

Journal of
**Physical and
Chemical
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Volume 16, 1987
Supplement No. 1

**Atomic and Ionic Spectrum Lines
below 2000 Angstroms:
Hydrogen through Krypton
Part II (Mn–Kr)**

Raymond L. Kelly



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and the **American Institute of Physics** for
the **National Bureau of Standards**

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Physical and Chemical Reference Data

David R. Lide, Jr., Editor

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David R. Lide, Jr., Editor
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Raymond L. Kelly

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Monterey, California 93943*



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MANGANESE, Z = 25
Unclassified Lines

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	13.814						716
	300	181.37						256
	600	183.72						256
	700	184.19						256
	500	185.24						256
	500	186.35						256
	500	187.45						256
	400	187.63						256
	500	187.76						256
	500	187.96						256
	500	188.09						256
	600	188.19						256
	600	188.67						256
	800	189.06						256
	500	189.49						256
	400	189.82						256
	600	190.73						256
	500	192.42						256
	500	193.59						256
	600	194.88						256
	500	195.28						256
	500	196.54						256
	500	197.64						256
	400	198.23						256
	900	205.27						256

MANGANESE I (Mn^{0+}), Z = 25
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^2 ({}^6S_{5/2})$ (25 electrons)
Ionization Potential $59\,959.40 \text{ cm}^{-1}$; 7.4341 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	1312.646	0.0 - 76.18203	$3d^5 4s^2 - 3d^5 4s(a^5P)5p$	$ga^6S - {}^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$	A	972
	200	1313.103	0.0 - 76.15553	$3d^5 4s^2 - 3d^5 4s(a^5P)5p$	$ga^6S - {}^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$	A	972
	300	1314.100	0.0 - 76.09773	$3d^5 4s^2 - 3d^5 4s(a^5P)5p$	$ga^6S - {}^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$	A	972
	100	1357.717	0.0 - 73.65303	$3d^5 4s^2 - 3d^6(a^5D3)13p$	$ga^6S - 14^\circ$	$\frac{5}{2} - \frac{7}{2}$	A	972
	120	1359.681					A	972
	150	1362.033					A	972
	100	1362.626	0.0 - 73.38773	$3d^5 4s^2 - 3d^6(a^5D2)11p$	$ga^6S - 97^\circ$	$\frac{5}{2} - \frac{5}{2}$	A	972
	600	1364.314					A	972
	650	1367.574					A	972
	300	1371.536					A	972
	100	1398.210	0.0 - 71.5200	$3d^5 4s^2 - 3d^6(a^5D)8p$	$ga^6S - 49^\circ$	$\frac{5}{2} - \frac{7}{2}$	A	972
	400	1400.590					A	972
	500	1403.026					A	972
	100	1404.337	0.0 - 71.2080	$3d^5 4s^2 - 3d^6(a^5D)8p$	$ga^6S - 43^\circ$	$\frac{5}{2} - \frac{7}{2}$	A	972
	100	1404.632	0.0 - 71.1930	$3d^5 4s^2 - 3d^6(a^5D)8p$	$ga^6S - 42^\circ$	$\frac{5}{2} - \frac{7}{2}$	A	972
	100	1419.017					A	972
	200	1419.710					A	972
	150	1419.828					A	972

MN I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	500	1421.197	0.0 - 70.3632	$3d^5 4s^2 - 3d^6(a^5D)7p$	$ga^6S - 31^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	200	1423.334					A	972
	500	1425.110					A	972
	200	1425.746					A	972
	600	1427.287					A	972
	1000	1430.431					A	972
	500	1431.434					A	972
	500	1432.480					A	972
	100	1442.147	0.0 - 69.34105	$3d^5 4s^2 - 3d^5 4s(a^5S)37p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	110	1442.260	0.0 - 69.33561	$3d^5 4s^2 - 3d^5 4s(a^5S)36p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	120	1442.384	0.0 - 69.32966	$3d^5 4s^2 - 3d^5 4s(a^5S)35p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	130	1442.518	0.0 - 69.32321	$3d^5 4s^2 - 3d^5 4s(a^5S)34p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	140	1442.667	0.0 - 69.31606	$3d^5 4s^2 - 3d^5 4s(a^5S)33p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	150	1442.831	0.0 - 69.30821	$3d^5 4s^2 - 3d^5 4s(a^5S)32p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	160	1443.010	0.0 - 69.29959	$3d^5 4s^2 - 3d^5 4s(a^5S)31p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	170	1443.209	0.0 - 69.29001	$3d^5 4s^2 - 3d^5 4s(a^5S)30p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	180	1443.435	0.0 - 69.27920	$3d^5 4s^2 - 3d^5 4s(a^5S)29p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	200	1443.684	0.0 - 69.26724	$3d^5 4s^2 - 3d^5 4s(a^5S)28p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	225	1443.966	0.0 - 69.25372	$3d^5 4s^2 - 3d^5 4s(a^5S)27p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	250	1444.283	0.0 - 69.23851	$3d^5 4s^2 - 3d^5 4s(a^5S)26p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	275	1444.641	0.0 - 69.22134	$3d^5 4s^2 - 3d^5 4s(a^5S)25p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	300	1445.051	0.0 - 69.20170	$3d^5 4s^2 - 3d^5 4s(a^5S)24p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	300	1445.523	0.0 - 69.17913	$3d^5 4s^2 - 3d^5 4s(a^5S)23p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	350	1446.067	0.0 - 69.15311	$3d^5 4s^2 - 3d^5 4s(a^5S)22p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	350	1446.700	0.0 - 69.12285	$3d^5 4s^2 - 3d^5 4s(a^5S)21p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	375	1447.440	0.0 - 69.08750	$3d^5 4s^2 - 3d^5 4s(a^5S)20p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	400	1448.322	0.0 - 69.04544	$3d^5 4s^2 - 3d^5 4s(a^5S)19p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	450	1449.374	0.0 - 68.99529	$3d^5 4s^2 - 3d^5 4s(a^5S)18p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	500	1450.648	0.0 - 68.93473	$3d^5 4s^2 - 3d^5 4s(a^5S)17p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	600	1452.211	0.0 - 68.86051	$3d^5 4s^2 - 3d^5 4s(a^5S)16p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	700	1454.153	0.0 - 68.76856	$3d^5 4s^2 - 3d^5 4s(a^5S)15p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	700	1456.611	0.0 - 68.6525	$3d^5 4s^2 - 3d^5 4s(a^5S)14p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	100	1458.555					A	972
	600	1459.786	0.0 - 68.50321	$3d^5 4s^2 - 3d^5 4s(a^5S)13p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	200	1460.385					A	972
	200	1463.235					A	972
	450	1463.981	0.0 - 68.30690	$3d^5 4s^2 - 3d^5 4s(a^5S)12p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	250	1464.042					A	972
	800	1465.358					A	972
	700	1469.119					A	972
	250	1469.976	0.0 - 68.02830	$3d^5 4s^2 - 3d^5 4s(a^5S)11p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	400	1470.372					A	972
	300	1471.079					A	972
	5	1471.335	0.0 - 67.96487	$3d^5 4s^2 - 3d^5(a^2H)4s4p(^3P^{\circ})$	$ga^6S - t^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	A	972
	100	1471.683					A	972
	60	1472.954	0.0 - 67.89136	$3d^5 4s^2 - 3d^5(a^2H)4s4p(^3P^{\circ})$	$ga^6S - t^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	1000	1472.971	0.0 - 67.890	$3d^5 4s^2 - 3d^6(a^5D)6p$	$ga^6S - 53^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	100	1474.580					A	972
	700	1476.952					A	972
	300	1477.331					A	972
	200	1478.201	0.0 - 67.6498	$3d^5 4s^2 - 3d^5 4s(a^5S)10p$	$ga^6S - 6^{\circ}P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	A	972
	300	1478.393					A	972
	1000	1479.728					A	972
	600	1481.152					A	972

MN I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	180	1483.030					A	972
	180	1483.187					A	972
	150	1483.595					A	972
	150	1483.873					A	972
	900	1484.869					A	972
	100	1487.489					A	972
1000	1490.302		0.0 - 67.10048	$3d^5 4s^2 - 3d^5 4s(a^5S)9p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
200	1490.728						A	972
100	1492.353		0.0 - 67.00854	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^1P^o)$	$ga^6S - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
200	1494.552		0.0 - 66.91002	$3d^5 4s^2 -$	$ga^6S - ^3F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
7	1496.174		0.0 - 66.83764	$3d^5 4s^2 - 3d^5(a^3D)4p$	$ga^6S - u^4F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
300	1497.398		0.0 - 66.78305	$3d^5 4s^2 - 3d^5(a^3D)4p$	$ga^6S - u^4F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
350	1503.681		0.0 - 66.50347	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^1P^o)$	$ga^6S - ^4S^o$	$\frac{5}{2} - \frac{3}{2}$	A	972
400	1516.204						A	972
150	1516.379		0.0 - 65.94687	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^1P^o)$	$ga^6S - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
30	1542.659		0.0 - 64.82317	$3d^5 4s^2 - 3d^5(a^3D)4s4p(^3P^o)$	$ga^6S - w^2F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
1000	1543.050		0.0 - 64.80670	$3d^5 4s^2 - 3d^5 4s(a^5S)7p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
20	1568.267		0.0 - 63.76480	$3d^5 4s^2 - 3d^5(a^2D)4s4p(^3P^o)$	$ga^6S - x^2D^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
180	1572.725		0.0 - 63.58384	$3d^5 4s^2 - 3d^5(a^4F)4s4p(^3P^o)$	$ga^6S - ^6D^o$	$\frac{5}{2} - \frac{3}{2}$	A	972
150	1574.214		0.0 - 63.52382	$3d^5 4s^2 - 3d^5(a^4F)4s4p(^3P^o)$	$ga^6S - ^6D^o$	$\frac{5}{2} - \frac{3}{2}$	A	972
200	1577.994		0.0 - 63.37156	$3d^5 4s^2 -$	$ga^6S - ^34^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
100	1591.802						A	972
350	1594.772						A	972
1000	1595.914		0.0 - 62.660	$3d^5 4s^2 - 3d^5(a^5D)5p$	$ga^6S - ^18^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
200	1597.138						A	972
350	1598.632						A	972
100	1600.353						A	972
200	1603.213						A	972
10	1610.940		0.0 - 62.07524	$3d^5 4s^2 - 3d^5(a^3G)4p$	$ga^6S - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
150	1613.137						A	972
500	1613.944						A	972
250	1616.308		0.0 - 61.86940	$3d^5 4s^2 - 3d^5 4s(a^5S)6p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
150	1616.804						A	972
120	1618.906						A	972
8	1620.029		0.0 - 61.72737	$3d^5 4s^2 - 3d^5(a^4G)4s4p(^1P^o)$	$ga^6S - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
200	1622.697						A	972
100	1626.529		0.0 - 61.48060	$3d^5 4s^2 - 3d^5(a^3F)4p$	$ga^6S - z^2F^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
300	1626.818		0.0 - 61.4697	$3d^5 4s^2 - 3d^5(a^3F)4p$	$ga^6S - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
100	1627.760						A	972
100	1681.511		0.0 - 59.47031	$3d^5 4s^2 - 3d^5 4s(a^7S)17p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
120	1683.577		0.0 - 59.39735	$3d^5 4s^2 - 3d^5 4s(a^7S)16p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
2	1683.948		0.0 - 59.38435	$3d^5 4s^2 - 3d^5(a^3P)4p$	$ga^6S - u^4P^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
10	1684.617		0.0 - 59.36070	$3d^5 4s^2 - 3d^5(a^3F)4p$	$ga^6S - x^4F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
12	1685.218		0.0 - 59.33953	$3d^5 4s^2 - 3d^5(a^3F)4p$	$ga^6S - w^4D^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
130	1686.129		0.0 - 59.30746	$3d^5 4s^2 - 3d^5 4s(a^7S)15p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
20	1686.622		0.0 - 59.29017	$3d^5 4s^2 - 3d^5(a^3F)4p$	$ga^6S - x^4F^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
60	1716.969		0.0 - 58.24216	$3d^5 4s^2 - 3d^5 4s(a^7S)10p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
70	1717.009		0.0 - 58.24080	$3d^5 4s^2 - 3d^5 4s(a^7S)10p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
90	1717.068		0.0 - 58.23880	$3d^5 4s^2 - 3d^5 4s(a^7S)10p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
5	1718.738		0.0 - 58.18224	$3d^5 4s^2 - 3d^5 4s(a^7S)10p$	$ga^6S - ^8P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
65	1732.441		0.0 - 57.72204	$3d^5 4s^2 - 3d^5 4s(a^7S)9p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
75	1732.511		0.0 - 57.71970	$3d^5 4s^2 - 3d^5 4s(a^7S)9p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
100	1732.601		0.0 - 57.71670	$3d^5 4s^2 - 3d^5 4s(a^7S)9p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972
5	1735.368		0.0 - 57.62465	$3d^5 4s^2 - 3d^5 4s(a^7S)9p$	$ga^6S - ^8P^o$	$\frac{5}{2} - \frac{7}{2}$	A	972

MN I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1735.408	0.0 - 57.62333	$3d^5 4s^2 - 3d^5 4s(a^7S)9p$	$ga^6S - ^8P^o$	$\frac{5}{2} - \frac{5}{2}$	A	972
	15	1738.765	0.0 - 57.51212	$3d^5 4s^2 - 3d^5 4s(b^3P)4p$	$ga^6S - y^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	20	1739.522	0.0 - 57.48705	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - v^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	15	1743.353	0.0 - 57.36073	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - v^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	75	1756.414	0.0 - 56.93417	$3d^5 4s^2 - 3d^5 4s(a^7S)8p$	$ga^6S - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	100	1756.508	0.0 - 56.93114	$3d^5 4s^2 - 3d^5 4s(a^7S)8p$	$ga^6S - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	150	1756.657	0.0 - 56.92632	$3d^5 4s^2 - 3d^5 4s(a^7S)8p$	$ga^6S - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	3	1761.941	0.0 - 56.75558	$3d^5 4s^2 - 3d^5 4s(a^7S)8p$	$ga^6S - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	350	1785.312	0.0 - 56.01250	$3d^5 4s^2 - 3d^5 4s(a^5S)5p$	$ga^6S - s^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	300	1785.453	0.0 - 56.00804	$3d^5 4s^2 - 3d^5 4s(a^5S)5p$	$ga^6S - s^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	200	1785.813	0.0 - 55.99675	$3d^5 4s^2 - 3d^5 4s(a^5S)5p$	$ga^6S - s^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	150	1787.653	0.0 - 55.93927	$3d^5 4s^2 - 3d^5 4s(a^5S)5p$	$ga^6S - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	150	1788.142	0.0 - 55.92381	$3d^5 4s^2 - 3d^5 4s(a^5S)5p$	$ga^6S - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	75	1802.013	0.0 - 55.49351	$3d^5 4s^2 - 3d^5 4s(a^7S)7p$	$ga^6S - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	125	1802.048	0.0 - 55.49241	$3d^5 4s^2 - 3d^5 4s(a^7S)7p$	$ga^6S - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	3	1804.859	0.0 - 55.40600	$3d^5 4s^2 - 3d^5 4s(a^5S)5p$	$ga^6S - w^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	20	1808.724	0.0 - 55.28759	$3d^5 4s^2 - 3d^5 4s(a^7S)7p$	$ga^6S - ^8P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	15	1808.842	0.0 - 55.28398	$3d^5 4s^2 - 3d^5 4s(a^7S)7p$	$ga^6S - ^8P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	5	1812.050	0.0 - 55.18615	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - x^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	7	1819.730	0.0 - 54.95312	$3d^5 4s^2 - 3d^5 4s(a^5S)4d$	$ga^6S - g^6D$	$\frac{3}{2} - \frac{3}{2}$	F,A	972
	5	1819.809	0.0 - 54.95074	$3d^5 4s^2 - 3d^5 4s(a^5S)4d$	$ga^6S - g^6D$	$\frac{3}{2} - \frac{3}{2}$	F,A	972
	3	1819.849	0.0 - 54.94960	$3d^5 4s^2 - 3d^5 4s(a^5S)4d$	$ga^6S - g^6D$	$\frac{3}{2} - \frac{3}{2}$	F,A	972
	10	1819.950	0.0 - 54.94632	$3d^5 4s^2 - 3d^5 4s(a^5S)4d$	$ga^6S - g^6D$	$\frac{3}{2} - \frac{3}{2}$	F,A	972
	10	1820.203	0.0 - 54.93875	$3d^5 4s^2 - 3d^5 4s(a^5S)4d$	$ga^6S - g^6D$	$\frac{3}{2} - \frac{3}{2}$	F,A	972
	5	1844.385	0.0 - 54.21867	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	300	1875.781	0.0 - 53.31125	$3d^5 4s^2 - 3d^5 4s(a^7S)6p$	$ga^6S - t^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	350	1876.479	0.0 - 53.29144	$3d^5 4s^2 - 3d^5 4s(a^7S)6p$	$ga^6S - t^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	400	1877.545	0.0 - 53.26124	$3d^5 4s^2 - 3d^5 4s(a^7S)6p$	$ga^6S - t^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	200	1882.388	0.0 - 53.12405	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	150	1882.915	0.0 - 53.10918	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	75	1883.130	0.0 - 53.10314	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	75	1890.939	0.0 - 52.88383	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - x^6D^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	170	1891.432	0.0 - 52.87005	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - x^6D^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	7	1904.863	0.0 - 52.49721	$3d^5 4s^2 - 3d^5 4s(a^7S)6p$	$ga^6S - ^8P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	4	1905.125	0.0 - 52.4900	$3d^5 4s^2 - 3d^5 4s(a^7S)6p$	$ga^6S - ^8P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	250	1913.759	0.0 - 52.25321	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - u^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	250	1918.333	0.0 - 52.12860	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - u^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	200	1922.523	0.0 - 52.01498	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - u^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	70	1943.803	0.0 - 51.44560	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	100	1949.116	0.0 - 51.30536	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	20	1960.210	0.0 - 51.01494	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - x^6F^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	20	1963.430	0.0 - 50.93136	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - x^6F^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	5	1966.046	0.0 - 50.86320	$3d^5 4s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6S - x^6F^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	10	1985.740	0.0 - 50.35918	$3d^5 4s^2 - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6S - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	400	1996.047	0.0 - 50.09910	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - v^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972
	450	1999.500	0.0 - 50.01250	$3d^5 4s^2 - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6S - v^6P^o$	$\frac{3}{2} - \frac{3}{2}$	A	972

MANGANESE II (Mn¹⁺), Z = 25
Ground State 1s²2s²2p⁶3s²3p⁶3d⁵4s(⁷S₃) (24 electrons)
Ionization Potential 126 145.0 cm⁻¹; 15.64011 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	1	953.04	14.32586 - 119.253	3d ⁶ - 3d ⁵ (a ⁶ S)8f	a ⁵ D - ⁵ F°	4 - 5		328
	0	955.48	14.59382 - 119.253	3d ⁶ - 3d ⁵ (a ⁶ S)8f	a ⁵ D - ⁵ F°	3 - 4		328
	0	957.20	14.78119 - 119.253	3d ⁶ - 3d ⁵ (a ⁶ S)8f	a ⁵ D - ⁵ F°	2 - 3		328
	10	972.55	14.32586 - 117.1483	3d ⁶ - 3d ⁵ (a ⁶ S)7f	a ⁵ D - ⁵ F°	4 - 5		328
	8	975.19	14.59382 - 117.1378	3d ⁶ - 3d ⁵ (a ⁶ S)7f	a ⁵ D - ⁵ F°	3 - 4		328
	7	976.96	14.78119 - 117.139	3d ⁶ - 3d ⁵ (a ⁶ S)7f	a ⁵ D - ⁵ F°	2 - 3		328
	5	978.11	14.90118 - 117.138	3d ⁶ - 3d ⁵ (a ⁶ S)7f	a ⁵ D - ⁵ F°	1 - 2		328
	0	978.70	14.95984 - 117.135	3d ⁶ - 3d ⁵ (a ⁶ S)7f	a ⁵ D - ⁵ F°	0 - 1		328
9	25	982.90	9.47297 - 111.2133	3d ⁵ (a ⁶ S)4s -	a ⁵ S - s ⁵ P°	2 - 3		328
9	20	983.24	9.47297 - 111.1785	3d ⁵ (a ⁶ S)4s -	a ⁵ S - s ⁵ P°	2 - 2		328
9	15	983.40	9.47297 - 111.1623	3d ⁵ (a ⁶ S)4s -	a ⁵ S - s ⁵ P°	2 - 1		328
8	25	1000.96	9.47297 - 109.3795	3d ⁵ (a ⁶ S)4s -	a ⁵ S - t ⁵ P°	2 - 3		328
17	22	1003.00	14.32586 - 114.0270	3d ⁶ - 3d ⁵ (a ⁶ S)6f	a ⁵ D - ⁵ F°	4 - 5		328
8	20	1005.02	9.47297 - 108.9751	3d ⁵ (a ⁶ S)4s -	a ⁵ S - t ⁵ P°	2 - 2		328
17	22	1005.70	14.59382 - 114.0280	3d ⁶ - 3d ⁵ (a ⁶ S)6f	a ⁵ D - ⁵ F°	3 - 4		328
	7	1006.72	14.32586 - 113.6581	3d ⁶ -	a ⁵ D - s ⁵ F°	4 - 5		328
8	15	1007.53	9.47297 - 108.7271	3d ⁵ (a ⁶ S)4s -	a ⁵ S - t ⁵ P°	2 - 1		328
17	15	1007.61	14.78119 - 114.0265	3d ⁶ - 3d ⁵ (a ⁶ S)6f	a ⁵ D - ⁵ F°	2 - 3		328
17	12	1008.85	14.90118 - 114.0249	3d ⁶ - 3d ⁵ (a ⁶ S)6f	a ⁵ D - ⁵ F°	1 - 2		328
17	10	1009.45	14.95984 - 114.0236	3d ⁶ - 3d ⁵ (a ⁶ S)6f	a ⁵ D - ⁵ F°	0 - 1		328
	6	1009.56	14.59382 - 113.6472	3d ⁶ -	a ⁵ D - s ⁵ F°	3 - 4		328
	5	1011.51	14.78119 - 113.6420	3d ⁶ -	a ⁵ D - s ⁵ F°	2 - 3		328
	4	1012.71	14.90118 - 113.6454	3d ⁶ -	a ⁵ D - s ⁵ F°	1 - 2		328
	0	1013.35	14.95984 - 113.6461	3d ⁶ -	a ⁵ D - s ⁵ F°	0 - 1		328
7	20	1023.55	9.47297 - 107.1731	3d ⁵ (a ⁶ S)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ S - u ⁵ P°	2 - 3		328
7	18	1027.99	9.47297 - 106.7500	3d ⁵ (a ⁶ S)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ S - u ⁵ P°	2 - 2		328
7	10	1030.87	9.47297 - 106.4792	3d ⁵ (a ⁶ S)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ S - u ⁵ P°	2 - 1		328
	2	1032.69	14.32586 - 111.1603	3d ⁶ -	a ⁵ D - t ⁵ F°	4 - 5		328
	8	1040.54	14.32586 - 110.4292	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ D°	4 - 4		328
	3	1042.98	14.32586 - 110.2056	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ D°	4 - 3		328
	3	1043.46	14.59382 - 110.4292	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ D°	3 - 4		328
	4	1045.89	14.59382 - 110.2056	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ D°	3 - 3		328
	1	1047.40	14.59382 - 110.0688	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ D°	3 - 2		328
	4	1047.95	14.78119 - 110.2056	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ D°	2 - 3		328
	2	1050.78	14.90118 - 110.0688	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ D°	1 - 2		328
	5	1052.04	14.32586 - 109.3795	3d ⁶ -	a ⁵ D - t ⁵ P°	4 - 3		328
	5	1052.60	14.32586 - 109.3275	3d ⁶ -	a ⁵ D - u ⁵ F°	4 - 5		328
	4	1056.80	14.59382 - 109.2219	3d ⁶ -	a ⁵ D - u ⁵ F°	3 - 4		328
	1	1059.53	14.59382 - 108.9751	3d ⁶ -	a ⁵ D - t ⁵ P°	3 - 2		328
	1	1059.98	14.78119 - 109.1233	3d ⁶ -	a ⁵ D - u ⁵ F°	2 - 3		328
	1	1061.64	14.78119 - 108.9751	3d ⁶ -	a ⁵ D - t ⁵ P°	2 - 2		328
16	30	1062.51	14.32586 - 108.4431	3d ⁶ - 3d ⁵ (a ⁶ S)5f	a ⁵ D - ⁵ F°	4 - 5		328
	1	1063.43	14.95984 - 108.9944	3d ⁶ -	a ⁵ D - u ⁵ F°	0 - 1		328
16	25	1065.56	14.59382 - 108.4414	3d ⁶ - 3d ⁵ (a ⁶ S)5f	a ⁵ D - ⁵ F°	3 - 4		328
16	25	1067.73	14.78119 - 108.4390	3d ⁶ - 3d ⁵ (a ⁶ S)5f	a ⁵ D - ⁵ F°	2 - 3		328
16	20	1069.11	14.90118 - 108.4373	3d ⁶ - 3d ⁵ (a ⁶ S)5f	a ⁵ D - ⁵ F°	1 - 2		328
16	10	1069.77	14.95984 - 108.4356	3d ⁶ - 3d ⁵ (a ⁶ S)5f	a ⁵ D - ⁵ F°	0 - 1		328
	3	1077.02	14.32586 - 107.1731	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - u ⁵ P°	4 - 3		328
	5	1080.29	14.32586 - 106.8944	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - v ⁵ F°	4 - 5		328
	2	1085.62	14.59382 - 106.7079	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - v ⁵ F°	3 - 4		328
	1	1089.98	14.78119 - 106.5262	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - v ⁵ F°	2 - 3		328
	0	1093.22	14.90118 - 106.3743	3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ D - v ⁵ F°	1 - 2		328
31	10	1111.90	27.54725 - 117.4836	3d ⁵ (a ⁴ G)4s -	a ⁵ G - r ⁵ F°	6 - 5		328
31	0	1112.19	27.57125 - 117.4836	3d ⁵ (a ⁴ G)4s -	a ⁵ G - r ⁵ F°	5 - 5		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
31	9	1113.23	27.57125 - 117.3999	$3d^5(a^4G)4s -$	$a^5G - r^5F^\circ$	5 - 4		328
31	0	1113.39	27.58357 - 117.3999	$3d^5(a^4G)4s -$	$a^5G - r^5F^\circ$	4 - 4		328
31	8	1114.44	27.58357 - 117.3149	$3d^5(a^4G)4s -$	$a^5G - r^5F^\circ$	4 - 3		328
31	0	1114.50	27.58850 - 117.3149	$3d^5(a^4G)4s -$	$a^5G - r^5F^\circ$	3 - 3		328
31	6	1115.53	27.58850 - 117.2321	$3d^5(a^4G)4s -$	$a^5G - r^5F^\circ$	3 - 2		328
31	6	1116.37	27.58928 - 117.1650	$3d^5(a^4G)4s -$	$a^5G - r^5F^\circ$	2 - 1		328
30	30	1156.34	27.54725 - 114.0270	$3d^5(a^4G)4s - 3d^5(a^6S)6f$	$a^5G - ^5F^\circ$	6 - 5		328
30	25	1156.66	27.57125 - 114.0280	$3d^5(a^4G)4s - 3d^5(a^6S)6f$	$a^5G - ^5F^\circ$	5 - 4		328
30	20	1156.83	27.58357 - 114.0265	$3d^5(a^4G)4s - 3d^5(a^6S)6f$	$a^5G - ^5F^\circ$	4 - 3		328
30	20	1156.92	27.58850 - 114.0249	$3d^5(a^4G)4s - 3d^5(a^6S)6f$	$a^5G - ^5F^\circ$	3 - 2		328
29	20	1161.29	27.54725 - 113.6581	$3d^5(a^4G)4s -$	$a^5G - s^5F^\circ$	6 - 5		328
29	3	1161.61	27.57125 - 113.6581	$3d^5(a^4G)4s -$	$a^5G - s^5F^\circ$	5 - 5		328
29	20	1161.76	27.57125 - 113.6472	$3d^5(a^4G)4s -$	$a^5G - s^5F^\circ$	5 - 4		328
4	50	1162.02	0 - 86.05744	$3d^5(a^6S)4s - 3d^5(a^6S)5p$	$ga^7S - x^7P^\circ$	3 - 4		328
4	40	1163.32	0 - 85.96046	$3d^5(a^6S)4s - 3d^5(a^6S)5p$	$ga^7S - x^7P^\circ$	3 - 3		328
4	30	1164.21	0 - 85.89530	$3d^5(a^6S)4s - 3d^5(a^6S)5p$	$ga^7S - x^7P^\circ$	3 - 2		328
28	25	1165.82	27.54725 - 113.3227	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	6 - 6		328
28	10	1166.16	27.57125 - 113.3227	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	5 - 6		328
28	8	1166.81	27.54725 - 113.2514	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	6 - 5		328
28	20	1167.13	27.57125 - 113.2514	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	5 - 5		328
28	9	1167.31	27.58357 - 113.2514	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	4 - 5		328
28	5	1168.07	27.57125 - 113.1817	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	5 - 4		328
28	15	1168.25	27.58357 - 113.1817	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	4 - 4		328
28	15	1169.28	27.58850 - 113.1097	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	3 - 3		328
28	15	1169.53	27.58850 - 113.0928	$3d^5(a^4G)4s -$	$a^5G - v^5G^\circ$	3 - 2		328
20	1177.52	27.54725 - 112.4724	$3d^5(a^4G)4s -$	$a^5G - w^5G^\circ$	6 - 6		328	
18	1177.89	27.57125 - 112.4688	$3d^5(a^4G)4s -$	$a^5G - w^5G^\circ$	5 - 5		328	
15	1178.14	27.58357 - 112.4632	$3d^5(a^4G)4s -$	$a^5G - w^5G^\circ$	4 - 4		328	
12	1178.34	27.58850 - 112.4532	$3d^5(a^4G)4s -$	$a^5G - w^5G^\circ$	3 - 3		328	
5	1178.76	27.58928 - 112.4242	$3d^5(a^4G)4s -$	$a^5G - w^5G^\circ$	2 - 2		328	
15	1180.69	32.78787 - 117.4836	$3d^5(a^4D)4s -$	$b^5D - r^5F^\circ$	4 - 5		328	
15	50	1188.502	14.32586 - 98.46521	$3d^6 - 3d^5(a^6S)4f$	$a^5D - ^5F^\circ$	4 - 5		328
15	40	1192.313	14.59382 - 98.46420	$3d^6 - 3d^5(a^6S)4f$	$a^5D - ^5F^\circ$	3 - 4		328
30	1195.00	14.78119 - 98.46323	$3d^6 - 3d^5(a^6S)4f$	$a^5D - ^5F^\circ$	2 - 3		328	
27	30	1195.97	27.54725 - 111.1603	$3d^5(a^4G)4s -$	$a^5G - t^5F^\circ$	6 - 5		328
27	25	1196.33	27.57125 - 111.1596	$3d^5(a^4G)4s -$	$a^5G - t^5F^\circ$	5 - 4		328
27	20	1196.52	27.58357 - 111.1596	$3d^5(a^4G)4s -$	$a^5G - t^5F^\circ$	4 - 4		328
15	25	1196.724	14.90118 - 98.46241	$3d^6 - 3d^5(a^6S)4f$	$a^5D - ^5F^\circ$	1 - 2		328
3	40	1197.17	0 - 83.52933	$3d^5(a^6S)4s - 3d^44s(a^6D)4p$	$ga^7S - y^7P^\circ$	3 - 4		328
15	10	1197.57	14.95984 - 98.46177	$3d^6 - 3d^5(a^6S)4f$	$a^5D - ^5F^\circ$	0 - 1		328
27	10	1198.00	27.58850 - 111.0605	$3d^5(a^4G)4s -$	$a^5G - t^5F^\circ$	3 - 2		328
27	10	1198.63	27.58928 - 111.0175	$3d^5(a^4G)4s -$	$a^5G - t^5F^\circ$	2 - 1		328
26	30	1199.34	27.54725 - 110.9263	$3d^5(a^4G)4s -$	$a^5G - y^5H^\circ$	6 - 7		328
3	50	1199.38	0 - 83.37563	$3d^5(a^6S)4s - 3d^44s(a^6D)4p$	$ga^7S - y^7P^\circ$	3 - 3		328
3	20	1201.124	0 - 83.25579	$3d^5(a^6S)4s - 3d^44s(a^6D)4p$	$ga^7S - y^7P^\circ$	3 - 2		328
26	5	1201.23	27.54725 - 110.7953	$3d^5(a^4G)4s -$	$a^5G - y^5H^\circ$	6 - 6		328
26	40	1201.57	27.57125 - 110.7953	$3d^5(a^4G)4s -$	$a^5G - y^5H^\circ$	5 - 6		328
26	8	1203.07	27.57125 - 110.6919	$3d^5(a^4G)4s -$	$a^5G - y^5H^\circ$	5 - 5		328
26	30	1203.25	27.58357 - 110.6919	$3d^5(a^4G)4s -$	$a^5G - y^5H^\circ$	4 - 5		328
26	25	1204.62	27.58850 - 110.6023	$3d^5(a^4G)4s -$	$a^5G - y^5H^\circ$	3 - 4		328
15	1204.95	30.52370 - 113.5150	$3d^6 -$	$a^3H - t^3G^\circ$	6 - 5		328	
26	20	1205.42	27.58928 - 110.5477	$3d^5(a^4G)4s -$	$a^5G - y^5H^\circ$	2 - 3		328
10	1206.55	30.67951 - 113.5601	$3d^6 -$	$a^3H - t^3G^\circ$	5 - 4		328	
5	1206.87	27.57125 - 110.4292	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^5G - u^5D^\circ$	5 - 4		328	

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1207.05	27.58357 - 110.4292	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^5G - u^5D^\circ$	4 - 4		328
	2	1207.12	27.58850 - 110.4292	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^5G - u^5D^\circ$	3 - 4		328
	8	1208.83	30.79569 - 113.5200	$3d^6 -$	$a^3H - t^3G^\circ$	4 - 3		328
	5	1210.33	27.58357 - 110.2056	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^5G - u^5D^\circ$	4 - 3		328
	5	1212.40	27.58850 - 110.0688	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^5G - u^5D^\circ$	3 - 2		328
	0	1213.50	27.58928 - 109.9946	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^5G - u^5D^\circ$	2 - 1		328
	8	1218.94	27.57125 - 109.6083	$3d^5(a^4G)4s -$	$a^5G - v^5D^\circ$	5 - 4		328
	0	1219.50	31.51466 - 113.5150	$3d^6 -$	$a^3F - t^3G^\circ$	4 - 5		328
	6	1221.11	27.58357 - 109.4766	$3d^5(a^4G)4s -$	$a^5G - v^5D^\circ$	4 - 3		328
	30	1222.785	27.54725 - 109.3275	$3d^5(a^4G)4s -$	$a^5G - u^5F^\circ$	6 - 5		328
25	8	1223.15	27.57125 - 109.3275	$3d^5(a^4G)4s -$	$a^5G - u^5F^\circ$	5 - 5		328
25	30	1224.733	27.57125 - 109.2219	$3d^5(a^4G)4s -$	$a^5G - u^5F^\circ$	5 - 4		328
25	6	1224.928	27.58357 - 109.2219	$3d^5(a^4G)4s -$	$a^5G - u^5F^\circ$	4 - 4		328
25	25	1226.40	27.58357 - 109.1233	$3d^5(a^4G)4s -$	$a^5G - u^5F^\circ$	4 - 3		328
25	23	1227.638	27.58850 - 109.0464	$3d^5(a^4G)4s -$	$a^5G - u^5F^\circ$	3 - 2		328
25	20	1228.423	27.58928 - 108.9944	$3d^5(a^4G)4s -$	$a^5G - u^5F^\circ$	2 - 1		328
43	25	1229.65	29.88952 - 111.2133	$3d^5(a^4P)4s -$	$a^5P - s^5P^\circ$	3 - 3		328
43	20	1230.11	29.91943 - 111.2133	$3d^5(a^4P)4s -$	$a^5P - s^5P^\circ$	2 - 3		328
43	15	1230.15	29.88952 - 111.1785	$3d^5(a^4P)4s -$	$a^5P - s^5P^\circ$	3 - 2		328
	1	1230.46	29.88952 - 111.1596	$3d^5(a^4P)4s -$	$a^5P - t^5F^\circ$	3 - 4		328
43	1	1230.62	29.91943 - 111.1785	$3d^5(a^4P)4s -$	$a^5P - s^5P^\circ$	2 - 2		328
43	10	1230.87	29.91943 - 111.1623	$3d^5(a^4P)4s -$	$a^5P - s^5P^\circ$	2 - 1		328
43	8	1231.10	29.95142 - 111.1785	$3d^5(a^4P)4s -$	$a^5P - s^5P^\circ$	1 - 2		328
43	5	1231.35	29.95142 - 111.1623	$3d^5(a^4P)4s -$	$a^5P - s^5P^\circ$	1 - 1		328
24	30	1233.952	27.54725 - 108.5874	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	6 - 6		328
24	5	1234.30	27.57125 - 108.5874	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	5 - 6		328
24	8	1234.51	27.54725 - 108.5507	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	6 - 5		328
24	25	1234.871	27.57125 - 108.5507	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	5 - 5		328
24	8	1235.06	27.58357 - 108.5507	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	4 - 5		328
24	10	1235.27	27.57125 - 108.5242	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	5 - 4		328
24	25	1235.46	27.58357 - 108.5242	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	4 - 4		328
24	10	1235.79	27.58357 - 108.5035	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	4 - 3		328
24	25	1235.87	27.58850 - 108.5035	$3d^5(a^4G)4s -$	$a^5G - x^5G^\circ$	3 - 3		328
23	25	1236.15	27.54725 - 108.4431	$3d^5(a^4G)4s - 3d^5(a^6S)5f$	$a^5G - s^5F^\circ$	6 - 5		328
23	15	1236.54	27.57125 - 108.4431	$3d^5(a^4G)4s - 3d^5(a^6S)5f$	$a^5G - s^5F^\circ$	5 - 5		328
23	20	1236.77	27.58357 - 108.4390	$3d^5(a^4G)4s - 3d^5(a^6S)5f$	$a^5G - s^5F^\circ$	4 - 3		328
23	20	1236.87	27.58850 - 108.4373	$3d^5(a^4G)4s - 3d^5(a^6S)5f$	$a^5G - s^5F^\circ$	3 - 2		328
	2	1237.59	29.86948 - 110.6716	$3d^6 - 3d^44s(b^4P)4p$	$a^3P - y^3S^\circ$	2 - 1		328
	1	1237.78	32.85719 - 113.6472	$3d^5(a^4D)4s -$	$b^5D - s^5F^\circ$	3 - 4		328
	1	1237.95	33.14771 - 113.9262	$3d^5(a^4G)4s -$	$a^3G - s^3G^\circ$	5 - 4		328
	5	1238.35	29.91943 - 110.6716	$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5P - y^5S^\circ$	2 - 1		328
	7	1238.84	29.95142 - 110.6716	$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5P - y^5S^\circ$	1 - 1		328
	1	1239.51	33.24860 - 113.9262	$3d^5(a^4G)4s -$	$a^3G - s^3G^\circ$	4 - 4		328
	0	1240.04	38.54308 - 119.1860	$3d^5(a^6S)4p - 3d^5(a^6S)10s$	$z^7P^\circ - s^7S$	3 - 3		328
42	10	1241.63	29.88952 - 110.4292	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^\circ$	3 - 4		328
	0	1244.10	38.80667 - 119.1860	$3d^5(a^6S)4p - 3d^5(a^6S)10s$	$z^7P^\circ - s^7S$	4 - 3		328
	15	1244.28	33.14771 - 113.5150	$3d^5(a^4G)4s -$	$a^3G - t^3G^\circ$	5 - 5		328
	20	1245.14	33.24860 - 113.5601	$3d^5(a^4G)4s -$	$a^3G - t^3G^\circ$	4 - 4		328
41	15	1245.55	29.91943 - 110.2056	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^\circ$	2 - 3		328
	12	1246.24	33.27872 - 113.5200	$3d^5(a^4G)4s -$	$a^3G - t^3G^\circ$	3 - 3		328
41	15	1247.66	29.91943 - 110.0688	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^\circ$	2 - 2		328
41	5	1248.15	29.95142 - 110.0688	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^\circ$	1 - 2		328
41	4	1248.83	29.91943 - 109.9946	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^\circ$	2 - 1		328
41	6	1249.31	29.95142 - 109.9946	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^\circ$	1 - 1		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1250.22	30.68507 - 110.6716	$3d^6 - 3d^4 4s(b^4P)4p$	$a^3P - y^3S^o$	1 - 1		328
	7	1250.681	9.47297 - 89.4291	$3d^5(a^6S)4s - 3d^4 4s4p$	$a^3S - v^3P^o$	2 - 3		328
	15	1252.91	29.88952 - 109.7040	$3d^5(a^4P)4s - 3d^4 4s(b^4P)4p$	$a^3P - y^3S^o$	3 - 2		328
	15	1253.37	29.91943 - 109.7040	$3d^5(a^4P)4s - 3d^4 4s(b^4P)4p$	$a^3P - y^3S^o$	2 - 2		328
	15	1253.880	29.95142 - 109.7040	$3d^5(a^4P)4s - 3d^4 4s(b^4P)4p$	$a^3P - y^3S^o$	1 - 2		328
	10	1254.20	33.14771 - 112.8798	$3d^5(a^4G)4s -$	$a^3G - q^3F^o$	5 - 4		328
41	15	1254.410	29.88952 - 109.6083	$3d^5(a^4P)4s -$	$a^3P - v^3D^o$	3 - 4		328
	1	1255.01	32.78787 - 112.4688	$3d^5(a^4D)4s -$	$b^3D - w^3G^o$	4 - 5		328
	6	1256.18	9.47297 - 89.0792	$3d^5(a^6S)4s - 3d^4 4s4p$	$a^3S - v^3P^o$	2 - 2		328
41	8	1256.47	29.88952 - 109.4766	$3d^5(a^4P)4s -$	$a^3P - v^3D^o$	3 - 3		328
41	10	1256.96	29.91943 - 109.4766	$3d^5(a^4P)4s -$	$a^3P - v^3D^o$	2 - 3		328
40	15	1258.028	29.88952 - 109.3795	$3d^5(a^4P)4s -$	$a^3P - t^3P^o$	3 - 3		328
40	15	1258.51	29.91943 - 109.3795	$3d^5(a^4P)4s -$	$a^3P - t^3P^o$	2 - 3		328
	12	1259.05	29.91943 - 109.3444	$3d^5(a^4P)4s -$	$a^3P - v^3D^o$	2 - 2		328
41	8	1259.56	29.95142 - 109.3444	$3d^5(a^4P)4s -$	$a^3P - v^3D^o$	1 - 2		328
	6	1259.97	9.47297 - 88.8397	$3d^5(a^6S)4s - 3d^4 4s4p$	$a^3S - v^3P^o$	2 - 1		328
	1	1260.52	29.88952 - 109.2219	$3d^5(a^4P)4s -$	$a^3P - u^3F^o$	3 - 4		328
41	1	1260.77	29.91943 - 109.2353	$3d^5(a^4P)4s -$	$a^3P - v^3D^o$	2 - 1		328
	8	1261.27	33.27872 - 112.5632	$3d^5(a^4G)4s -$	$a^3G - q^3F^o$	3 - 2		328
41	4	1262.35	29.95142 - 109.1677	$3d^5(a^4P)4s -$	$a^3P - v^3D^o$	1 - 0		328
	4	1262.57	29.91943 - 109.1233	$3d^5(a^4P)4s -$	$a^3P - u^3F^o$	2 - 3		328
	1	1263.79	29.91943 - 109.0464	$3d^5(a^4P)4s -$	$a^3P - u^3F^o$	2 - 2		328
	12	1264.45	29.88952 - 108.9751	$3d^5(a^4P)4s -$	$a^3P - t^3P^o$	3 - 2		328
	10	1265.39						328
	2	1265.57	34.91075 - 113.9262	$3d^6 -$	$b^3G - s^3G^o$	4 - 4		328
	8	1266.13	33.14771 - 112.1285	$3d^5(a^4G)4s -$	$a^3G - u^3H^o$	5 - 6		328
40	10	1268.90	29.91943 - 108.7271	$3d^5(a^4P)4s -$	$a^3P - t^3P^o$	2 - 1		328
40	5	1269.42	29.95142 - 108.7271	$3d^5(a^4P)4s -$	$a^3P - t^3P^o$	1 - 1		328
	0	1269.54	35.00477 - 113.7734	$3d^6 -$	$b^3G - s^3G^o$	3 - 3		328
	2	1271.22	38.36618 - 117.03123	$3d^5(a^6S)4p - 3d^5(a^6S)9s$	$z^7P^o - ^7S$	2 - 3		328
	6	1272.18	33.24860 - 111.8545	$3d^5(a^4G)4s -$	$a^3G - u^3H^o$	4 - 5		328
	2	1274.08	38.54308 - 117.03123	$3d^5(a^6S)4p - 3d^5(a^6S)9s$	$z^7P^o - ^7S$	3 - 3		328
	2	1274.84	33.27872 - 111.7200	$3d^5(a^4G)4s -$	$a^3G - u^3H^o$	3 - 4		328
59	20	1275.10	32.78787 - 111.2133	$3d^5(a^4D)4s -$	$b^3D - s^3P^o$	4 - 3		328
58	40	1275.97	32.78787 - 111.1603	$3d^5(a^4D)4s -$	$b^3D - t^3F^o$	4 - 5		328
59	20	1276.24	32.85719 - 111.2133	$3d^5(a^4D)4s -$	$b^3D - s^3P^o$	3 - 3		328
59	8	1276.45	32.83666 - 111.1785	$3d^5(a^4D)4s -$	$b^3D - s^3P^o$	1 - 2		328
59	10	1276.77	32.85719 - 111.1785	$3d^5(a^4D)4s -$	$b^3D - s^3P^o$	3 - 2		328
58	20	1277.12	32.85719 - 111.1596	$3d^5(a^4D)4s -$	$b^3D - t^3F^o$	3 - 4		328
58	20	1277.82	32.85909 - 111.1160	$3d^5(a^4D)4s -$	$b^3D - t^3F^o$	2 - 3		328
	10	1278.369	38.80667 - 117.03123	$3d^5(a^6S)4p - 3d^5(a^6S)9s$	$z^7P^o - ^7S$	4 - 3		328
58	15	1278.75	32.85909 - 111.0605	$3d^5(a^4D)4s -$	$b^3D - t^3F^o$	2 - 2		328
	2	1278.90	33.14771 - 111.3392	$3d^5(a^4G)4s - 3d^4 4s(a^4H)4p$	$a^3G - x^3I^o$	5 - 6		328
58	10	1279.09	32.83666 - 111.0175	$3d^5(a^4D)4s -$	$b^3D - t^3F^o$	1 - 1		328
58	2	1279.44	32.85909 - 111.0175	$3d^5(a^4D)4s -$	$b^3D - t^3F^o$	2 - 1		328
	10	1280.11	34.76211 - 112.8798	$3d^6 -$	$b^3G - q^3F^o$	5 - 4		328
	2	1284.76	33.24860 - 111.0838	$3d^5(a^4G)4s - 3d^4 4s(a^4H)4p$	$a^3G - x^3I^o$	4 - 5		328
	8	1285.95	34.91075 - 112.6739	$3d^6 -$	$b^3G - q^3F^o$	4 - 3		328
57	15	1287.978	32.78787 - 110.4292	$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^3D - u^3D^o$	4 - 4		328
57	15	1289.13	32.85719 - 110.4292	$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^3D - u^3D^o$	3 - 4		328
	8	1289.35	35.00477 - 112.5632	$3d^6 -$	$b^3G - q^3F^o$	3 - 2		328
	8	1290.52	9.47297 - 86.96096	$3d^5(a^6S)4s - 3d^5(a^6S)5p$	$a^3S - w^3P^o$	2 - 1		328
6	10	1290.93	9.47297 - 86.93681	$3d^5(a^6S)4s - 3d^5(a^6S)5p$	$a^3S - w^3P^o$	2 - 2		328
6	10	1291.58	9.47297 - 86.89767	$3d^5(a^6S)4s - 3d^5(a^6S)5p$	$a^3S - w^3P^o$	2 - 3		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
57	10	1291.70	32.78787 - 110.2056	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	4 - 3		328
	10	1292.57	34.76211 - 112.1285	$3d^6 -$	$b^3G - u^3H^o$	5 - 6		328
57	15	1292.87	32.85909 - 110.2056	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	2 - 3		328
	1	1293.92	29.88952 - 107.1731	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5P^o$	3 - 3		328
57	2	1294.437	29.91943 - 107.1731	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5P^o$	2 - 3		328
	10	1294.803	32.83666 - 110.0688	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	1 - 2		328
57	10	1295.15	32.85719 - 110.0688	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	3 - 2		328
57	6	1295.74	32.81833 - 109.9946	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	0 - 1		328
57	3	1296.03	32.83666 - 109.9946	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	1 - 1		328
57	6	1296.43	32.85909 - 109.9946	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	2 - 1		328
57	5	1296.67	32.83666 - 109.9590	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5D^o$	1 - 0		328
57	6	1298.800	33.14771 - 110.1415	$3d^5(a^4G)4s -$	$a^3G - r^3F^o$	5 - 4		328
	5	1299.09	36.27458 - 113.2514	$3d^5(a^4P)4s -$	$b^3P - s^3D^o$	2 - 3		328
	5	1299.66	34.91075 - 111.8545	$3d^6 -$	$b^3G - u^3H^o$	4 - 5		328
	1	1300.52	33.24860 - 110.1415	$3d^5(a^4G)4s -$	$a^3G - r^3F^o$	4 - 4		328
	4	1301.06	29.88952 - 106.7500	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5P^o$	3 - 2		328
	3	1301.31	32.85719 - 109.7040	$3d^5(a^4D)4s - 3d^44s(b^4P)4p$	$b^5D - y^5S^o$	3 - 2		328
	1	1302.12	29.95142 - 106.7500	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5P^o$	1 - 2		328
	9	1302.61	33.24860 - 110.0183	$3d^5(a^4G)4s -$	$a^3G - r^3F^o$	4 - 3		328
	1	1303.12	33.27872 - 110.0183	$3d^5(a^4G)4s -$	$a^3G - r^3F^o$	3 - 3		328
	4	1303.52	35.00477 - 111.7200	$3d^6 -$	$b^3G - u^3H^o$	3 - 4		328
	10	1305.136	33.27872 - 109.9004	$3d^5(a^4G)4s -$	$a^3G - r^3F^o$	3 - 2		328
56	15	1305.63	32.78787 - 109.3795	$3d^5(a^4D)4s -$	$b^5D - t^5P^o$	4 - 3		328
	5	1305.87	34.76211 - 111.3392	$3d^6 - 3d^44s(a^4H)4p$	$b^3G - x^3I^o$	5 - 6		328
	5	1306.17	29.91943 - 106.4792	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5P^o$	2 - 1		328
	10	1306.81	32.85719 - 109.3795	$3d^5(a^4D)4s -$	$b^5D - t^5P^o$	3 - 3		328
56	1	1307.41	32.85719 - 109.3444	$3d^5(a^4D)4s -$	$b^5D - v^5D^o$	3 - 2		328
	1	1308.16	14.59382 - 91.0378	$3d^6 - 3d^44s(a^6D)4p$	$a^3D - w^3F^o$	3 - 4		328
	1	1309.29	32.85909 - 109.2353	$3d^5(a^4D)4s -$	$b^5D - v^5D^o$	2 - 1		328
	3	1309.72	36.36459 - 112.7176	$3d^5(a^4P)4s -$	$b^3P - s^3D^o$	1 - 2		328
	2	1312.80	34.91075 - 111.0838	$3d^6 - 3d^44s(a^4H)4p$	$b^3G - x^3I^o$	4 - 5		328
	2	1313.41	32.83666 - 108.9751	$3d^5(a^4D)4s -$	$b^5D - t^5P^o$	1 - 2		328
56	10	1313.77	32.85719 - 108.9751	$3d^5(a^4D)4s -$	$b^5D - t^5P^o$	3 - 2		328
80	9	1316.16	38.36618 - 114.34490	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^7P^o - ^7D$	2 - 2		328
56	3	1317.39	32.81833 - 108.7271	$3d^5(a^4D)4s -$	$b^5D - t^5P^o$	0 - 1		328
56	4	1317.70	32.83666 - 108.7271	$3d^5(a^4D)4s -$	$b^5D - t^5P^o$	1 - 1		328
56	3	1318.09	32.85909 - 108.7271	$3d^5(a^4D)4s -$	$b^5D - t^5P^o$	2 - 1		328
80	10	1319.21	38.54308 - 114.34738	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^7P^o - ^7D$	3 - 4		328
80	11	1323.76	38.80667 - 114.34916	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^7P^o - ^7D$	4 - 5	P	328
80	4	1323.78	38.80667 - 114.34738	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^7P^o - ^7D$	4 - 4	P	328
80	1	1323.81	38.80667 - 114.34596	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^7P^o - ^7D$	4 - 3	P	328
80	10	1326.63	34.76211 - 110.1415	$3d^6 -$	$b^3G - r^3F^o$	5 - 4		328
79	12	1327.48	38.36618 - 113.69768	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^7P^o - ^7S$	2 - 3		328
	1	1329.25	34.91075 - 110.1415	$3d^6 -$	$b^3G - r^3F^o$	4 - 4		328
79	12	1330.61	38.54308 - 113.69768	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^7P^o - ^7S$	3 - 3		328
	8	1331.42	34.91075 - 110.0183	$3d^6 -$	$b^3G - r^3F^o$	4 - 3		328
79	25	1335.27	38.80667 - 113.69768	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^7P^o - ^7S$	4 - 3		328
	50	1344.14	36.27458 - 110.6716	$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$b^3P - y^3S^o$	2 - 1		328
	6	1344.35	32.78787 - 107.1731	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5P^o$	4 - 3		328
	2	1345.62	32.85909 - 107.1731	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5P^o$	2 - 3		328
	15	1345.77	36.36459 - 110.6716	$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$b^3P - y^3S^o$	1 - 1		328
	1	1346.94	36.42817 - 110.6716	$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$b^3P - y^3S^o$	0 - 1		328
	5	1349.41	32.78787 - 106.8944	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - v^5F^o$	4 - 5		328
	4	1352.17	43.52864 - 117.4836	$3d^5(a^4F)4s -$	$a^5F - r^5F^o$	5 - 5		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1352.83	32.78787 - 106.7079	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - v^5F^o$	4 - 4		328
	6	1353.33	32.85719 - 106.7500	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5P^o$	3 - 2		328
	1	1353.90	43.53718 - 117.3999	$3d^5(a^4F)4s -$	$a^5F - r^5F^o$	4 - 4		328
	5	1354.08	32.85719 - 106.7079	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - v^5F^o$	3 - 4		328
	1	1355.90	39.80846 - 113.5601	$3d^5(a^4D)4s -$	$b^3D - t^3G^o$	3 - 4		328
	1	1356.74	39.81368 - 113.5200	$3d^5(a^4D)4s -$	$b^3D - t^3G^o$	2 - 3		328
	5	1357.45	32.85909 - 106.5262	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - v^5F^o$	2 - 3		328
	1	1357.91	32.83666 - 106.4792	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5P^o$	1 - 1		328
	1	1358.32	32.85909 - 106.4792	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - u^5P^o$	2 - 1		328
	2	1359.86	32.83666 - 106.3743	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - v^5F^o$	1 - 2		328
	0	1360.24	32.85909 - 106.3743	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - v^5F^o$	2 - 2		328
	2	1361.60	39.80846 - 113.2514	$3d^5(a^4D)4s -$	$b^3D - s^3D^o$	3 - 3		328
	2	1368.53	39.80846 - 112.8798	$3d^5(a^4D)4s -$	$b^3D - q^3F^o$	3 - 4		328
	5	1371.73	41.19047 - 114.0906	$3d^5(a^2I)4s -$	$a^3I - s^3G^o$	6 - 5		328
	2	1372.48	39.81368 - 112.6739	$3d^5(a^4D)4s -$	$b^3D - q^3F^o$	2 - 3		328
	2	1373.17	37.84818 - 110.6716	$3d^6 - 3d^54s(b^4P)4p$	$a^3D - y^3S^o$	2 - 1		328
	1	1374.81	39.82684 - 112.5632	$3d^5(a^4D)4s -$	$b^3D - q^3F^o$	1 - 2		328
	4	1375.11	41.20434 - 113.9262	$3d^5(a^2I)4s -$	$a^3I - s^3G^o$	5 - 4		328
14	15	1377.94	14.32586 - 86.89767	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	4 - 3		328
	1	1380.32	39.82684 - 112.2740	$3d^5(a^4D)4s -$	$b^3D - s^3D^o$	1 - 1		328
14	10	1382.30	14.59382 - 86.93681	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	3 - 2		328
14	4	1383.05	14.59382 - 86.89767	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	3 - 3		328
14	4	1385.43	14.78119 - 86.96096	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	2 - 1		328
14	10	1385.89	14.78119 - 86.93681	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	2 - 2		328
14	6	1387.75	14.90118 - 86.96096	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	1 - 1		328
14	2	1388.21	14.90118 - 86.93681	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	1 - 2		328
14	3	1388.87	14.95984 - 86.96096	$3d^6 - 3d^5(a^6S)5p$	$a^5D - w^5P^o$	0 - 1		328
	3	1397.17	43.37051 - 114.9440	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	3 - 3		328
	6	1397.39	43.37051 - 114.9323	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	3 - 4		328
	2	1399.15	43.48464 - 114.9563	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	2 - 1		328
	3	1399.24	43.48464 - 114.9517	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	2 - 2		328
	4	1399.39	43.48464 - 114.9440	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	2 - 3		328
	2	1400.54	43.55714 - 114.9584	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	1 - 0		328
	3	1400.57	43.55714 - 114.9563	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	1 - 1		328
	2	1400.66	43.55714 - 114.9517	$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^5D$	1 - 2		328
	25	1409.51	41.18253 - 112.1285	$3d^5(a^2I)4s -$	$a^3I - u^3H^o$	7 - 6		328
	5	1409.69	41.19047 - 112.1285	$3d^5(a^2I)4s -$	$a^3I - u^3H^o$	6 - 6		328
78	25	1410.913	38.36618 - 109.24240	$3d^5(a^6S)4p - 3d^5(a^6S)6d$	$z^3P^o - ^7D$	2 - 2		328
	4	1411.28	39.81368 - 110.6716	$3d^5(a^4D)4s - 3d^44s(b^4P)4p$	$b^3D - y^3S^o$	2 - 1		328
	4	1411.55	39.82684 - 110.6716	$3d^5(a^4D)4s - 3d^44s(b^4P)4p$	$b^3D - y^3S^o$	1 - 1		328
88	4	1414.18	43.31130 - 114.0249	$3d^5(a^4F)4s - 3d^5(a^6S)6f$	$a^5F - ^5F^o$	1 - 2		328
78	30	1414.40	38.54308 - 109.24401	$3d^5(a^6S)4p - 3d^5(a^6S)6d$	$z^3P^o - ^7D$	3 - 3		328
	6	1414.73	43.33942 - 114.0249	$3d^5(a^2D)4s - 3d^5(a^6S)6f$	$c^3D - ^5F^o$	2 - 2		328
	30	1415.15	41.19047 - 111.8545	$3d^5(a^2I)4s -$	$a^3I - u^3H^o$	6 - 5		328
	6	1415.43	41.20434 - 111.8545	$3d^5(a^2I)4s -$	$a^3I - u^3H^o$	5 - 5		328
	35	1415.75	41.18253 - 111.8165	$3d^5(a^2I)4s - 3d^44s(a^4H)4p$	$a^3I - x^3I^o$	7 - 7		328
93	10	1417.95	43.37051 - 113.89525	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^3P^o - ^5S$	3 - 2		328
	18	1418.13	41.20434 - 111.7200	$3d^5(a^2I)4s -$	$a^3I - u^3H^o$	5 - 4		328
88	15	1418.48	43.52864 - 114.0270	$3d^5(a^4F)4s - 3d^5(a^6S)6f$	$a^5F - ^5F^o$	5 - 5		328
88	12	1418.63	43.53718 - 114.0270	$3d^5(a^4F)4s - 3d^5(a^6S)6f$	$a^5F - ^5F^o$	4 - 5		328
78	40	1419.61	38.80667 - 109.24905	$3d^5(a^6S)4p - 3d^5(a^6S)6d$	$z^3P^o - ^7D$	4 - 5		328
93	8	1420.24	43.48464 - 113.89525	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^3P^o - ^5S$	2 - 2		328
93	5	1421.71	43.55714 - 113.89525	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^3P^o - ^5S$	1 - 2		328
	2	1421.77	43.31130 - 113.6454	$3d^5(a^4F)4s -$	$a^5F - s^5F^o$	1 - 2		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1421.87	43.69619 - 114.0265	$3d^5(a^4F)4s - 3d^5(a^6S)6f$	$a^5F - ^5F^o$	3 - 3		328
	3	1422.36	43.33942 - 113.6454	$3d^5(a^2D)4s -$	$c^3D - s^3F^o$	2 - 2		328
	2	1422.42	43.33942 - 113.6420	$3d^5(a^2D)4s -$	$c^3D - s^3F^o$	2 - 3		328
	2	1423.48	43.39538 - 113.6454	$3d^5(a^2D)4s -$	$c^3D - s^3F^o$	3 - 2		328
	4	1423.55	43.39538 - 113.6420	$3d^5(a^2D)4s -$	$c^3D - s^3F^o$	3 - 3		328
	5	1424.49	38.72002 - 108.9204	$3d^6 -$	$a^1I - w^1H^o$	6 - 5		328
	3	1425.03	43.85042 - 114.0249	$3d^5(a^4F)4s - 3d^5(a^6S)6f$	$a^5F - ^5F^o$	2 - 2		328
	12	1425.40	41.18253 - 111.3392	$3d^5(a^2I)4s - 3d^44s(a^4H)4p$	$a^3I - x^3I^o$	7 - 6		328
	20	1425.544	41.19047 - 111.3392	$3d^5(a^2I)4s - 3d^44s(a^4H)4p$	$a^3I - x^3I^o$	6 - 6		328
87	12	1425.93	43.52864 - 113.6581	$3d^5(a^4F)4s -$	$a^5F - s^3F^o$	5 - 5		328
87	1	1426.15	43.52864 - 113.6472	$3d^5(a^4F)4s -$	$a^5F - s^3F^o$	5 - 4		328
87	10	1426.32	43.53718 - 113.6472	$3d^5(a^4F)4s -$	$a^5F - s^3F^o$	4 - 4		328
87	3	1426.43	43.53718 - 113.6420	$3d^5(a^4F)4s -$	$a^5F - s^3F^o$	4 - 3		328
	0	1428.19	38.9018 - 108.9204	$3d^6 -$	$a^1G - w^1H^o$	4 - 5		328
	2	1428.85	43.52864 - 113.5150	$3d^5(a^4F)4s -$	$a^5F - t^3G^o$	5 - 5		328
	2	1429.02	43.53718 - 113.5150	$3d^5(a^4F)4s -$	$a^5F - t^3G^o$	4 - 5		328
	1	1429.60	43.69619 - 113.6472	$3d^5(a^4F)4s -$	$a^5F - s^3F^o$	3 - 4		328
	2	1429.66	43.69619 - 113.6420	$3d^5(a^4F)4s -$	$a^5F - s^3F^o$	3 - 3		328
	0	1430.37	43.33942 - 113.2514	$3d^5(a^2D)4s -$	$c^3D - s^3D^o$	2 - 3		328
	10	1430.77	41.19047 - 111.0838	$3d^5(a^2I)4s - 3d^44s(a^4H)4p$	$a^3I - x^3I^o$	6 - 5		328
	20	1431.046	41.20434 - 111.0838	$3d^5(a^2I)4s - 3d^44s(a^4H)4p$	$a^3I - x^3I^o$	5 - 5		328
	3	1431.36	43.69619 - 113.5601	$3d^5(a^4F)4s -$	$a^5F - t^3G^o$	3 - 4		328
	2	1431.52	43.39538 - 113.2514	$3d^5(a^2D)4s -$	$c^3D - s^3D^o$	3 - 3		328
	1	1432.18	43.69619 - 113.5200	$3d^5(a^4F)4s -$	$a^5F - t^3G^o$	3 - 3		328
86	40	1432.78	43.52864 - 113.3227	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	5 - 6		328
	5	1432.95	43.39538 - 113.1817	$3d^5(a^2D)4s -$	$c^3D - v^5G^o$	3 - 4		328
86	4	1433.08	43.31130 - 113.0928	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	1 - 2		328
	4	1433.27	43.33942 - 113.1097	$3d^5(a^2D)4s -$	$c^3D - v^5G^o$	2 - 3		328
77	15	1433.50	38.36618 - 108.12618	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^7P^o - ^7S$	2 - 3		328
	6	1433.63	43.33942 - 113.0928	$3d^5(a^2D)4s -$	$c^3D - v^5G^o$	2 - 2		328
86	10	1434.26	43.52864 - 113.2514	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	5 - 5		328
86	30	1434.44	43.53718 - 113.2514	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	4 - 5		328
86	1	1434.79	43.39538 - 113.0928	$3d^5(a^2D)4s -$	$c^3D - v^5G^o$	3 - 2		328
86	1	1435.68	43.52864 - 113.1817	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	5 - 4		328
86	4	1435.87	43.53718 - 113.1817	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	4 - 4		328
77	15	1437.13	38.54308 - 108.12618	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^7P^o - ^7S$	3 - 3		328
86	1	1437.32	43.53718 - 113.1097	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	4 - 3		328
	4	1437.42	44.52152 - 114.0906	$3d^5(a^4F)4s -$	$b^3F - s^3G^o$	4 - 5		328
	3	1437.70	43.69619 - 113.2514	$3d^5(a^4F)4s -$	$a^5F - s^3D^o$	3 - 3		328
	1	1438.71	44.13896 - 113.6454	$3d^5(a^2D)4s -$	$c^3D - s^3F^o$	1 - 2		328
	15	1439.16	43.69619 - 113.1817	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	3 - 4		328
	8	1440.63	43.69619 - 113.1097	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	3 - 3		328
	0	1440.81	44.52152 - 113.9262	$3d^5(a^2F)4s -$	$b^3F - s^3G^o$	4 - 4		328
	1	1440.96	43.69619 - 113.0928	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	3 - 2		328
	1	1441.37	43.33942 - 112.7176	$3d^5(a^2D)4s -$	$c^3D - s^3D^o$	2 - 2		328
	10	1442.28	43.33942 - 112.6739	$3d^5(a^2D)4s -$	$c^3D - q^3F^o$	2 - 3		328
77	25	1442.594	38.80667 - 108.12618	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^7P^o - ^7S$	4 - 3		328
	7	1443.46	43.39538 - 112.6739	$3d^5(a^2D)4s -$	$c^3D - q^3F^o$	3 - 3		328
	10	1443.85	43.85042 - 113.1097	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	2 - 3		328
	6	1444.01	44.52152 - 113.7734	$3d^5(a^4F)4s -$	$b^3F - s^3G^o$	4 - 3		328
	6	1444.19	43.85042 - 113.0928	$3d^5(a^4F)4s -$	$a^5F - v^5G^o$	2 - 2		328
	3	1444.58	43.33942 - 112.5632	$3d^5(a^2D)4s -$	$c^3D - q^3F^o$	2 - 2		328
	2	1445.43	43.69619 - 112.8798	$3d^5(a^4F)4s -$	$a^5F - q^3F^o$	3 - 4		328
	20	1446.908	43.31130 - 112.4242	$3d^5(a^4F)4s -$	$a^5F - w^3G^o$	1 - 2		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	1447.49	43.33942 - 112.4242	$3d^5(a^3D)4s -$	$c^3D - w^5G^\circ$	2 - 2		328
	10	1447.86	43.39538 - 112.4632	$3d^5(a^3D)4s -$	$c^3D - w^5G^\circ$	3 - 4		328
	15	1448.08	43.39538 - 112.4532	$3d^5(a^3D)4s -$	$c^3D - w^5G^\circ$	3 - 3		328
	4	1448.47	44.52152 - 113.5601	$3d^5(a^3F)4s -$	$b^3F - t^3G^\circ$	4 - 4		328
	15	1448.714	44.89982 - 113.9262	$3d^5(a^3F)4s -$	$b^3F - s^3G^\circ$	3 - 4		328
	12	1448.83	43.69619 - 112.7176	$3d^5(a^3F)4s -$	$a^3F - s^3D^\circ$	3 - 2		328
	4	1449.74	43.69619 - 112.6739	$3d^5(a^3F)4s -$	$a^3F - q^3F^\circ$	3 - 3		328
	10	1450.23	44.13896 - 113.0928	$3d^5(a^3D)4s -$	$c^3D - v^3G^\circ$	1 - 2		328
	12	1450.46	43.52864 - 112.4724	$3d^5(a^3F)4s -$	$a^3F - w^5G^\circ$	5 - 6		328
	15	1450.71	43.53718 - 112.4688	$3d^5(a^3F)4s -$	$a^3F - w^5G^\circ$	4 - 5		328
	4	1450.82	43.53718 - 112.4632	$3d^5(a^3F)4s -$	$a^3F - w^5G^\circ$	4 - 4		328
	6	1452.05	43.85042 - 112.7176	$3d^5(a^3F)4s -$	$a^3F - s^3D^\circ$	2 - 2		328
	3	1452.99	43.85042 - 112.6739	$3d^5(a^3F)4s -$	$a^3F - q^3F^\circ$	2 - 3		328
	6	1454.03	44.74546 - 113.5200	$3d^5(a^3F)4s -$	$b^3F - t^3G^\circ$	2 - 3		328
	6	1454.18	43.69619 - 112.4632	$3d^5(a^3F)4s -$	$a^3F - w^5G^\circ$	3 - 4		328
	1	1454.40	43.69619 - 112.4532	$3d^5(a^3F)4s -$	$a^3F - w^5G^\circ$	3 - 3		328
	20	1454.97	44.52152 - 113.2514	$3d^5(a^3F)4s -$	$b^3F - s^3D^\circ$	4 - 3		328
	5	1455.33	43.85042 - 112.5632	$3d^5(a^3F)4s -$	$a^3F - q^3F^\circ$	2 - 2		328
	2	1456.45	44.89982 - 113.5601	$3d^5(a^3F)4s -$	$b^3F - t^3G^\circ$	3 - 4		328
	5	1457.30	44.89982 - 113.5200	$3d^5(a^3F)4s -$	$b^3F - t^3G^\circ$	3 - 3		328
	7	1457.67	43.85042 - 112.4532	$3d^5(a^3F)4s -$	$a^3F - w^5G^\circ$	2 - 3		328
	3	1458.18	44.13896 - 112.7176	$3d^5(a^3D)4s -$	$c^3D - s^3D^\circ$	1 - 2		328
	2	1459.72	44.74546 - 113.2514	$3d^5(a^3F)4s -$	$b^3F - s^3D^\circ$	2 - 3		328
	5	1461.48	44.13896 - 112.5632	$3d^5(a^3D)4s -$	$c^3D - q^3F^\circ$	1 - 2		328
	3	1462.27	14.32586 - 82.71255	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	4 - 3		328
	5	1462.87	44.52152 - 112.8798	$3d^5(a^3F)4s -$	$b^3F - q^3F^\circ$	4 - 4		328
	8	1463.02	44.89982 - 113.2514	$3d^5(a^3F)4s -$	$b^3F - s^3D^\circ$	3 - 3		328
	30	1464.572	14.32586 - 82.60529	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	4 - 4		328
	1	1467.31	44.52152 - 112.6739	$3d^5(a^3F)4s -$	$b^3F - q^3F^\circ$	4 - 3		328
	10	1467.53	14.59382 - 82.73529	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	3 - 2		328
	20	1468.03	14.59382 - 82.71255	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	3 - 3		328
	0	1470.33	14.59382 - 82.60529	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	3 - 4		328
	8	1470.73	14.78119 - 82.77473	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	2 - 1		328
	5	1471.024	44.89982 - 112.8798	$3d^5(a^3F)4s -$	$b^3F - q^3F^\circ$	3 - 4		328
	7	1471.19	44.74546 - 112.7176	$3d^5(a^3F)4s -$	$b^3F - s^3D^\circ$	2 - 2		328
	8	1471.586	14.78119 - 82.73529	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	2 - 2		328
	2	1471.93	14.90118 - 82.83949	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	1 - 0		328
	2	1472.08	14.78119 - 82.71255	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	2 - 3		328
	3	1472.62	14.32586 - 82.23218	$3d^6 - 3d^5(a^3F)4p$	$a^5D - y^3G^\circ$	4 - 5		328
	0	1473.32	14.90118 - 82.77473	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	1 - 1		328
	1	1474.18	14.90118 - 82.73529	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5D^\circ$	1 - 2		328
	10	1474.54	44.89982 - 112.7176	$3d^5(a^3F)4s -$	$b^3F - s^3D^\circ$	3 - 2		328
	3	1475.11	14.32586 - 82.11716	$3d^6 - 3d^5(a^4F)4p$	$a^5D - y^3G^\circ$	4 - 5		328
	6	1475.46	43.33942 - 111.1160	$3d^5(a^3D)4s -$	$c^3D - t^3F^\circ$	2 - 3		328
	5	1475.72	43.39538 - 111.1596	$3d^5(a^3D)4s -$	$c^3D - t^3F^\circ$	3 - 4		328
85	12	1476.04	43.31130 - 111.0605	$3d^5(a^3F)4s -$	$a^3F - t^3F^\circ$	1 - 2		328
	12	1476.64	43.39538 - 111.1160	$3d^5(a^3D)4s -$	$c^3D - t^3F^\circ$	3 - 3		328
85	5	1476.98	43.31130 - 111.0175	$3d^5(a^3F)4s -$	$a^3F - t^3F^\circ$	1 - 1		328
	3	1477.61	43.33942 - 111.0175	$3d^5(a^3D)4s -$	$c^3D - t^3F^\circ$	2 - 1		328
	5	1477.83	43.39538 - 111.0605	$3d^5(a^3D)4s -$	$c^3D - t^3F^\circ$	3 - 2		328
85	25	1478.59	43.52864 - 111.1603	$3d^5(a^3F)4s -$	$a^3F - t^3F^\circ$	5 - 5		328
85	20	1478.79	43.53718 - 111.1603	$3d^5(a^3F)4s -$	$a^3F - t^3F^\circ$	4 - 5		328
85	1	1479.76	43.53718 - 111.1160	$3d^5(a^3F)4s -$	$a^3F - t^3F^\circ$	4 - 3		328
	2	1480.16	14.32586 - 81.88633	$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5F^\circ$	4 - 5		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	1480.85	44.74546 - 112.2740	$3d^5(a^2F)4s -$	$b^3F - s^3D^o$	2 - 1		328
	5	1481.35	14.59382 - 82.09982	$3d^6 - 3d^5(a^2F)4p$	$a^3D - y^3G^o$	3 - 4		328
	0	1482.40	14.59382 - 82.05162	$3d^6 - 3d^5(a^4F)4p$	$a^3D - x^3F^o$	3 - 3		328
85	3	1483.25	43.69619 - 111.1160	$3d^5(a^4F)4s -$	$a^3F - t^3F^o$	3 - 3		328
	10	1483.685	14.59382 - 81.99385	$3d^6 - 3d^5(a^4F)4p$	$a^3D - x^3F^o$	3 - 4		328
85	0	1484.45	43.69619 - 111.0605	$3d^5(a^4F)4s -$	$a^3F - t^3F^o$	3 - 2		328
	8	1486.068	14.90118 - 82.19304	$3d^6 - 3d^5(a^4F)4p$	$a^3D - y^3G^o$	1 - 2		328
	1	1486.40	14.95984 - 82.23689	$3d^6 - 3d^5(a^4F)4p$	$a^3D - x^3F^o$	0 - 1		328
	12	1486.55	14.78119 - 82.05162	$3d^6 - 3d^5(a^4F)4p$	$a^3D - x^3F^o$	2 - 3		328
85	3	1486.66	43.85042 - 111.1160	$3d^5(a^4F)4s -$	$a^3F - t^3F^o$	2 - 3		328
85	50	1487.86	43.85042 - 111.0605	$3d^5(a^4F)4s -$	$a^3F - t^3F^o$	2 - 2		328
	12	1489.13	14.90118 - 82.05435	$3d^6 - 3d^5(a^4F)4p$	$a^3D - x^3F^o$	1 - 2		328
84	20	1494.754	43.52864 - 110.4292	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	5 - 4		328
84	7	1494.97	43.53718 - 110.4292	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	4 - 4		328
	1	1495.26	14.78119 - 81.65950	$3d^6 - 3d^5(a^2D)4p$	$a^3D - x^3D^o$	2 - 3		328
	4	1496.78	43.39538 - 110.2056	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^3D - u^3D^o$	3 - 3		328
	8	1498.60	43.33942 - 110.0688	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^3D - u^3D^o$	2 - 2		328
84	1	1499.61	43.31130 - 109.9946	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	1 - 1		328
	8	1499.84	43.39538 - 110.0688	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^3D - u^3D^o$	3 - 2		328
	20	1499.95	43.53718 - 110.2056	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	4 - 3		328
	5	1500.26	43.33942 - 109.9946	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^3D - u^3D^o$	2 - 1		328
84	0	1500.41	43.31130 - 109.9590	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	1 - 0		328
	4	1500.99	43.39538 - 110.0183	$3d^5(a^2D)4s -$	$c^3D - r^3F^o$	3 - 3		328
	0	1501.44	43.53718 - 110.1415	$3d^5(a^4F)4s -$	$a^3F - r^3F^o$	4 - 4		328
	1	1502.38	43.33942 - 109.9004	$3d^5(a^2D)4s -$	$c^3D - r^3F^o$	2 - 2		328
	3	1503.02	44.13896 - 110.6716	$3d^5(a^2D)4s - 3d^44s(b^4P)4p$	$c^3D - y^3S^o$	1 - 1		328
	1	1503.54	43.69619 - 110.2056	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	3 - 3		328
84	1	1504.99	43.69619 - 110.1415	$3d^5(a^4F)4s -$	$a^3F - r^3F^o$	3 - 4		328
84	7	1506.63	43.69619 - 110.0688	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	3 - 2		328
	4	1507.78	43.69619 - 110.0183	$3d^5(a^4F)4s -$	$a^3F - r^3F^o$	3 - 3		328
84	0	1510.14	43.85042 - 110.0688	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	2 - 2		328
84	4	1511.84	43.85042 - 109.9946	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^3F - u^3D^o$	2 - 1		328
	2	1513.32	43.52864 - 109.6083	$3d^5(a^4F)4s -$	$a^3F - v^3D^o$	5 - 4		328
	1	1514.03	43.85042 - 109.9004	$3d^5(a^4F)4s -$	$a^3F - r^3F^o$	2 - 2		328
	5	1516.36	43.39538 - 109.3444	$3d^5(a^2D)4s -$	$c^3D - v^3D^o$	3 - 2		328
	8	1516.75	44.13896 - 110.0688	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^3D - u^3D^o$	1 - 2		328
	0	1518.48	44.13896 - 109.9946	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^3D - u^3D^o$	1 - 1		328
	5	1519.79	43.52864 - 109.3275	$3d^5(a^4F)4s -$	$a^3F - u^3F^o$	5 - 5		328
	2	1521.42	43.39538 - 109.1233	$3d^5(a^2D)4s -$	$c^3D - u^3F^o$	3 - 3		328
	3	1522.420	43.53718 - 109.2219	$3d^5(a^4F)4s -$	$a^3F - u^3F^o$	4 - 4		328
	12	1523.14	48.43596 - 114.0906	$3d^5(a^2H)4s -$	$b^3H - s^3G^o$	6 - 5		328
	10	1523.92	44.52152 - 110.1415	$3d^5(a^2F)4s -$	$b^3F - r^3F^o$	4 - 4		328
	10	1524.55	48.33306 - 113.9262	$3d^5(a^2H)4s -$	$b^3H - s^3G^o$	5 - 4		328
	4	1524.71	43.53718 - 109.1233	$3d^5(a^4F)4s -$	$a^3F - u^3F^o$	4 - 3		328
	7	1527.76	48.31785 - 113.7734	$3d^5(a^2H)4s -$	$b^3H - s^3G^o$	4 - 3		328
	8	1531.01	29.88952 - 95.2063	$3d^5(a^2P)4s - 3d^44s(a^2D)4p$	$a^3P - w^3D^o$	3 - 4		328
	2	1533.10	48.33306 - 113.5601	$3d^5(a^2H)4s -$	$b^3H - t^3G^o$	5 - 4		328
	5	1533.68	48.31785 - 113.5200	$3d^5(a^2H)4s -$	$b^3H - t^3G^o$	4 - 3		328
	0	1534.34	43.31130 - 108.4860	$3d^5(a^4F)4s -$	$a^3F - x^3G^o$	1 - 2		328
	0	1534.58	43.33942 - 108.5035	$3d^5(a^2D)4s -$	$c^3D - x^3G^o$	2 - 3		328
	5	1534.80	44.74546 - 109.9004	$3d^5(a^2F)4s -$	$b^3F - r^3F^o$	2 - 2		328
	1	1535.42	43.39538 - 108.5242	$3d^5(a^2D)4s -$	$c^3D - x^3G^o$	3 - 4		328
	6	1535.66	44.89982 - 110.0183	$3d^5(a^2F)4s -$	$b^3F - r^3F^o$	3 - 3		328
	0	1535.91	43.39538 - 108.5035	$3d^5(a^2D)4s -$	$c^3D - x^3G^o$	3 - 3		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
92	3	1536.10	29.88952 - 94.9897	$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^3D^o$	3 - 3		328
	7	1536.63	43.37051 - 108.44730	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^5P^o - ^5S$	3 - 2		328
	3	1536.808	29.91943 - 94.9897	$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^3D^o$	2 - 3		328
	1	1537.070	43.52864 - 108.5874	$3d^5(a^4F)4s -$	$a^5F - x^5G^o$	5 - 6		328
	2	1537.56	31.76115 - 96.7999	$3d^6 - 3d^44s(b^4D)4p$	$a^3F - s^3F^o$	2 - 3		328
	1	1538.14	43.53718 - 108.5507	$3d^5(a^4F)4s -$	$a^5F - x^5G^o$	4 - 5		328
92	0	1538.43	44.89982 - 109.9004	$3d^5(a^2F)4s -$	$b^3F - r^3F^o$	3 - 2		328
	3	1539.24	29.91943 - 94.8865	$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^3D^o$	2 - 2		328
	5	1539.33	43.48464 - 108.44730	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^5P^o - ^5S$	2 - 2		328
	0	1539.99	29.95142 - 94.8865	$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^3D^o$	1 - 2		328
	0	1540.47	43.52864 - 108.4431	$3d^5(a^4F)4s - 3d^5(a^6S)5f$	$a^5F - ^5F^o$	5 - 5		328
92	4	1541.06	43.55714 - 108.44730	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^5P^o - ^5S$	1 - 2		328
	0	1541.39	29.91943 - 94.7955	$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^3D^o$	2 - 1		328
	1	1542.16	29.95142 - 94.7955	$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^3D^o$	1 - 1		328
	1	1542.52	43.69619 - 108.5242	$3d^5(a^4F)4s -$	$a^5F - x^5G^o$	3 - 4		328
	0	1542.98	36.27458 - 101.0841	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - t^3D^o$	2 - 2		328
	0	1543.28	29.95142 - 94.7480	$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^3D^o$	1 - 0		328
	1	1545.13	36.36459 - 101.0841	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - t^3D^o$	1 - 2		328
	8	1546.22						328
	4	1546.87	47.07356 - 111.7200	$3d^5(a^2F)4s -$	$a^1F - u^3H^o$	3 - 4		328
	4	1548.634	49.51758 - 114.0906	$3d^5(a^2G)4s -$	$c^3G - s^3G^o$	5 - 5		328
	0	1549.25	48.33306 - 112.8798	$3d^5(a^2H)4s -$	$b^3H - q^3F^o$	5 - 4		328
	4	1550.41	49.42732 - 113.9262	$3d^5(a^2G)4s -$	$c^3G - s^3G^o$	4 - 4		328
	2	1550.82	49.29131 - 113.7734	$3d^6 -$	$b^1F - s^3G^o$	3 - 3		328
	2	1552.60	49.51758 - 113.9262	$3d^5(a^2G)4s -$	$c^3G - s^3G^o$	5 - 4		328
	0	1553.85	48.31785 - 112.6739	$3d^5(a^2H)4s -$	$b^3H - q^3F^o$	4 - 3		328
	1	1555.01	49.46513 - 113.7734	$3d^5(a^2G)4s -$	$c^3G - s^3G^o$	3 - 3		328
	2	1556.94	49.29131 - 113.5200	$3d^6 -$	$b^1F - t^3G^o$	3 - 3		328
	1	1557.43	49.88215 - 114.0906	$3d^5(a^2F)4s -$	$c^3F - s^3G^o$	4 - 5		328
	3	1559.24	49.42732 - 113.5601	$3d^5(a^2G)4s -$	$c^3G - t^3G^o$	4 - 4		328
	4	1561.17	49.46513 - 113.5200	$3d^5(a^2G)4s -$	$c^3G - t^3G^o$	3 - 3		328
	4	1561.61	49.88986 - 113.9262	$3d^5(a^4F)4s -$	$c^3F - s^3G^o$	3 - 4		328
	1	1562.57	49.51758 - 113.5150	$3d^5(a^2G)4s -$	$c^3G - t^3G^o$	5 - 5		328
	6	1563.61	49.82016 - 113.7734	$3d^5(a^4F)4s -$	$c^3F - s^3G^o$	2 - 3		328
	30	1564.897	33.14771 - 97.0499	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^3G - s^3F^o$	5 - 4		328
40	1566.47	27.54725 - 91.3851	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^3F^o$	6 - 5		328	
2	1567.06	27.57125 - 91.3851	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^3F^o$	5 - 5		328	
20	1568.51	27.54725 - 91.3018	$3d^5(a^4G)4s - 3d^5(b^2F)4p$	$a^5G - u^3G^o$	6 - 5		328	
1	1569.08	27.57125 - 91.3018	$3d^5(a^4G)4s - 3d^5(b^2F)4p$	$a^5G - u^3G^o$	5 - 5		328	
7	1570.05	48.43596 - 112.1285	$3d^5(a^2H)4s -$	$b^3H - u^3H^o$	6 - 6		328	
1	1572.13	27.57125 - 91.1788	$3d^5(a^4G)4s - 3d^5(b^2F)4p$	$a^5G - u^3G^o$	5 - 4		328	
30	1573.53	33.24860 - 96.7999	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^3G - s^3F^o$	4 - 3		328	
6	1574.276	48.33306 - 111.8545	$3d^5(a^2H)4s -$	$b^3H - u^3H^o$	5 - 5		328	
40	1575.642	43.48464 - 106.95057	$3d^5(a^6S)4p - 3d^5(a^6D)5s$	$z^5P^o - g^5D$	2 - 3		328	
3	1575.75	37.85147 - 101.3130	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - t^3D^o$	3 - 3		328	
10	1575.94	27.58357 - 91.0378	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^3F^o$	4 - 4		328	
3	1577.22	48.31785 - 111.7200	$3d^5(a^2H)4s -$	$b^3H - u^3H^o$	4 - 4		328	
10	1577.774	48.43596 - 111.8165	$3d^5(a^2H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^o$	6 - 7		328	
20	1578.90	33.27872 - 96.6141	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^3G - s^3F^o$	3 - 2		328	
3	1581.39	30.68507 - 93.9209	$3d^6 - 3d^44s(b^4D)4p$	$a^3P - w^3P^o$	1 - 2		328	
40	1582.23	27.58357 - 90.7857	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^3F^o$	4 - 3		328	
10	1582.35	27.58850 - 90.7857	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^3F^o$	3 - 3		328	
1	1584.38	37.81186 - 100.9282	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - t^3D^o$	1 - 1		328	
1	1585.30	37.84818 - 100.9282	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - t^3D^o$	2 - 1		328	

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	1587.11	27.58850 - 90.5968	$3d^5(a^4G)4s - 3d^5(b^2F)4p$	$a^5G - x^1D^o$	3 - 2		328
	7	1587.15	48.33306 - 111.3392	$3d^5(a^2H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^o$	5 - 6		328
	1	1587.38	49.88215 - 112.8798	$3d^5(a^4F)4s -$	$c^3F - q^3F^o$	4 - 4		328
	15	1587.46	27.58850 - 90.5822	$3d^5(a^2G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^o$	3 - 2		328
	1	1589.74	48.43596 - 111.3392	$3d^5(a^2H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^o$	6 - 6		328
	20	1590.569	27.58928 - 90.4599	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^o$	2 - 1		328
	0	1592.76	49.88986 - 112.6739	$3d^5(a^4F)4s -$	$c^3F - q^3F^o$	3 - 3		328
	5	1593.224	48.31785 - 111.0838	$3d^5(a^2H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^o$	4 - 5		328
	0	1593.61	48.33306 - 111.0838	$3d^5(a^2H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^o$	5 - 5		328
	2	1597.18	49.51758 - 112.1285	$3d^5(a^2G)4s -$	$c^3G - u^3H^o$	5 - 6		328
	5	1601.84	49.42732 - 111.8545	$3d^5(a^2G)4s -$	$c^3G - u^3H^o$	4 - 5		328
	30	1602.10	32.78787 - 95.2063	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	4 - 4		328
	5	1603.87	32.85719 - 95.2063	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	3 - 4		328
	0	1604.19	49.51758 - 111.8545	$3d^5(a^2G)4s -$	$c^3G - u^3H^o$	5 - 5		328
	0	1605.33	49.42732 - 111.7200	$3d^5(a^2G)4s -$	$c^3G - u^3H^o$	4 - 4		328
	60	1605.467	34.76211 - 97.0499	$3d^6 - 3d^44s(b^4D)4p$	$b^3G - s^3F^o$	5 - 4		328
	2	1607.37	29.86948 - 92.0830	$3d^6 - 3d^5(b^2F)4p$	$a^3P - u^3D^o$	2 - 3		328
	5	1607.67	32.78787 - 94.9897	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	4 - 3		328
	30	1609.50	32.85909 - 94.9897	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	2 - 3		328
	5	1611.61	32.83666 - 94.8865	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	1 - 2		328
	10	1612.15	32.85719 - 94.8865	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	3 - 2		328
	1	1613.50	32.81833 - 94.7955	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	0 - 1		328
	3	1613.62	49.88215 - 111.8545	$3d^5(a^4F)4s -$	$c^3F - u^3H^o$	4 - 5		328
	5	1614.56	32.85909 - 94.7955	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	2 - 1		328
	2	1615.050	9.47297 - 71.39048	$3d^5(a^6S)4s - 3d^5(a^4D)4p$	$a^5S - x^5P^o$	2 - 3		328
	1	1615.22	32.83666 - 94.7480	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^o$	1 - 0		328
	60	1615.79	34.91075 - 96.7999	$3d^6 - 3d^44s(b^4D)4p$	$b^3G - s^3F^o$	4 - 3		328
	5	1616.79	9.47297 - 71.32362	$3d^5(a^6S)4s - 3d^5(a^4D)4p$	$a^5S - x^5P^o$	2 - 2		328
	4	1617.34	49.88986 - 111.7200	$3d^5(a^4F)4s -$	$c^3F - u^3H^o$	3 - 4		328
	2	1618.34	9.47297 - 71.26442	$3d^5(a^6S)4s - 3d^5(a^4D)4p$	$a^5S - x^5P^o$	2 - 1		328
	40	1623.14	35.00477 - 96.6141	$3d^6 - 3d^44s(b^4D)4p$	$b^3G - s^3F^o$	3 - 2		328
76	10	1625.28	38.36618 - 99.89513	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	2 - 3		328
76	20	1625.35	38.36618 - 99.89232	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	2 - 2		328
	10	1625.89	39.80846 - 101.3130	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^3D - t^3D^o$	3 - 3		328
76	20	1629.84	38.54308 - 99.89898	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	3 - 4		328
76	10	1629.94	38.54308 - 99.89513	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	3 - 3		328
76	7	1630.00	38.54308 - 99.89232	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	3 - 2		328
	2	1632.10	39.81368 - 101.0841	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^3D - t^3D^o$	2 - 2		328
76	25	1636.75	38.80667 - 99.90410	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	4 - 5		328
76	15	1636.87	38.80667 - 99.89898	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	4 - 4		328
76	6	1636.96	38.80667 - 99.89513	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^7P^o - ^7D$	4 - 3		328
	1	1642.90	52.38372 - 113.2514	$3d^5(a^2F)4s -$	$d^3F - s^3D^o$	4 - 3		328
	2	1643.08	30.52370 - 91.3851	$3d^6 - 3d^44s(a^6D)4p$	$a^3H - w^5F^o$	6 - 5		328
10	1645.32	30.52370 - 91.3018	$3d^6 - 3d^5(b^2F)4p$	$a^3H - u^3G^o$	6 - 5		328	
	1	1647.07	49.42732 - 110.1415	$3d^5(a^2G)4s -$	$c^3G - r^3F^o$	4 - 4		328
	1	1649.52	49.51758 - 110.1415	$3d^5(a^2G)4s -$	$c^3G - r^3F^o$	5 - 4		328
	30	1651.02	31.51466 - 92.0830	$3d^6 - 3d^5(b^2F)4p$	$a^3F - u^3D^o$	4 - 3		328
	10	1652.91	30.67951 - 91.1788	$3d^6 - 3d^5(b^2F)4p$	$a^3H - u^3G^o$	5 - 4		328
	2	1653.00	52.38372 - 112.8798	$3d^5(a^2F)4s -$	$d^3F - q^3F^o$	4 - 4		328
	1	1655.04	31.66196 - 92.0830	$3d^6 - 3d^5(b^2F)4p$	$a^3F - u^3D^o$	3 - 3		328
	3	1658.37	31.76115 - 92.0608	$3d^6 - 3d^5(b^2F)4p$	$a^3F - u^3D^o$	2 - 1		328
	0	1659.50	49.88215 - 110.1415	$3d^5(a^4F)4s -$	$c^3F - r^3F^o$	4 - 4		328
	10	1660.06	49.46513 - 109.7040	$3d^5(a^2G)4s - 3d^44s(b^4P)4p$	$c^3G - y^3S^o$	3 - 2		328
	10	1660.516	30.79569 - 91.0183	$3d^6 - 3d^5(b^2F)4p$	$a^3H - u^3G^o$	4 - 3		328

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1661.576	52.37938 - 112.5632	$3d^5(a^2F)4s$	$d^3F - q^3F^o$	2 - 2		328
	3	1663.653	48.33306 - 108.4414	$3d^5(a^2H)4s - 3d^5(a^6S)5f$	$b^3H - ^5F^o$	5 - 4		328
	2	1678.63	9.47297 - 69.04490	$3d^5(a^6S)4s - 3d^5(a^4P)4p$	$a^5S - z^3P^o$	2 - 2		328
39	60	1679.55	29.88952 - 89.4291	$3d^5(a^4P)4s - 3d^44s4p$	$a^3P - v^5P^o$	3 - 3		328
39	40	1680.401	29.91943 - 89.4291	$3d^5(a^4P)4s - 3d^44s4p$	$a^3P - v^5P^o$	2 - 3		328
75	10	1684.58	38.36618 - 97.72854	$3d^5(a^6S)4p - 3d^5(a^6S)6s$	$z^7P^o - ^7S$	2 - 3		328
	10	1684.71	14.32586 - 73.68344	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	4 - 4		328
	2	1688.13	30.52370 - 89.76033	$3d^6 - 3d^5(a^2H)4p$	$a^3H - x^1H^o$	6 - 5		328
	2	1689.25	37.85147 - 97.0499	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - s^3F^o$	3 - 4		328
39	50	1689.48	29.88952 - 89.0792	$3d^5(a^4P)4s - 3d^44s4p$	$a^3P - v^5P^o$	3 - 2		328
75	15	1689.611	38.54308 - 97.72854	$3d^5(a^6S)4p - 3d^5(a^6S)6s$	$z^7P^o - ^7S$	3 - 3		328
102	4	1689.84	54.84624 - 114.0236	$3d^44s^2 - 3d^5(a^6S)6f$	$c^5D - ^5F^o$	0 - 1		328
39	0	1690.32	29.91943 - 89.0792	$3d^5(a^4P)4s - 3d^44s4p$	$a^3P - v^5P^o$	2 - 2		328
39	40	1691.248	29.95142 - 89.0792	$3d^5(a^4P)4s - 3d^44s4p$	$a^3P - v^5P^o$	1 - 2		328
	1	1691.45	30.67951 - 89.80034	$3d^6 - 3d^5(b^2F)4p$	$a^3H - t^3F^o$	5 - 4		328
	2	1692.34	14.59382 - 73.68344	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	3 - 4		328
102	10	1692.46	54.93819 - 114.0249	$3d^44s^2 - 3d^5(a^6S)6f$	$c^5D - ^5F^o$	1 - 2		328
	50	1694.24	9.47297 - 68.49661	$3d^5(a^6S)4s - 3d^5(a^4P)4p$	$a^3S - y^3P^o$	2 - 1		328
	60	1696.51	9.47297 - 68.41761	$3d^5(a^6S)4s - 3d^5(a^4P)4p$	$a^3S - y^3P^o$	2 - 2		328
39	80	1697.19	29.91943 - 88.8397	$3d^5(a^4P)4s - 3d^44s4p$	$a^3P - v^5P^o$	2 - 1		328
75	80	1697.19	38.80667 - 97.72854	$3d^5(a^6S)4p - 3d^5(a^6S)6s$	$z^7P^o - ^7S$	4 - 3		328
102	12	1697.53	55.11631 - 114.0265	$3d^44s^2 - 3d^5(a^6S)6f$	$c^5D - ^5F^o$	2 - 3		328
39	10	1698.127	29.95142 - 88.8397	$3d^5(a^4P)4s - 3d^44s4p$	$a^3P - v^5P^o$	1 - 1		328
	100	1700.34	9.47297 - 68.28462	$3d^5(a^6S)4s - 3d^5(a^4P)4p$	$a^3S - y^3P^o$	2 - 3		328
	1	1700.60	37.81186 - 96.6141	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - s^3F^o$	1 - 2		328
101	3	1700.69	54.84624 - 113.6461	$3d^44s^2 -$	$c^5D - s^3F^o$	0 - 1		328
101	5	1703.37	54.93819 - 113.6454	$3d^44s^2 -$	$c^5D - s^3F^o$	1 - 2		328
102	15	1704.87	55.37168 - 114.0265	$3d^44s^2 - 3d^5(a^6S)6f$	$c^5D - ^5F^o$	3 - 3		328
	10	1706.57	32.78787 - 91.3851	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5F^o$	4 - 5		328
	100	1708.267	30.52370 - 89.0626	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^1H^o$	6 - 5		328
101	4	1708.55	55.11631 - 113.6454	$3d^44s^2 -$	$c^5D - s^3F^o$	2 - 2		328
101	6	1708.65	55.11631 - 113.6420	$3d^44s^2 -$	$c^5D - s^3F^o$	2 - 3		328
	100	1711.83	30.67951 - 89.09656	$3d^6 - 3d^5(a^2G)4p$	$a^3H - v^3G^o$	5 - 4		328
102	100	1714.38	55.69699 - 114.0270	$3d^44s^2 - 3d^5(a^6S)6f$	$c^5D - ^5F^o$	4 - 5		328
	1	1715.25	30.79569 - 89.09656	$3d^6 - 3d^5(a^2G)4p$	$a^3H - v^3G^o$	4 - 4		328
	10	1715.69	31.51466 - 89.80034	$3d^6 - 3d^5(b^2F)4p$	$a^3F - t^3F^o$	4 - 4		328
101	12	1715.98	55.37168 - 113.6472	$3d^44s^2 -$	$c^5D - s^3F^o$	3 - 4		328
101	12	1716.14	55.37168 - 113.6420	$3d^44s^2 -$	$c^5D - s^3F^o$	3 - 3		328
	80	1716.78	30.52370 - 88.77230	$3d^6 - 3d^5(a^2G)4p$	$a^3H - v^3G^o$	6 - 5		328
	2	1718.56	55.37168 - 113.5601	$3d^44s^2 -$	$c^5D - t^3G^o$	3 - 4		328
	15	1718.79	32.85719 - 91.0378	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5F^o$	3 - 4		328
101	15	1725.29	55.69699 - 113.6581	$3d^44s^2 -$	$c^5D - s^3F^o$	4 - 5		328
	20	1725.441	36.27458 - 94.2309	$3d^5(a^4P)4s - 3d^5(a^2S)4p$	$b^3P - v^3P^o$	2 - 2		328
101	10	1725.61	55.69699 - 113.6472	$3d^44s^2 -$	$c^5D - s^3F^o$	4 - 4		328
	10	1726.29	32.85909 - 90.7857	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5F^o$	2 - 3		328
13	200	1726.47	14.32586 - 72.24771	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	4 - 3		328
	30	1726.81	31.66196 - 89.57203	$3d^6 - 3d^5(b^2F)4p$	$a^3F - t^3F^o$	3 - 3		328
	1	1728.12	36.36459 - 94.2309	$3d^5(a^4P)4s - 3d^5(a^2S)4p$	$b^3P - v^3P^o$	1 - 2		328
	5	1729.57	55.69699 - 113.5150	$3d^44s^2 -$	$c^5D - t^3G^o$	4 - 5		328
	40	1731.36	31.76115 - 89.51925	$3d^6 - 3d^5(b^2F)4p$	$a^3F - t^3F^o$	2 - 2		328
	0	1731.73	32.83666 - 90.5822	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5F^o$	1 - 2		328
13	300	1732.702	14.59382 - 72.30721	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	3 - 2		328
13	500	1733.55	14.32586 - 72.01102	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	4 - 4		328
	30	1733.87	30.52370 - 88.19807	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3H^o$	6 - 6		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
13	400	1734.49	14.59382 - 72.24771	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	3 - 3		328
	30	1734.72	36.27458 - 93.9209	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - w^3P^o$	2 - 2		328
	5	1737.43	36.36459 - 93.9209	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - w^3P^o$	1 - 2		328
13	300	1737.929	14.78119 - 72.32106	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	2 - 1		328
13	100	1738.347	14.78119 - 72.30721	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	2 - 2		328
	10	1738.51	52.37938 - 109.9004	$3d^5(a^2F)4s -$	$d^3F - r^3F^o$	2 - 2		328
13	200	1740.156	14.78119 - 72.24771	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	2 - 3		328
13	40	1741.50	14.90118 - 72.32249	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	1 - 0		328
13	50	1741.65	14.59382 - 72.01102	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	3 - 4		328
13	200	1742.00	14.90118 - 72.30721	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	1 - 2		328
13	100	1743.347	14.95984 - 72.32106	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5D^o$	0 - 1		328
91	2	1744.54	43.37051 - 100.69316	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^5P^o - ^5D$	3 - 2		328
91	20	1744.69	30.67951 - 87.99550	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3H^o$	5 - 5		328
	10	1744.86	43.37051 - 100.68238	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^5P^o - ^5D$	3 - 4		328
	10	1746.99	39.80846 - 97.0499	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^3D - s^3F^o$	3 - 4		328
91	2	1747.92	43.48464 - 100.6961	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^5P^o - ^5D$	2 - 1		328
91	2	1747.995	43.48464 - 100.69316	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^5P^o - ^5D$	2 - 2		328
91	10	1748.13	43.48464 - 100.68858	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^5P^o - ^5D$	2 - 3		328
91	40	1749.93	30.79569 - 87.94108	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3H^o$	4 - 4		328
	8	1750.18	43.55714 - 100.69316	$3d^5(a^6S)4p - 3d^5(a^6S)5d$	$z^5P^o - ^5D$	1 - 2		328
	20	1751.60	36.27458 - 93.3660	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - w^3P^o$	2 - 1		328
	8	1752.40	14.32586 - 71.39048	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	4 - 3		328
	0	1752.92	29.88952 - 86.93681	$3d^5(a^4P)4s - 3d^5(a^6S)5p$	$a^3P - w^3P^o$	3 - 2		328
	1	1754.12	29.88952 - 86.89767	$3d^5(a^4P)4s - 3d^5(a^6S)5p$	$a^3P - w^3P^o$	3 - 3		328
	5	1754.34	36.36459 - 93.3660	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - w^3P^o$	1 - 1		328
	0	1754.65	39.80846 - 96.7999	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^3D - s^3F^o$	3 - 3		328
	8	1754.81	39.81368 - 96.7999	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^3D - s^3F^o$	2 - 3		328
	0	1755.04	29.91943 - 86.89767	$3d^5(a^4P)4s - 3d^5(a^6S)5p$	$a^3P - w^3P^o$	2 - 3		328
	10	1756.30	36.42817 - 93.3660	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - w^3P^o$	0 - 1		328
	1	1756.80	30.79569 - 87.71762	$3d^6 - 3d^5(a^2G)4p$	$a^3H - u^3F^o$	4 - 3		328
	2	1757.44	30.67951 - 87.58023	$3d^6 - 3d^5(a^2G)4p$	$a^3H - u^3F^o$	5 - 4		328
	100	1760.678	14.59382 - 71.39048	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	3 - 3		328
	5	1760.96	39.82684 - 96.6141	$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^3D - s^3F^o$	1 - 2		328
10	1762.75	14.59382 - 71.32362	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	3 - 2		328	
15	1763.94	36.36459 - 93.0561	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - w^3P^o$	1 - 0		328	
100	1765.502	32.78787 - 89.4291	$3d^5(a^4D)4s - 3d^44s4p$	$b^5D - v^5P^o$	4 - 3		328	
50	1766.50	14.78119 - 71.39048	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	2 - 3		328	
60	1767.67	32.85719 - 89.4291	$3d^5(a^4D)4s - 3d^44s4p$	$b^5D - v^5P^o$	3 - 3		328	
80	1768.596	14.78119 - 71.32362	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	2 - 2		328	
8	1769.08	47.07356 - 103.60017	$3d^5(a^2F)4s - 3d^5(b^2D)4p$	$a^1F - w^1D^o$	3 - 2		328	
10	1770.444	14.78119 - 71.26442	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	2 - 1		328	
2	1772.00	29.86948 - 86.30255	$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3D^o$	2 - 3		328	
30	1772.35	14.90118 - 71.32362	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	1 - 2		328	
5	1772.45	37.81186 - 94.2309	$3d^6 - 3d^5(a^2S)4p$	$a^3D - v^3P^o$	1 - 2		328	
2	1773.70	37.85147 - 94.2309	$3d^6 - 3d^5(a^2S)4p$	$a^3D - v^3P^o$	3 - 2		328	
50	1774.21	14.90118 - 71.26442	$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^5P^o$	1 - 1		328	
15	1774.75	14.59382 - 70.94054	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^o$	3 - 2		328	
50	1775.21	14.32586 - 70.65758	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5F^o$	4 - 5		328	
0	1775.52	29.86948 - 86.19018	$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3D^o$	2 - 2		328	
6	1775.69	54.84624 - 111.1623	$3d^44s^2 -$	$c^5D - s^5P^o$	0 - 1		328	
20	1776.06	27.57125 - 83.87546	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^5G - x^5G^o$	5 - 4		328	
0	1777.23	34.91075 - 91.1788	$3d^6 - 3d^5(b^2F)4p$	$b^3G - u^3G^o$	4 - 4		328	
10	1778.01	32.83666 - 89.0792	$3d^5(a^4D)4s - 3d^44s4p$	$b^5D - v^5P^o$	1 - 2		328	
6	1778.09	54.93819 - 111.1785	$3d^44s^2 -$	$c^5D - s^5P^o$	1 - 2		328	

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
100	20	1778.59	54.93819 - 111.1623	$3d^4 4s^2 -$	$c^5D - s^5P^o$	1 - 1		328	
	100	1778.692	32.85719 - 89.0792	$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^5D - v^5P^o$	3 - 2		328	
	20	1779.308	14.32586 - 70.52762	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3G^o$	4 - 5		328	
	1	1779.59	29.86948 - 86.06168	$3d^6 - 3d^5(a^2F)4p$	$a^3P - y^1F^o$	2 - 3		328	
	8	1780.25	14.32586 - 70.49780	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	4 - 4		328	
	1	1781.82	54.93819 - 111.0605	$3d^4 4s^2 -$	$c^5D - t^5F^o$	1 - 2		328	
	1	1781.93	14.95984 - 71.07844	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^3D^o$	0 - 1		328	
	8	1782.626	31.76115 - 87.85851	$3d^6 - 3d^5(a^2G)4p$	$a^3F - u^3F^o$	2 - 2		328	
	1	1783.06	29.86948 - 85.9526	$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3F^o$	2 - 3		328	
	0	1783.18	54.93819 - 111.0175	$3d^4 4s^2 -$	$c^5D - t^5F^o$	1 - 1		328	
	2	1783.38	37.84818 - 93.9209	$3d^6 - 3d^4 4s(b^4D)4p$	$a^3D - w^3P^o$	2 - 2		328	
	15	1783.51	37.85147 - 93.9209	$3d^6 - 3d^4 4s(b^4D)4p$	$a^3D - w^3P^o$	3 - 2		328	
	100	10	1783.63	31.51466 - 87.58023	$3d^6 - 3d^5(a^2G)4p$	$a^3F - u^3F^o$	4 - 4		328
		20	1783.72	55.11631 - 111.1785	$3d^4 4s^2 -$	$c^5D - s^5P^o$	2 - 2		328
		10	1783.94	31.66196 - 87.71762	$3d^6 - 3d^5(a^2G)4p$	$a^3F - u^3F^o$	3 - 3		328
100		15	1784.24	55.11631 - 111.1623	$3d^4 4s^2 -$	$c^5D - s^5P^o$	2 - 1		328
		10	1784.46	14.90118 - 70.94054	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^3D^o$	1 - 2		328
		20	1785.032	32.81833 - 88.8397	$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^5D - v^5P^o$	0 - 1		328
		1	1785.31	35.00477 - 91.0183	$3d^6 - 3d^5(b^2F)4p$	$b^3G - u^3G^o$	3 - 3		328
		20	1785.618	32.83666 - 88.8397	$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^5D - v^5P^o$	1 - 1		328
		1	1785.73	55.11631 - 111.1160	$3d^4 4s^2 -$	$c^5D - t^5F^o$	2 - 3		328
		20	1786.31	32.85909 - 88.8397	$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^5D - v^5P^o$	2 - 1		328
		10	1786.86	14.78119 - 70.74538	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^3D^o$	2 - 3		328
		3	1786.97	55.75927 - 111.7200	$3d^5(a^2F)4s -$	$c^1F - u^3H^o$	3 - 4		328
		2	1787.23	14.59382 - 70.54637	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3G^o$	3 - 4		328
		3	1787.36	33.14771 - 89.09656	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	5 - 4		328
		2	1787.48	55.11631 - 111.0605	$3d^4 4s^2 -$	$c^5D - t^5F^o$	2 - 2		328
	40	1788.43	33.14771 - 89.0626	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - ^1H^o$	5 - 5		328	
	40	1788.786	14.59382 - 70.49780	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	3 - 4		328	
	8	1789.63	33.24860 - 89.1260	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	4 - 3		328	
100	80	1790.60	33.24860 - 89.09656	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	4 - 4		328	
	20	1790.79	55.37168 - 111.2133	$3d^4 4s^2 -$	$c^5D - s^5P^o$	3 - 3		328	
	1	1791.54	33.27872 - 89.09656	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	3 - 4		328	
	2	1791.67	33.24860 - 89.0626	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - ^1H^o$	4 - 5		328	
	100	25	1791.88	55.37168 - 111.1785	$3d^4 4s^2 -$	$c^5D - s^5P^o$	3 - 2		328
		0	1792.52	55.37168 - 111.1596	$3d^4 4s^2 -$	$c^5D - t^5F^o$	3 - 4		328
		30	1793.753	14.59382 - 70.34293	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	3 - 3		328
		1	1793.89	55.37168 - 111.1160	$3d^4 4s^2 -$	$c^5D - t^5F^o$	3 - 3		328
		2	1797.35	14.59382 - 70.23147	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	3 - 2		328
		20	1797.76	33.14771 - 88.77230	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	5 - 5		328
		40	1799.81	14.78119 - 70.34293	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	2 - 3		328
		2	1800.959	53.59713 - 109.1233	$3d^6 -$	$c^3P - u^5F^o$	2 - 3		328
		1	1801.04	30.68507 - 86.2084	$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3D^o$	1 - 1		328
		10	1801.23	37.84818 - 93.3660	$3d^6 - 3d^4 4s(b^4D)4p$	$a^3D - w^3P^o$	2 - 1		328
		100	50	1801.27	55.69699 - 111.2133	$3d^4 4s^2 -$	$c^5D - s^5P^o$	4 - 3	
8			1801.63	30.68507 - 86.19018	$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3D^o$	1 - 2		328
10			1803.00	55.69699 - 111.1603	$3d^4 4s^2 -$	$c^5D - t^5F^o$	4 - 5		328
20			1803.43	14.78119 - 70.23147	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	2 - 2		328
			1804.446	55.69699 - 111.1160	$3d^4 4s^2 -$	$c^5D - t^5F^o$	4 - 3		141
30	1807.34		14.90118 - 70.23147	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	1 - 2		328	
40	1808.72		30.52370 - 85.81143	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	6 - 7		328	
40	1808.96		38.9018 - 94.1822	$3d^6 - 3d^5(b^2F)4p$	$a^3G - w^3F^o$	4 - 3		328	
30	1809.43		30.79569 - 86.06168	$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^1F^o$	4 - 3		328	
30	1809.97		14.90118 - 70.15074	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	1 - 1		328	

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1810.12	37.81186 - 93.0561	$3d^6 - 3d^4 4s(b^4D)4p$	$a^3D - w^3P^o$	1 - 0		328
	10	1811.89	14.95984 - 70.15074	$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^5F^o$	0 - 1		328
	2	1812.04	31.02205 - 86.2084	$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3D^o$	0 - 1		328
	10	1813.03	30.79569 - 85.9526	$3d^6 - 3d^5(a^4F)4p$	$a^3H - v^3F^o$	4 - 3		328
99	8	1813.283	54.84624 - 109.9946	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	0 - 1		328
99	30	1813.866	54.93819 - 110.0688	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	1 - 2		328
	25	1814.47	30.52370 - 85.63610	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	6 - 6		328
99	40	1815.24	55.11631 - 110.2056	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	2 - 3		328
	5	1815.57	30.67951 - 85.7593	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^1G^o$	5 - 4		328
99	25	1816.284	55.37168 - 110.4292	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	3 - 4		328
	25	1816.52	33.14771 - 88.19807	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	5 - 6		328
90	10	1816.87	43.37051 - 98.41035	$3d^5(a^6S)4p - 3d^5(a^6S)6s$	$z^5P^o - ^5S$	3 - 2		328
	10	1816.91	34.76211 - 89.80034	$3d^6 - 3d^5(b^2F)4p$	$b^3G - t^3F^o$	5 - 4		328
99	150	1817.53	30.52370 - 85.54323	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3G^o$	6 - 5		328
	100	1818.38	30.67951 - 85.67372	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3G^o$	5 - 4		328
	15	1819.62	30.67951 - 85.63610	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	5 - 6		328
99	9	1819.75	55.11631 - 110.0688	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	2 - 2		328
	50	1820.22	30.79569 - 85.73462	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3G^o$	4 - 3		328
90	9	1820.65	43.48464 - 98.41035	$3d^5(a^6S)4p - 3d^5(a^6S)6s$	$z^5P^o - ^5S$	2 - 2		328
99	30	1822.213	30.79569 - 85.67372	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3G^o$	4 - 4		328
	10	1822.71	30.67951 - 85.54323	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3G^o$	5 - 5		328
90	8	1823.06	43.55714 - 98.41035	$3d^5(a^6S)4p - 3d^5(a^6S)6s$	$z^5P^o - ^5S$	1 - 2		328
	1	1823.22	33.14771 - 87.99550	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	5 - 5		328
99	30	1823.69	55.37168 - 110.2056	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	3 - 3		328
	3	1825.22	31.51466 - 86.30255	$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3D^o$	4 - 3		328
	20	1826.59	33.24860 - 87.99550	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	4 - 5		328
99	100	1827.076	55.69699 - 110.4292	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	4 - 4		328
99	10	1828.251	55.37168 - 110.0688	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	3 - 2		328
	60	1829.43	34.91075 - 89.57203	$3d^6 - 3d^5(b^2F)4p$	$b^3G - t^3F^o$	4 - 3		328
	20	1829.75	30.79569 - 85.44770	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	4 - 5		328
	10	1830.15	31.66196 - 86.30255	$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3D^o$	3 - 3		328
	10	1831.05	43.85042 - 98.46323	$3d^5(a^4F)4s - 3d^5(a^6S)4f$	$a^5F - ^5F^o$	2 - 3		328
	40	1831.66	27.54725 - 82.14246	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^5G - y^5G^o$	6 - 6		328
	50	1832.19	33.27872 - 87.85851	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - u^3F^o$	3 - 2		328
	1	1832.47	27.57125 - 82.14246	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^5G - y^5G^o$	5 - 6		328
	20	1833.30	27.57125 - 82.11716	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^5G - y^5G^o$	5 - 5		328
	1	1833.47	31.76115 - 86.30255	$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3D^o$	2 - 3		328
	15	1833.91	31.66196 - 86.19018	$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3D^o$	3 - 2		328
	15	1834.47	36.27458 - 90.7857	$3d^5(a^4P)4s - 3d^4 4s(a^6D)4p$	$b^3P - w^3F^o$	2 - 3		328
	30	1834.57	55.69699 - 110.2056	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5D^o$	4 - 3		328
	100	1835.91	33.24860 - 87.71762	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - u^3F^o$	4 - 3		328
	50	1836.508	14.59382 - 69.04490	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^3P^o$	3 - 2		328
	20	1836.92	33.27872 - 87.71762	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - u^3F^o$	3 - 3		328
	80	1837.13	33.14771 - 87.58023	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - u^3F^o$	5 - 4		328
	2	1837.25	31.76115 - 86.19018	$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3D^o$	2 - 2		328
	60	1837.48	39.80846 - 94.2309	$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^o$	3 - 2		328
	10	1837.65	39.81368 - 94.2309	$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^o$	2 - 2		328
	1	1837.86	27.58357 - 81.99385	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^5G - x^3F^o$	4 - 4		328
98	10	1838.05	54.93819 - 109.3444	$3d^4 4s^2 -$	$c^5D - v^5D^o$	1 - 2		328
	2	1838.25	31.66196 - 86.06168	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3F^o$	3 - 3		328
98	30	1838.604	54.84624 - 109.2353	$3d^4 4s^2 -$	$c^5D - v^5D^o$	0 - 1		328
98	15	1839.59	55.11631 - 109.4766	$3d^4 4s^2 -$	$c^5D - v^5D^o$	2 - 3		328
	100	1840.29	27.54725 - 81.88633	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^5G - x^3F^o$	6 - 5		328
	2	1840.45	34.76211 - 89.09656	$3d^6 - 3d^5(a^2G)4p$	$b^3G - v^3G^o$	5 - 4		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
98	3	1840.56	33.24860 - 87.58023	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - u^3F^o$	4 - 4		328
	5	1840.91	40.7595 - 95.08076	$3d^6 - 3d^5(a^2S)4p$	$a^1S - y^1P^o$	0 - 1		328
	30	1841.12	27.57125 - 81.88633	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - x^3F^o$	5 - 5		328
	10	1841.33	49.29131 - 103.60017	$3d^6 - 3d^5(b^2D)4p$	$b^1F - w^1D^o$	3 - 2		328
	40	1841.61	31.76115 - 86.06168	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3F^o$	2 - 3		328
	3	1841.72	54.93819 - 109.2353	$3d^4s^2 -$	$c^5D - v^5D^o$	1 - 1		328
	100	1841.947	31.66196 - 85.9526	$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3F^o$	3 - 3		328
	10	1842.33	27.58357 - 81.86284	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - y^3G^o$	4 - 4		328
	1	1842.49	27.58850 - 81.86284	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - y^3G^o$	3 - 4		328
	50	1842.863	55.11631 - 109.3795	$3d^4s^2 -$	$c^5D - t^5P^o$	2 - 3		328
20	1843.117	14.95984 - 69.21602	$3d^6 - 3d^5(a^4P)4p$	$a^3D - z^3P^o$	0 - 1		328	
100	1843.505	31.51466 - 85.7593	$3d^6 - 3d^5(a^2G)4p$	$a^3F - ^1G^o$	4 - 4		328	
98	1	1843.78	55.37168 - 109.6083	$3d^4s^2 -$	$c^5D - v^5D^o$	3 - 4		328
	20	1843.94	37.85147 - 92.0830	$3d^6 - 3d^5(b^2F)4p$	$a^3D - u^3D^o$	3 - 3		328
98	6	1844.027	54.93819 - 109.1677	$3d^4s^2 -$	$c^5D - v^5D^o$	1 - 0		141
98	50	1844.086	55.11631 - 109.3444	$3d^4s^2 -$	$c^5D - v^5D^o$	2 - 2		328
	20	1844.794						328
	30	1845.29	27.58850 - 81.78070	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - y^3G^o$	3 - 3		328
	40	1845.51	34.91075 - 89.09656	$3d^6 - 3d^5(a^2G)4p$	$b^3G - v^3G^o$	4 - 4		328
	10	1846.66	34.91075 - 89.0626	$3d^6 - 3d^5(a^2G)4p$	$b^3G - H^o$	4 - 5		328
	4	1846.78	54.84624 - 108.9944	$3d^4s^2 -$	$c^5D - u^5F^o$	0 - 1		328
	10	1846.93	14.90118 - 69.04490	$3d^6 - 3d^5(a^4P)4p$	$a^3D - z^3P^o$	1 - 2		328
	150	1847.73	30.52370 - 84.64386	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	6 - 6		328
97	10	1848.16	54.93819 - 109.0464	$3d^4s^2 -$	$c^5D - u^5F^o$	1 - 2		328
98	40	1848.26	55.37168 - 109.4766	$3d^4s^2 -$	$c^5D - v^5D^o$	3 - 3		328
	2	1848.52	31.66196 - 85.7593	$3d^6 - 3d^5(a^2G)4p$	$a^3F - ^1G^o$	3 - 4		328
97	3	1849.94	54.93819 - 108.9944	$3d^4s^2 -$	$c^5D - u^5F^o$	1 - 1		328
	20	1850.00	39.81368 - 93.8685	$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^o$	2 - 1		328
	3	1850.43	39.82684 - 93.8685	$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^o$	1 - 1		328
96	1	1850.60	54.93819 - 108.9751	$3d^4s^2 -$	$c^5D - t^5P^o$	1 - 2		328
	100	1850.88	31.51466 - 85.54323	$3d^6 - 3d^5(a^2H)4p$	$a^3F - w^3G^o$	4 - 5		328
	60	1851.44	31.66196 - 85.67372	$3d^6 - 3d^5(a^2H)4p$	$a^3F - w^3G^o$	3 - 4		328
97	10	1851.61	55.11631 - 109.1233	$3d^4s^2 -$	$c^5D - u^5F^o$	2 - 3		328
98	60	1852.78	55.37168 - 109.3444	$3d^4s^2 -$	$c^5D - v^5D^o$	3 - 2		328
	2	1853.05	30.67951 - 84.64386	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	5 - 6		328
12	300	1853.272	14.32586 - 68.28462	$3d^6 - 3d^5(a^4P)4p$	$a^3D - y^3P^o$	4 - 3		328
97	2	1854.24	55.11631 - 109.0464	$3d^4s^2 -$	$c^5D - u^5F^o$	2 - 2		328
98	40	1854.89	55.69699 - 109.6083	$3d^4s^2 -$	$c^5D - v^5D^o$	4 - 4		328
	8	1855.14	30.52370 - 84.42821	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	6 - 5		328
	8	1855.54	39.82684 - 93.7196	$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^o$	1 - 0		328
96	5	1855.947	54.84624 - 108.7271	$3d^4s^2 -$	$c^5D - t^5P^o$	0 - 1		328
96	12	1856.70	55.11631 - 108.9751	$3d^4s^2 -$	$c^5D - t^5P^o$	2 - 2		328
	30	1857.01	55.37168 - 109.2219	$3d^4s^2 -$	$c^5D - u^5F^o$	3 - 4		328
12	200	1857.923	14.59382 - 68.41761	$3d^6 - 3d^5(a^4P)4p$	$a^3D - y^3P^o$	3 - 2		328
96	10	1859.11	54.93819 - 108.7271	$3d^4s^2 -$	$c^5D - t^5P^o$	1 - 1		328
	8	1859.44	55.69699 - 109.4766	$3d^4s^2 -$	$c^5D - v^5D^o$	4 - 3		328
97	3	1860.42	55.37168 - 109.1233	$3d^4s^2 -$	$c^5D - u^5F^o$	3 - 3		328
	100	1860.51	30.67951 - 84.42821	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	5 - 5		328
	1	1861.44	33.14771 - 86.86939	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - y^1I^o$	5 - 6		328
12	100	1861.667	14.78119 - 68.49661	$3d^6 - 3d^5(a^4P)4p$	$a^3D - y^3P^o$	2 - 1		328
12	80	1862.515	14.59382 - 68.28462	$3d^6 - 3d^5(a^4P)4p$	$a^3D - y^3P^o$	3 - 3		328
96	20	1862.80	55.69699 - 109.3795	$3d^4s^2 -$	$c^5D - t^5P^o$	4 - 3		328
	20	1863.48						328
12	80	1864.400	14.78119 - 68.41761	$3d^6 - 3d^5(a^4P)4p$	$a^3D - y^3P^o$	2 - 2		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
97	40	1864.615	55.69699 - 109.3275	$3d^4 4s^2 -$	$c^5D - u^5F^o$	4 - 5		328
	5	1865.16	38.9018 - 92.51665	$3d^6 - 3d^5(a^2H)4p$	$a^1G - w^1G^o$	4 - 4		328
96	2	1865.30	55.11631 - 108.7271	$3d^4 4s^2 -$	$c^5D - t^5P^o$	2 - 1		328
	10	1865.52	55.37168 - 108.9751	$3d^4 4s^2 -$	$c^5D - t^5P^o$	3 - 2		328
12	150	1865.832	14.90118 - 68.49661	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^o$	1 - 1		328
	1	1866.25	30.68507 - 84.26806	$3d^6 - 3d^5(a^2D)4p$	$a^3P - z^1P^o$	1 - 1		328
12	80	1867.880	14.95984 - 68.49661	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^o$	0 - 1		328
97	0	1868.28	55.69699 - 109.2219	$3d^4 4s^2 -$	$c^5D - u^5F^o$	4 - 4		328
12	20	1868.58	14.90118 - 68.41761	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^o$	1 - 2		328
	40	1868.78	30.79569 - 84.30720	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	4 - 4		328
12	15	1869.03	14.78119 - 68.28462	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^o$	2 - 3		328
	1	1869.55						328
20	1871.39	34.76211 - 88.19807	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3H^o$	5 - 6		328	
	40	1873.07	30.52370 - 83.91238	$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^o$	6 - 5		328
30	1875.59	14.59382 - 67.91056	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3H^o$	3 - 4		328	
	1	1876.11	33.14771 - 86.44924	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - v^3F^o$	5 - 4		328
30	1877.16	14.59382 - 67.86585	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3F^o$	3 - 4		328	
	3	1878.52	34.76211 - 87.99550	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3H^o$	5 - 5		328
5	1879.09	14.59382 - 67.81205	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3F^o$	3 - 3	Q	328	
	1	1879.66	33.24860 - 86.44924	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - v^3F^o$	4 - 4		328
40	1879.85	30.67951 - 83.87546	$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^o$	5 - 4		328	
	30	1881.90	30.79569 - 83.93374	$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^o$	4 - 3		328
10	1883.78	34.91075 - 87.99550	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3H^o$	4 - 5		328	
	10	1883.98	30.79569 - 83.87546	$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^o$	4 - 4		328
1	1885.05	29.86948 - 82.91778	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3F^o$	2 - 2		328	
	20	1885.70	34.91075 - 87.94108	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3H^o$	4 - 4		328
20	1886.72						328	
	2	1887.31	14.78119 - 67.76676	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3F^o$	2 - 2		328
11	10	1887.87	14.32586 - 67.29543	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^o$	4 - 4		328
	20	1889.05	35.00477 - 87.94108	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3H^o$	3 - 4		328
8	1889.88	31.51466 - 84.42821	$3d^6 - 3d^5(a^2G)4p$	$a^3F - x^3H^o$	4 - 5		328	
	5	1890.17	29.86948 - 82.77473	$3d^6 - 3d^5(a^4F)4p$	$a^3P - x^3D^o$	2 - 1		328
8	1891.18	32.85719 - 85.73462	$3d^5(a^4D)4s - 3d^5(a^2H)4p$	$b^5D - w^3G^o$	3 - 3		328	
	30	1891.55	29.86948 - 82.73529	$3d^6 - 3d^5(a^4F)4p$	$a^3P - x^5D^o$	2 - 2		328
50	1892.02	35.00477 - 87.85851	$3d^6 - 3d^5(a^2G)4p$	$b^3G - u^3F^o$	3 - 2		328	
	10	1892.40	29.86948 - 82.71255	$3d^6 - 3d^5(a^4F)4p$	$a^3P - x^5D^o$	2 - 3		328
60	1893.288	34.76211 - 87.58023	$3d^6 - 3d^5(a^2G)4p$	$b^3G - u^3F^o$	5 - 4		328	
	30	1893.49	33.24860 - 86.06168	$3d^5(a^4G)4s - 3d^5(a^2F)4p$	$a^3G - y^1F^o$	4 - 3		328
50	1893.70	34.91075 - 87.71762	$3d^6 - 3d^5(a^2G)4p$	$b^3G - u^3F^o$	4 - 3		328	
	0	1894.19	29.91943 - 82.71255	$3d^5(a^4P)4s - 3d^5(a^4F)4p$	$a^3P - x^3D^o$	2 - 3		328
20	1897.06	35.00477 - 87.71762	$3d^6 - 3d^5(a^2G)4p$	$b^3G - u^3F^o$	3 - 3		328	
	100	1897.48	14.59382 - 67.29543	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^o$	3 - 4		328
30	1898.12	14.32586 - 67.00916	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^o$	4 - 3		328	
	30	1898.64	34.91075 - 87.58023	$3d^6 - 3d^5(a^2G)4p$	$b^3G - u^3F^o$	4 - 4		328
10	1899.51	31.66196 - 84.30720	$3d^6 - 3d^5(a^2G)4p$	$a^3F - x^3H^o$	3 - 4		328	
	10	1902.04	35.00477 - 87.58023	$3d^6 - 3d^5(a^2G)4p$	$b^3G - u^3F^o$	3 - 4		328
500	1902.948	29.86948 - 82.41948	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^o$	2 - 3		328	
	20	1906.37	33.27872 - 85.73462	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - w^3G^o$	3 - 3		328
20	1907.49	33.24860 - 85.67372	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - w^3G^o$	4 - 4		328	
	200	1907.840	14.59382 - 67.00916	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^o$	3 - 3		328
20	1908.47	31.51466 - 83.91238	$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^3G^o$	4 - 5		328	
	20	1908.54	33.14771 - 85.54323	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - w^3G^o$	5 - 5		328
100	1908.91	30.68507 - 83.07097	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^o$	1 - 2		328	
	60	1909.830	14.32586 - 66.68670	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	4 - 3		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10	300	1911.41	14.32586 - 66.64331	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	4 - 4		328
11	2	1911.76	14.59382 - 66.90144	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	3 - 2		328
	1	1912.15	49.29131 - 101.5883	$3d^6 - 3d^5(b^2D)4p$	$b^1F - u^1F^o$	3 - 3		328
	30	1912.96	39.80846 - 92.0830	$3d^5(a^4D)4s - 3d^5(b^2F)4p$	$b^3D - u^3D^o$	3 - 3		328
	20	1913.73	30.68507 - 82.93900	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^o$	1 - 1		328
11	200	1914.68	14.78119 - 67.00916	$3d^6 - 3d^5(a^2P)4p$	$a^3D - z^3D^o$	2 - 3		328
10	1000	1915.10	14.32586 - 66.54253	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	4 - 5		328
	20	1915.21	31.66196 - 83.87546	$3d^6 - 3d^5(a^2F)4p$	$a^3F - x^3G^o$	3 - 4		328
	0	1916.34	59.5374 - 111.7200	$3d^6 -$	$c^1G - u^1H^o$	4 - 4		328
	30	1916.71	31.76115 - 83.93374	$3d^6 - 3d^5(a^2F)4p$	$a^3F - x^3G^o$	2 - 3		328
	3	1917.38	30.68507 - 82.83949	$3d^6 - 3d^5(a^2F)4p$	$a^3P - x^3D^o$	1 - 0		328
	100	1917.61	14.78119 - 66.92952	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5S^o$	2 - 2		328
11	200	1918.643	14.78119 - 66.90144	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	2 - 2		328
11	30	1918.909	14.78119 - 66.89409	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	2 - 1		328
	300	1919.639	14.59382 - 66.68670	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	3 - 3		328
	100	1920.03	14.59382 - 66.67678	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5D^o$	3 - 2		328
	2	1920.95	55.11631 - 107.1731	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5P^o$	2 - 3		328
	800	1921.250	14.59382 - 66.64331	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	3 - 4		328
	100	1922.031	14.90118 - 66.92952	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5S^o$	1 - 2		328
	200	1923.07	14.90118 - 66.90144	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	1 - 2		328
	200	1923.34	14.90118 - 66.89409	$3d^6 - 3d^5(a^2G)4p$	$a^5D - z^5F^o$	1 - 1		328
	5	1924.96	37.85147 - 89.80034	$3d^6 - 3d^5(b^2F)4p$	$a^3D - t^3F^o$	3 - 4		328
	5	1925.17	29.86948 - 81.8129	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3D^o$	2 - 2		328
	300	1925.52	14.95984 - 66.89409	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	0 - 1		328
	1	1925.728	27.58357 - 79.51273	$3d^5(a^4G)4s - 3d^5(a^2D)4p$	$a^3G - x^3F^o$	4 - 3	Q	328
	40	1926.167	30.79569 - 82.71255	$3d^6 - 3d^5(a^2F)4p$	$a^3H - x^3D^o$	4 - 3		328
	500	1926.585	14.78119 - 66.68670	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^o$	2 - 3		328
	50	1926.948	14.78119 - 66.67678	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5D^o$	2 - 2		328
	10	1927.33	49.42732 - 101.3130	$3d^5(a^2G)4s - 3d^4 4s(b^4D)4p$	$c^3G - t^3D^o$	4 - 3		328
	40	1928.15	14.78119 - 66.64507	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5D^o$	2 - 1		328
95	3	1930.06	54.93819 - 106.7500	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5P^o$	1 - 2		328
	30	1930.45	55.37168 - 107.1731	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - u^5P^o$	3 - 3		328
	300	1931.404	14.90118 - 66.67678	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5D^o$	1 - 2		328
	10	1932.27	31.02205 - 82.77473	$3d^6 - 3d^5(a^2F)4p$	$a^3P - x^3D^o$	0 - 1		328
	20	1932.600	14.90118 - 66.64507	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5D^o$	1 - 1		328
	15	1933.32	14.90118 - 66.62528	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5D^o$	1 - 0		328
	80	1933.93	30.52370 - 82.23218	$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^3G^o$	6 - 5		328
	20	1934.78	14.95984 - 66.64507	$3d^6 - 3d^5(a^2P)4p$	$a^5D - z^5D^o$	0 - 1		328
	100	1935.068	43.52864 - 95.2063	$3d^5(a^2F)4s - 3d^4 4s(a^6D)4p$	$a^3F - w^3D^o$	5 - 4		328
	20	1935.384	43.53718 - 95.2063	$3d^5(a^2F)4s - 3d^4 4s(a^6D)4p$	$a^5F - w^5D^o$	4 - 4		328
	1	1936.089	43.33942 - 94.9897	$3d^5(a^2D)4s - 3d^4 4s(a^6D)4p$	$c^3D - w^3D^o$	2 - 3		328
95	10	1936.74	54.84624 - 106.4792	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^3D - u^3P^o$	0 - 1		328
	2	1937.28	30.52370 - 82.14246	$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^3G^o$	6 - 6		328
	15	1937.46	37.85147 - 89.4653	$3d^6 - 3d^5(b^2F)4p$	$a^3D - x^3G^o$	3 - 4		328
	20	1938.20	43.39538 - 94.9897	$3d^5(a^2D)4s - 3d^4 4s(a^6D)4p$	$c^3D - w^3D^o$	3 - 3		328
	10	1938.27	30.79569 - 82.38753	$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^3G^o$	4 - 3		328
	1	1938.92	43.31130 - 94.8865	$3d^5(a^2F)4s - 3d^4 4s(a^6D)4p$	$a^3F - w^3D^o$	1 - 2		328
	1	1939.77	30.67951 - 82.23218	$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^3G^o$	5 - 5		328
	20	1939.96	43.33942 - 94.8865	$3d^5(a^2D)4s - 3d^4 4s(a^6D)4p$	$c^3D - w^3D^o$	2 - 2		328
95	8	1940.19	54.93819 - 106.4792	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^3D - u^3P^o$	1 - 1		328
	20	1941.89	33.14771 - 84.64386	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$a^3G - x^3H^o$	5 - 6		328
	20	1942.08	43.39538 - 94.8865	$3d^5(a^2D)4s - 3d^4 4s(a^6D)4p$	$c^3D - w^3D^o$	3 - 2		328
	5	1942.35	43.31130 - 94.7955	$3d^5(a^2F)4s - 3d^4 4s(a^6D)4p$	$a^3F - w^3D^o$	1 - 1		328
95	40	1942.66	55.69699 - 107.1731	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^3D - u^3P^o$	4 - 3		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
94	100	1943.541	43.53718 - 94.9897	$3d^5(a^4F)4s - 3d^44s(a^6D)4p$	$a^3F - w^3D^o$	4 - 3		328
	100	1944.16	54.93819 - 106.3743	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	1 - 2		328
94	20	1944.36	49.88215 - 101.3130	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$c^3F - t^3D^o$	4 - 3		328
	40	1944.77	54.84624 - 106.2657	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	0 - 1		328
94	200	1945.15	55.11631 - 106.5262	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	2 - 3		328
	5	1945.83	34.91075 - 86.30255	$3d^6 - 3d^5(a^4F)4p$	$b^3G - v^3D^o$	4 - 3		328
95	30	1946.34	55.37168 - 106.7500	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - u^3P^o$	3 - 2		328
	20	1946.94	55.11631 - 106.4792	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - u^3P^o$	2 - 1		328
94	200	1947.932	55.37168 - 106.7079	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	3 - 4		328
	94	10	1948.28	54.93819 - 106.2657	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	1 - 1	
80		1948.72	31.51466 - 82.83075	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	4 - 4		328
	10	1949.56	43.69619 - 94.9897	$3d^5(a^4F)4s - 3d^44s(a^6D)4p$	$a^3F - w^3D^o$	3 - 3		328
200	1950.143	29.86948 - 81.14765	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	2 - 2		328	
	30	1950.31	31.66196 - 82.93601	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	3 - 3		328
94	2	1950.69	49.82016 - 101.0841	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$c^3F - t^3D^o$	2 - 2		328
	40	1950.922	55.11631 - 106.3743	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	2 - 2		328
94	2	1952.86	30.67951 - 81.88633	$3d^6 - 3d^5(a^2F)4p$	$a^3H - x^3F^o$	5 - 5		328
	300	1953.23	55.69699 - 106.8944	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	4 - 5		328
3	1953.35	49.88986 - 101.0841	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$c^3F - t^3D^o$	3 - 2		328	
	10	1953.51	43.69619 - 94.8865	$3d^5(a^4F)4s - 3d^44s(a^6D)4p$	$a^3F - w^3D^o$	3 - 2		328
10	1953.90	33.24860 - 84.42821	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - x^3H^o$	4 - 5		328	
	5	1953.98	31.76115 - 82.93900	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3D^o$	2 - 1		328
5	1954.10	31.76115 - 82.93601	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	2 - 3		328	
	30	1954.32	31.66196 - 82.83075	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	3 - 4		328
94	200	1954.81	31.76115 - 82.91778	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	2 - 2		328
	94	1	1955.06	55.11631 - 106.2657	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	2 - 1	
40		1957.98	31.66196 - 82.73529	$3d^6 - 3d^5(a^2F)4p$	$a^3F - x^3D^o$	3 - 2		328
5	1958.58	35.00477 - 86.06168	$3d^6 - 3d^5(a^2F)4p$	$b^3G - y^3F^o$	3 - 3		328	
	80	1958.932	38.9018 - 89.95040	$3d^6 - 3d^5(a^2G)4p$	$a^3G - x^3F^o$	4 - 3		328
300	1959.246	38.72002 - 89.76033	$3d^6 - 3d^5(a^2H)4p$	$a^3I - x^3H^o$	6 - 5		328	
5	1959.69	33.27872 - 84.30720	$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - x^3H^o$	3 - 4		328	
	10	1960.27	31.76115 - 82.77473	$3d^6 - 3d^5(a^2F)4p$	$a^3F - x^3D^o$	2 - 1		328
94	10	1960.37	55.69699 - 106.7079	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	4 - 4		328
	94	0	1960.67	55.37168 - 106.3743	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^3D - v^3F^o$	3 - 2	
10		1960.757						328
5	1960.90	34.76211 - 85.7593	$3d^6 - 3d^5(a^2G)4p$	$b^3G - ^1G^o$	5 - 4		328	
	20	1961.39	35.00477 - 85.98912	$3d^6 - 3d^5(a^2F)4p$	$b^3G - v^3F^o$	3 - 2		328
30		1962.80	35.00477 - 85.9526	$3d^6 - 3d^5(a^2F)4p$	$b^3G - v^3F^o$	3 - 3		328
10	1964.19	34.76211 - 85.67372	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3G^o$	5 - 4		328	
	80	1964.45	31.51466 - 82.41948	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3D^o$	4 - 3		328
20	1964.70	38.9018 - 89.80034	$3d^6 - 3d^5(b^2F)4p$	$a^3G - t^3F^o$	4 - 4		328	
	60	1965.68	31.51466 - 82.38753	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	4 - 3		328
20	1966.04	30.79569 - 81.65950	$3d^6 - 3d^5(a^2D)4p$	$a^3H - x^3D^o$	4 - 3		328	
	2	1966.24	38.9018 - 89.76033	$3d^6 - 3d^5(a^2H)4p$	$a^3G - x^3H^o$	4 - 5		328
30	1967.59	34.91075 - 85.73462	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3G^o$	4 - 3		328	
	200	1969.24	34.76211 - 85.54323	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3G^o$	5 - 5		328
50	1969.87	33.14771 - 83.91238	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - x^3G^o$	5 - 5		328	
	100	1969.95	34.91075 - 85.67372	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3G^o$	4 - 4		328
5	1970.16	31.66196 - 82.41948	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3D^o$	3 - 3		328	
	5	1970.947	43.1314 - 93.8685	$3d^6 - 3d^5(a^2S)4p$	$a^3D - v^3P^o$	2 - 1		328
100	1971.22	35.00477 - 85.73462	$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3G^o$	3 - 3		328	
	20	1971.71	31.51466 - 82.23218	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	4 - 5		328
100	1974.14	33.27872 - 83.93374	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - x^3G^o$	3 - 3	P	328	
	80	1974.82	30.68507 - 81.32233	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	1 - 1		328

MN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	1975.24	33.24860 – 83.87546	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - x^3G^o$	4 - 4		328
	10	1976.002						
	2	1976.18	31.51466 – 82.11716	$3d^6 - 3d^5(a^4F)4p$	$a^3F - y^5G^o$	4 - 5		328
	2	1976.27						
	40	1976.87	31.51466 – 82.09982	$3d^6 - 3d^5(a^2F)4p$	$a^3H - z^1G^o$	5 - 4		328
	40	1977.72						
			38.9018 – 89.4653	$3d^6 - 3d^5(b^2F)4p$	$a^1G - x^1G^o$	4 - 4		328
	20	1978.75	31.51466 – 82.05162	$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^5F^o$	4 - 3		328
	2	1980.84						
	10	1981.01	31.51466 – 81.99385	$3d^6 - 3d^5(a^2F)4p$	$a^3H - z^1G^o$	4 - 4		328
	20	1981.16						
	20	1981.67	31.76115 – 82.23689	$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^5F^o$	2 - 1		328
	20	1981.67						
	10	1982.60	30.68507 – 81.14765	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	1 - 2		328
			31.66196 – 82.09982	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	3 - 4		328
	60	1983.17	30.79569 – 81.22058	$3d^6 - 3d^5(a^2D)4p$	$a^3H - z^1F^o$	4 - 3		328
	20	1984.43						
	2	1985.25	31.66196 – 82.05435	$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^5F^o$	3 - 2		328
	20	1986.40						
	30	1988.06	31.51466 – 81.88633	$3d^6 - 3d^5(a^2F)4p$	$a^3F - x^5F^o$	4 - 5		328
	50	1989.41						
			38.72002 – 89.0626	$3d^6 - 3d^5(a^2G)4p$	$a^1I - ^1H^o$	6 - 5		328
	20	1992.30	14.32586 – 64.51887	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	0 - 1		328
	10	1993.60						
	100	1993.99	31.66196 – 81.8129	$3d^6 - 3d^5(a^4F)4p$	$a^3F - y^5G^o$	4 - 3		328
	300	1994.23						
	1	1995.275	31.02205 – 81.32233	$3d^6 - 3d^5(a^2D)4p$	$a^3F - y^5G^o$	3 - 3		328
	20	1997.94	31.51466 – 81.65950	$3d^6 - 3d^5(a^2D)4p$	$a^3F - x^3D^o$	4 - 3		328
			31.66196 – 81.78070	$3d^6 - 3d^5(a^4F)4p$	$a^3F - y^5G^o$	3 - 3		328
			31.76115 – 81.8129	$3d^6 - 3d^5(a^2D)4p$	$a^3F - x^3D^o$	2 - 2		328
	80	1999.92	32.83666 – 82.83949	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$b^5D - x^5D^o$	1 - 0		328

MANGANESE III (Mn²⁺), Z = 25
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5(^6S_{5/2})$ (23 electrons)
Ionization Potential 271 550 cm^{-1} ; 33.668 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	594.872	63.28537 – 231.38766	$3d^4(a^5D)4s - 3d^4(a^5D)5f$	$a^6D - y^6H^o$	$\frac{9}{2} - \frac{7}{2}$		131
	5	601.035						
	0	655.804	29.20730 – 195.59209	$3d^5 - 3d^4(a^5D)5p$	$a^4P - u^4D^o$	$\frac{3}{2} - \frac{1}{2}$		131
	0	658.481						
	0	661.385	43.1057 – 195.59209	$3d^5 - 3d^4(a^3D)5p$	$a^3F - u^4D^o$	$\frac{5}{2} - \frac{3}{2}$		802
	0	661.385						
	15	699.727	43.1057 – 194.97115	$3d^5 - 3d^4(a^5D)5p$	$a^2F - u^4F^o$	$\frac{5}{2} - \frac{5}{2}$		802
	0	661.385						
	15	699.727	26.85990 – 169.7737	$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4D^o$	$\frac{7}{2} - \frac{5}{2}$		959
	35	700.153	26.85780 – 169.6824	$3d^5 - 3d^4(b^3F)4p$	$a^4G - u^2G^o$	$\frac{5}{2} - \frac{3}{2}$		959
	60	700.932						
	20	701.280	26.85110 – 169.5183	$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4D^o$	$\frac{9}{2} - \frac{7}{2}$		959
	50	711.196						
	70	711.404	26.85990 – 169.4550	$3d^5 - 3d^4(b^3F)4p$	$a^4G - u^2G^o$	$\frac{7}{2} - \frac{9}{2}$		959
	115	712.493						
			29.16770 – 169.7737	$3d^5 - 3d^4(b^3F)4p$	$a^4P - v^4D^o$	$\frac{3}{2} - \frac{5}{2}$		959
			29.20730 – 169.7737	$3d^5 - 3d^4(b^3F)4p$	$a^4P - v^4D^o$	$\frac{3}{2} - \frac{5}{2}$		959
			29.16770 – 169.5183	$3d^5 - 3d^4(b^3F)4p$	$a^4P - v^4D^o$	$\frac{5}{2} - \frac{7}{2}$		959
	10	712.786	0.0 – 140.29444	$3d^5 - 3d^4(a^3G)4p$	$ga^6S - x^4G^o$	$\frac{5}{2} - \frac{7}{2}$		959
	80	718.786	26.82440 – 165.9470	$3d^5 - 3d^4(b^3F)4p$	$a^4G - w^4G^o$	$\frac{11}{2} - \frac{11}{2}$		959
	60	718.929						
	45	719.850	26.85110 – 165.9470	$3d^5 - 3d^4(b^3F)4p$	$a^4G - w^4G^o$	$\frac{9}{2} - \frac{11}{2}$		959
	50	719.997						
	12	721.296	26.82440 – 165.7400	$3d^5 - 3d^4(b^3F)4p$	$a^4G - w^4G^o$	$\frac{11}{2} - \frac{9}{2}$		959
			26.85110 – 165.7400	$3d^5 - 3d^4(b^3F)4p$	$a^4G - w^4G^o$	$\frac{9}{2} - \frac{9}{2}$		959
			29.16770 – 167.8084	$3d^5 - 3d^4(b^3P)4p$	$a^4P - y^4S^o$	$\frac{3}{2} - \frac{1}{2}$		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	35	721.647	26.85990 - 165.4287	$3d^5 - 3d^4(b^3F)4p$	$a^4G - w^4G^o$	$\frac{7}{2} - \frac{7}{2}$		959
	25	727.860	32.38470 - 169.7737	$3d^5 - 3d^4(b^3F)4p$	$a^4D - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$		959
	20	729.204	32.38370 - 169.5183	$3d^5 - 3d^4(b^3F)4p$	$a^4D - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
	20	733.298	26.82440 - 163.1946	$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^o$	$\frac{11}{2} - \frac{11}{2}$		802
	80	733.435	26.85110 - 163.1946	$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^o$	$\frac{9}{2} - \frac{9}{2}$		959
	10	734.066	26.85110 - 163.0785	$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^o$	$\frac{10}{2} - \frac{10}{2}$		802
	0	734.407	26.85990 - 163.0223	$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^o$	$\frac{7}{2} - \frac{5}{2}$		802
	0	734.519	26.85780 - 162.9990	$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^o$	$\frac{5}{2} - \frac{1}{2}$		802
	12	735.993	0.0 - 135.86976	$3d^5 - 3d^4(a^3F)4p$	$ga^6S - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
	12	737.940	0.0 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$ga^6S - y^4F^o$	$\frac{5}{2} - \frac{3}{2}$		959
	10	752.040	0.0 - 132.97199	$3d^5 - 3d^4(a^3P)4p$	$ga^6S - y^4D^o$	$\frac{5}{2} - \frac{1}{2}$		959
	10	755.854	0.0 - 132.29755	$3d^5 - 3d^4(a^3P)4p$	$ga^6S - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		959
	10	759.306	0.0 - 131.70169	$3d^5 - 3d^4(a^3P)4p$	$ga^6S - y^4D^o$	$\frac{5}{2} - \frac{1}{2}$		959
	10	760.142	29.20730 - 160.7585	$3d^5 - 3d^4(a^1F)4p$	$a^4P - v^2D^o$	$\frac{3}{2} - \frac{1}{2}$		959
	40	764.003	32.30730 - 163.1946	$3d^5 - 3d^4(b^3F)4p$	$a^4D - v^4F^o$	$\frac{7}{2} - \frac{9}{2}$		959
	70	764.106	29.16770 - 160.0397	$3d^5 - 3d^4(a^1F)4p$	$a^4P - v^2D^o$	$\frac{5}{2} - \frac{3}{2}$		959
	80	764.695	32.30730 - 163.0785	$3d^5 - 3d^4(b^3F)4p$	$a^4D - v^4F^o$	$\frac{7}{2} - \frac{7}{2}$		959
	35	764.794	62.74750 - 193.49807	$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{3}{2} - \frac{1}{2}$		959
130	765.148	32.38370 - 163.0785		$3d^5 - 3d^4(b^3F)4p$	$a^4D - v^4F^o$	$\frac{5}{2} - \frac{7}{2}$		959
25	765.480	32.38470 - 163.0223		$3d^5 - 3d^4(b^3F)4p$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{5}{2}$		959
40	766.222	62.98892 - 193.49807		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{7}{2} - \frac{1}{2}$		959
35	766.335	62.74750 - 193.23543		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{2}{2} - \frac{2}{2}$		959
80	766.438	63.28537 - 193.75679		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{9}{2} - \frac{9}{2}$		959
10	766.994	62.56808 - 192.94829		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{3}{2} - \frac{1}{2}$		959
25	767.577	39.17440 - 169.4550		$3d^5 - 3d^4(b^3F)4p$	$a^2I - u^2G^o$	$\frac{11}{2} - \frac{9}{2}$		959
30	767.763	62.98892 - 193.23543		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{7}{2} - \frac{3}{2}$		959
25	767.967	63.28537 - 193.49807		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{9}{2} - \frac{7}{2}$		959
20	768.031	62.74750 - 192.94829		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{5}{2} - \frac{3}{2}$		959
25	768.424	62.74750 - 192.88016		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{5}{2} - \frac{7}{2}$		959
25	769.467	26.85110 - 156.8093		$3d^5 - 3d^4(a^1F)4p$	$a^4G - u^2F^o$	$\frac{9}{2} - \frac{7}{2}$		959
20	769.757	62.45699 - 192.36552		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{1}{2} - \frac{1}{2}$		959
25	769.862	62.98892 - 192.88016		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{7}{2} - \frac{7}{2}$		959
25	770.233	62.74750 - 192.57642		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{5}{2} - \frac{5}{2}$		959
60	770.421	62.56808 - 192.36552		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{1}{2} - \frac{1}{2}$		959
20	770.643	26.85990 - 156.6217		$3d^5 - 3d^4(a^1F)4p$	$a^4G - u^2F^o$	$\frac{7}{2} - \frac{7}{2}$		959
0	770.997	63.28537 - 192.98905		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{9}{2} - \frac{11}{2}$		802
60	771.138	62.98892 - 192.66580		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{7}{2} - \frac{9}{2}$		959
45	771.345	62.74750 - 192.39220		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{5}{2} - \frac{7}{2}$		959
70	772.513	62.56808 - 192.01275		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{3}{2} - \frac{1}{2}$		959
60	772.621	62.74750 - 192.17289		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{5}{2} - \frac{5}{2}$		959
40	772.778	62.98892 - 192.39220		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{7}{2} - \frac{7}{2}$		959
150	772.911	63.28537 - 192.66580		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{9}{2} - \frac{9}{2}$		959
25	774.079	62.98892 - 192.17289		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{7}{2} - \frac{5}{2}$		959
15	774.566	63.28537 - 192.39220		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^6D - y^6D^o$	$\frac{9}{2} - \frac{7}{2}$		959
12	782.880	32.30730 - 160.0397		$3d^5 - 3d^4(a^1F)4p$	$a^4D - v^2D^o$	$\frac{7}{2} - \frac{5}{2}$		959
5	783.356	32.38370 - 160.0397		$3d^5 - 3d^4(a^1F)4p$	$a^4D - v^2D^o$	$\frac{5}{2} - \frac{5}{2}$		959
15	786.925	42.6065 - 169.6824		$3d^5 - 3d^4(b^3F)4p$	$a^2F - u^2G^o$	$\frac{7}{2} - \frac{7}{2}$		959
50	788.342	42.6065 - 169.4550		$3d^5 - 3d^4(b^3F)4p$	$a^2F - u^2G^o$	$\frac{7}{2} - \frac{9}{2}$		959
115	788.812	39.17650 - 165.9470		$3d^5 - 3d^4(b^3F)4p$	$a^2I - w^4G^o$	$\frac{11}{2} - \frac{11}{2}$		959
12	790.044	43.1057 - 169.6824		$3d^5 - 3d^4(b^3F)4p$	$a^2F - u^2G^o$	$\frac{5}{2} - \frac{5}{2}$		959
60	792.567	43.60250 - 169.7737		$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4D^o$	$\frac{7}{2} - \frac{3}{2}$		959
15	792.982	43.66884 - 169.7737		$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4D^o$	$\frac{5}{2} - \frac{3}{2}$		959
80	793.981	43.57316 - 169.5183		$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4D^o$	$\frac{9}{2} - \frac{7}{2}$		959
7	794.576	43.60250 - 169.4550		$3d^5 - 3d^4(b^3F)4p$	$a^4F - u^2G^o$	$\frac{7}{2} - \frac{9}{2}$		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	802.029	41.2381 - 165.9229	$3d^5 - 3d^4(b^3F)4p$	$a^2D - t^2F^o$	3 3		959
	0	803.447	41.2381 - 165.7029	$3d^5 - 3d^4(b^3F)4p$	$a^2D - t^2F^o$	3 3		802
	2	805.578	43.67474 - 167.8084	$3d^5 - 3d^4(b^3P)4p$	$a^4F - y^4S^o$	3 3		131
	80	814.212	43.1057 - 165.9229	$3d^5 - 3d^4(b^3F)4p$	$a^2F - t^2F^o$	3 3		959
	225	817.162	43.57316 - 165.9470	$3d^5 - 3d^4(b^3F)4p$	$a^4F - w^4G^o$	3 3		959
	70	818.740	43.60250 - 165.7400	$3d^5 - 3d^4(b^3F)4p$	$a^4F - w^4G^o$	3 3		959
	115	820.833	43.60250 - 165.4287	$3d^5 - 3d^4(b^3F)4p$	$a^4F - w^4G^o$	3 3		959
	25	821.123	41.2381 - 163.0223	$3d^5 - 3d^4(b^3F)4p$	$a^2D - v^4F^o$	3 3		959
	115	821.287	43.66884 - 165.4287	$3d^5 - 3d^4(b^3F)4p$	$a^4F - w^4G^o$	3 3		959
	20	821.682	26.85990 - 148.56050	$3d^5 - 3d^4(a^1D)4p$	$a^4G - w^2H^o$	3 3		959
	150	823.191	0.0 - 121.48024	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - z^4D^o$	3 3		959
	80	823.515	41.5698 - 162.9990	$3d^5 - 3d^4(b^3F)4p$	$a^2D - v^4F^o$	3 3		959
	15	824.033	26.85110 - 148.20690	$3d^5 - 3d^4(a^1D)4p$	$a^4G - w^2H^o$	3 3		959
	30	824.628	0.0 - 121.26732	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - z^4D^o$	3 3		959
	15	825.641	71.83198 - 192.94829	$3d^4(a^3D)4s - 3d^4(a^3D)5p$	$b^4D - y^6D^o$	3 3		959
	25	826.073	72.18333 - 193.23543	$3d^4(a^3D)4s - 3d^4(a^3D)5p$	$b^4D - y^6D^o$	3 3		959
	2	828.617	32.38470 - 153.06770	$3d^5 - 3d^4(a^1D)4p$	$a^4D - v^2F^o$	3 3		131
	2	829.635	71.83198 - 192.36552	$3d^4(a^3D)4s - 3d^4(a^3D)5p$	$b^4D - y^6P^o$	3 3		131
	50	830.067	42.6065 - 163.0785	$3d^5 - 3d^4(b^3F)4p$	$a^2F - v^4F^o$	3 3		959
	70	833.519	43.1057 - 163.0785	$3d^5 - 3d^4(b^3F)4p$	$a^2F - v^4F^o$	3 3		959
	170	833.907	43.1057 - 163.0223	$3d^5 - 3d^4(b^3F)4p$	$a^2F - v^4F^o$	3 3		959
	40	835.971	43.57316 - 163.1946	$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4F^o$	3 3		802
	260	836.182	43.60250 - 163.1946	$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4F^o$	3 3		959
	20	836.994	43.60250 - 163.0785	$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4F^o$	3 3		802
	130	837.378	43.60250 - 163.0223	$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4F^o$	3 3		959
	225	837.456	43.66884 - 163.0785	$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4F^o$	3 3		959
	0	837.854	43.66884 - 163.0223	$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4F^o$	3 3		802
	0	838.049	43.67474 - 162.9990	$3d^5 - 3d^4(b^3F)4p$	$a^4F - v^4F^o$	3 3		802
	40	838.358	46.6707 - 165.9470	$3d^5 - 3d^4(b^3F)4p$	$a^2H - w^4G^o$	3 3		959
	30	838.757	46.5159 - 165.7400	$3d^5 - 3d^4(b^3F)4p$	$a^2H - w^4G^o$	3 3		959
	130	839.006	41.5698 - 160.7585	$3d^5 - 3d^4(a^1F)4p$	$a^2D - v^2D^o$	3 3		959
	150	841.744	41.2381 - 160.0397	$3d^5 - 3d^4(a^1F)4p$	$a^2D - v^2D^o$	3 3		959
	45	844.089	41.5698 - 160.0397	$3d^5 - 3d^4(a^1F)4p$	$a^2D - v^2D^o$	3 3		959
	60	844.629	51.0597 - 169.4550	$3d^5 - 3d^4(b^3F)4p$	$b^2F - u^2G^o$	3 3		959
	0	846.475	26.82440 - 144.95974	$3d^5 - 3d^4(a^3D)4p$	$a^4G - w^4F^o$	3 3		802
	0	846.667	26.85110 - 144.95974	$3d^5 - 3d^4(a^3D)4p$	$a^4G - w^4F^o$	3 3		802
	0	847.691	26.85110 - 144.81768	$3d^5 - 3d^4(a^3D)4p$	$a^4G - w^4F^o$	3 3		802
	70	847.855	48.0052 - 165.9470	$3d^5 - 3d^4(b^3F)4p$	$a^2G - w^4G^o$	3 3		959
	170	848.466	26.85990 - 144.7184	$3d^5 - 3d^4(a^1G)4p$	$a^4G - x^2F^o$	3 3		959
	190	848.810	26.85990 - 144.67238	$3d^5 - 3d^4(a^3D)4p$	$a^4G - w^4F^o$	3 3		959
	115	849.173	26.85780 - 144.61900	$3d^5 - 3d^4(a^3D)4p$	$a^4G - x^4P^o$	3 3		959
	40	849.364	48.0052 - 165.7400	$3d^5 - 3d^4(b^3F)4p$	$a^2G - w^4G^o$	3 3		959
	170	849.854	26.85780 - 144.52550	$3d^5 - 3d^4(a^3D)4p$	$a^4G - w^4F^o$	3 3		959
	90	849.951	43.1057 - 160.7585	$3d^5 - 3d^4(a^1F)4p$	$a^2F - v^2D^o$	3 3		959
	130	851.554	42.6065 - 160.0397	$3d^5 - 3d^4(a^1F)4p$	$a^2F - v^2D^o$	3 3		959
	25	852.609	26.85990 - 144.14650	$3d^5 - 3d^4(a^3D)4p$	$a^4G - x^4P^o$	3 3		959
	0	852.691	26.85110 - 144.1298	$3d^5 - 3d^4(a^1G)4p$	$a^4G - x^2F^o$	3 3		802
	15	854.054	43.66884 - 160.7585	$3d^5 - 3d^4(a^1F)4p$	$a^4F - v^2D^o$	3 3		959
	50	855.181	43.1057 - 160.0397	$3d^5 - 3d^4(a^1F)4p$	$a^2F - v^2D^o$	3 3		959
	7	857.047	46.5159 - 163.1946	$3d^5 - 3d^4(b^3F)4p$	$a^2H - v^4F^o$	3 3		959
	15	857.900	46.5159 - 163.0785	$3d^5 - 3d^4(b^3F)4p$	$a^2H - v^4F^o$	3 3		959
	15	858.830	29.20730 - 145.64345	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	3 3		959
	35	859.470	26.85990 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^4G - w^4D^o$	3 3		959
	25	859.910	26.85780 - 143.14840	$3d^5 - 3d^4(a^3D)4p$	$a^4G - w^4D^o$	3 3		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	862.283	32.38370 - 148.35560	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^2F^o$	2-2		959
	50	862.718	29.20730 - 145.1208	$3d^5 - 3d^4(a^3D)4p$	$a^4P - y^2P^o$	2-2		959
	60	862.973	29.24140 - 145.1208	$3d^5 - 3d^4(a^3D)4p$	$a^4P - y^2P^o$	2-2		959
	150	864.872	29.20730 - 144.83290	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	2-2		959
	30	865.124	29.24140 - 144.83290	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	2-2		959
	0	865.276	41.2381 - 156.8093	$3d^5 - 3d^4(a^1F)4p$	$a^2D - u^2F^o$	2-2		802
	45	865.767	29.16770 - 144.67238	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4F^o$	2-2		959
	170	866.174	29.16770 - 144.61900	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	2-2		959
	150	866.473	29.20730 - 144.61900	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	2-2		959
	190	866.731	29.24140 - 144.61900	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	2-2		959
	115	866.872	29.16770 - 144.52550	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4F^o$	2-2		959
	60	867.168	29.20730 - 144.52550	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4F^o$	2-2		959
	150	867.428	29.24140 - 144.52550	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4F^o$	1-1		959
	40	869.176	41.5698 - 156.6217	$3d^5 - 3d^4(a^1F)4p$	$a^2D - u^2F^o$	2-2		959
	260	869.735	29.16770 - 144.14650	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	2-2		959
	225	870.037	29.20730 - 144.14650	$3d^5 - 3d^4(a^3D)4p$	$a^4P - x^4P^o$	2-2		959
	20	870.169	51.0027 - 165.9229	$3d^5 - 3d^4(b^3F)4p$	$b^2F - t^2F^o$	2-2		802
	10	870.596	51.0597 - 165.9229	$3d^5 - 3d^4(b^3F)4p$	$b^2F - t^2F^o$	2-2		802
	0	871.851	51.0027 - 165.7029	$3d^5 - 3d^4(b^3F)4p$	$b^2F - t^2F^o$	2-2		802
	20	872.261	51.0597 - 165.7029	$3d^5 - 3d^4(b^3F)4p$	$b^2F - t^2F^o$	2-2		802
	150	874.994	0.0 - 114.28791	$3d^5 - 3d^4(a^5D)4p$	$ga^6S - z^6D^o$	2-2		959
	150	875.592	0.0 - 114.20901	$3d^5 - 3d^4(a^5D)4p$	$ga^6S - z^6D^o$	2-2		959
	0	875.627	42.6065 - 156.8093	$3d^5 - 3d^4(a^1F)4p$	$a^2F - u^2F^o$	2-2		802
	115	875.836	29.16770 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4D^o$	2-2		959
	35	876.465	0.0 - 114.09497	$3d^5 - 3d^4(a^5D)4p$	$ga^6S - z^6D^o$	2-2		959
	80	876.869	29.16770 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4D^o$	2-2		959
	30	877.082	42.6065 - 156.6217	$3d^5 - 3d^4(a^1F)4p$	$a^2F - u^2F^o$	2-2		959
	90	877.179	29.20730 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4D^o$	2-2		959
	40	877.337	29.16770 - 143.14840	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4D^o$	2-2		959
	30	877.561	26.82440 - 140.77688	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4G^o$	1-1		802
	0	877.777	26.85110 - 140.77688	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4G^o$	0-0		802
	80	877.916	29.24140 - 143.14840	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4D^o$	2-2		959
	25	878.082	29.24140 - 143.12700	$3d^5 - 3d^4(a^3D)4p$	$a^4P - w^4D^o$	2-2		959
	80	879.256	26.82440 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4G^o$	1-1		959
	10	879.466	26.85110 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4G^o$	2-2		802
	0	879.642	32.38370 - 146.06607	$3d^5 - 3d^4(a^3D)4p$	$a^4D - x^4P^o$	2-2		802
	180	879.693	0.0 - 113.67662	$3d^5 - 3d^4(a^5D)4p$	$ga^6S - z^6P^o$	2-2		802
	0	880.648	26.85110 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^2F^o$	2-2		802
	20	880.937	43.1057 - 156.6217	$3d^5 - 3d^4(a^1F)4p$	$a^2F - u^2F^o$	2-2		959
	0	881.553	26.85990 - 140.29444	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4G^o$	2-2		802
	0	882.227	26.85780 - 140.20709	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4G^o$	2-2		802
	70	883.336	43.60250 - 156.8093	$3d^5 - 3d^4(a^1F)4p$	$a^4F - u^2F^o$	2-2		959
	60	884.025	26.85110 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^2H^o$	0-0		959
	0	884.301	26.85990 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^2F^o$	2-2		802
	150	884.349	0.0 - 113.07834	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - z^6P^o$	2-2		959
	40	884.698	26.82440 - 139.85740	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^2G^o$	1-1		959
	15	884.795	43.60250 - 156.6217	$3d^5 - 3d^4(a^1F)4p$	$a^4F - u^2F^o$	2-2		959
	0	884.978	26.85990 - 139.85740	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^2G^o$	2-2		802
	50	885.327	43.66884 - 156.6217	$3d^5 - 3d^4(a^1F)4p$	$a^4F - u^2F^o$	2-2		959
	80	887.030	32.38370 - 145.1208	$3d^5 - 3d^4(a^3D)4p$	$a^4D - y^2P^o$	2-2		959
	0	887.681	32.30730 - 144.95974	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4F^o$	2-2		802
	150	888.778	32.30730 - 144.81768	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4F^o$	2-2		959
	130	889.171	32.3689 - 144.83290	$3d^5 - 3d^4(a^3D)4p$	$a^4D - x^4P^o$	2-2		959
	150	889.326	32.38470 - 144.83290	$3d^5 - 3d^4(a^3D)4p$	$a^4D - x^4P^o$	2-2		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	Reference
	130	889.407	32.38370 - 144.81768	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4F^o$	$\frac{5}{2} - \frac{7}{2}$		959
	20	889.608	32.30730 - 144.7184	$3d^5 - 3d^4(a^1G)4p$	$a^4D - x^4F^o$	$\frac{7}{2} - \frac{9}{2}$		802
	60	889.958	32.30730 - 144.67238	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4F^o$	$\frac{3}{2} - \frac{5}{2}$		959
	130	890.589	32.38470 - 144.67238	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4F^o$	$\frac{3}{2} - \frac{5}{2}$		959
	150	890.858	32.3689 - 144.61900	$3d^5 - 3d^4(a^3D)4p$	$a^4D - x^4P^o$	$\frac{1}{2} - \frac{3}{2}$		959
	150	890.999	32.38370 - 144.61900	$3d^5 - 3d^4(a^3D)4p$	$a^4D - x^4P^o$	$\frac{3}{2} - \frac{5}{2}$		959
	40	891.287	47.8420 - 160.0397	$3d^5 - 3d^4(a^1F)4p$	$a^2G - v^2D^o$	$\frac{7}{2} - \frac{9}{2}$		959
	130	891.603	32.3689 - 144.52550	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4F^o$	$\frac{1}{2} - \frac{3}{2}$		959
	150	891.739	32.38470 - 144.52550	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4F^o$	$\frac{3}{2} - \frac{5}{2}$		959
1	20	892.393	0.0 - 112.05780	$3d^5 - 3d^4(a^3D)4p$	$ga^4S - z^6P^o$	$\frac{5}{2} - \frac{7}{2}$		301
1	10	893.786	0.0 - 111.88360	$3d^5 - 3d^4(a^3D)4p$	$ga^4S - z^6P^o$	$\frac{3}{2} - \frac{5}{2}$		301
	170	894.154	32.30730 - 144.14650	$3d^5 - 3d^4(a^3D)4p$	$a^4D - x^4P^o$	$\frac{7}{2} - \frac{9}{2}$		959
	350	894.586	26.82440 - 138.60580	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^o$	$\frac{11}{2} - \frac{13}{2}$		802
1	8	894.644	0.0 - 111.77660	$3d^5 - 3d^4(a^3D)4p$	$ga^4S - z^6P^o$	$\frac{5}{2} - \frac{7}{2}$		301
	150	894.741	32.38370 - 144.14650	$3d^5 - 3d^4(a^3D)4p$	$a^4D - x^4P^o$	$\frac{3}{2} - \frac{5}{2}$		959
	40	896.781	26.85110 - 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4F^o$	$\frac{3}{2} - \frac{5}{2}$		802
	150	896.816	26.85990 - 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4F^o$	$\frac{7}{2} - \frac{9}{2}$		959
	120	896.975	26.82440 - 138.31270	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4F^o$	$\frac{11}{2} - \frac{13}{2}$		802
	130	897.176	26.85110 - 138.31270	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4F^o$	$\frac{9}{2} - \frac{11}{2}$		959
	90	897.245	26.85990 - 138.31270	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4F^o$	$\frac{7}{2} - \frac{9}{2}$		959
	190	897.508	26.82440 - 138.24509	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^o$	$\frac{11}{2} - \frac{13}{2}$		959
	100	897.714	26.85110 - 138.24509	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^o$	$\frac{9}{2} - \frac{11}{2}$		802
	130	897.855	26.85780 - 138.23479	$3d^5 - 3d^4(a^3G)4p$	$a^4G - x^4F^o$	$\frac{5}{2} - \frac{7}{2}$		959
	0	898.103	46.6707 - 158.0155	$3d^5 - 3d^4(a^1F)4p$	$a^2H - v^2G^o$	$\frac{11}{2} - \frac{13}{2}$		802
	60	900.012	26.82440 - 137.93553	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^o$	$\frac{11}{2} - \frac{13}{2}$		959
	170	900.237	26.85110 - 137.93553	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^o$	$\frac{9}{2} - \frac{11}{2}$		959
	120	900.286	26.85990 - 137.93553	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^o$	$\frac{7}{2} - \frac{9}{2}$		802
	150	900.453	26.85110 - 137.90820	$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4H^o$	$\frac{9}{2} - \frac{11}{2}$		959
	80	900.594	32.30730 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4D^o$	$\frac{7}{2} - \frac{9}{2}$		802
	130	901.212	32.38370 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4D^o$	$\frac{5}{2} - \frac{7}{2}$		959
	100	901.691	32.30730 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4D^o$	$\frac{7}{2} - \frac{9}{2}$		959
	70	902.101	32.30730 - 143.16150	$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^2G^o$	$\frac{7}{2} - \frac{9}{2}$		959
	80	902.316	32.38370 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4D^o$	$\frac{5}{2} - \frac{7}{2}$		802
	150	902.502	26.85780 - 137.66024	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^o$	$\frac{5}{2} - \frac{7}{2}$		802
	150	902.686	32.3689 - 143.14840	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4D^o$	$\frac{1}{2} - \frac{3}{2}$		959
	60	902.832	32.38470 - 143.14840	$3d^5 - 3d^4(a^3D)4p$	$a^4D - w^4D^o$	$\frac{3}{2} - \frac{5}{2}$		802
	150	903.018	26.85990 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^2F^o$	$\frac{7}{2} - \frac{9}{2}$		959
	35	903.234	0.0 - 110.71162	$3d^5 - 3d^4(a^3D)4p$	$ga^4S - z^6F^o$	$\frac{3}{2} - \frac{5}{2}$		959
	80	903.901	41.2381 - 151.8713	$3d^5 - 3d^4(a^1D)4p$	$a^2D - w^2D^o$	$\frac{5}{2} - \frac{7}{2}$		802
	130	904.359	26.85990 - 137.43670	$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^2H^o$	$\frac{7}{2} - \frac{9}{2}$		959
	130	905.597	26.85990 - 137.28240	$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^2F^o$	$\frac{7}{2} - \frac{9}{2}$		959
	90	906.613	41.5698 - 151.8713	$3d^5 - 3d^4(a^1D)4p$	$a^2D - w^2D^o$	$\frac{3}{2} - \frac{5}{2}$		959
	115	906.691	46.5159 - 156.8093	$3d^5 - 3d^4(a^1F)4p$	$a^2H - v^2F^o$	$\frac{9}{2} - \frac{11}{2}$		959
	20	908.220	29.16770 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^2D^o$	$\frac{5}{2} - \frac{7}{2}$		959
	10	908.607	41.5698 - 151.6288	$3d^5 - 3d^4(a^1D)4p$	$a^2D - w^2D^o$	$\frac{3}{2} - \frac{5}{2}$		802
	70	908.835	26.85780 - 136.88870	$3d^5 - 3d^4(a^3F)4p$	$a^4G - x^4D^o$	$\frac{3}{2} - \frac{5}{2}$		959
	130	909.336	26.85110 - 136.82386	$3d^5 - 3d^4(a^3F)4p$	$a^4G - x^4D^o$	$\frac{9}{2} - \frac{11}{2}$		959
	115	909.622	26.85990 - 136.79661	$3d^5 - 3d^4(a^3F)4p$	$a^4G - x^4D^o$	$\frac{7}{2} - \frac{9}{2}$		959
	40	910.760	43.57316 - 153.37065	$3d^5 - 3d^4(a^1D)4p$	$a^4F - v^2F^o$	$\frac{9}{2} - \frac{11}{2}$		959
	80	911.112	51.0027 - 160.7585	$3d^5 - 3d^4(a^1F)4p$	$b^2F - v^2D^o$	$\frac{5}{2} - \frac{7}{2}$		959
	100	911.783	26.82440 - 136.50063	$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^2I^o$	$\frac{11}{2} - \frac{13}{2}$		959
	80	912.442	26.82440 - 136.42150	$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^2I^o$	$\frac{11}{2} - \frac{13}{2}$		959
	25	912.661	26.85110 - 136.42150	$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^2I^o$	$\frac{9}{2} - \frac{11}{2}$		959
	15	913.353	29.20730 - 138.6920	$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{5}{2}$		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	914.199	39.17440 – 148.56050	$3d^5 - 3d^4(a^1I)4p$	$a^2I - w^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		301
	170	915.215	42.6065 – 151.8713	$3d^5 - 3d^4(a^1D)4p$	$a^2F - w^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	225	915.802	29.16770 – 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^4P - x^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	225	916.002	29.16770 – 138.34062	$3d^5 - 3d^4(a^3G)4p$	$a^4P - x^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		959
	4	916.428	26.82440 – 135.94408	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		301
	90	916.649	26.85110 – 135.94408	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	2	917.175	39.17650 – 148.20690	$3d^5 - 3d^4(a^1I)4p$	$a^2I - w^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	4	917.275	26.85110 – 135.86976	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		301
	1	917.334	26.85990 – 135.86976	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		301
	190	917.417	26.85780 – 135.8590	$3d^5 - 3d^4(a^3P)4p$	$a^4G - z^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	150	917.603	51.0597 – 160.0397	$3d^5 - 3d^4(a^1F)4p$	$b^2F - v^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	8	917.797	26.82440 – 135.78109	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	170	918.007	26.85110 – 135.78109	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		959
	0	918.201	26.82440 – 135.73250	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		301
	1	918.43	26.85110 – 135.73250	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		301
	190	918.500	26.85990 – 135.73250	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		959
	3	918.678	26.85780 – 135.70990	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		301
	0	918.771	26.85110 – 135.69217	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		301
	3	918.849	26.85990 – 135.69217	$3d^5 - 3d^4(a^3H)4p$	$a^4G - y^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		301
	0	919.078	48.0052 – 156.8093	$3d^5 - 3d^4(a^1F)4p$	$a^2G - u^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	0	919.288	47.8420 – 156.6217	$3d^5 - 3d^4(a^1F)4p$	$a^2G - u^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	150	920.382	26.85990 – 135.51070	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	150	921.495	43.1057 – 151.6288	$3d^5 - 3d^4(a^1D)4p$	$a^2F - w^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	150	922.252	29.16770 – 137.59920	$3d^5 - 3d^4(a^3F)4p$	$a^4P - z^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		959
	130	922.623	26.85990 – 135.24627	$3d^5 - 3d^4(a^3P)4p$	$a^4G - y^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	150	923.712	26.85780 – 135.11680	$3d^5 - 3d^4(a^3F)4p$	$a^4G - y^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	130	923.784	32.30730 – 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		959
	25	924.773	84.61053 – 192.74167	$3d^4(a^3P)4s - 3d^4(a^5D)5p$	$b^4P - y^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	130	924.947	29.16770 – 137.28240	$3d^5 - 3d^4(a^3F)4p$	$a^4P - z^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		959
	50	925.122	32.30730 – 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^4D - y^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		959
	150	925.291	29.20730 – 137.28240	$3d^5 - 3d^4(a^3F)4p$	$a^4P - z^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	115	925.776	32.38370 – 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^4D - y^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		959
	50	925.974	41.2381 – 149.2337	$3d^5 - 3d^4(a^3D)4p$	$a^2D - x^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
	170	926.191	29.16770 – 137.13769	$3d^5 - 3d^4(a^3P)4p$	$a^4P - z^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	150	926.532	29.20730 – 137.13769	$3d^5 - 3d^4(a^3P)4p$	$a^4P - z^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	130	926.698	32.38370 – 140.29444	$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		959
	150	926.826	29.24140 – 137.13769	$3d^5 - 3d^4(a^3P)4p$	$a^4P - z^4S^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	100	927.463	32.38470 – 140.20709	$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	35	927.812	26.85780 – 134.63839	$3d^5 - 3d^4(a^3P)4p$	$a^4G - y^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	25	927.881	85.17388 – 192.94829	$3d^4(a^3P)4s - 3d^4(a^5D)5p$	$b^4P - y^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	35	928.039	84.61053 – 192.36552	$3d^4(a^3P)4s - 3d^4(a^5D)5p$	$b^4P - y^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	130	928.288	29.20730 – 136.93560	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	130	928.313	29.16770 – 136.88870	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	150	928.574	29.24140 – 136.93560	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	150	928.676	29.20730 – 136.88870	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	115	928.815	41.5698 – 149.2337	$3d^5 - 3d^4(a^3D)4p$	$a^2D - x^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	250	928.886	29.16770 – 136.82386	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		802
	60	928.959	29.24140 – 136.88870	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	80	929.131	29.16770 – 136.79661	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		959
	150	929.477	29.20730 – 136.79661	$3d^5 - 3d^4(a^3F)4p$	$a^4P - x^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	7	930.707	86.05150 – 193.49807	$3d^4(a^3P)4s - 3d^4(a^5D)5p$	$b^4P - y^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	20	933.555	41.2381 – 148.35560	$3d^5 - 3d^4(a^3D)4p$	$a^2D - w^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		802
	150	933.735	26.85110 – 133.94954	$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		959
	10	934.594	41.5698 – 148.56840	$3d^5 - 3d^4(a^3D)4p$	$a^2D - w^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		802

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
150	934.761	26.82440 - 133.80428		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4I^o$	$\frac{11}{2} - \frac{11}{2}$		959
20	934.950	51.0597 - 158.0155		$3d^5 - 3d^4(a^3F)4p$	$b^2F - v^2G^o$	$\frac{7}{2} - \frac{9}{2}$		802
1	935.36	26.82440 - 133.73664		$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^4G^o$	$\frac{11}{2} - \frac{11}{2}$		301
150	935.539	26.85990 - 133.75150		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		959
0	935.563	26.85110 - 133.73664		$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^4G^o$	$\frac{9}{2} - \frac{11}{2}$		802
130	935.919	29.20730 - 136.0539		$3d^5 - 3d^4(a^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{5}{2}$		959
35	936.091	86.05150 - 192.88016		$3d^4(a^3P)4s - 3d^4(a^5D)5p$	$b^4P - y^6P^o$	$\frac{5}{2} - \frac{7}{2}$		959
30	936.470	62.98892 - 169.7737		$3d^4(a^5D)4s - 3d^4(b^3F)4p$	$a^6D - v^4D^o$	$\frac{7}{2} - \frac{5}{2}$		959
15	936.778	86.48677 - 193.23543		$3d^4(a^3F)4s - 3d^4(a^5D)5p$	$b^4F - y^6D^o$	$\frac{3}{2} - \frac{5}{2}$		959
40	936.880	29.24140 - 135.9778		$3d^5 - 3d^4(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$		959
80	937.199	29.16770 - 135.86976		$3d^5 - 3d^4(a^3F)4p$	$a^4P - y^4F^o$	$\frac{5}{2} - \frac{7}{2}$		959
130	937.287	29.16770 - 135.8590		$3d^5 - 3d^4(a^3P)4p$	$a^4P - z^2P^o$	$\frac{5}{2} - \frac{3}{2}$		959
100	937.642	29.20730 - 135.8590		$3d^5 - 3d^4(a^3P)4p$	$a^4P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		959
150	937.864	42.6065 - 149.2337		$3d^5 - 3d^4(a^3D)4p$	$a^2F - x^2D^o$	$\frac{2}{2} - \frac{4}{2}$		959
150	937.928	29.24140 - 135.8590		$3d^5 - 3d^4(a^3P)4p$	$a^4P - z^2P^o$	$\frac{1}{2} - \frac{1}{2}$		959
150	938.047	26.85110 - 133.45564		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4I^o$	$\frac{9}{2} - \frac{11}{2}$		959
40	939.396	26.82440 - 133.27640		$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^4G^o$	$\frac{11}{2} - \frac{9}{2}$		802
70	939.543	43.1057 - 149.5410		$3d^5 - 3d^4(a^3D)4p$	$a^2F - x^2D^o$	$\frac{2}{2} - \frac{2}{2}$		802
50	939.618	26.85110 - 133.27640		$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^4G^o$	$\frac{9}{2} - \frac{9}{2}$		802
150	940.366	29.16770 - 135.51070		$3d^5 - 3d^4(a^3F)4p$	$a^4P - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
150	940.698	29.20730 - 135.51070		$3d^5 - 3d^4(a^3F)4p$	$a^4P - y^4F^o$	$\frac{3}{2} - \frac{5}{2}$		959
0	940.922	39.17650 - 145.45510		$3d^5 - 3d^4(a^3I)4p$	$a^2I - z^2K^o$	$\frac{11}{2} - \frac{11}{2}$		301
130	941.064	26.82440 - 133.08708		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4I^o$	$\frac{11}{2} - \frac{9}{2}$		959
130	941.311	26.85110 - 133.08708		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4I^o$	$\frac{9}{2} - \frac{9}{2}$		959
150	941.380	26.85990 - 133.08708		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4I^o$	$\frac{7}{2} - \frac{9}{2}$		959
170	941.563	26.85110 - 133.05984		$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		959
150	941.599	26.85990 - 133.05984		$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^4G^o$	$\frac{7}{2} - \frac{7}{2}$		959
50	942.704	29.16770 - 135.24627		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$		802
50	942.903	32.30730 - 138.36280		$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4F^o$	$\frac{7}{2} - \frac{7}{2}$		802
150	943.052	26.85990 - 132.89774		$3d^5 - 3d^4(a^3F)4p$	$a^4G - z^4G^o$	$\frac{7}{2} - \frac{3}{2}$		802
6	943.347	32.30730 - 138.31270		$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4F^o$	$\frac{7}{2} - \frac{9}{2}$		301
3	943.565	32.38370 - 138.36280		$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4F^o$	$\frac{3}{2} - \frac{7}{2}$		301
2	943.796	32.38470 - 138.34062		$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4F^o$	$\frac{1}{2} - \frac{5}{2}$		301
90	944.206	29.20730 - 135.11680		$3d^5 - 3d^4(a^3F)4p$	$a^4P - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
80	944.573	32.3689 - 138.23479		$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$		802
30	944.746	32.38470 - 138.23479		$3d^5 - 3d^4(a^3G)4p$	$a^4D - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$		802
0	944.862	39.17440 - 145.00836		$3d^5 - 3d^4(a^3I)4p$	$a^2I - z^2K^o$	$\frac{11}{2} - \frac{11}{2}$		301
1	944.906	39.17650 - 145.00836		$3d^5 - 3d^4(a^3I)4p$	$a^2I - z^2K^o$	$\frac{11}{2} - \frac{11}{2}$		301
0	945.124	51.0027 - 156.8093		$3d^5 - 3d^4(a^3F)4p$	$b^2F - u^2F^o$	$\frac{5}{2} - \frac{7}{2}$		802
200	945.632	42.6065 - 148.35560		$3d^5 - 3d^4(a^3D)4p$	$a^2F - w^2F^o$	$\frac{7}{2} - \frac{7}{2}$		802
3	946.050	39.17650 - 144.88010		$3d^5 - 3d^4(a^3G)4p$	$a^2I - x^2H^o$	$\frac{11}{2} - \frac{11}{2}$		301
150	946.722	32.30730 - 137.93553		$3d^5 - 3d^4(a^3G)4p$	$a^4D - y^4H^o$	$\frac{7}{2} - \frac{9}{2}$		959
120	946.802	51.0027 - 156.6217		$3d^5 - 3d^4(a^3F)4p$	$b^2F - u^2F^o$	$\frac{5}{2} - \frac{5}{2}$		802
170	947.141	29.20730 - 134.78910		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4P^o$	$\frac{3}{2} - \frac{1}{2}$		959
115	947.315	51.0597 - 156.6217		$3d^5 - 3d^4(a^3F)4p$	$b^2F - u^2F^o$	$\frac{7}{2} - \frac{5}{2}$		959
130	947.448	29.24140 - 134.78910		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4P^o$	$\frac{1}{2} - \frac{1}{2}$		959
130	947.614	47.8420 - 153.37065		$3d^5 - 3d^4(a^3D)4p$	$a^2G - v^2F^o$	$\frac{7}{2} - \frac{7}{2}$		959
170	948.144	29.16770 - 134.63839		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4P^o$	$\frac{3}{2} - \frac{1}{2}$		959
90	948.495	29.20730 - 134.63839		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4P^o$	$\frac{3}{2} - \frac{1}{2}$		959
190	949.086	48.0052 - 153.37065		$3d^5 - 3d^4(a^3D)4p$	$a^2G - v^2F^o$	$\frac{9}{2} - \frac{7}{2}$		959
2	949.235	39.17440 - 144.52230		$3d^5 - 3d^4(a^3G)4p$	$a^2I - x^2H^o$	$\frac{11}{2} - \frac{9}{2}$		301
0	949.741	32.30730 - 137.59920		$3d^5 - 3d^4(a^3F)4p$	$a^4D - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$		301
80	949.881	32.38370 - 137.66024		$3d^5 - 3d^4(a^3G)4p$	$a^4D - y^4H^o$	$\frac{3}{2} - \frac{3}{2}$		959
20	950.114	43.1057 - 148.35560		$3d^5 - 3d^4(a^3D)4p$	$a^2F - w^2F^o$	$\frac{5}{2} - \frac{7}{2}$		802

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
115	950.335	47.8420 - 153.06770		$3d^5 - 3d^4(a^1D)4p$	$a^2G - v^2F^o$	$\frac{7}{2} - \frac{5}{2}$		959
130	950.435	32.38370 - 137.59920		$3d^5 - 3d^4(a^3F)4p$	$a^4D - z^2F^o$	$\frac{3}{2} - \frac{1}{2}$		959
5	951.140	39.17440 - 144.3107		$3d^5 - 3d^4(a^1I)4p$	$a^2I - y^2I^o$	$\frac{11}{2} - \frac{9}{2}$		301
3	951.630	39.17650 - 144.2585		$3d^5 - 3d^4(a^1I)4p$	$a^2I - y^2I^o$	$\frac{13}{2} - \frac{11}{2}$		301
130	951.765	111.60145 - 216.67058		$3d^4(a^5D)4p - 3d^4(a^5D)5d$	$z^6F^o - g^6D$	$\frac{11}{2} - \frac{9}{2}$		959
45	952.051	111.11139 - 216.14932		$3d^4(a^5D)4p - 3d^4(a^5D)5d$	$z^6F^o - f^6F$	$\frac{9}{2} - \frac{7}{2}$		959
115	952.610	32.30730 - 137.28240		$3d^5 - 3d^4(a^3F)4p$	$a^4D - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		959
115	953.020	111.60145 - 216.53306		$3d^4(a^5D)4p - 3d^4(a^5D)5d$	$z^6F^o - f^6G$	$\frac{11}{2} - \frac{9}{2}$		959
0	953.309	32.38370 - 137.28240		$3d^5 - 3d^4(a^3F)4p$	$a^4D - z^2F^o$	$\frac{3}{2} - \frac{1}{2}$		301
340	954.475	32.3689 - 137.13769		$3d^5 - 3d^4(a^3P)4p$	$a^4D - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		959
60	954.619	32.38370 - 137.13769		$3d^5 - 3d^4(a^3P)4p$	$a^4D - z^2S^o$	$\frac{5}{2} - \frac{3}{2}$		959
35	955.077	89.05244 - 193.75679		$3d^4(a^3G)4s - 3d^4(a^5D)5p$	$b^4G - y^4D^o$	$\frac{9}{2} - \frac{7}{2}$		959
115	955.897	90.2335 - 194.84910		$3d^4(a^3P)4s - 3d^4(a^5D)5p$	$b^2P - u^4F^o$	$\frac{1}{2} - \frac{3}{2}$		959
3	956.061	26.82440 - 131.42003		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4H^o$	$\frac{11}{2} - \frac{9}{2}$		301
0	956.316	32.3689 - 136.93560		$3d^5 - 3d^4(a^3F)4p$	$a^4D - x^4D^o$	$\frac{3}{2} - \frac{1}{2}$		802
190	956.770	111.88360 - 216.40386		$3d^4(a^5D)4p - 3d^4(a^5D)5d$	$z^6P^o - f^6P$	$\frac{11}{2} - \frac{9}{2}$		959
190	956.784	32.30730 - 136.82386		$3d^5 - 3d^4(a^3F)4p$	$a^4D - x^4D^o$	$\frac{3}{2} - \frac{1}{2}$		959
80	956.906	32.38370 - 136.88870		$3d^5 - 3d^4(a^3F)4p$	$a^4D - x^4D^o$	$\frac{5}{2} - \frac{3}{2}$		802
150	957.036	32.30730 - 136.79661		$3d^5 - 3d^4(a^3F)4p$	$a^4D - x^4D^o$	$\frac{7}{2} - \frac{5}{2}$		959
170	957.349	29.20730 - 133.6626		$3d^5 - 3d^4(a^3P)4p$	$a^4P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		959
20	957.488	32.38370 - 136.82386		$3d^5 - 3d^4(a^3F)4p$	$a^4D - x^4D^o$	$\frac{3}{2} - \frac{1}{2}$		802
180	957.748	32.38370 - 136.79661		$3d^5 - 3d^4(a^3F)4p$	$a^4D - x^4D^o$	$\frac{5}{2} - \frac{3}{2}$		802
45	957.992	111.77660 - 216.16290		$3d^4(a^5D)4p - 3d^4(a^5D)5d$	$z^6P^o - f^6P$	$\frac{11}{2} - \frac{9}{2}$		959
0	958.387	61.5802 - 165.9229		$3d^5 - 3d^4(b^3F)4p$	$b^2D - t^2F^o$	$\frac{3}{2} - \frac{1}{2}$		802
80	958.607	61.6038 - 165.9229		$3d^5 - 3d^4(b^3F)4p$	$b^2D - t^2F^o$	$\frac{5}{2} - \frac{3}{2}$		959
0	958.794	26.82440 - 131.12364		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4H^o$	$\frac{11}{2} - \frac{9}{2}$		802
2	959.021	26.85110 - 131.12364		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4H^o$	$\frac{13}{2} - \frac{11}{2}$		301
0	959.468	112.05780 - 216.28358		$3d^4(a^5D)4p - 3d^4(a^5D)5d$	$z^6P^o - g^6D$	$\frac{11}{2} - \frac{9}{2}$		802
10	959.866	42.6065 - 146.7884		$3d^5 - 3d^4(a^1G)4p$	$a^2F - w^2G^o$	$\frac{3}{2} - \frac{1}{2}$		802
10	960.611	61.6038 - 165.7029		$3d^5 - 3d^4(b^3F)4p$	$b^2D - t^2F^o$	$\frac{5}{2} - \frac{3}{2}$		802
80	960.885	26.82440 - 130.89539		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4H^o$	$\frac{11}{2} - \frac{9}{2}$		959
0	961.209	26.85990 - 130.89539		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4H^o$	$\frac{13}{2} - \frac{11}{2}$		301
80	961.680	42.6065 - 146.5919		$3d^5 - 3d^4(a^1G)4p$	$a^2F - w^2G^o$	$\frac{3}{2} - \frac{1}{2}$		959
150	962.622	41.2381 - 145.1208		$3d^5 - 3d^4(a^5D)4p$	$a^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		959
0	962.71	26.85780 - 130.73131		$3d^5 - 3d^4(a^3H)4p$	$a^4G - z^4H^o$	$\frac{3}{2} - \frac{1}{2}$		301
1	963.353	29.16770 - 132.97199		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		301
90	963.892	32.30730 - 136.0539		$3d^5 - 3d^4(a^3F)4p$	$a^4D - z^2D^o$	$\frac{7}{2} - \frac{5}{2}$		959
0	964.208	114.09497 - 217.80757		$3d^4(a^5D)4p - 3d^4(a^5D)6s$	$z^6D^o - g^6D$	$\frac{11}{2} - \frac{9}{2}$		802
60	965.319	32.38370 - 135.9778		$3d^5 - 3d^4(a^3F)4p$	$a^4D - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$		959
40	966.264	32.3689 - 135.8590		$3d^5 - 3d^4(a^3P)4p$	$a^4D - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$		959
0	966.361	41.2381 - 144.7184		$3d^5 - 3d^4(a^1G)4p$	$a^2D - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$		802
90	966.801	41.2381 - 144.67238		$3d^5 - 3d^4(a^5D)4p$	$a^2D - w^4F^o$	$\frac{3}{2} - \frac{1}{2}$		959
35	966.882	32.30730 - 135.73250		$3d^5 - 3d^4(a^3H)4p$	$a^4D - y^4G^o$	$\frac{7}{2} - \frac{5}{2}$		959
25	967.087	32.30730 - 135.70990		$3d^5 - 3d^4(a^3H)4p$	$a^4D - y^4G^o$	$\frac{9}{2} - \frac{7}{2}$		959
70	967.818	32.38470 - 135.70990		$3d^5 - 3d^4(a^3H)4p$	$a^4D - y^4G^o$	$\frac{11}{2} - \frac{9}{2}$		959
35	967.971	32.38370 - 135.69217		$3d^5 - 3d^4(a^3H)4p$	$a^4D - y^4G^o$	$\frac{13}{2} - \frac{11}{2}$		959
90	968.852	43.57316 - 146.7884		$3d^5 - 3d^4(a^1G)4p$	$a^2F - w^2G^o$	$\frac{3}{2} - \frac{1}{2}$		959
0	968.961	32.30730 - 135.51070		$3d^5 - 3d^4(a^3F)4p$	$a^4D - y^4F^o$	$\frac{3}{2} - \frac{1}{2}$		802
60	969.132	43.60250 - 146.7884		$3d^5 - 3d^4(a^1G)4p$	$a^2F - w^2G^o$	$\frac{5}{2} - \frac{3}{2}$		959
10	969.478	41.5698 - 144.7184		$3d^5 - 3d^4(a^1G)4p$	$a^2D - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$		802
120	969.661	29.16770 - 132.29755		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		802
150	970.033	29.20730 - 132.29755		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		959
30	970.692	43.57316 - 146.5919		$3d^5 - 3d^4(a^1G)4p$	$a^2F - w^2G^o$	$\frac{3}{2} - \frac{1}{2}$		959
60	970.986	43.60250 - 146.5919		$3d^5 - 3d^4(a^1G)4p$	$a^2F - w^2G^o$	$\frac{5}{2} - \frac{3}{2}$		959

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
150	971.454	32.30730 - 135.24627		$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4P^o$	$\frac{7}{2} - \frac{5}{2}$		959
90	971.587	43.66884 - 146.5919		$3d^5 - 3d^4(a^3G)4p$	$a^4F - w^4G^o$	$\frac{7}{2} - \frac{7}{2}$		959
60	971.903	41.2381 - 144.1298		$3d^5 - 3d^4(a^3G)4p$	$a^2D - x^2F^o$	$\frac{7}{2} - \frac{7}{2}$		802
0	973.386	32.38470 - 135.11680		$3d^5 - 3d^4(a^3F)4p$	$a^4D - y^4F^o$	$\frac{7}{2} - \frac{7}{2}$		802
0	975.284	29.16770 - 131.70169		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		802
150	975.664	29.20730 - 131.70169		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		959
150	975.994	29.24140 - 131.70169		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		959
130	976.360	32.3689 - 134.78910		$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$		959
80	976.529	32.38470 - 134.78910		$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$		959
130	977.801	32.3689 - 134.63839		$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$		959
150	977.964	32.38370 - 134.63839		$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$		959
40	978.544	114.50118 - 216.69183		$3d^4(a^3D)4p - 3d^4(a^3D)5d$	$z^6D^o - f^6F$	$\frac{9}{2} - \frac{11}{2}$		959
130	979.630	29.20730 - 131.28718		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		959
170	979.963	29.24140 - 131.28718		$3d^5 - 3d^4(a^3P)4p$	$a^4P - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		959
115	980.248	43.1057 - 145.1208		$3d^5 - 3d^4(a^3D)4p$	$a^2F - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$		959
60	980.669	41.2381 - 143.20980		$3d^5 - 3d^4(a^3D)4p$	$a^2D - w^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
70	981.268	41.2381 - 143.14840		$3d^5 - 3d^4(a^3D)4p$	$a^2D - w^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
0	981.462	46.6707 - 148.56050		$3d^5 - 3d^4(a^3I)4p$	$a^2H - w^2H^o$	$\frac{11}{2} - \frac{9}{2}$		802
45	981.598	114.28791 - 216.16290		$3d^4(a^3D)4p - 3d^4(a^3D)5d$	$z^6D^o - f^6P$	$\frac{5}{2} - \frac{3}{2}$		959
70	981.750	41.2381 - 143.09700		$3d^5 - 3d^4(a^3G)4p$	$a^2D - x^2G^o$	$\frac{5}{2} - \frac{7}{2}$		959
20	983.369	46.5159 - 148.20690		$3d^5 - 3d^4(a^3I)4p$	$a^2H - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		802
150	983.857	32.30730 - 133.94954		$3d^5 - 3d^4(a^3H)4p$	$a^4D - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		959
450	984.129	43.1057 - 144.7184		$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^2F^o$	$\frac{5}{2} - \frac{5}{2}$		802
115	984.455	41.5698 - 143.14840		$3d^5 - 3d^4(a^3D)4p$	$a^2D - w^4D^o$	$\frac{5}{2} - \frac{7}{2}$		959
0	984.572	43.1057 - 144.67238		$3d^5 - 3d^4(a^3D)4p$	$a^2F - w^4F^o$	$\frac{5}{2} - \frac{5}{2}$		802
115	984.655	41.5698 - 143.12700		$3d^5 - 3d^4(a^3D)4p$	$a^2D - w^4D^o$	$\frac{5}{2} - \frac{7}{2}$		959
600	984.883	46.6707 - 148.20690		$3d^5 - 3d^4(a^3I)4p$	$a^2H - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		802
6	984.904	46.6707 - 148.20690		$3d^5 - 3d^4(a^3I)4p$	$a^2H - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		301
5	984.982	42.6065 - 144.1298		$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^2F^o$	$\frac{5}{2} - \frac{7}{2}$		301
2	985.974	43.1057 - 144.52550		$3d^5 - 3d^4(a^3D)4p$	$a^2F - w^4F^o$	$\frac{5}{2} - \frac{7}{2}$		301
0	986.239	61.6038 - 162.9990		$3d^5 - 3d^4(b^3F)4p$	$b^2D - v^4F^o$	$\frac{5}{2} - \frac{3}{2}$		301
60	986.322	43.57316 - 144.95974		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{7}{2} - \frac{7}{2}$		802
70	986.495	32.38370 - 133.75150		$3d^5 - 3d^4(a^3H)4p$	$a^4D - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		959
70	986.606	43.60250 - 144.95974		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{7}{2} - \frac{7}{2}$		959
60	987.102	43.57316 - 144.88010		$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^2H^o$	$\frac{7}{2} - \frac{11}{2}$		959
150	987.219	32.3689 - 133.6626		$3d^5 - 3d^4(a^3P)4p$	$a^4D - z^2S^o$	$\frac{7}{2} - \frac{11}{2}$		959
130	987.698	43.57316 - 144.81768		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{9}{2} - \frac{7}{2}$		959
0	987.994	43.60250 - 144.81768		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{9}{2} - \frac{7}{2}$		802
115	988.632	43.66884 - 144.81768		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{9}{2} - \frac{7}{2}$		959
0	989.414	43.60250 - 144.67238		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{9}{2} - \frac{7}{2}$		802
10	990.066	43.66884 - 144.67238		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{9}{2} - \frac{5}{2}$		802
190	991.498	43.66884 - 144.52550		$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4F^o$	$\frac{9}{2} - \frac{7}{2}$		959
350	991.942	51.0597 - 151.8713		$3d^5 - 3d^4(a^3D)4p$	$b^2F - w^2D^o$	$\frac{7}{2} - \frac{5}{2}$		802
90	992.169	68.89200 - 169.6824		$3d^5 - 3d^4(b^3F)4p$	$b^2G - u^2G^o$	$\frac{7}{2} - \frac{7}{2}$		959
80	992.241	32.30730 - 133.08708		$3d^5 - 3d^4(a^3H)4p$	$a^4D - z^2I^o$	$\frac{7}{2} - \frac{9}{2}$		959
80	992.868	47.8420 - 148.56050		$3d^5 - 3d^4(a^3I)4p$	$a^2G - w^2H^o$	$\frac{7}{2} - \frac{9}{2}$		802
150	993.216	94.90645 - 195.59209		$3d^4(a^3D)4s - 3d^4(a^3D)5p$	$c^4D - u^4D^o$	$\frac{11}{2} - \frac{11}{2}$		959
60	993.388	32.30730 - 132.97199		$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		959
150	993.789	51.0027 - 151.6288		$3d^5 - 3d^4(a^3D)4p$	$b^2F - w^2D^o$	$\frac{5}{2} - \frac{3}{2}$		802
80	994.153	32.38370 - 132.97199		$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		959
170	994.475	42.6065 - 143.16150		$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^2G^o$	$\frac{7}{2} - \frac{9}{2}$		959
80	994.752	43.60250 - 144.1298		$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^2F^o$	$\frac{7}{2} - \frac{7}{2}$		959
50	994.893	47.8420 - 148.35560		$3d^5 - 3d^4(a^3D)4p$	$a^2G - w^2F^o$	$\frac{7}{2} - \frac{7}{2}$		959
50	995.122	42.6065 - 143.09700		$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^2G^o$	$\frac{7}{2} - \frac{7}{2}$		802

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	995.403	43.66884 - 144.1298	$3d^5 - 3d^4(a^1G)4p$	$a^4F - x^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		959
	80	996.510	48.0052 - 148.35560	$3d^5 - 3d^4(a^3D)4p$	$a^2G - w^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	70	997.995	48.0052 - 148.20690	$3d^5 - 3d^4(a^1I)4p$	$a^2G - w^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		802
	700	998.818	46.6707 - 146.7884	$3d^5 - 3d^4(a^1G)4p$	$a^2H - w^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		802
	600	999.236	46.5159 - 146.5919	$3d^5 - 3d^4(a^1G)4p$	$a^2H - w^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	40	1000.091	43.1057 - 143.09700	$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		802
	100	1002.279	43.57316 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	0	1002.578	43.60250 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		802
	60	1003.239	43.66884 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		959
	30	1003.940	43.60250 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	0	1004.605	43.66884 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		802
	10	1005.244	43.66884 - 143.14840	$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	0	1005.501	43.67474 - 143.12700	$3d^5 - 3d^4(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		802
	70	1006.859	32.38370 - 131.70169	$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	115	1008.276	61.5802 - 160.7585	$3d^5 - 3d^4(a^1F)4p$	$b^2D - v^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	10	1008.437	41.2381 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^2D - y^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		802
	60	1008.520	61.6038 - 160.7585	$3d^5 - 3d^4(a^1F)4p$	$b^2D - v^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	50	1010.649	47.8420 - 146.7884	$3d^5 - 3d^4(a^1G)4p$	$a^2G - w^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		959
	60	1011.106	32.38470 - 131.28718	$3d^5 - 3d^4(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	500	1012.324	48.0052 - 146.7884	$3d^5 - 3d^4(a^1G)4p$	$a^2G - w^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		802
	100	1012.662	47.8420 - 146.5919	$3d^5 - 3d^4(a^1G)4p$	$a^2G - w^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		802
	1	1012.844	39.17650 - 137.90820	$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	80	1014.344	48.0052 - 146.5919	$3d^5 - 3d^4(a^1G)4p$	$a^2G - w^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	180	1014.836	51.0027 - 149.5410	$3d^5 - 3d^4(a^3D)4p$	$b^2F - x^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		802
	130	1015.893	61.6038 - 160.0397	$3d^5 - 3d^4(a^1F)4p$	$b^2D - v^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		959
	100	1016.212	41.2381 - 139.6436	$3d^5 - 3d^4(a^3F)4p$	$a^2D - y^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		959
	60	1016.518	41.5698 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$a^2D - y^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
	70	1016.628	46.5159 - 144.88010	$3d^5 - 3d^4(a^1G)4p$	$a^2H - x^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		959
	150	1016.897	46.6707 - 145.00836	$3d^5 - 3d^4(a^1I)4p$	$a^2H - z^2K^\circ$	$\frac{11}{2} - \frac{13}{2}$		959
	115	1017.385	46.6707 - 144.95974	$3d^5 - 3d^4(a^3D)4p$	$a^2H - w^2F^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	2	1017.674	39.17440 - 137.43670	$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		301
	115	1018.008	51.0027 - 149.2337	$3d^5 - 3d^4(a^3D)4p$	$b^2F - x^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		959
	300	1018.239	46.6707 - 144.88010	$3d^5 - 3d^4(a^1G)4p$	$a^2H - x^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		802
	250	1018.605	51.0597 - 149.2337	$3d^5 - 3d^4(a^3D)4p$	$b^2F - x^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	350	1020.049	41.2381 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		802
	300	1020.337	46.5159 - 144.52230	$3d^5 - 3d^4(a^1G)4p$	$a^2H - x^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		802
	80	1021.950	46.6707 - 144.52230	$3d^5 - 3d^4(a^1G)4p$	$a^2H - x^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	150	1022.536	46.5159 - 144.3107	$3d^5 - 3d^4(a^1I)4p$	$a^2H - y^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		802
	40	1023.502	41.5698 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
	115	1023.663	42.6065 - 140.29444	$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		959
	0	1023.797						802
	50	1024.160	46.6707 - 144.3107	$3d^5 - 3d^4(a^1I)4p$	$a^2H - y^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		959
	45	1024.437	46.5159 - 144.1298	$3d^5 - 3d^4(a^1G)4p$	$a^2H - x^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	80	1024.717	46.6707 - 144.2585	$3d^5 - 3d^4(a^1I)4p$	$a^2H - y^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		802
	10	1024.950	51.0027 - 148.56840	$3d^5 - 3d^4(a^3D)4p$	$b^2F - w^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		802
	130	1025.557	51.0597 - 148.56840	$3d^5 - 3d^4(a^3D)4p$	$b^2F - w^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	150	1026.130	41.2381 - 138.6920	$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
	150	1027.073	42.6065 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$a^2F - y^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		959
	130	1027.370	72.18333 - 169.5183	$3d^4(a^5D)4s - 3d^4(b^3F)4p$	$b^4D - v^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		959
	0	1027.495	39.17650 - 136.50063	$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2I^\circ$	$\frac{13}{2} - \frac{13}{2}$		301
	20	1027.791	51.0597 - 148.35560	$3d^5 - 3d^4(a^3D)4p$	$b^2F - w^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		802
	0	1028.307	39.17650 - 136.42150	$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	650	1028.754	43.57316 - 140.77688	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		802
	300	1029.627	41.5698 - 138.6920	$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		802

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1029.843	41.2381 - 138.34062	$3d^5 - 3d^4(a^3G)4p$	$a^2D - x^4F^o$			802
	30	1030.973	41.2381 - 138.23479	$3d^5 - 3d^4(a^3G)4p$	$a^2D - x^4F^o$			802
	170	1031.093	43.57316 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4G^o$			959
	700	1031.404	43.60250 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4G^o$			802
	20	1032.251	48.0052 - 144.88010	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^2H^o$			802
	90	1032.646	43.1057 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$a^2F - y^2F^o$			959
	60	1032.737	47.8420 - 144.67238	$3d^5 - 3d^4(a^3D)4p$	$a^2G - w^4F^o$			959
	100	1032.912	48.0052 - 144.81768	$3d^5 - 3d^4(a^3D)4p$	$a^2G - w^4F^o$			959
	130	1033.067	43.60250 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^2F^o$			959
	50	1033.341	41.5698 - 138.34062	$3d^5 - 3d^4(a^3G)4p$	$a^2D - x^4F^o$			959
	150	1033.774	43.66884 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^2F^o$			959
	150	1034.212	43.60250 - 140.29444	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4G^o$			959
	750	1034.480	42.6065 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^2F - y^2D^o$			802
	1	1034.698	46.5159 - 143.16150	$3d^5 - 3d^4(a^3G)4p$	$a^2H - x^2G^o$			802
	650	1034.917	43.66884 - 140.29444	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4G^o$			802
	115	1035.138	39.17650 - 135.78109	$3d^5 - 3d^4(a^3H)4p$	$a^2I - y^4G^o$			959
	0	1035.392	46.5159 - 143.09700	$3d^5 - 3d^4(a^3G)4p$	$a^2H - x^2G^o$			802
	80	1035.645	39.17440 - 135.73250	$3d^5 - 3d^4(a^3H)4p$	$a^2I - y^4G^o$			959
	170	1035.875	43.66884 - 140.20709	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4G^o$			959
	700	1035.895	43.67474 - 140.20709	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4G^o$			802
	20	1036.081	48.0052 - 144.52230	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^2H^o$			802
	130	1036.344	46.6707 - 143.16150	$3d^5 - 3d^4(a^3G)4p$	$a^2H - x^2G^o$			959
	130	1037.361	43.57316 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^2H^o$			959
	170	1037.691	43.60250 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^2H^o$			959
	750	1037.746	41.2381 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$a^2D - z^2F^o$			802
	170	1038.107	43.57316 - 139.90206	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^2H^o$			959
	130	1038.356	48.0052 - 144.3107	$3d^5 - 3d^4(a^3I)4p$	$a^2G - y^2I^o$			959
	20	1038.752	43.67474 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^2F^o$			802
	250	1039.850	43.1057 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^2F - y^2D^o$			802
	80	1040.323	48.0052 - 144.1298	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^2F^o$			802
	180	1041.191	41.2381 - 137.28240	$3d^5 - 3d^4(a^3F)4p$	$a^2D - z^2F^o$			802
	60	1044.312	42.6065 - 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^4F^o$			959
	50	1044.610	51.0597 - 146.7884	$3d^5 - 3d^4(a^3G)4p$	$b^2F - w^2G^o$			802
	700	1044.790	41.5698 - 137.28240	$3d^5 - 3d^4(a^3F)4p$	$a^2D - z^2F^o$			802
	0	1045.240	43.60250 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^4F - y^2D^o$			802
	30	1045.984	43.66884 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^4F - y^2D^o$			802
	700	1046.167	43.1057 - 138.6920	$3d^5 - 3d^4(a^3P)4p$	$a^2F - y^2D^o$			802
	80	1046.473	41.2381 - 136.79661	$3d^5 - 3d^4(a^3F)4p$	$a^2D - x^4D^o$			802
	60	1047.090	47.8420 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^2G - w^4D^o$			959
	10	1048.586	47.8420 - 143.20980	$3d^5 - 3d^4(a^3D)4p$	$a^2G - w^4D^o$			802
	50	1048.886	48.0052 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$a^2G - w^4D^o$			959
	0	1049.105	41.5698 - 136.88870	$3d^5 - 3d^4(a^3F)4p$	$a^2D - x^4D^o$			802
	650	1049.816	43.1057 - 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^4F^o$			802
	130	1050.034	43.1057 - 138.34062	$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^4F^o$			959
	80	1050.122	41.5698 - 136.79661	$3d^5 - 3d^4(a^3F)4p$	$a^2D - x^4D^o$			802
	200	1050.354	61.6038 - 156.8093	$3d^5 - 3d^4(a^3F)4p$	$b^2D - u^2F^o$			802
	650	1050.889	48.0052 - 143.16150	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^2G^o$			802
	150	1051.196	43.1057 - 138.23479	$3d^5 - 3d^4(a^3G)4p$	$a^2F - x^4F^o$			959
	115	1051.617	48.0052 - 143.09700	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^2G^o$			959
	100	1052.193	61.5802 - 156.6217	$3d^5 - 3d^4(a^3F)4p$	$b^2D - u^2F^o$			802
	30	1052.431	61.6038 - 156.6217	$3d^5 - 3d^4(a^3F)4p$	$b^2D - u^2F^o$			802
	450	1052.718	42.6065 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^2F^o$			802
	150	1053.070	39.17650 - 134.13660	$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^4I^o$			959
	115	1054.523	42.6065 - 137.43670	$3d^5 - 3d^4(a^3H)4p$	$a^2F - z^2H^o$			959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	170	1054.684	41.2381 - 136.0539	$3d^5 - 3d^4(a^3F)4p$	$a^2D - z^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	115	1054.955	43.57316 - 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	90	1055.136	39.17440 - 133.94954	$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	80	1055.289	43.60250 - 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	350	1055.523	43.57316 - 138.31270	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	0	1055.839	43.60250 - 138.31270	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	150	1056.028	43.66884 - 138.36280	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	30	1056.271	43.66884 - 138.34062	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
	150	1056.322	43.67474 - 138.34062	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	150	1056.771	39.17650 - 133.80428	$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2I^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	150	1056.846	41.2381 - 135.8590	$3d^5 - 3d^4(a^3P)4p$	$a^2D - z^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	150	1057.470	43.66884 - 138.23479	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	150	1057.520	43.67474 - 138.23479	$3d^5 - 3d^4(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	170	1057.983	41.5698 - 136.0894	$3d^5 - 3d^4(a^3P)4p$	$a^2D - z^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	120	1058.270	43.1057 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		802
	150	1059.749	43.57316 - 137.93553	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	130	1060.562	41.5698 - 135.8590	$3d^5 - 3d^4(a^3P)4p$	$a^2D - z^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	170	1060.758	41.2381 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$a^2D - y^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	90	1061.383	42.6065 - 136.82386	$3d^5 - 3d^4(a^3F)4p$	$a^2F - x^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	150	1061.825	43.1057 - 137.28240	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
	130	1062.505	51.0027 - 145.1208	$3d^5 - 3d^4(a^3D)4p$	$b^2F - y^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	130	1062.622	46.6707 - 140.77688	$3d^5 - 3d^4(a^3G)4p$	$a^2H - x^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	30	1063.182	43.60250 - 137.66024	$3d^5 - 3d^4(a^3G)4p$	$a^4F - y^4H^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	150	1063.356	46.5159 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^2H - x^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	20	1063.745	41.2381 - 135.24627	$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
	70	1064.485	41.5698 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$a^2D - y^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	170	1065.117	46.6707 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^2H - x^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	10	1066.287	43.1057 - 136.88870	$3d^5 - 3d^4(a^3F)4p$	$a^2F - x^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
	150	1067.049	51.0027 - 144.7184	$3d^5 - 3d^4(a^3G)4p$	$b^2F - x^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
	0	1067.343	43.1057 - 136.79661	$3d^5 - 3d^4(a^3F)4p$	$a^2F - x^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		802
	130	1067.710	51.0597 - 144.7184	$3d^5 - 3d^4(a^3G)4p$	$b^2F - x^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	170	1068.977	41.5698 - 135.11680	$3d^5 - 3d^4(a^3F)4p$	$a^2D - y^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	150	1070.033	46.5159 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$a^2H - y^2H^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	40	1070.812	46.5159 - 139.90206	$3d^5 - 3d^4(a^3G)4p$	$a^2H - y^2H^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	150	1071.334	46.5159 - 139.85740	$3d^5 - 3d^4(a^3F)4p$	$a^2H - y^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	190	1071.802	46.6707 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$a^2H - y^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	130	1072.262	43.67474 - 136.93560	$3d^5 - 3d^4(a^3F)4p$	$a^4F - x^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	120	1072.372	43.57316 - 136.82386	$3d^5 - 3d^4(a^3F)4p$	$a^4F - x^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	400	1072.598	46.6707 - 139.90206	$3d^5 - 3d^4(a^3G)4p$	$a^2H - y^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		802
	50	1072.727	43.66884 - 136.88870	$3d^5 - 3d^4(a^3F)4p$	$a^4F - x^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		802
	30	1073.027	43.60250 - 136.79661	$3d^5 - 3d^4(a^3F)4p$	$a^4F - x^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	190	1073.108	46.6707 - 139.85740	$3d^5 - 3d^4(a^3F)4p$	$a^2H - y^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	800	1073.789	46.5159 - 139.6436	$3d^5 - 3d^4(a^3F)4p$	$a^2H - y^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	100	1074.270	51.0597 - 144.14650	$3d^5 - 3d^4(a^3D)4p$	$b^2F - x^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	80	1074.460	51.0597 - 144.1298	$3d^5 - 3d^4(a^3G)4p$	$b^2F - x^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	250	1077.920	48.0052 - 140.77688	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	20	1078.572	47.8420 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	100	1080.386	47.8420 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^2G - y^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	100	1080.445	48.0052 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	170	1080.928	41.2381 - 133.75150	$3d^5 - 3d^4(a^3H)4p$	$a^2D - z^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	0	1081.636	47.8420 - 140.29444	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	150	1082.195	43.1057 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$a^2F - y^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
	800	1082.300	48.0052 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$a^2G - y^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	650	1082.588	43.57316 - 135.94408	$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		802

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	170	1082.655	47.8420 - 140.20709	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4G^\circ$	2-2		959
	90	1082.924	43.60250 - 135.94408	$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^4F^\circ$	1-1		959
	1	1083.276	29.16770 - 121.48024	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	2-2		301
	190	1083.551	48.0052 - 140.29444	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4G^\circ$	2-2		959
	300	1083.795	43.60250 - 135.86976	$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^4F^\circ$	1-1		802
	450	1084.485	43.57316 - 135.78109	$3d^5 - 3d^4(a^3H)4p$	$a^4F - y^4G^\circ$	2-2	11	802
	150	1085.081	43.57316 - 135.73250	$3d^5 - 3d^4(a^3H)4p$	$a^4F - y^4G^\circ$	2-2		959
	600	1085.423	43.60250 - 135.73250	$3d^5 - 3d^4(a^3H)4p$	$a^4F - y^4G^\circ$	1-1		802
	850	1085.772	29.16770 - 121.26732	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	1-1		802
	190	1086.249	29.20730 - 121.26732	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	1-1		959
	150	1086.457	43.66884 - 135.70990	$3d^5 - 3d^4(a^3H)4p$	$a^4F - y^4G^\circ$	2-2		959
	90	1086.533	43.67474 - 135.70990	$3d^5 - 3d^4(a^3H)4p$	$a^4F - y^4G^\circ$	2-2		802
	400	1086.688	43.66884 - 135.69217	$3d^5 - 3d^4(a^3H)4p$	$a^4F - y^4G^\circ$	2-2	7	802
	170	1086.773	47.8420 - 139.85740	$3d^5 - 3d^4(a^3F)4p$	$a^2G - y^2G^\circ$	1-1		959
	150	1087.369	48.0052 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$a^2G - y^2H^\circ$	2-2		959
	40	1087.699	46.6707 - 138.60580	$3d^5 - 3d^4(a^3G)4p$	$a^2H - y^4H^\circ$	11	13	802
	0	1087.862	29.16770 - 121.09108	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	1-1		802
	115	1088.040	43.60250 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^4F^\circ$	2-2		959
	650	1088.185	48.0052 - 139.90206	$3d^5 - 3d^4(a^3G)4p$	$a^2G - y^2H^\circ$	2-2	11	802
	170	1088.334	29.20730 - 121.09108	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	1-1		959
	190	1088.725	29.24140 - 121.09108	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	1-1		959
	150	1088.889	43.67474 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^4F^\circ$	2-2		959
	250	1089.313	47.8420 - 139.6436	$3d^5 - 3d^4(a^3F)4p$	$a^2G - y^2G^\circ$	2-2		802
	150	1089.718	29.20730 - 120.97425	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	2-2		959
	150	1090.126	29.24140 - 120.97425	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4D^\circ$	1-1		959
	40	1091.233	48.0052 - 139.6436	$3d^5 - 3d^4(a^3F)4p$	$a^2G - y^2G^\circ$	2-2		802
	300	1092.002	46.6707 - 138.24509	$3d^5 - 3d^4(a^3G)4p$	$a^2H - y^4H^\circ$	11	11	802
	70	1093.575	43.67474 - 135.11680	$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^4F^\circ$	2-2		959
	70	1093.844	46.5159 - 137.93553	$3d^5 - 3d^4(a^3G)4p$	$a^2H - y^4H^\circ$	2-2		802
	10	1094.203	46.5159 - 137.90820	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^2H^\circ$	2-2	11	802
	750	1094.773	42.6065 - 133.94954	$3d^5 - 3d^4(a^3H)4p$	$a^2F - z^2G^\circ$	2-2		802
	750	1096.033	46.6707 - 137.90820	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^2H^\circ$	11	11	802
	25	1096.612	71.83198 - 163.0223	$3d^4(a^5D)4s - 3d^4(b^3F)4p$	$b^4D - v^4F^\circ$	2-2		959
	0	1097.158	42.6065 - 133.75150	$3d^5 - 3d^4(a^3H)4p$	$a^2F - z^2G^\circ$	2-2		802
	115	1097.893	46.5159 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$a^2H - z^2F^\circ$	2-2		959
	10	1098.758	72.18333 - 163.1946	$3d^4(a^5D)4s - 3d^4(b^3F)4p$	$b^4D - v^4F^\circ$	2-2		959
	750	1099.858	46.5159 - 137.43670	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^2H^\circ$	2-2		802
	10	1101.711	46.6707 - 137.43670	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^2H^\circ$	11	2	959
	130	1102.893	42.6065 - 133.27640	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^4G^\circ$	2-2		959
	650	1103.190	43.1057 - 133.75150	$3d^5 - 3d^4(a^3H)4p$	$a^2F - z^2G^\circ$	2-2		802
	35	1105.325	47.8420 - 138.31270	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4F^\circ$	2-2		959
	30	1105.541	42.6065 - 133.05984	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^4G^\circ$	2-2		959
	35	1106.614	42.6065 - 132.97199	$3d^5 - 3d^4(a^3P)4p$	$a^2F - y^4D^\circ$	2-2	7	959
	80	1107.322	48.0052 - 138.31270	$3d^5 - 3d^4(a^3G)4p$	$a^2G - x^4F^\circ$	2-2		959
	115	1107.510	42.6065 - 132.89774	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^4G^\circ$	1-1		959
	350	1107.814	61.6038 - 151.8713	$3d^5 - 3d^4(a^1D)4p$	$b^2D - w^2D^\circ$	2-2		802
2	20	1108.164	26.82440 - 117.06374	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^4F^\circ$	11		301
2	750	1108.482	26.85110 - 117.06374	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^4F^\circ$	2-2		802
	300	1109.073	43.57316 - 133.73664	$3d^5 - 3d^4(a^3F)4p$	$a^4F - z^4G^\circ$	2-2	11	802
	115	1109.962	47.8420 - 137.93553	$3d^5 - 3d^4(a^3G)4p$	$a^4G - y^4H^\circ$	2-2		959
	150	1110.508	61.5802 - 151.6288	$3d^5 - 3d^4(a^1D)4p$	$b^2D - w^2D^\circ$	2-2		802
	130	1110.807	61.6038 - 151.6288	$3d^5 - 3d^4(a^1D)4p$	$b^2D - w^2D^\circ$	2-2		959
2	10	1111.105	26.85110 - 116.85169	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^4F^\circ$	1-1		301
	115	1111.664	43.1057 - 133.05984	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^4G^\circ$	2-2		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
2	190	1112.288	48.0052 - 137.90820	$3d^5 - 3d^4(a^3H)4p$	$a^2G - z^2H^o$	$\frac{3}{2} - \frac{11}{2}$		959
	5	1113.18	26.85990 - 116.69214	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		301
2	20	1113.677	43.1057 - 132.89774	$3d^5 - 3d^4(a^3F)4p$	$a^2F - z^4G^o$	$\frac{3}{2} - \frac{5}{2}$		802
	1	1114.53	26.85780 - 116.58017	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		301
2	80	1114.765	43.57316 - 133.27640	$3d^5 - 3d^4(a^3F)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		959
	80	1114.931	42.6065 - 132.29755	$3d^5 - 3d^4(a^3P)4p$	$a^2F - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		959
2	90	1115.147	43.60250 - 133.27640	$3d^5 - 3d^4(a^3F)4p$	$a^4F - z^4G^o$	$\frac{7}{2} - \frac{9}{2}$		802
	170	1116.149	48.0052 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$a^2G - z^2F^o$	$\frac{3}{2} - \frac{7}{2}$		959
2	20	1117.150	43.57316 - 133.08708	$3d^5 - 3d^4(a^3H)4p$	$a^4F - z^4I^o$	$\frac{3}{2} - \frac{9}{2}$		959
	115	1117.499	43.60250 - 133.08708	$3d^5 - 3d^4(a^3H)4p$	$a^4F - z^4I^o$	$\frac{3}{2} - \frac{9}{2}$		959
2	40	1117.843	43.60250 - 133.05984	$3d^5 - 3d^4(a^3F)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{7}{2}$		959
	0	1118.068	47.8420 - 137.28240	$3d^5 - 3d^4(a^3F)4p$	$a^2G - z^2F^o$	$\frac{3}{2} - \frac{5}{2}$		802
2	150	1118.179	48.0052 - 137.43670	$3d^5 - 3d^4(a^3H)4p$	$a^2G - z^2H^o$	$\frac{3}{2} - \frac{9}{2}$		959
	80	1118.674	43.66884 - 133.05984	$3d^5 - 3d^4(a^3F)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{7}{2}$		802
2	300	1119.303	51.0597 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$b^2F - y^2F^o$	$\frac{3}{2} - \frac{7}{2}$		802
	25	1119.779	43.66884 - 132.97199	$3d^5 - 3d^4(a^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{7}{2}$		959
2	40	1120.128	46.6707 - 135.94408	$3d^5 - 3d^4(a^3F)4p$	$a^3H - y^4F^o$	$\frac{11}{2} - \frac{9}{2}$		959
	0	1120.768	43.67474 - 132.89774	$3d^5 - 3d^4(a^3F)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{5}{2}$		802
2	1	1121.413	32.30730 - 121.48024	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$		301
	0	1122.113	68.89920 - 158.0155	$3d^5 - 3d^4(a^3F)4p$	$b^2G - v^2G^o$	$\frac{3}{2} - \frac{7}{2}$		802
2	115	1122.186	46.6707 - 135.78109	$3d^5 - 3d^4(a^3H)4p$	$a^2H - y^4G^o$	$\frac{11}{2} - \frac{11}{2}$		959
	450	1122.397	32.38370 - 121.48024	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$		802
2	40	1122.799	46.6707 - 135.73250	$3d^5 - 3d^4(a^3H)4p$	$a^2H - y^4G^o$	$\frac{11}{2} - \frac{9}{2}$		959
	400	1124.109	32.30730 - 121.26732	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		802
2	80	1124.333	51.0027 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$b^2F - y^2F^o$	$\frac{5}{2} - \frac{5}{2}$		802
	130	1124.713	51.0597 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$b^2F - y^2H^o$	$\frac{3}{2} - \frac{9}{2}$		959
2	0	1125.065	32.38370 - 121.26732	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	150	1126.152	51.0597 - 139.85740	$3d^5 - 3d^4(a^3F)4p$	$b^2F - y^2G^o$	$\frac{3}{2} - \frac{9}{2}$		959
2	150	1127.093	32.3689 - 121.09108	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$		802
	650	1127.314	32.38370 - 121.09108	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		802
2	150	1128.157	51.0027 - 139.6436	$3d^5 - 3d^4(a^3F)4p$	$b^2F - y^2G^o$	$\frac{5}{2} - \frac{7}{2}$		959
	120	1128.577	32.3689 - 120.97425	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$		802
2	120	1128.825	32.38470 - 120.97425	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		802
	30	1131.017	48.0052 - 136.42150	$3d^5 - 3d^4(a^3H)4p$	$a^2G - z^2I^o$	$\frac{9}{2} - \frac{11}{2}$		959
2	50	1132.875	51.0027 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$b^2F - y^2D^o$	$\frac{3}{2} - \frac{5}{2}$		959
	500	1133.613	51.0597 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$b^2F - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$		802
2	40	1135.934	43.66884 - 131.70169	$3d^5 - 3d^4(a^3P)4p$	$a^4F - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		959
	40	1135.992	43.67474 - 131.70169	$3d^5 - 3d^4(a^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		959
2	80	1136.867	61.5802 - 149.5410	$3d^5 - 3d^4(a^3D)4p$	$b^2D - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		802
	115	1137.180	61.6038 - 149.5410	$3d^5 - 3d^4(a^3D)4p$	$b^2D - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		959
2	0	1137.518	68.89920 - 156.8093	$3d^5 - 3d^4(a^3F)4p$	$b^2G - u^2F^o$	$\frac{3}{2} - \frac{7}{2}$		802
	70	1139.842	68.89200 - 156.6217	$3d^5 - 3d^4(a^3F)4p$	$b^2G - u^2F^o$	$\frac{7}{2} - \frac{5}{2}$		959
2	200	1140.396	51.0027 - 138.6920	$3d^5 - 3d^4(a^3P)4p$	$b^2F - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$		802
	150	1140.552	26.82440 - 114.50118	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^6D^o$	$\frac{11}{2} - \frac{9}{2}$		959
2	0	1140.856	61.5802 - 149.2337	$3d^5 - 3d^4(a^3D)4p$	$b^2D - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		802
	150	1141.171	61.6038 - 149.2337	$3d^5 - 3d^4(a^3D)4p$	$b^2D - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$		802
2	45	1141.368	43.67474 - 131.28718	$3d^5 - 3d^4(a^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		959
	40	1142.532	29.16770 - 116.69214	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
2	80	1143.051	29.20730 - 116.69214	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		959
	45	1143.808	26.85990 - 114.28791	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		959
2	40	1144.516	29.20730 - 116.58017	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
	130	1144.724	26.85110 - 114.20901	$3d^5 - 3d^4(a^3D)4p$	$a^4G - z^6D^o$	$\frac{9}{2} - \frac{7}{2}$		959
2	70	1144.965	29.24140 - 116.58017	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$		959
	0	1145.744	46.6707 - 133.94954	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^2G^o$	$\frac{11}{2} - \frac{9}{2}$		802

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	1146.335	46.5159 - 133.75150	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	40	1147.641	46.6707 - 133.80428	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^4I^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	550	1149.572	61.5802 - 148.56840	$3d^5 - 3d^4(a^3D)4p$	$b^2D - w^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
	35	1149.888	61.6038 - 148.56840	$3d^5 - 3d^4(a^3D)4p$	$b^2D - w^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	7	1150.226	46.5159 - 133.45564	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^4I^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	35	1152.251	46.6707 - 133.45564	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^4I^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	700	1152.716	61.6038 - 148.35560	$3d^5 - 3d^4(a^3D)4p$	$b^2D - w^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		802
	40	1154.634	46.6707 - 133.27640	$3d^5 - 3d^4(a^3F)4p$	$a^2H - z^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	40	1155.105	46.5159 - 133.08708	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^4I^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	300	1155.544	51.0597 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$b^2F - z^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
	150	1159.022	51.0027 - 137.28240	$3d^5 - 3d^4(a^3F)4p$	$b^2F - z^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
	150	1163.549	48.0052 - 133.94954	$3d^5 - 3d^4(a^3H)4p$	$a^2G - z^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	60	1164.019	47.8420 - 133.75150	$3d^5 - 3d^4(a^3H)4p$	$a^2G - z^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
	130	1165.579	51.0027 - 136.79661	$3d^5 - 3d^4(a^3F)4p$	$b^2F - x^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	150	1165.990	51.0597 - 136.82386	$3d^5 - 3d^4(a^3F)4p$	$b^2F - x^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	40	1170.267	48.0052 - 133.45564	$3d^5 - 3d^4(a^3H)4p$	$a^2G - z^4I^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	20	1172.721	48.0052 - 133.27640	$3d^5 - 3d^4(a^3F)4p$	$a^2G - z^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	15	1173.099	47.8420 - 133.08708	$3d^5 - 3d^4(a^3H)4p$	$a^2G - z^4I^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	115	1173.476	47.8420 - 133.05984	$3d^5 - 3d^4(a^3F)4p$	$a^2G - z^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	10	1174.810	29.16770 - 114.28791	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6D^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
	225	1175.362	29.20730 - 114.28791	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	6	1177.484	29.16770 - 114.09497	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		301
	150	1178.034	29.20730 - 114.09497	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	150	1178.508	29.24140 - 114.09497	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6D^\circ$	$\frac{1}{2} - \frac{3}{2}$		959
	190	1179.476	29.20730 - 113.99131	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6D^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
7	20	1179.85	133.75150 - 218.50639	$3d^4(a^3H)4p - 3d^4(a^5D)5d$	$z^2G^\circ - h^4D$	$\frac{7}{2} - \frac{5}{2}$		301
7	20	1179.85	32.30730 - 117.06374	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		301
	170	1179.928	46.6707 - 131.42003	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	40	1181.579	83.1760 - 167.8084	$3d^5 - 3d^4(b^3P)4p$	$a^2P - y^4S^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	45	1181.912	46.5159 - 131.12364	$3d^5 - 3d^4(a^3H)4p$	$a^2H - z^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
7	350	1182.825	32.30730 - 116.85169	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		802
4	30	1183.304	29.16770 - 113.67662	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$		301
4	25	1183.860	29.20730 - 113.67662	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$		301
7	225	1183.878	32.38370 - 116.85169	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		959
7	0	1185.045	32.30730 - 116.69214	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
7	10	1186.14	32.38470 - 116.69214	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		301
	80	1186.425	26.82440 - 111.11139	$3d^5 - 3d^4(a^5D)4p$	$a^4G - z^6F^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	25	1186.808	26.85110 - 111.11139	$3d^5 - 3d^4(a^5D)4p$	$a^4G - z^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	25	1186.933	26.85990 - 111.11139	$3d^5 - 3d^4(a^5D)4p$	$a^4G - z^6F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
7	150	1187.468	32.3689 - 116.58017	$3d^5 - 3d^4(a^3D)4p$	$a^4D - z^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
7	250	1187.735	32.38470 - 116.58017	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		802
	115	1187.862	51.0597 - 135.24627	$3d^5 - 3d^4(a^3P)4p$	$b^2F - y^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
4	15	1191.730	29.16770 - 113.07834	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
4	8	1192.78	29.24140 - 113.07834	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		301
	10	1195.678	51.0027 - 134.63839	$3d^5 - 3d^4(a^3P)4p$	$b^2F - y^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
4	115	1198.510	29.20730 - 112.64531	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
4	30	1199.001	29.24140 - 112.64531	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	40	1201.739	61.6038 - 144.81768	$3d^5 - 3d^4(a^3D)4p$	$b^2D - w^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	0	1202.807	61.5802 - 144.7184	$3d^5 - 3d^4(a^1G)4p$	$b^2D - x^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		802
	90	1203.476	61.5802 - 144.67238	$3d^5 - 3d^4(a^3D)4p$	$b^2D - w^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
3	20	1206.425	29.16770 - 112.05780	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$		131
	800	1208.476	51.0027 - 133.75150	$3d^5 - 3d^4(a^3H)4p$	$b^2F - z^2G^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
3	225	1208.985	29.16770 - 111.88360	$3d^5 - 3d^4(a^3D)4p$	$a^4P - z^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	80	1209.326	51.0597 - 133.75150	$3d^5 - 3d^4(a^3H)4p$	$b^2F - z^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
3	100	1209.559	29.20730 - 111.88360	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6P^o$	$\frac{3}{2} - \frac{5}{2}$		959
3	40	1210.523	29.16770 - 111.77660	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6P^o$	$\frac{3}{2} - \frac{3}{2}$		802
3	60	1211.116	29.20730 - 111.77660	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6P^o$	$\frac{3}{2} - \frac{3}{2}$		959
3	115	1211.632	29.24140 - 111.77660	$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^6P^o$	$\frac{1}{2} - \frac{3}{2}$		959
	40	1211.725	61.6038 - 144.1298	$3d^5 - 3d^4(a^5G)4p$	$b^2D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$		802
	260	1216.301	51.0597 - 133.27640	$3d^5 - 3d^4(a^3F)4p$	$b^2F - z^4G^o$	$\frac{3}{2} - \frac{9}{2}$		959
6	20	1216.639	32.30730 - 114.50118	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6D^o$	$\frac{7}{2} - \frac{9}{2}$		802
	150	1218.678	51.0027 - 133.05984	$3d^5 - 3d^4(a^3F)4p$	$b^2F - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$		959
6	30	1219.801	32.30730 - 114.28791	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6D^o$	$\frac{7}{2} - \frac{5}{2}$		301
6	750	1220.940	32.30730 - 114.20901	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6D^o$	$\frac{7}{2} - \frac{7}{2}$		802
6	150	1223.591	32.3689 - 114.09497	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6D^o$	$\frac{1}{2} - \frac{3}{2}$		959
6	20	1223.836	32.38470 - 114.09497	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
6	350	1225.133	32.3689 - 113.99131	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6D^o$	$\frac{1}{2} - \frac{1}{2}$		802
	60	1227.117	61.6038 - 143.09700	$3d^5 - 3d^4(a^3G)4p$	$b^2D - x^2G^o$	$\frac{5}{2} - \frac{7}{2}$		959
5	100	1228.972	32.30730 - 113.67662	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4P^o$	$\frac{7}{2} - \frac{5}{2}$		301
5	20	1230.12	32.38370 - 113.67662	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4P^o$	$\frac{5}{2} - \frac{5}{2}$		301
5	170	1239.000	32.3689 - 113.07834	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		959
5	50	1239.24	32.38370 - 113.07834	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		301
	35	1242.809	62.74750 - 143.20980	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$a^6D - w^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
	30	1243.769	62.74750 - 143.14840	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$a^6D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$		959
5	750	1245.673	32.3689 - 112.64531	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		802
5	700	1245.975	32.38470 - 112.64531	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		802
	0	1249.529	41.2381 - 121.26732	$3d^5 - 3d^4(a^5D)4p$	$a^2D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		802
	30	1252.289	41.2381 - 121.09108	$3d^5 - 3d^4(a^5D)4p$	$a^2D - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		802
	10	1255.078	32.38370 - 112.05780	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6P^o$	$\frac{5}{2} - \frac{7}{2}$		301
	20	1255.21	68.89200 - 148.56050	$3d^5 - 3d^4(a^1I)4p$	$b^2G - w^2H^o$	$\frac{7}{2} - \frac{9}{2}$		301
	30	1255.324	68.89920 - 148.56050	$3d^5 - 3d^4(a^1I)4p$	$b^2G - w^2H^o$	$\frac{9}{2} - \frac{9}{2}$		959
	150	1256.675	32.30730 - 111.88360	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6P^o$	$\frac{7}{2} - \frac{5}{2}$		959
	0	1257.885	32.38370 - 111.88360	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6P^o$	$\frac{5}{2} - \frac{5}{2}$		802
	30	1258.55	68.89920 - 148.35560	$3d^5 - 3d^4(a^3D)4p$	$b^2G - w^2F^o$	$\frac{9}{2} - \frac{7}{2}$		301
	170	1259.572	32.38370 - 111.77660	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6P^o$	$\frac{5}{2} - \frac{3}{2}$		959
	40	1260.907	68.89920 - 148.20690	$3d^5 - 3d^4(a^1I)4p$	$b^2G - w^2H^o$	$\frac{9}{2} - \frac{11}{2}$		301
	800	1269.104	61.6038 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{7}{2}$		802
	190	1275.461	32.30730 - 110.71162	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6F^o$	$\frac{7}{2} - \frac{7}{2}$		959
	700	1276.092	61.5802 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$b^2D - y^2F^o$	$\frac{1}{2} - \frac{5}{2}$		802
	50	1276.467	61.6038 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		802
	70	1276.691	32.38370 - 110.71162	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6F^o$	$\frac{5}{2} - \frac{7}{2}$		959
	60	1280.583	32.30730 - 110.39850	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6F^o$	$\frac{7}{2} - \frac{5}{2}$		959
	30	1281.812	32.38470 - 110.39850	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6F^o$	$\frac{3}{2} - \frac{5}{2}$		959
	150	1282.295	55.6777 - 133.6626	$3d^5 - 3d^4(a^3P)4p$	$a^2S - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$		959
9	500	1283.581	43.57316 - 121.48024	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{9}{2} - \frac{9}{2}$		301
	115	1283.882	68.89920 - 146.7884	$3d^5 - 3d^4(a^1G)4p$	$b^2G - w^2G^o$	$\frac{9}{2} - \frac{9}{2}$		959
9	30	1284.058	43.60250 - 121.48024	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$		301
9	70	1285.164	43.66884 - 121.48024	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$		959
	15	1285.547	32.38470 - 110.17269	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^6F^o$	$\frac{1}{2} - \frac{3}{2}$		959
	7	1285.755	91.90610 - 169.6824	$3d^4(a^3F)4s - 3d^4(b^3F)4p$	$c^2F - u^2G^o$	$\frac{5}{2} - \frac{7}{2}$		959
	60	1287.004	68.89200 - 146.5919	$3d^5 - 3d^4(a^1G)4p$	$b^2G - w^2G^o$	$\frac{7}{2} - \frac{7}{2}$		959
	15	1287.137	68.89920 - 146.5919	$3d^5 - 3d^4(a^1G)4p$	$b^2G - w^2G^o$	$\frac{9}{2} - \frac{7}{2}$		959
9	400	1287.589	43.60250 - 121.26732	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$		301
9	50	1288.682	43.66884 - 121.26732	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		301
9	115	1288.793	43.67474 - 121.26732	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$		959
	25	1290.225	91.94830 - 169.4550	$3d^4(a^3F)4s - 3d^4(b^3F)4p$	$c^2F - u^2G^o$	$\frac{7}{2} - \frac{9}{2}$		959
9	300	1291.618	43.66884 - 121.09108	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		301
9	600	1291.714	43.67474 - 121.09108	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$		802

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
9	200	1293.661	43.67474 - 120.97425	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	3/2 - 1/2		301	
	20	1307.192	91.3083 - 167.8084	$3d^4(a^3P)4s - 3d^4(b^3P)4p$	$b^2P - y^4S^o$	3/2 - 1/2		959	
	5	1314.633	68.89200 - 144.95974	$3d^5 - 3d^4(a^3D)4p$	$b^2G - w^4F^o$	3/2 - 1/2		959	
	80	1316.091	68.89920 - 144.88010	$3d^5 - 3d^4(a^1G)4p$	$b^2G - x^2H^o$	3/2 - 1/2		802	
	20	1318.815	68.89200 - 144.7184	$3d^5 - 3d^4(a^1G)4p$	$b^2G - x^2F^o$	3/2 - 1/2		959	
	40	1322.186	68.89200 - 144.52230	$3d^5 - 3d^4(a^1G)4p$	$b^2G - x^2H^o$	3/2 - 1/2		802	
	15	1329.120	68.89200 - 144.1298	$3d^5 - 3d^4(a^1G)4p$	$b^2G - x^2F^o$	3/2 - 1/2		959	
	15	1329.248	68.89920 - 144.1298	$3d^5 - 3d^4(a^1G)4p$	$b^2G - x^2F^o$	3/2 - 1/2		959	
	15	1331.176	41.5698 - 116.69214	$3d^5 - 3d^4(a^3D)4p$	$a^2D - z^4F^o$	3/2 - 1/2		959	
	70	1335.721	85.17388 - 160.0397	$3d^4(a^3P)4s - 3d^4(a^1F)4p$	$b^4P - v^2D^o$	3/2 - 1/2		959	
	20	1343.141	68.89200 - 143.34507	$3d^5 - 3d^4(a^3D)4p$	$b^2G - w^4D^o$	3/2 - 1/2		959	
	25	1346.448	68.89200 - 143.16150	$3d^5 - 3d^4(a^3G)4p$	$b^2G - x^2G^o$	3/2 - 1/2		959	
	100	1346.58	68.89920 - 143.16150	$3d^5 - 3d^4(a^3G)4p$	$b^2G - x^2G^o$	3/2 - 1/2		301	
	50	1346.854	42.6065 - 116.85169	$3d^5 - 3d^4(a^3D)4p$	$a^2F - z^4F^o$	3/2 - 1/2		802	
	0	1347.087	71.83198 - 146.06607	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$b^4D - x^4P^o$	3/2 - 1/2		802	
	80	1347.62	68.89200 - 143.09700	$3d^5 - 3d^4(a^3G)4p$	$b^2G - x^2G^o$	3/2 - 1/2		301	
	0	1349.782	42.6065 - 116.69214	$3d^5 - 3d^4(a^3D)4p$	$a^2F - z^4F^o$	3/2 - 1/2		802	
	20	1352.636	61.5802 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$b^2D - y^4F^o$	3/2 - 1/2		959	
	30	1353.053	61.6038 - 135.51070	$3d^5 - 3d^4(a^3F)4p$	$b^2D - y^4F^o$	3/2 - 1/2		959	
	20	1355.959	43.1057 - 116.85169	$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^4F^o$	3/2 - 1/2		802	
	40	1358.958	43.1057 - 116.69214	$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^4F^o$	3/2 - 1/2		802	
	8	1000	1360.718	43.57316 - 117.06374	$3d^5 - 3d^4(a^3D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301
	8	10	1361.032	43.1057 - 116.58017	$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^4F^o$	3/2 - 1/2		802
	8	1	1361.26	43.60250 - 117.06374	$3d^5 - 3d^4(a^3D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301
	20	1361.548	83.1760 - 156.6217	$3d^5 - 3d^4(a^1F)4p$	$a^2P - u^2F^o$	3/2 - 1/2		959	
	8	5	1364.65	43.57316 - 116.85169	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301
8	800	1365.199	43.60250 - 116.85169	$3d^5 - 3d^4(a^3D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301	
8	4	1366.46	43.66884 - 116.85169	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301	
8	20	1368.20	43.60250 - 116.69214	$3d^5 - 3d^4(a^3D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301	
8	400	1369.430	43.66884 - 116.69214	$3d^5 - 3d^4(a^3D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301	
8	700	1369.535	43.67474 - 116.69214	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		802	
8	115	1371.540	43.66884 - 116.58017	$3d^5 - 3d^4(a^3D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		959	
8	300	1371.647	43.67474 - 116.58017	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	3/2 - 1/2		301	
25	1379.351	62.74750 - 135.24627	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$a^6D - y^4P^o$	3/2 - 1/2		959		
1	1384.640	62.56808 - 134.78910	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$a^6D - y^4P^o$	3/2 - 1/2		959		
0	1386.833	41.5698 - 113.67662	$3d^5 - 3d^4(a^5D)4p$	$a^2D - z^4P^o$	3/2 - 1/2		802		
1	1390.983	62.74750 - 134.63839	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$a^6D - y^4P^o$	3/2 - 1/2		959		
15	1391.266	68.89920 - 140.77688	$3d^5 - 3d^4(a^3G)4p$	$b^2G - x^4G^o$	3/2 - 1/2		959		
10	1394.051	71.39527 - 143.12700	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$b^4D - w^4D^o$	3/2 - 1/2		802		
1	1395.381	68.89200 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$b^2G - x^4G^o$	3/2 - 1/2		959		
7	1395.517	68.89920 - 140.55746	$3d^5 - 3d^4(a^3G)4p$	$b^2G - x^4G^o$	3/2 - 1/2		959		
10	1395.767	71.56421 - 143.20980	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$b^4D - w^4D^o$	3/2 - 1/2		959		
10	1396.946	71.56421 - 143.14840	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$b^4D - w^4D^o$	3/2 - 1/2		959		
4	1398.400	68.89200 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$b^2G - y^2F^o$	3/2 - 1/2		959		
2	1398.550	68.89920 - 140.4011	$3d^5 - 3d^4(a^3G)4p$	$b^2G - y^2F^o$	3/2 - 1/2		959		
40	1400.955	71.83198 - 143.20980	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$b^4D - w^4D^o$	3/2 - 1/2		802		
40	1405.244	72.18333 - 143.34507	$3d^4(a^5D)4s - 3d^4(a^3D)4p$	$b^4D - w^4D^o$	3/2 - 1/2		802		
10	1406.880	68.89200 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$b^2G - y^2H^o$	3/2 - 1/2		959		
0	1406.957	41.5698 - 112.64531	$3d^5 - 3d^4(a^5D)4p$	$a^2D - z^4P^o$	3/2 - 1/2		802		
1	1407.024	68.89920 - 139.97090	$3d^5 - 3d^4(a^3G)4p$	$b^2G - y^2H^o$	3/2 - 1/2		959		
30	1408.350	68.89920 - 139.90206	$3d^5 - 3d^4(a^3G)4p$	$b^2G - y^2H^o$	3/2 - 1/2		802		
20	1409.286	68.89920 - 139.85740	$3d^5 - 3d^4(a^3F)4p$	$b^2G - y^2G^o$	3/2 - 1/2		959		
30	1409.888	43.57316 - 114.50118	$3d^5 - 3d^4(a^3D)4p$	$a^4F - z^4D^o$	3/2 - 1/2		959		
1	1410.476	43.60250 - 114.50118	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	3/2 - 1/2		959		

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
22	0	1413.387	68.89200 - 139.6436	$3d^5 - 3d^4(a^3F)4p$	$b^2G - y^2G^o$	$\frac{7}{2} - \frac{7}{2}$		802	
	1	1416.031	43.66884 - 114.28791	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		959	
	2	1416.322	43.60250 - 114.20901	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		959	
	1	1417.632	43.66884 - 114.20901	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^6D^o$	$\frac{3}{2} - \frac{7}{2}$		959	
	1	1420.041	43.67474 - 114.09497	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		959	
	2	1425.05	111.77660 - 181.94934	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6S$	$\frac{3}{2} - \frac{3}{2}$		301	
	22	6	1427.238	111.88360 - 181.94934	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6S$	$\frac{3}{2} - \frac{3}{2}$		301
	22	20	1430.784	112.05780 - 181.94934	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6S$	$\frac{3}{2} - \frac{3}{2}$		301
		10	1442.047	68.89920 - 138.24509	$3d^5 - 3d^4(a^3G)4p$	$b^2G - y^4H^o$	$\frac{9}{2} - \frac{11}{2}$		959
		5	1446.467	62.56808 - 131.70169	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$a^6D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		301
		2	1448.351	68.89200 - 137.93553	$3d^5 - 3d^4(a^3G)4p$	$b^2G - y^4H^o$	$\frac{7}{2} - \frac{7}{2}$		959
		20	1449.07	68.89920 - 137.90820	$3d^5 - 3d^4(a^3H)4p$	$b^2G - z^2H^o$	$\frac{9}{2} - \frac{11}{2}$		301
		7	1455.596	68.89920 - 137.59920	$3d^5 - 3d^4(a^3F)4p$	$b^2G - z^2F^o$	$\frac{9}{2} - \frac{7}{2}$		959
		10	1458.90	68.89200 - 137.43670	$3d^5 - 3d^4(a^3H)4p$	$b^2G - z^2H^o$	$\frac{7}{2} - \frac{9}{2}$		301
		2	1460.182	43.57316 - 112.05780	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^6P^o$	$\frac{3}{2} - \frac{7}{2}$		959
		60	1462.243	43.66884 - 112.05780	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^6P^o$	$\frac{3}{2} - \frac{7}{2}$		802
		25	1480.998	68.89920 - 136.42150	$3d^5 - 3d^4(a^3H)4p$	$b^2G - z^2I^o$	$\frac{9}{2} - \frac{11}{2}$		959
	300	1486.494							802
	20	10	1489.669	71.56421 - 138.6920	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$b^4D - y^2D^o$	$\frac{1}{2} - \frac{1}{2}$		802
		2	1496.133	71.39527 - 138.23479	$3d^4(a^5D)4s - 3d^4(a^3G)4p$	$b^4D - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$		959
		7	1497.543	71.56421 - 138.34062	$3d^4(a^5D)4s - 3d^4(a^3G)4p$	$b^4D - x^4F^o$	$\frac{1}{2} - \frac{1}{2}$		959
		5	1503.066	71.83198 - 138.36280	$3d^4(a^5D)4s - 3d^4(a^3G)4p$	$b^4D - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		301
1		1503.561	71.83198 - 138.34062	$3d^4(a^5D)4s - 3d^4(a^3G)4p$	$b^4D - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959	
1		1505.961	71.83198 - 138.23479	$3d^4(a^5D)4s - 3d^4(a^3G)4p$	$b^4D - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959	
		5	1512.177	72.18333 - 138.31270	$3d^4(a^5D)4s - 3d^4(a^3G)4p$	$b^4D - x^4F^o$	$\frac{7}{2} - \frac{9}{2}$		301
		10	1513.635	91.94830 - 158.0155	$3d^4(a^3F)4s - 3d^4(a^1F)4p$	$c^2F - v^2G^o$	$\frac{7}{2} - \frac{9}{2}$		802
20		1	1513.67	110.03614 - 176.10071	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{1}{2} - \frac{1}{2}$		301
20		12	1514.306	110.17269 - 176.20915	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		959
20		1	1515.34	110.39850 - 176.39067	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		301
20		5	1516.76	110.71162 - 176.64114	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{7}{2} - \frac{7}{2}$		301
		1	1518.207	110.39850 - 176.26578	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^4P$	$\frac{5}{2} - \frac{3}{2}$		959
20		12	1518.956	47.8420 - 113.67662	$3d^5 - 3d^4(a^5D)4p$	$a^2G - z^4P^o$	$\frac{7}{2} - \frac{3}{2}$		959
20		5	1519.51	110.39850 - 176.20915	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		301
20		8	1522.577	110.71162 - 176.39067	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{7}{2} - \frac{3}{2}$		301
		7	1523.395	94.39720 - 160.0397	$3d^4(a^3G)4s - 3d^4(a^1F)4p$	$c^2G - v^2D^o$	$\frac{7}{2} - \frac{3}{2}$		959
20		10	1526.05	111.11139 - 176.64114	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{9}{2} - \frac{7}{2}$		301
20		2	1528.64	72.18333 - 137.59920	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$		301
		12	1529.233	83.1760 - 148.56840	$3d^5 - 3d^4(a^3D)4p$	$a^2P - w^2F^o$	$\frac{3}{2} - \frac{3}{2}$		959
		6	1529.40	86.48677 - 151.8713	$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$b^4F - w^2D^o$	$\frac{3}{2} - \frac{3}{2}$		301
		30	1530.364	111.60145 - 176.94520	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6F^o - f^6D$	$\frac{11}{2} - \frac{9}{2}$		301
	2	1531.344	104.4708 - 169.7737	$3d^4(a^1D)4s - 3d^4(b^3F)4p$	$e^2D - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$		959	
	2	1532.115	94.77147 - 160.0397	$3d^4(a^5D)4s - 3d^4(a^1F)4p$	$c^4D - v^2D^o$	$\frac{5}{2} - \frac{3}{2}$		959	
		7	1537.278	68.89920 - 133.94954	$3d^5 - 3d^4(a^3H)4p$	$b^2G - z^2G^o$	$\frac{9}{2} - \frac{9}{2}$		959
	15	1541.15	112.05780 - 176.94520	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6P^o - f^6D$	$\frac{7}{2} - \frac{9}{2}$		301	
	30	1541.744	91.94830 - 156.8093	$3d^4(a^3F)4s - 3d^4(a^1F)4p$	$c^2F - u^2F^o$	$\frac{7}{2} - \frac{7}{2}$		802	
	10	1544.25	111.88360 - 176.64114	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6P^o - f^6D$	$\frac{7}{2} - \frac{7}{2}$		301	
	20	1545.251	91.90610 - 156.6217	$3d^4(a^3F)4s - 3d^4(a^1F)4p$	$c^2F - u^2F^o$	$\frac{5}{2} - \frac{5}{2}$		802	
	0	1546.197	91.94830 - 156.6217	$3d^4(a^3F)4s - 3d^4(a^1F)4p$	$c^2F - u^2F^o$	$\frac{7}{2} - \frac{7}{2}$		802	
20	1	1547.45	112.64531 - 177.26934	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^4P^o - e^4D$	$\frac{1}{2} - \frac{3}{2}$		301	
	1	1547.68	72.18333 - 136.79661	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - x^4D^o$	$\frac{1}{2} - \frac{3}{2}$		301	
	1	1548.371	112.05780 - 176.64114	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6P^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		301	
	2	1550.20	111.88360 - 176.39067	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6P^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		301	
	5	1551.990	111.77660 - 176.20915	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6P^o - f^6D$	$\frac{1}{2} - \frac{1}{2}$		959	
	10	1554.604	111.88360 - 176.20915	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6P^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		959	

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
19	0	1555.343	71.56421 - 135.8590	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$b^4D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		802
	1	1555.40	131.12364 - 195.41520	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - f^4G$	$\frac{11}{2} - \frac{11}{2}$		301
19	12	1556.096	110.17269 - 174.43659	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		959
	8	1556.121	131.42003 - 195.68250	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - f^4G$	$\frac{11}{2} - \frac{11}{2}$		301
19	12	1557.339	110.03614 - 174.24763	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		959
19	5	1558.182	110.39850 - 174.57587	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
19	10	1558.602	110.17269 - 174.33291	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
19	20	1561.570	110.39850 - 174.43659	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
	60	1561.589	71.83198 - 135.86976	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
	40	1561.681	131.42003 - 195.4536	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - e^4I$	$\frac{11}{2} - \frac{11}{2}$		802
	20	1562.033	131.12364 - 195.1427	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - e^4I$	$\frac{11}{2} - \frac{11}{2}$		802
	2	1562.212	113.67662 - 177.68754	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^4P^o - e^4D$	$\frac{3}{2} - \frac{3}{2}$		301
19	0	1562.493						802
	20	1563.831	71.56421 - 135.51070	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
	30	1565.830	111.11139 - 174.97565	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
	40	1566.198	130.89539 - 194.7440	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - e^4H$	$\frac{11}{2} - \frac{11}{2}$		802
	20	1566.762	130.73131 - 194.5572	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - e^4H$	$\frac{11}{2} - \frac{11}{2}$		802
19	15	1567.772	131.12364 - 194.90820	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - e^4H$	$\frac{11}{2} - \frac{11}{2}$		301
19	10	1568.325	111.11139 - 174.87450	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
19	80	1568.380	72.18333 - 135.94408	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
19	7	1569.260	110.71162 - 174.43659	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		959
	0	1569.304	71.39527 - 135.11680	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		802
	0	1569.516	130.73131 - 194.4452	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4H^o - e^4I$	$\frac{11}{2} - \frac{11}{2}$		802
	0	1570.169	72.18333 - 135.86976	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		802
19	2	1571.06	110.39850 - 174.04889	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	20	1571.920	94.39720 - 158.0155	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$c^2G - v^2G^o$	$\frac{3}{2} - \frac{3}{2}$		301
	15	1574.026	110.71162 - 174.24333	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6D$	$\frac{3}{2} - \frac{3}{2}$		959
	1	1575.33	114.20901 - 177.68754	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6D^o - e^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	10	1576.924	71.83198 - 135.24627	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$b^4D - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$		802
	100	1577.939	111.60145 - 174.97565	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
	20	1578.467	111.11139 - 174.46407	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	12	1579.116	72.18333 - 135.51070	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$b^4D - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
	10	1579.457	113.07834 - 176.39067	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^4P^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		959
	0	1579.567	94.70720 - 158.0155	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$c^2G - v^2G^o$	$\frac{3}{2} - \frac{3}{2}$		802
19	45	1580.462	111.60145 - 174.87450	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		959
10	1581.690	71.56421 - 134.78910	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$b^4D - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$		959	
19	20	1585.480	71.56421 - 134.63839	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$b^4D - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$		959
	150	1585.714	72.18333 - 135.24627	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$b^4D - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$		802
	12	1588.182	113.67662 - 176.64114	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^4P^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		959
	7	1590.753	111.60145 - 174.46407	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6D$	$\frac{3}{2} - \frac{3}{2}$		959
	5	1591.942	112.05780 - 174.87450	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6F^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
	5	1592.187	71.83198 - 134.63839	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$b^4D - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$		301
	3	1593.97	114.20901 - 176.94520	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	5	1594.312						301
	100	1595.081	111.88360 - 174.57587	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
		1595.3	26.85780 - 89.5434	$3d^5 - 3d^5$	$a^4G - c^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,959
	1595.3	26.85990 - 89.5434	$3d^5 - 3d^5$	$a^4G - c^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,959	
80	1595.35	116.85169 - 179.53462	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^4F^o - e^4F$	$\frac{3}{2} - \frac{3}{2}$		301	
19	12	1595.896	111.77660 - 174.43659	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		959
	80	1596.211	116.69214 - 179.33959	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^4F^o - e^4F$	$\frac{3}{2} - \frac{3}{2}$		301
		1596.3	26.85110 - 89.4963	$3d^5 - 3d^5$	$a^4G - c^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,959
		1596.5	26.85990 - 89.4963	$3d^5 - 3d^5$	$a^4G - c^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,959
	300	1596.948	117.06374 - 179.68361	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^4F^o - e^4F$	$\frac{3}{2} - \frac{3}{2}$		301
	10	1598.529	111.77660 - 174.33291	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
18	50	1598.651	111.88360 - 174.43659	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
	5	1599.50	112.05780 - 174.57587	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^o - e^6F$	$\frac{3}{2} - \frac{3}{2}$		301
	12	1600.365	114.20901 - 176.69506	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^o - e^6G$	$\frac{3}{2} - \frac{3}{2}$		959
	10	1600.770	117.06374 - 179.53462	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^o - e^4F$	$\frac{3}{2} - \frac{3}{2}$		301
	5	1601.045	116.69214 - 179.15209	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^4F^o - f^4D$	$\frac{3}{2} - \frac{3}{2}$		301
	5	1601.42	114.50118 - 176.94520	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	40	1601.727	114.20901 - 176.64114	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		959
	20	1602.17	110.03614 - 172.45123	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{3}{2} - \frac{3}{2}$		301
	20	1602.38	112.05780 - 174.46407	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^o - e^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	30	1603.203	110.17269 - 172.54785	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{3}{2} - \frac{3}{2}$		301
	2	1603.598	111.88360 - 174.24333	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^o - e^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	25	1603.755	114.28791 - 176.64114	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		959
	2	1604.407	133.08708 - 195.41520	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - f^4G$	$\frac{3}{2} - \frac{3}{2}$		301
	4	1605.107	116.85169 - 179.15209	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^4F^o - f^4D$	$\frac{3}{2} - \frac{3}{2}$		301
	3	1605.22	114.09497 - 176.39067	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	40	1605.545	110.39850 - 172.68264	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{3}{2} - \frac{3}{2}$		131
	20	1605.67	110.17269 - 172.45123	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^o - e^4G$	$\frac{3}{2} - \frac{3}{2}$		301
	1	1606.755	116.58017 - 178.81696	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^4F^o - f^4D$	$\frac{3}{2} - \frac{3}{2}$		301
20	1607.003	133.45564 - 195.68250	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - f^4G$	$\frac{11}{2} - \frac{11}{2}$		301	
30	1607.263	113.99131 - 176.20915	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{11}{2} - \frac{11}{2}$		959	
0	1607.658						802	
30	1607.884	114.50118 - 176.69506	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^o - e^6G$	$\frac{9}{2} - \frac{9}{2}$		301	
3	1608.18	114.20901 - 176.39067	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{9}{2} - \frac{9}{2}$		301	
20	1609.02	110.39850 - 172.54785	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{9}{2} - \frac{9}{2}$		301	
500	1609.172	110.71162 - 172.85502	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{7}{2} - \frac{7}{2}$		301	
20	1610.010	94.69785 - 156.8093	$3d^4(a^3D)4s - 3d^4(a^3F)4p$	$c^4D - u^4F^o$	$\frac{7}{2} - \frac{7}{2}$		959	
3	1610.05	113.99131 - 176.10071	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{7}{2} - \frac{7}{2}$		301	
20	1610.228	114.28791 - 176.39067	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{5}{2} - \frac{5}{2}$		301	
35	1611.521	110.39850 - 172.45123	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{5}{2} - \frac{5}{2}$		959	
2	1612.78	114.09497 - 176.10071	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{5}{2} - \frac{5}{2}$		301	
20	1613.656	110.71162 - 172.68264	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{7}{2} - \frac{7}{2}$		301	
800	1614.144	111.11139 - 173.06355	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{9}{2} - \frac{9}{2}$		301	
45	1614.944	114.28791 - 176.20915	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^6D^o - f^6D$	$\frac{5}{2} - \frac{5}{2}$		959	
5	1617.163	110.71162 - 172.54785	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{7}{2} - \frac{7}{2}$		301	
200	1617.760	133.08708 - 194.90040	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4K$	$\frac{11}{2} - \frac{11}{2}$		301	
1	1618.689	86.57824 - 148.35560	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4F^o$	$\frac{7}{2} - \frac{7}{2}$		301	
40	1619.62	111.11139 - 172.85502	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{9}{2} - \frac{9}{2}$		301	
15	1620.472	85.07709 - 146.7884	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - w^4G^o$	$\frac{9}{2} - \frac{9}{2}$		959	
1000	1620.602	111.60145 - 173.30645	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{11}{2} - \frac{11}{2}$		301	
1	1621.284	133.73664 - 195.41520	$3d^4(a^3F)4p - 3d^4(a^3H)4d$	$z^4G^o - f^4G$	$\frac{11}{2} - \frac{11}{2}$		301	
10	1623.122	84.98163 - 146.5919	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - w^4G^o$	$\frac{7}{2} - \frac{7}{2}$		802	
300	1623.911	133.45564 - 195.03620	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4K$	$\frac{11}{2} - \frac{11}{2}$		301	
0	1626.885	133.27640 - 194.7440	$3d^4(a^3F)4p - 3d^4(a^3H)4d$	$z^4G^o - e^4H$	$\frac{9}{2} - \frac{9}{2}$		802	
6	1626.99	111.60145 - 173.06355	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6F^o - e^6G$	$\frac{11}{2} - \frac{11}{2}$		301	
3	1627.200	84.61053 - 146.06607	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^4P - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$		301	
10	1627.467	133.45564 - 194.90040	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4K$	$\frac{11}{2} - \frac{11}{2}$		959	
20	1627.743	133.45564 - 194.8904	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4I$	$\frac{11}{2} - \frac{11}{2}$		802	
40	1628.089	91.94830 - 153.37065	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - v^2F^o$	$\frac{3}{2} - \frac{3}{2}$		959	
400	1629.117	133.80428 - 195.18690	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4K$	$\frac{13}{2} - \frac{13}{2}$		301	
20	1629.775	133.08708 - 194.4452	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4I$	$\frac{13}{2} - \frac{13}{2}$	P	802	
150	1629.997	83.1760 - 144.52550	$3d^5 - 3d^4(a^3D)4p$	$a^2P - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959	
0	1630.300	133.80428 - 195.1427	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4I$	$\frac{13}{2} - \frac{13}{2}$	P	802	
0	1630.868	134.13660 - 195.4536	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4I$	$\frac{13}{2} - \frac{13}{2}$	P	802	
0	1631.638	133.45564 - 194.7440	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^o - e^4H$	$\frac{13}{2} - \frac{13}{2}$		802	

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
21	20	1632.538	113.07834 - 174.33291	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4P^\circ - e^6F$	11 - 11		959
	20	1633.51	85.17388 - 146.3913	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^4P - x^4P^\circ$	11 - 11		301
	500	1633.800	134.13660 - 195.34310	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^\circ - e^4K$	11 - 11		301
	30	1635.017	91.90610 - 153.06770	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - v^2F^\circ$	11 - 11		959
	20	1635.597	71.83198 - 132.97199	$3d^4(a^3D)4s - 3d^4(a^3P)4p$	$b^4D - y^4D^\circ$	11 - 11		959
	60	1636.163	91.94830 - 153.06770	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - v^2F^\circ$	11 - 11		959
	3	1636.559	133.80428 - 194.90820	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^\circ - e^4H$	11 - 11		301
	2	1637.974	134.13660 - 195.18690	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^\circ - e^4K$	11 - 11		301
	10	1642.054	134.13660 - 195.03620	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$z^4I^\circ - e^4H$	11 - 11		301
	30	1642.782	111.88360 - 172.75595	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^\circ - e^6P$	11 - 11	P	301
	30	1643.729	111.77660 - 172.61387	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^\circ - e^6P$	11 - 11	P	301
	10	1644.935	111.77660 - 172.56927	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^\circ - e^6P$	11 - 11	P	301
	15	1645.03	72.18333 - 132.97199	$3d^4(a^3D)4s - 3d^4(a^3P)4p$	$b^4D - y^4D^\circ$	11 - 11		301
	40	1645.815	113.67662 - 174.43659	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4P^\circ - e^6F$	11 - 11		959
	2	1646.625	111.88360 - 172.61387	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^\circ - e^6P$	11 - 11	P	301
	250	1647.497	112.05780 - 172.75595	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^\circ - e^6P$	11 - 11	P	301
	30	1647.836	111.88360 - 172.56927	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^\circ - e^6P$	11 - 11	P	301
	100	1648.375	114.20901 - 174.87450	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		301
150	1649.50	117.06374 - 177.68754	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^4D$	11 - 11		301	
45	1651.173	91.3083 - 151.8713	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^2P - w^2D^\circ$	11 - 11		959	
80	1651.362	112.05780 - 172.61387	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6P^\circ - e^6P$	11 - 11	P	301	
400	1653.57	114.50118 - 174.97565	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		301	
50	1653.823	71.83198 - 132.29755	$3d^4(a^3D)4s - 3d^4(a^3P)4p$	$b^4D - y^4D^\circ$	11 - 11		301	
150	1656.245	96.4308 - 156.8093	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$d^2G - u^2F^\circ$	11 - 11		959	
150	1656.334	114.50118 - 174.87450	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		959	
3	1656.510	114.20901 - 174.57587	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		301	
10	1657.20	114.09497 - 174.43659	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		301	
25	1657.843	91.3083 - 151.6288	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^2P - w^2D^\circ$	11 - 11		959	
6	1658.68	114.28791 - 174.57587	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		301	
100	1659.602	114.20901 - 174.46407	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6D$	11 - 11		301	
60	1660.350	114.20901 - 174.43659	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		959	
20	1660.846	86.57824 - 146.7884	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - w^2G^\circ$	11 - 11		959	
3	1662.533	114.28791 - 174.43659	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6F$	11 - 11		301	
0	1662.827	71.56421 - 131.70169	$3d^4(a^3D)4s - 3d^4(a^3P)4p$	$b^4D - y^4D^\circ$	11 - 11		802	
0	1662.943	96.4875 - 156.6217	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$d^2G - u^2F^\circ$	11 - 11		802	
25	1664.094	116.85169 - 176.94520	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^4F^\circ - f^6D$	11 - 11		959	
15	1665.701	114.20901 - 174.24333	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6D$	11 - 11		301	
115	1666.277	86.05150 - 146.06607	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^4P - x^4P^\circ$	11 - 11		959	
20	1667.698	114.50118 - 174.46407	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6D$	11 - 11		301	
1	1668.047	135.73250 - 195.68250	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$y^4G^\circ - f^4G$	11 - 11		301	
20	1668.071	116.69214 - 176.64114	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^4F^\circ - f^6D$	11 - 11		959	
20	1668.387	86.65407 - 146.5919	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - w^2G^\circ$	11 - 11		959	
0	1668.799	112.64531 - 172.56927	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4P^\circ - e^6P$	11 - 11		802	
200	1669.032	84.61053 - 144.52550	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^4P - w^4F^\circ$	11 - 11		301	
200	1669.404	135.78109 - 195.68250	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$y^4G^\circ - f^4G$	11 - 11		301	
2	1669.691	71.39527 - 131.28718	$3d^4(a^3D)4s - 3d^4(a^3P)4p$	$b^4D - y^4D^\circ$	11 - 11		301	
3	1670.315	71.83198 - 131.70169	$3d^4(a^3D)4s - 3d^4(a^3P)4p$	$b^4D - y^4D^\circ$	11 - 11		301	
200	1671.015	116.85169 - 176.69506	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^4G$	11 - 11		301	
25	1671.138	114.20901 - 174.04889	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6D$	11 - 11		959	
30	1671.474	114.09497 - 173.92069	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6D$	11 - 11		301	
45	1671.953	116.58017 - 176.39067	$3d^4(a^3D)4p - 3d^4(a^3D)5s$	$z^4F^\circ - f^6D$	11 - 11		959	
10	1672.009	85.20076 - 145.00836	$3d^4(a^3H)4s - 3d^4(a^3I)4p$	$a^4H - z^4K^\circ$	11 - 11		301	
200	1672.974	116.69214 - 176.46478	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^4G$	11 - 11		301	
70	1673.836	114.50118 - 174.24333	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6D$	11 - 11		959	

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
24	3	1674.408	91.90610 - 151.6288	$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$c^2F - w^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
	3	1675.329	116.58017 - 176.27025	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^4G$	$\frac{5}{2} - \frac{3}{2}$		301
	200	1675.52	135.73250 - 195.41520	$3d^4(a^3H)4p - 3d^4(a^3H)4d$	$y^4G^\circ - f^4G$	$\frac{9}{2} - \frac{7}{2}$		301
	3	1676.147	85.34672 - 145.00836	$3d^4(a^3H)4s - 3d^4(a^1I)4p$	$a^4H - z^2K^\circ$	$\frac{13}{2} - \frac{11}{2}$		301
	30	1676.95	114.28791 - 173.92069	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6D$	$\frac{5}{2} - \frac{3}{2}$		301
	1	1678.08	86.05150 - 145.64345	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^4P - x^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
	45	1679.652	113.07834 - 172.61387	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4P^\circ - e^6P$	$\frac{3}{2} - \frac{5}{2}$		959
	30	1688.290						959
	35	1691.803	85.20076 - 144.3107	$3d^4(a^3H)4s - 3d^4(a^1I)4p$	$a^4H - y^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		959
	70	1692.616	113.67662 - 172.75595	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4P^\circ - e^6P$	$\frac{5}{2} - \frac{7}{2}$		959
23	20	1693.289	85.20076 - 144.2585	$3d^4(a^3H)4s - 3d^4(a^1I)4p$	$a^4H - y^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		959
	25	1696.004	85.34672 - 144.3107	$3d^4(a^3H)4s - 3d^4(a^1I)4p$	$a^4H - y^2I^\circ$	$\frac{13}{2} - \frac{11}{2}$		959
	70	1696.700	113.67662 - 172.61387	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4P^\circ - e^6P$	$\frac{5}{2} - \frac{5}{2}$		959
	100	1697.507	85.34672 - 144.2585	$3d^4(a^3H)4s - 3d^4(a^1I)4p$	$a^4H - y^2I^\circ$	$\frac{13}{2} - \frac{13}{2}$		959
23	15	1702.631	62.74750 - 121.48024	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		959
	35	1704.387	94.69785 - 153.37065	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$c^4D - v^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		959
	30	1704.456	94.39720 - 153.06770	$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$c^2G - v^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	60	1704.647	94.70720 - 153.37065	$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$c^2G - v^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	3	1705.497	62.45699 - 121.09108	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		301
	2	1707.157	113.99131 - 172.56927	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6P$	$\frac{1}{2} - \frac{3}{2}$		301
	30	1707.559	114.50118 - 173.06355	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6G$	$\frac{9}{2} - \frac{11}{2}$		959
	2	1707.995	114.20901 - 172.75595	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6P$	$\frac{7}{2} - \frac{7}{2}$		301
	0	1708.804	114.09497 - 172.61387	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6P$	$\frac{7}{2} - \frac{5}{2}$		802
	2	1710.138	114.09497 - 172.56927	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6P$	$\frac{3}{2} - \frac{3}{2}$		301
25	1	1710.318	114.28791 - 172.75595	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6P$	$\frac{5}{2} - \frac{7}{2}$		959
	1	1712.134	62.56808 - 120.97425	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		301
	30	1713.223	94.69785 - 153.06770	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$c^4D - v^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	40	1713.673	114.50118 - 172.85502	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6G$	$\frac{9}{2} - \frac{9}{2}$		959
	15	1715.397	94.77147 - 153.06770	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$c^4D - v^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		959
	60	1715.794	114.28791 - 172.56927	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6P$	$\frac{3}{2} - \frac{3}{2}$		959
	5	1716.569	114.50118 - 172.75595	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^6D^\circ - e^6P$	$\frac{9}{2} - \frac{7}{2}$		301
	3	1717.053	86.57824 - 144.81768	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		301
	45	1718.367	63.28537 - 121.48024	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	2	1721.61	85.07709 - 143.16150	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		301
25	25	1722.972	86.48677 - 144.52550	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	40	1723.565	85.07709 - 143.09700	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	150	1729.801	117.06374 - 174.87450	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6F$	$\frac{9}{2} - \frac{9}{2}$		959
	90	1732.407	116.85169 - 174.57587	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6F$	$\frac{7}{2} - \frac{7}{2}$		959
	30	1734.073	116.58017 - 174.24763	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6F$	$\frac{3}{2} - \frac{1}{2}$		959
	130	1734.863	116.69214 - 174.33291	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6F$	$\frac{5}{2} - \frac{3}{2}$		959
	30	1735.073	91.90610 - 149.5410	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - x^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		802
	25	1736.560	116.85169 - 174.43659	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6F$	$\frac{7}{2} - \frac{5}{2}$		959
	20	1736.599	89.20469 - 146.7884	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$b^4G - w^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		959
	190	1737.932	89.05244 - 146.5919	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$b^4G - w^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		959
60	60	1739.884	86.65407 - 144.1298	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$b^4F - x^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	50	1742.15	117.06374 - 174.46407	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6D$	$\frac{9}{2} - \frac{9}{2}$		301
	3	1743.96	116.58017 - 173.92069	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	2	1744.35	91.90610 - 149.2337	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - x^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
	5	1745.625	91.94830 - 149.2337	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - x^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		301
	5	1747.38	116.69214 - 173.92069	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6D$	$\frac{3}{2} - \frac{3}{2}$		301
	80	1748.359	116.85169 - 174.04889	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6D$	$\frac{7}{2} - \frac{5}{2}$		959
	10	1748.888	117.06374 - 174.24333	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4F^\circ - e^6D$	$\frac{9}{2} - \frac{7}{2}$		301
	1	1749.17	138.24509 - 195.41520	$3d^4(a^3G)4p - 3d^4(a^3H)4d$	$y^4H^\circ - f^4G$	$\frac{11}{2} - \frac{9}{2}$		301
	20	1749.537	86.05150 - 143.20980	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^4P - w^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1751.253	138.31270 - 195.41520	$3d^4(a^3G)4p - 3d^4(a^3H)4d$	$x^4F^\circ - f^4G$	9-9 2-2		802
	20	1751.422	86.05150 - 143.14840	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^4P - w^4D^\circ$	3-3 2-2		959
	50	1760.343	100.00130 - 156.8093	$3d^4(a^3D)4s - 3d^4(a^1F)4p$	$d^2D - u^2F^\circ$	3-3 2-2		959
	20	1761.543	83.1760 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$a^2P - y^2F^\circ$	3-3 2-2		959
	20	1761.615	86.57824 - 143.34507	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4D^\circ$	2-2 2-2		959
	150	1763.933	86.65407 - 143.34507	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4D^\circ$	2-2 2-2		959
	70	1764.867	86.48677 - 143.14840	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4D^\circ$	1-1 2-2		959
	60	1765.801	86.57824 - 143.20980	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4D^\circ$	2-2 2-2		959
	35	1765.940	86.52094 - 143.14840	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$b^4F - w^4D^\circ$	3-3 2-2		959
	130	1766.416	91.94830 - 148.56050	$3d^4(a^3F)4s - 3d^4(a^1I)4p$	$c^2F - w^2H^\circ$	2-2 2-2		959
	70	1768.795	100.08520 - 156.6217	$3d^4(a^3D)4s - 3d^4(a^1F)4p$	$d^2D - u^2F^\circ$	3-3 2-2		959
	35	1771.486	91.90610 - 148.35560	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - w^2F^\circ$	3-3 2-2		959
	5	1772.824	91.94830 - 148.35560	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - w^2F^\circ$	3-3 2-2		301
	60	1780.891	90.44050 - 146.5919	$3d^4(a^3H)4s - 3d^4(a^1G)4p$	$b^2H - w^2G^\circ$	3-3 2-2		959
	150	1782.615	83.1760 - 139.27350	$3d^5 - 3d^4(a^3P)4p$	$a^2P - y^2D^\circ$	3-3 2-2		959
	20	1784.394	90.74606 - 146.7884	$3d^4(a^3H)4s - 3d^4(a^1G)4p$	$b^2H - w^2G^\circ$	1-1 2-2		802
	150	1788.669	89.05244 - 144.95974	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	2-2 2-2		959
	5	1792.38	88.88008 - 144.67238	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	3-3 2-2		301
	10	1793.242	89.05244 - 144.81768	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	2-2 2-2		301
	10	1793.560	89.20469 - 144.95974	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	3-3 2-2		301
	80	1794.098	88.88008 - 144.61900	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - x^4P^\circ$	3-3 2-2		959
	45	1796.457	89.05244 - 144.7184	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$b^4G - x^2F^\circ$	2-2 2-2		959
	100	1796.864	89.30722 - 144.95974	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	1-1 2-2		301
	150	1797.100	88.88008 - 144.52550	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	2-2 2-2		959
	25	1797.919	89.05244 - 144.67238	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	2-2 2-2		301
	80	1798.130	89.20469 - 144.81768	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4F^\circ$	3-3 2-2		301
	1	1798.545	176.46478 - 232.06503	$3d^4(a^5D)4d - 3d^4(a^5D)5f$	$e^4G - w^6F^\circ$	1-1 2-2		301
	2	1799.346	85.20076 - 140.77688	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4G^\circ$	1-1 2-2		301
	2	1799.56	104.4708 - 160.0397	$3d^4(a^3D)4s - 3d^4(a^1F)4p$	$e^2D - v^2D^\circ$	2-2 2-2		301
	1	1802.450	85.07709 - 140.55746	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4G^\circ$	2-2 2-2		301
	400	1804.065	85.34672 - 140.77688	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4G^\circ$	1-1 2-2		301
	300	1806.473	85.20076 - 140.55746	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4G^\circ$	2-2 2-2		301
	115	1807.551	85.07709 - 140.4011	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^2F^\circ$	2-2 2-2		959
	3	1807.926	84.98163 - 140.29444	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4G^\circ$	2-2 2-2		301
	25	1808.316	121.09108 - 176.39067	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^4D^\circ - f^6D$	3-3 2-2		959
	20	1810.447	120.97425 - 176.20915	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^4D^\circ - f^6D$	1-1 2-2		959
	200	1810.767	84.98163 - 140.20709	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4G^\circ$	2-2 2-2		301
	300	1811.025	85.07709 - 140.29444	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4G^\circ$	2-2 2-2		301
	35	1814.093	121.26732 - 176.39067	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^4D^\circ - f^6D$	2-2 2-2		959
	20	1814.271	121.09108 - 176.20915	$3d^4(a^5D)4p - 3d^4(a^5D)5s$	$z^4D^\circ - f^6D$	1-1 2-2		959
	30	1818.560	84.98163 - 139.97090	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^2H^\circ$	2-2 2-2		959
	170	1819.449	84.98163 - 139.9444	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^2F^\circ$	1-1 2-2		959
	45	1821.697	85.07709 - 139.97090	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^2H^\circ$	3-3 2-2		959
	40	1823.477	91.94830 - 146.7884	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$c^2F - w^2G^\circ$	2-2 2-2		802
	10	1823.994	85.07709 - 139.90206	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^2H^\circ$	1-1 2-2		959
	260	1825.864	85.20076 - 139.97090	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^2H^\circ$	1-1 2-2		959
	60	1828.485	94.85066 - 149.5410	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - x^2D^\circ$	3-3 2-2		959
	40	1828.647	91.90610 - 146.5919	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$c^2F - w^2G^\circ$	3-3 2-2		802
	190	1829.818	89.4963 - 144.14650	$3d^5 - 3d^4(a^3D)4p$	$c^2D - x^4P^\circ$	3-3 2-2		959
	20	1833.019	85.34672 - 139.90206	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^2H^\circ$	1-1 2-2		301
	225	1836.947	90.44050 - 144.88010	$3d^4(a^3H)4s - 3d^4(a^1G)4p$	$b^2H - x^2H^\circ$	1-1 2-2		959
	30	1838.789	94.85066 - 149.2337	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - x^2D^\circ$	3-3 2-2		959
	2	1839.01	90.44050 - 144.81768	$3d^4(a^3H)4s - 3d^4(a^3D)4p$	$b^2H - w^4F^\circ$	3-3 2-2		301
	170	1845.131	115.78023 - 169.9772	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$c^4F - v^4D^\circ$	3-3 2-2		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1846.001	94.39720 - 148.56840	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$c^2G - w^2F^o$	$\frac{7}{2} - \frac{5}{2}$		301
	3	1846.278	94.39720 - 148.56050	$3d^4(a^3G)4s - 3d^4(a^1I)4p$	$c^2G - w^2H^o$	$\frac{7}{2} - \frac{9}{2}$		301
	45	1846.491	89.05244 - 143.20980	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4D^o$	$\frac{7}{2} - \frac{5}{2}$		959
	260	1846.671	115.62240 - 169.7737	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$c^4P - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
	60	1847.064	89.20469 - 143.34507	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$b^4G - w^4D^o$	$\frac{9}{2} - \frac{7}{2}$		959
	30	1847.268	90.74606 - 144.88010	$3d^4(a^3H)4s - 3d^4(a^1G)4p$	$b^2H - x^2H^o$	$\frac{11}{2} - \frac{11}{2}$		301
	340	1847.640	86.65407 - 140.77688	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4G^o$	$\frac{9}{2} - \frac{11}{2}$		959
	15	1849.049	90.44050 - 144.52230	$3d^4(a^3H)4s - 3d^4(a^1G)4p$	$b^2H - x^2H^o$	$\frac{9}{2} - \frac{9}{2}$		301
	260	1849.289	62.98892 - 117.06374	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{7}{2} - \frac{9}{2}$		959
	390	1851.458	62.56808 - 116.58017	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
	225	1851.865	115.77400 - 169.7737	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$c^4F - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
	10	1852.11	115.78023 - 169.7737	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$c^4F - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$	Q	328
	3	1852.579	86.57824 - 140.55746	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4G^o$	$\frac{7}{2} - \frac{9}{2}$		301
	390	1853.270	94.39720 - 148.35560	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$c^2G - w^2F^o$	$\frac{7}{2} - \frac{7}{2}$		959
	1	1853.77	62.74750 - 116.69214	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		301
	225	1855.436	115.62240 - 169.5183	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$c^4P - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
	225	1855.541	89.20469 - 143.09700	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^2G^o$	$\frac{9}{2} - \frac{7}{2}$		959
	3	1856.316	90.44050 - 144.3107	$3d^4(a^3H)4s - 3d^4(a^1I)4p$	$b^2H - y^2I^o$	$\frac{9}{2} - \frac{11}{2}$		301
	1	1856.580	62.98892 - 116.85169	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$		301
	35	1857.638	62.74750 - 116.58017	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		959
	225	1858.502	115.71160 - 169.5183	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$c^4F - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
	25	1859.46	63.28537 - 117.06374	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{9}{2} - \frac{9}{2}$		301
	2	1859.65	86.52094 - 140.29444	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4G^o$	$\frac{3}{2} - \frac{7}{2}$		301
	225	1860.658	115.77400 - 169.5183	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$c^4F - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$		959
	20	1860.879	115.78023 - 169.5183	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$c^4F - v^4D^o$	$\frac{5}{2} - \frac{7}{2}$		959
	150	1861.519	86.48677 - 140.20709	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4G^o$	$\frac{3}{2} - \frac{5}{2}$		959
	70	1862.106	62.98892 - 116.69214	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		959
	190	1862.657	86.52094 - 140.20709	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4G^o$	$\frac{3}{2} - \frac{7}{2}$		959
	50	1863.721	104.4708 - 158.1269	$3d^4(a^1D)4s - 3d^4(a^1F)4p$	$e^2D - v^2G^o$	$\frac{3}{2} - \frac{3}{2}$		959
	3	1863.975	94.70720 - 148.35560	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$c^2G - w^2F^o$	$\frac{9}{2} - \frac{7}{2}$		301
	50	1864.286	86.65407 - 140.29444	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4G^o$	$\frac{9}{2} - \frac{7}{2}$		959
	260	1864.682	86.57824 - 140.20709	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4G^o$	$\frac{7}{2} - \frac{7}{2}$		959
	5	1866.828	63.28537 - 116.85169	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4F^o$	$\frac{9}{2} - \frac{7}{2}$		301
	150	1866.857	116.20750 - 169.7737	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$c^4P - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$		959
	60	1868.305	91.3083 - 144.83290	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^2P - x^4P^o$	$\frac{3}{2} - \frac{1}{2}$		959
	6	1869.164	94.70720 - 148.20690	$3d^4(a^3G)4s - 3d^4(a^1I)4p$	$c^2G - w^2H^o$	$\frac{9}{2} - \frac{11}{2}$		301
	115	1872.507	85.20076 - 138.60580	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^o$	$\frac{11}{2} - \frac{11}{2}$		959
	130	1872.942	86.57824 - 139.97090	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - y^2H^o$	$\frac{7}{2} - \frac{9}{2}$		959
	35	1873.740	100.00130 - 153.37065	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$d^2D - v^2F^o$	$\frac{5}{2} - \frac{7}{2}$		959
	40	1874.122	84.98163 - 138.34062	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4F^o$	$\frac{7}{2} - \frac{5}{2}$		959
	12	1875.017	109.86185 - 163.1946	$3d^4(a^3F)4s - 3d^4(b^3F)4p$	$d^2F - v^4F^o$	$\frac{7}{2} - \frac{9}{2}$		959
	225	1875.593	86.65407 - 139.97090	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - y^2H^o$	$\frac{9}{2} - \frac{9}{2}$		959
	90	1875.800	91.3083 - 144.61900	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^2P - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$		959
	60	1876.701	85.07709 - 138.36280	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4F^o$	$\frac{9}{2} - \frac{7}{2}$		959
	400	1877.616	85.34672 - 138.60580	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^o$	$\frac{11}{2} - \frac{11}{2}$		301
	2	1878.018	86.65407 - 139.90206	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - y^2H^o$	$\frac{9}{2} - \frac{11}{2}$		301
	60	1878.963	86.05150 - 139.27350	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^2P - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$		959
	3	1880.818	85.07709 - 138.24509	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^o$	$\frac{9}{2} - \frac{11}{2}$		301
	45	1882.838	85.20076 - 138.31270	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - x^4F^o$	$\frac{11}{2} - \frac{9}{2}$		959
	150	1883.256						959
	45	1884.431	100.00130 - 153.06770	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$d^2D - v^2F^o$	$\frac{5}{2} - \frac{5}{2}$		959
	300	1885.207	85.20076 - 138.24509	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^o$	$\frac{11}{2} - \frac{11}{2}$		301
	1	1888.438	84.98163 - 137.93553	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^o$	$\frac{7}{2} - \frac{9}{2}$		301
	12	1888.709	120.97425 - 173.92069	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4D^o - e^6D$	$\frac{1}{2} - \frac{3}{2}$		959

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	1889.878	83.1760 - 136.0894	$3d^5 - 3d^4(a^3P)4p$	$a^2P - z^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		959
	2	1890.42	85.34672 - 138.24509	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^\circ$	$\frac{13}{2} - \frac{11}{2}$		301
	50	1891.772	83.2290 - 136.0894	$3d^5 - 3d^4(a^3P)4p$	$a^2P - z^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	200	1891.846	85.07709 - 137.93553	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		301
	70	1893.485	91.90610 - 144.7184	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$c^2F - x^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		802
	12	1895.032	91.94830 - 144.7184	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$c^2F - x^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	20	1895.971	121.09108 - 173.83507	$3d^4(a^3D)4p - 3d^4(a^3D)4d$	$z^4D^\circ - e^6D$	$\frac{3}{2} - \frac{1}{2}$		959
	3	1896.293	85.20076 - 137.93553	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		301
	1	1897.28	85.20076 - 137.90820	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - z^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	260	1898.133	83.1760 - 135.8590	$3d^5 - 3d^4(a^3P)4p$	$a^2P - z^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	200	1898.301	84.98163 - 137.66024	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		301
	150	1899.097	90.44050 - 143.09700	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$b^2H - x^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		301
	12	1900.041	83.2290 - 135.8590	$3d^5 - 3d^4(a^3P)4p$	$a^2P - z^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	1	1901.754	85.07709 - 137.66024	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$a^4H - y^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		301
	100	1902.069	91.94830 - 144.52230	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$c^2F - x^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
	115	1902.559	85.34672 - 137.90820	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - z^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		959
	100	1903.807	84.61053 - 137.13769	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^2P - z^4S^\circ$	$\frac{1}{2} - \frac{1}{2}$		959
	200	1907.83	90.74606 - 143.16150	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$b^2H - x^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		301
	0	1908.670	94.39720 - 146.7884	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$c^2G - w^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		802
	40	1910.649	104.4708 - 156.8093	$3d^4(a^3D)4s - 3d^4(a^1F)4p$	$e^2D - u^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		802
	150	1915.907	94.39720 - 146.5919	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$c^2G - w^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		802
	115	1916.223	115.62240 - 167.8084	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$c^4P - y^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	20	1916.385	91.94830 - 144.1298	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$c^2F - x^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		802
	225	1917.530	104.4708 - 156.6217	$3d^4(a^3D)4s - 3d^4(a^1F)4p$	$e^2D - u^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	0	1918.198	179.22869 - 231.36128	$3d^4(a^3D)4d - 3d^4(a^3D)5f$	$e^4F - y^6H^\circ$	$\frac{3}{2} - \frac{3}{2}$		802
	20	1919.162						802
	290	1920.075	94.70720 - 146.7884	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$c^2G - w^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		959
	70	1920.390	96.4875 - 148.56050	$3d^4(a^3G)4s - 3d^4(a^1I)4p$	$d^2G - w^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		802
	20	1924.422	85.17388 - 137.13769	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^2P - z^4S^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	20	1925.851	96.4308 - 148.35560	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$d^2G - w^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		802
	150	1926.728	91.3083 - 143.20980	$3d^4(a^3P)4s - 3d^4(a^3D)4p$	$b^2P - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	0	1927.337	94.70720 - 146.5919	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$c^2G - w^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		802
	80	1927.889	100.00130 - 151.8713	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$d^2D - w^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$		802
	90	1927.968	96.4875 - 148.35560	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$d^2G - w^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	1	1928.479	86.48677 - 138.34062	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	2	1928.925	86.52094 - 138.36280	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	3	1929.752	86.52094 - 138.34062	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
	2	1931.06	86.57824 - 138.36280	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	300	1931.394	96.4308 - 148.20690	$3d^4(a^3G)4s - 3d^4(a^1I)4p$	$d^2G - w^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		802
	30	1931.883	86.57824 - 138.34062	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	2	1931.92	86.57824 - 138.34062	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	2	1932.44	86.48677 - 138.23479	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
	1	1932.92	86.57824 - 138.31270	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		301
13	100	1933.483	62.56808 - 114.28791	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
	90	1933.729	86.52094 - 138.23479	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	290	1933.926	86.65407 - 138.36280	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	2	1935.770	86.65407 - 138.31270	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
13	200	1936.559	62.45699 - 114.09497	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
	4	1937.121	85.17388 - 136.79661	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - x^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
	25	1937.929	116.20750 - 167.8084	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$c^4P - y^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		959
	40	1939.053	89.20469 - 140.77688	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		959
	100	1940.056	100.08520 - 151.6288	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$d^2D - w^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		802
13	6	1940.224	62.74750 - 114.28791	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
13	15	1940.458	62.45699 - 113.99131	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		301

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
13	2	1940.74	62.56808 - 114.09497	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
13	500	1941.282	62.98892 - 114.50118	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	1	1941.59	89.05244 - 140.55746	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		301
	250	1942.886	89.30722 - 140.77688	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{11}{2} - \frac{11}{2}$		301
13	800	1943.209	62.74750 - 114.20901	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
13	150	1944.640	62.56808 - 113.99131	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	190	1945.010	88.88008 - 140.29444	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{5}{2} - \frac{7}{2}$		959
	30	1945.671	91.94830 - 143.34507	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - w^4D^o$	$\frac{3}{2} - \frac{7}{2}$		959
	80	1947.172	86.57824 - 137.93553	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - y^4H^o$	$\frac{3}{2} - \frac{7}{2}$		959
	150	1947.320	89.20469 - 140.55746	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{3}{2} - \frac{7}{2}$		301
13	200	1947.516	62.74750 - 114.09497	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	200	1948.282	88.88008 - 140.20709	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{3}{2} - \frac{7}{2}$		301
	40	1948.935	116.49840 - 167.8084	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$c^4P - y^4S^o$	$\frac{1}{2} - \frac{3}{2}$		959
	100	1949.173	91.90610 - 143.20980	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$c^2F - w^4D^o$	$\frac{3}{2} - \frac{7}{2}$		959
13	200	1949.354	62.98892 - 114.28791	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	30	1949.53	94.77147 - 146.06607	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - x^4P^o$	$\frac{3}{2} - \frac{7}{2}$		301
	150	1949.744	97.27176 - 148.56050	$3d^4(a^1D)4s - 3d^4(a^1I)4p$	$b^2I - w^2H^o$	$\frac{11}{2} - \frac{9}{2}$		301
	1	1951.24	89.30722 - 140.55746	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{11}{2} - \frac{9}{2}$		301
	200	1951.504	89.05244 - 140.29444	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{7}{2} - \frac{7}{2}$		301
13	500	1952.361	62.98892 - 114.20901	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
13	1000	1952.525	63.28537 - 114.50118	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	315	1954.833	89.05244 - 140.20709	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{3}{2} - \frac{7}{2}$		959
	50	1958.456	86.52094 - 137.66024	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - y^4H^o$	$\frac{3}{2} - \frac{7}{2}$		959
12	300	1956.614	62.56808 - 113.67662	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		301
	60	1957.358	89.20469 - 140.29444	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - x^4G^o$	$\frac{9}{2} - \frac{7}{2}$		959
	10	1957.472	86.05150 - 137.13769	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		301
	35	1957.651	86.57824 - 137.66024	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - y^4H^o$	$\frac{3}{2} - \frac{7}{2}$		959
	8	1958.310	88.88008 - 139.9444	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4G - y^2F^o$	$\frac{3}{2} - \frac{7}{2}$		301
	2	1959.98	86.57824 - 137.59920	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{7}{2}$		301
	250	1962.042	97.23986 - 148.20690	$3d^4(a^1D)4s - 3d^4(a^1I)4p$	$b^2I - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		301
	290	1962.896	86.65407 - 137.59920	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - z^2F^o$	$\frac{9}{2} - \frac{7}{2}$		959
	1	1963.27	97.27176 - 148.20690	$3d^4(a^1D)4s - 3d^4(a^1I)4p$	$b^2I - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		301
12	100	1963.514	62.74750 - 113.67662	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		301
13	200	1963.719	63.28537 - 114.20901	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^6D^o$	$\frac{3}{2} - \frac{3}{2}$		301
	225	1963.950	89.05244 - 139.97090	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^2H^o$	$\frac{3}{2} - \frac{7}{2}$		959
	260	1964.858	109.86440 - 160.7585	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$d^2F - v^2D^o$	$\frac{3}{2} - \frac{3}{2}$		959
	150	1964.961	89.05244 - 139.9444	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^2F^o$	$\frac{7}{2} - \frac{5}{2}$		959
	40	1965.096	84.98163 - 135.86976	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$a^4H - y^4F^o$	$\frac{3}{2} - \frac{7}{2}$		959
	25	1965.918	85.07709 - 135.94408	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$a^4H - y^4F^o$	$\frac{9}{2} - \frac{9}{2}$		959
	150	1966.250	86.57824 - 137.43670	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$b^4F - z^2H^o$	$\frac{3}{2} - \frac{7}{2}$		959
	10	1967.080	86.05150 - 136.88870	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - x^4D^o$	$\frac{3}{2} - \frac{7}{2}$		301
	4	1968.776	85.07709 - 135.86976	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$a^4H - y^4F^o$	$\frac{3}{2} - \frac{7}{2}$		301
	50	1969.576	86.05150 - 136.82386	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - x^4D^o$	$\frac{5}{2} - \frac{7}{2}$		301
	60	1970.432	84.98163 - 135.73250	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^o$	$\frac{3}{2} - \frac{9}{2}$		959
	2	1970.639	86.05150 - 136.79661	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - x^4D^o$	$\frac{3}{2} - \frac{7}{2}$		301
	260	1970.678	85.20076 - 135.94408	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$a^4H - y^4F^o$	$\frac{11}{2} - \frac{9}{2}$		959
	100	1971.28	84.98163 - 135.70990	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^o$	$\frac{3}{2} - \frac{5}{2}$		301
	8	1971.976	84.98163 - 135.69217	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^o$	$\frac{3}{2} - \frac{7}{2}$		301
	5	1972.218	85.07709 - 135.78109	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^o$	$\frac{9}{2} - \frac{11}{2}$		301
	3	1972.471	89.20469 - 139.90206	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^2H^o$	$\frac{9}{2} - \frac{11}{2}$		301
12	100	1972.861	62.98892 - 113.67662	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		301
	60	1973.811	89.30722 - 139.97090	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^2H^o$	$\frac{11}{2} - \frac{9}{2}$		959
	20	1974.10	85.07709 - 135.73250	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^o$	$\frac{3}{2} - \frac{5}{2}$		301
12	100	1975.439	62.45699 - 113.07834	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$a^6D - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		301

MN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	1975.690	85.07709 - 135.69217	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		301
	30	1976.490	89.30722 - 139.90206	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	4	1977.044	85.20076 - 135.78109	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	60	1978.253	89.30722 - 139.85740	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$b^4G - y^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		959
	500	1978.953	85.20076 - 135.73250	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		301
	290	1979.058	84.98163 - 135.51070	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$a^4H - y^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
12	1	1979.790	62.56808 - 113.07834	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		301
	25	1979.969	84.61053 - 135.11680	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - y^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		959
	260	1982.240	89.4963 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$c^2D - y^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		959
	400	1982.76	85.34672 - 135.78109	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		301
	2	1984.052	86.48677 - 136.88870	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		301
	225	1984.083	89.5434 - 139.9444	$3d^5 - 3d^4(a^3G)4p$	$c^2D - y^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		959
	20	1985.398	86.52094 - 136.88870	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
	300	1985.717	165.9470 - 216.30729	$3d^4(b^3F)4p - 3d^4(a^5D)5d$	$w^4G^\circ - f^6F$	$\frac{11}{2} - \frac{9}{2}$	Q	131
	750	1985.797	96.4308 - 146.7884	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$d^2G - w^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		802
	130	1986.646	90.44050 - 140.77688	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$b^2H - x^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		959
12	100	1986.839	62.74750 - 113.07834	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
	50	1987.254	94.39720 - 144.7184	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$c^2G - x^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	1	1987.70	86.48677 - 136.79661	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		301
	8	1989.038	86.52094 - 136.79661	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		301
	400	1989.587	94.69785 - 144.95974	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - w^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		301
	45	1989.958	94.70720 - 144.95974	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$c^2G - w^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		959
	3	1990.219	86.57824 - 136.82386	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		301
	290	1990.615	115.71160 - 165.9470	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$c^4F - w^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		959
12	50	1991.290	86.57824 - 136.79661	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		301
	2	1992.492	62.45699 - 112.64531	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	10	1992.889	84.61053 - 134.78910	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - y^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	290	1992.927	109.86185 - 160.0397	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$d^2F - v^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		959
	190	1993.013	109.86440 - 160.0397	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$d^2F - v^2D^\circ$	$\frac{9}{2} - \frac{5}{2}$		959
	80	1993.222	86.65407 - 136.82386	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		301
	20	1993.550	96.4308 - 146.5919	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$d^2G - w^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		802
	260	1994.130	89.4963 - 139.6436	$3d^5 - 3d^4(a^3F)4p$	$c^2D - y^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		959
	3	1995.02	94.39720 - 144.52230	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$c^2G - x^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		301
	225	1995.356	90.44050 - 140.55746	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$b^2H - x^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		959
	60	1995.586	94.70720 - 144.81768	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$c^2G - w^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		959
	700	1995.838	96.4875 - 146.5919	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$d^2G - w^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		802
12	15	1996.905	62.56808 - 112.64531	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^6D - z^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		301
	20	1997.109	85.17388 - 135.24627	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - y^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		301
	100	1998.127	94.77147 - 144.81768	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - w^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		301
	260	1998.773	90.74606 - 140.77688	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$b^2H - x^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		959
	20	1998.883	84.61053 - 134.63839	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - y^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		301
	315	1999.916	86.05150 - 136.0539	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - z^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		959

MANGANESE IV (Mn³⁺), Z = 25
Ground State 1s²2s²2p⁶3s²3p⁶3d⁴(⁵D₀) (22 electrons)
Ionization Potential [413 000] cm⁻¹; [51.2] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	120	522.780	21.6797 - 212.9662	3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ G°	6 - 5		799
	80	523.036	21.4748 - 212.6658	3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ G°	5 - 4		799
	70	523.234	21.2807 - 212.3998	3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ G°	4 - 3		799
	20	526.293	22.9597 - 212.9662	3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ G°	4 - 5		799
	0	526.858	22.8626 - 212.6658	3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ G°	3 - 4		799
	0	527.402	22.7912 - 212.3998	3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ G°	2 - 3		799
	0	534.396	0.5530 - 187.6788	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - y ⁵ D°	3 - 4		799
	90	534.504	25.8780 - 212.9662	3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ G°	5 - 5		799
	60	534.780	25.6707 - 212.6658	3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ G°	4 - 4		799
	40	534.876	25.4411 - 212.3998	3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ G°	3 - 3		799
	150	535.352	0.8857 - 187.6788	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - y ⁵ D°	4 - 4		799
	20	535.562	0.2882 - 187.0044	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - y ⁵ D°	2 - 3		799
	70	536.324	0.5530 - 187.0044	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - y ⁵ D°	3 - 3		799
	50	540.103	0.2882 - 185.4348	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	2 - 3		799
	300	540.882	0.5530 - 185.4348	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	3 - 3		799
	100	541.117	0.0996 - 184.9021	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	1 - 2		799
	350	541.667	0.2882 - 184.9021	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	2 - 2		799
	100	541.814	0.0 - 184.5667	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	0 - 1		799
	400	541.858	0.8857 - 185.4348	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	4 - 3		799
	300	542.101	0.0996 - 184.5667	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	1 - 1		799
	400	542.454	0.5530 - 184.9021	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	3 - 2		799
	300	542.653	0.2882 - 184.5667	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ² D - z ⁵ P°	2 - 1		799
	300	544.016	25.4411 - 209.2610	3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ F°	3 - 2		799
	350	544.533	25.6707 - 209.3155	3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ F°	4 - 3		799
	350	544.752	25.8780 - 209.4478	3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ F°	5 - 4		799
	300	558.495	21.2807 - 200.3334	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	4 - 3		799
	0	558.624	21.2807 - 200.2909	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	4 - 4		799
	350	559.231	21.4748 - 200.2909	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	5 - 4		799
	0	559.544	21.4748 - 200.1928	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	5 - 5		799
	300	560.181	21.6797 - 200.1928	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	6 - 5		799
	90	561.598	31.3851 - 209.4478	3d ⁴ - 3d ³ (a ² F)4p	a ³ D - w ³ F°	3 - 4		799
	80	562.288	31.4728 - 209.3155	3d ⁴ - 3d ³ (a ² F)4p	a ³ D - w ³ F°	2 - 3		799
	50	562.806	31.5811 - 209.2610	3d ⁴ - 3d ³ (a ² F)4p	a ³ D - w ³ F°	1 - 2		799
	30	566.757	20.6539 - 197.0954	3d ⁴ - 3d ³ (a ² D)4p	a ³ P - w ³ D°	0 - 1		799
	80	567.295	21.2788 - 197.5546	3d ⁴ - 3d ³ (a ² D)4p	a ³ P - w ³ D°	1 - 2		799
	30	568.774	21.2788 - 197.0954	3d ⁴ - 3d ³ (a ² D)4p	a ³ P - w ³ D°	1 - 1		799
	200	569.614	22.3243 - 197.8808	3d ⁴ - 3d ³ (a ² D)4p	a ³ P - w ³ D°	2 - 3		799
	300	569.781	21.6797 - 197.1853	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - z ³ I°	6 - 7		799
	0	570.130	0.8857 - 176.2894	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ² D - z ³ G°	4 - 5		047
	50	570.675	22.3243 - 197.5546	3d ⁴ - 3d ³ (a ² D)4p	a ³ P - w ³ D°	2 - 2		799
	250	571.352	21.4748 - 196.4983	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - z ³ I°	5 - 6		799
	350	571.696	22.9597 - 197.8808	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D°	4 - 3		799
	350	571.774	25.4411 - 200.3334	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G°	3 - 3		799
	20	571.923	25.4411 - 200.2909	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G°	3 - 4		799
	30	572.021	21.6797 - 196.4983	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - z ³ I°	6 - 6		799
	40	572.203	22.7912 - 197.5546	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D°	2 - 2		799
	400	572.433	22.8626 - 197.5546	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D°	3 - 2		799
	100	572.532	25.6707 - 200.3334	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G°	4 - 3		799
	350	572.671	25.6707 - 200.2909	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G°	4 - 4		799
	40	572.992	25.6707 - 200.1928	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G°	4 - 5		799
	80	573.352	25.8780 - 200.2909	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G°	5 - 4		799
	500	573.677	25.8780 - 200.1928	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G°	5 - 5		799
	200	573.706	22.7912 - 197.0954	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D°	2 - 1		799
	450	579.155	0.2882 - 172.9533	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ² D - z ³ D°	2 - 3		799

MN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	600	579.787	21.6797 - 194.1558	$3d^4 - 3d^3(a^2H)4p$	$a^3H - y^3H^\circ$	6 - 6		799
	500	580.026	21.4748 - 193.8797	$3d^4 - 3d^3(a^2H)4p$	$a^3H - y^3H^\circ$	5 - 5		799
	30	580.298	20.6539 - 192.9807	$3d^4 - 3d^3(a^2P)4p$	$a^3P - y^3D^\circ$	0 - 1		799
	350	580.383	0.0996 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	1 - 2		799
	30	581.099	0.0 - 172.0906	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	0 - 1		047
	600	581.442	0.8857 - 172.8719	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	4 - 5		799
	600	581.650	0.5530 - 172.4775	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	3 - 4		799
	40	581.914	0.5530 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	3 - 2		799
	80	582.089	0.2882 - 172.0826	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	2 - 3		799
	30	582.400	21.2788 - 192.9807	$3d^4 - 3d^3(a^2P)4p$	$a^3P - y^3D^\circ$	1 - 1		799
	450	582.785	0.8857 - 172.4775	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	4 - 4		799
	500	582.993	0.5530 - 172.0826	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	3 - 3		799
	450	583.390	0.2882 - 171.6987	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	2 - 2		799
	350	583.480	0.0 - 171.3847	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	0 - 1		799
	40	583.618	22.8626 - 194.2088	$3d^4 - 3d^3(a^2P)4p$	$a^3F - y^3D^\circ$	3 - 3		799
	150	583.824	0.0996 - 171.3847	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	1 - 1		799
	100	583.945	22.9597 - 194.2088	$3d^4 - 3d^3(a^2P)4p$	$a^3F - y^3D^\circ$	4 - 3		799
	150	584.063	0.5530 - 171.7662	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	3 - 4		799
	20	584.124	0.8857 - 172.0826	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	4 - 3		047
	50	584.296	0.5530 - 171.6987	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	3 - 2		047
	70	584.443	0.2882 - 171.3847	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3F^\circ$	2 - 1		047
	500	584.835	0.2882 - 171.2773	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	2 - 3		799
	600	585.208	0.8857 - 171.7662	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	4 - 4		799
	500	585.586	0.0996 - 170.8670	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	1 - 2		799
	450	585.736	0.5530 - 171.2773	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	3 - 3		799
	350	586.245	0.2882 - 170.8670	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	2 - 2		799
	30	586.590	0.0996 - 170.5778	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	1 - 1		799
	450	586.873	0.8857 - 171.2773	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	4 - 3		799
	350	587.157	0.5530 - 170.8670	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	3 - 2		799
	350	587.232	0.2882 - 170.5778	$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^3D^\circ$	2 - 1		799
	200	587.574	22.7912 - 192.9807	$3d^4 - 3d^3(a^2P)4p$	$a^3F - y^3D^\circ$	2 - 1		799
	150	591.707	21.2807 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^3F^\circ$	4 - 3		799
	0	592.230	21.2788 - 190.1362	$3d^4 - 3d^3(a^2G)4p$	$a^3P - y^3F^\circ$	1 - 2		799
	120	592.599	21.2807 - 190.0324	$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^3F^\circ$	4 - 4		799
	100	593.279	21.4748 - 190.0324	$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^3F^\circ$	5 - 4		799
	80	593.329	25.6707 - 194.2088	$3d^4 - 3d^3(a^2P)4p$	$a^3G - y^3D^\circ$	4 - 3		799
	120	594.106	25.4411 - 193.7618	$3d^4 - 3d^3(a^2H)4p$	$a^3G - y^3H^\circ$	3 - 4		799
	120	594.260	25.8780 - 194.1558	$3d^4 - 3d^3(a^2H)4p$	$a^3G - y^3H^\circ$	5 - 6		799
	350	594.503	25.6707 - 193.8797	$3d^4 - 3d^3(a^2H)4p$	$a^3G - y^3H^\circ$	4 - 5		799
	500	594.959	21.4748 - 189.5539	$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^3G^\circ$	5 - 5		799
	60	595.223	25.8780 - 193.8797	$3d^4 - 3d^3(a^2H)4p$	$a^3G - y^3H^\circ$	5 - 5		799
	0	595.392	22.3243 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3P - y^3F^\circ$	2 - 3		799
	550	595.684	21.6797 - 189.5539	$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^3G^\circ$	6 - 5		799
	450	596.174	21.4748 - 189.2112	$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^3G^\circ$	5 - 4		799
	400	597.107	21.2807 - 188.7564	$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^3G^\circ$	4 - 3		799
	450	597.298	22.8626 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^\circ$	3 - 3		799
	500	597.577	22.7912 - 190.1362	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^\circ$	2 - 2		799
	450	597.644	22.9597 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^\circ$	4 - 3		799
	150	597.820	22.8626 - 190.1362	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^\circ$	3 - 2		799
	500	598.526	22.9597 - 190.0324	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^\circ$	4 - 4		799
	40	599.848	21.4748 - 188.1848	$3d^4 - 3d^3(a^2G)4p$	$a^3H - z^3H^\circ$	5 - 6		799
	350	600.257	22.9597 - 189.5539	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^\circ$	4 - 5		799
	100	600.614	31.3851 - 197.8808	$3d^4 - 3d^3(a^2D)4p$	$a^3D - w^3D^\circ$	3 - 3		799
	40	600.917	31.4728 - 197.8808	$3d^4 - 3d^3(a^2D)4p$	$a^3D - w^3D^\circ$	2 - 3		799

MN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	601.153	22.8626 - 189.2112	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^\circ$	3 - 4		799
	70	601.499	22.9597 - 189.2112	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^\circ$	4 - 4		799
	10	601.788	31.3851 - 197.5546	$3d^4 - 3d^3(a^2D)4p$	$a^3D - w^3D^\circ$	3 - 2		799
	80	602.115	31.4728 - 197.5546	$3d^4 - 3d^3(a^2D)4p$	$a^3D - w^3D^\circ$	2 - 2		799
	300	602.535	22.7912 - 188.7564	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^\circ$	2 - 3		799
	40	602.798	22.8626 - 188.7564	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^\circ$	3 - 3		799
	0	603.129	21.4748 - 187.2783	$3d^4 - 3d^3(a^2G)4p$	$a^3H - z^3H^\circ$	5 - 5		799
	10	603.788	31.4728 - 197.0954	$3d^4 - 3d^3(a^2D)4p$	$a^3D - w^3D^\circ$	2 - 1		799
	100	603.863	21.6797 - 187.2783	$3d^4 - 3d^3(a^2G)4p$	$a^3H - z^3H^\circ$	6 - 5		799
	40	604.177	31.5811 - 197.0954	$3d^4 - 3d^3(a^2D)4p$	$a^3D - w^3D^\circ$	1 - 1		799
	50	605.377	21.4748 - 186.6592	$3d^4 - 3d^3(a^2G)4p$	$a^3H - z^3H^\circ$	5 - 4		799
	80	606.648	25.4411 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^3F^\circ$	3 - 3		799
	200	607.478	25.6707 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^3F^\circ$	4 - 3		799
	50	608.577	22.9597 - 187.2783	$3d^4 - 3d^3(a^2G)4p$	$a^3F - z^3H^\circ$	4 - 5		799
	0	609.188	25.8780 - 190.0324	$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^3F^\circ$	5 - 4		799
	10	610.509	22.8626 - 186.6592	$3d^4 - 3d^3(a^2G)4p$	$a^3F - z^3H^\circ$	3 - 4		799
	450	610.967	25.8780 - 189.5539	$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^3G^\circ$	5 - 5		799
	450	611.461	25.6707 - 189.2112	$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^3G^\circ$	4 - 4		799
	500	612.292	25.4411 - 188.7564	$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^3G^\circ$	3 - 3		799
	0	613.162	25.6707 - 188.7564	$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^3G^\circ$	4 - 3		047
	400	614.153	31.3851 - 194.2088	$3d^4 - 3d^3(a^2P)4p$	$a^3D - y^3D^\circ$	3 - 3		799
	40	615.947	31.3851 - 193.7392	$3d^4 - 3d^3(a^2P)4p$	$a^3D - y^3D^\circ$	3 - 2		799
	300	616.111	25.8780 - 188.1848	$3d^4 - 3d^3(a^2G)4p$	$a^3G - z^3H^\circ$	5 - 6		799
	300	616.277	31.4728 - 193.7392	$3d^4 - 3d^3(a^2P)4p$	$a^3D - y^3D^\circ$	2 - 2		799
	250	618.780	25.6707 - 187.2783	$3d^4 - 3d^3(a^2G)4p$	$a^3G - z^3H^\circ$	4 - 5		799
	10	619.173	31.4728 - 192.9807	$3d^4 - 3d^3(a^2P)4p$	$a^3D - y^3D^\circ$	2 - 1		799
	90	619.580	25.8780 - 187.2783	$3d^4 - 3d^3(a^2G)4p$	$a^3G - z^3H^\circ$	5 - 5		799
	200	620.275	25.4411 - 186.6592	$3d^4 - 3d^3(a^2G)4p$	$a^3G - z^3H^\circ$	3 - 4		799
	70	621.176	25.6707 - 186.6592	$3d^4 - 3d^3(a^2G)4p$	$a^3G - z^3H^\circ$	4 - 4		799
	80	621.964	25.8780 - 186.6592	$3d^4 - 3d^3(a^2G)4p$	$a^3G - z^3H^\circ$	5 - 4		799
	90	625.961	53.2128 - 212.9662	$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3G^\circ$	4 - 5		799
	50	627.432	53.2873 - 212.6658	$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3G^\circ$	3 - 4		799
	30	628.380	53.2608 - 212.3998	$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3G^\circ$	2 - 3		799
	0	629.341	31.3851 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^\circ$	3 - 3		799
	180	629.685	31.4728 - 190.2828	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^\circ$	2 - 3		799
	150	630.329	31.3851 - 190.0324	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^\circ$	3 - 4		799
	100	630.695	31.5811 - 190.1362	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^\circ$	1 - 2		799
	10	633.607	31.3851 - 189.2112	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3G^\circ$	3 - 4		799
	80	640.069	53.2128 - 209.4478	$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3F^\circ$	4 - 4		799
	30	640.909	53.2873 - 209.3155	$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3F^\circ$	3 - 3		799
	20	641.021	53.2608 - 209.2610	$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3F^\circ$	2 - 2		799
	100	641.132	53.2873 - 209.2610	$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3F^\circ$	3 - 2		799
	40	642.195	22.8626 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 4		799
	300	642.588	22.9597 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	4 - 4		799
	50	643.983	22.7912 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	2 - 3		799
	300	644.273	22.8626 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 3		799
	80	644.679	22.9597 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	4 - 3		799
	250	645.832	22.7912 - 177.6304	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	2 - 2		799
	10	645.931	21.4748 - 176.2894	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	5 - 5		799
	80	646.133	22.8626 - 177.6304	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 2		799
	500	646.794	21.6797 - 176.2894	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	6 - 5		799
	40	647.102	21.2807 - 175.8137	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	4 - 4		799
	450	647.921	21.4748 - 175.8137	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	5 - 4		799
	450	648.692	21.2807 - 175.4358	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	4 - 3		799

MN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
250		652.195	22.9597 - 176.2894	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	4 - 5		799
0		653.018	25.4411 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	3 - 4		799
180		653.811	22.8626 - 175.8137	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	3 - 4		799
150		653.988	25.6707 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	4 - 4		799
90		654.222	22.9597 - 175.8137	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	4 - 4		799
400		654.870	25.8780 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	5 - 4		799
250		655.122	22.7912 - 175.4358	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	2 - 3		799
200		655.156	25.4411 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	3 - 3		799
80		655.424	22.8626 - 175.4358	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	3 - 3		799
400		656.148	25.6707 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	4 - 3		799
400		657.077	25.4411 - 177.6304	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	3 - 2		799
80		660.344	20.6539 - 172.0906	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	0 - 1		799
300		661.726	21.2788 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	1 - 2		799
0		662.234	21.4748 - 172.4775	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3F^\circ$	5 - 4		799
80		663.085	21.2788 - 172.0906	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	1 - 1		799
10		663.429	20.6539 - 171.3847	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3F^\circ$	0 - 1		799
450		663.884	22.3243 - 172.9533	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	2 - 3		799
400		664.838	25.8780 - 176.2894	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	5 - 5		799
40		665.015	25.4411 - 175.8137	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	3 - 4		799
350		666.035	25.6707 - 175.8137	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	4 - 4		799
80		666.255	22.8626 - 172.9533	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	3 - 3		799
100		666.332	22.3243 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	2 - 2		799
400		666.694	22.9597 - 172.9533	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	4 - 3		799
120		667.004	20.6539 - 170.5778	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	0 - 1		799
0		667.706	25.6707 - 175.4358	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	4 - 3		799
40		668.433	22.7912 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 2		047
120		668.498	21.2788 - 170.8670	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	1 - 2		799
180		668.736	22.8626 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	3 - 2		799
30		669.486	22.3243 - 171.6987	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3F^\circ$	2 - 2		047
150		669.792	22.7912 - 172.0906	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 1		799
10		670.607	22.9597 - 172.0826	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	4 - 3		047
80		671.353	22.3243 - 171.2773	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	2 - 3		799
10		671.891	22.8626 - 171.6987	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 2		047
40		673.208	22.3243 - 170.8670	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	2 - 2		799
0		673.449	22.7912 - 171.2773	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 3		047
0		673.804	22.8626 - 171.2773	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	3 - 3		047
60		674.236	22.9597 - 171.2773	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	4 - 3		799
80		675.654	22.8626 - 170.8670	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	3 - 2		799
80		676.647	22.7912 - 170.5778	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 1		799
150		679.374	31.3851 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^\circ$	3 - 4		799
200		679.939	53.2608 - 200.3334	$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^3G^\circ$	2 - 3		799
300		680.265	53.2873 - 200.2909	$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^3G^\circ$	3 - 4		799
350		680.362	53.2128 - 200.1928	$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^3G^\circ$	4 - 5		799
80		682.120	31.4728 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^\circ$	2 - 3		799
50		684.183	31.4728 - 177.6304	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^\circ$	2 - 2		799
50		684.707	31.5811 - 177.6304	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^\circ$	1 - 2		799
50		691.252	53.2128 - 197.8808	$3d^4 - 3d^3(a^2D)4p$	$b^3F - w^3D^\circ$	4 - 3		799
40		693.163	53.2873 - 197.5546	$3d^4 - 3d^3(a^2D)4p$	$b^3F - w^3D^\circ$	3 - 2		799
20		695.248	53.2608 - 197.0954	$3d^4 - 3d^3(a^2D)4p$	$b^3F - w^3D^\circ$	2 - 1		799
60		706.383	31.3851 - 172.9533	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3D^\circ$	3 - 3		799
90		709.244	53.2128 - 194.2088	$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^\circ$	4 - 3		799
10		709.586	31.4728 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3D^\circ$	2 - 2		799
40		709.627	53.2873 - 194.2088	$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^\circ$	3 - 3		799
30		711.978	53.2873 - 193.7392	$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^\circ$	3 - 2		799

MN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	715.715	53.2608 - 192.9807	$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^{\circ}$	2 - 1		799
150	717.945	31.5811 - 170.8670	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3D^{\circ}$	1 - 2		799	
	0	718.893	31.4728 - 170.5778	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3D^{\circ}$	2 - 1		799
	0	730.873	53.2128 - 190.0324	$3d^4 - 3d^3(a^2G)4p$	$b^3F - y^3F^{\circ}$	4 - 4		799
40	797.657	53.2128 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	4 - 4		799	
40	798.121	53.2873 - 178.5794	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	3 - 4		799	
	0	801.194	53.2608 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	2 - 3		799
30	801.355	53.2873 - 178.0755	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	3 - 3		799	
10	804.052	53.2608 - 177.6304	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	2 - 2		799	
40	812.499	53.2128 - 176.2894	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3G^{\circ}$	4 - 5		799	
	0	818.468	53.2608 - 175.4358	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3G^{\circ}$	2 - 3		799
	0	835.657	53.2873 - 172.9533	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^{\circ}$	3 - 3		799
	0	839.514	53.2873 - 172.3990	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^{\circ}$	3 - 2		799
	0	841.536	53.2608 - 172.0906	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^{\circ}$	2 - 1		799
100	864.850	53.2128 - 168.8387	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3G^{\circ}$	4 - 4		799	
100	1082.64	120.6036 - 212.9662	$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$c^3F - w^3G^{\circ}$	4 - 5		799	
120	1145.36	112.8837 - 200.1928	$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$a^3F - x^3G^{\circ}$	5 - 5		799	
	0	1216.06	111.5061 - 193.7392	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	1 - 2		799
	0	1219.02						799
70	1222.49	112.4089 - 194.2088	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	4 - 3		799	
80	1222.58	131.1705 - 212.9662	$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	4 - 5		799	
20	1223.56	112.0132 - 193.7392	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	3 - 2		799	
50	1226.97	131.4633 - 212.9662	$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	5 - 5		799	
30	1227.09	131.1705 - 212.6658	$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	4 - 4		799	
	30	1231.10	131.1705 - 212.3998	$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	4 - 3		799
70	1236.24	119.4460 - 200.3334	$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^3G^{\circ}$	2 - 3		799	
900	1242.25	167.8913 - 248.3906	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	2 - 3		799	
80	1244.24	119.9620 - 200.3334	$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^3G^{\circ}$	3 - 3		799	
900	1244.50	168.3011 - 248.6547	$3d^3(a^4F)4p - 3d^3(a^2F)4d$	$z^3G^{\circ} - e^5H$	3 - 4		799	
	0	1244.88	119.9620 - 200.2909	$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^3G^{\circ}$	3 - 4		799
	850	1247.73	168.8387 - 248.9837	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	4 - 5		799
300	1248.64	168.3011 - 248.3906	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	3 - 3		799	
950	1251.93	169.5000 - 249.3750	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	5 - 6		799	
450	1252.88	168.8387 - 248.6547	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	4 - 4		799	
40	1256.46	120.6036 - 200.1928	$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^3G^{\circ}$	4 - 5		799	
950	1257.28	170.2855 - 249.8224	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	6 - 7		799	
	750	1258.13	169.5000 - 248.9837	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	5 - 5		799
900	1264.41	170.2855 - 249.3750	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^5H$	6 - 6		799	
100	1277.63	112.0132 - 190.2828	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^3F - y^3F^{\circ}$	3 - 3		799	
30	1281.73	112.0132 - 190.0324	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^3F - y^3F^{\circ}$	3 - 4		799	
150	1293.93							799
	0	1297.95	111.7108 - 188.7564	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^3F - y^3G^{\circ}$	2 - 3		799
	20	1321.59	112.0132 - 187.6788	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	3 - 4		799
	0	1328.56	112.4089 - 187.6788	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	4 - 4		799
20	1332.66	137.9308 - 212.9662	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^{\circ}$	5 - 5		799	
10	1333.56							799
450	1336.12	138.1232 - 212.9662	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^{\circ}$	6 - 5		799	
400	1336.92							799
	350	1338.06	137.9308 - 212.6658	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^{\circ}$	5 - 4		799
	250	1340.62						799
300	1341.46	137.8536 - 212.3998	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^{\circ}$	4 - 3		799	
	0	1346.01	119.4460 - 193.7392	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$c^3F - y^3D^{\circ}$	2 - 2		799
	0	1346.86	119.9620 - 194.2088	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$c^3F - y^3D^{\circ}$	3 - 3		799
250	1355.44	119.9620 - 193.7392	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$c^3F - y^3D^{\circ}$	3 - 2		799	

MN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1356.44	111.7108 - 185.4348	$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - z^5P^o$	2 - 3		799
	450	1358.59	120.6036 - 194.2088	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$c^3F - y^3D^o$	4 - 3		799
	350	1359.89	119.4460 - 192.9807	$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$c^3F - y^3D^o$	2 - 1		799
	0	1362.00	112.0132 - 185.4348	$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - z^5P^o$	3 - 3		799
	10	1414.60	119.4460 - 190.1362	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^3F^o$	2 - 2		799
	10	1422.04	119.9620 - 190.2828	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^3F^o$	3 - 3		799
	70	1440.32	120.6036 - 190.0324	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^3F^o$	4 - 4		799
	80	1442.81	119.4460 - 188.7564	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^3G^o$	2 - 3		799
	100	1444.08	119.9620 - 189.2112	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^3G^o$	3 - 4		799
	60	1446.74	131.1705 - 200.2909	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - x^3G^o$	4 - 4		799
	120	1448.79	131.1705 - 200.1928	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - x^3G^o$	4 - 5		799
	120	1450.32	120.6036 - 189.5539	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^3G^o$	4 - 5		799
	200	1452.89	131.4633 - 200.2909	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - x^3G^o$	5 - 4		799
	20	1453.63	119.9620 - 188.7564	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^3G^o$	3 - 3		799
	60	1454.96	131.4633 - 200.1928	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - x^3G^o$	5 - 5		799
	80	1457.46						799
	0	1476.74	119.9620 - 187.6788	$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^5D^o$	3 - 4		799
	0	1491.58	119.9620 - 187.0044	$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^5D^o$	3 - 3		799
	0	1499.77	120.6036 - 187.2783	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - z^3H^o$	4 - 5		799
	20	1513.64						799
	0	1513.87	120.6036 - 186.6592	$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - z^3H^o$	4 - 4		799
	0	1522.80	112.4089 - 178.0755	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3F^o$	4 - 3		799
	0	1567.38	112.0132 - 175.8137	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3G^o$	3 - 4		799
	350	1577.18	112.8837 - 176.2894	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3G^o$	5 - 5		799
	30	1586.64	112.4089 - 175.4358	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3G^o$	4 - 3		799
	300	1592.54	130.9693 - 193.7618	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^3H^o$	3 - 4		799
	500	1594.66	131.1705 - 193.8797	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^3H^o$	4 - 5		799
	500	1595.08	131.4633 - 194.1558	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^3H^o$	5 - 6		799
	0	1597.66	131.1705 - 193.7618	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^3H^o$	4 - 4		799
	550	1600.55	137.8536 - 200.3334	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - x^3G^o$	4 - 3		799
	80	1601.55						799
	100	1602.14	131.4633 - 193.8797	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^3H^o$	5 - 5		799
	700	1603.60	137.9308 - 200.2909	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - x^3G^o$	5 - 4		799
	0	1604.04						799
	40	1605.20	131.4633 - 193.7618	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^3H^o$	5 - 4		799
	150	1606.11	137.9308 - 200.1928	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - x^3G^o$	5 - 5		799
	700	1611.10	138.1232 - 200.1928	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - x^3G^o$	6 - 5		799
	40	1642.25	111.5061 - 172.3990	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3D^o$	1 - 2		799
	300	1647.77	111.7108 - 172.3990	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3D^o$	2 - 2		799
	300	1650.57	111.5061 - 172.0906	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3D^o$	1 - 1		799
	350	1651.68	112.4089 - 172.9533	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3D^o$	4 - 3		799
	750	1653.83	112.0132 - 172.4775	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3F^o$	3 - 4		799
	450	1656.05	112.0132 - 172.3990	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3D^o$	3 - 2		799
	550	1656.17	111.7108 - 172.0906	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3D^o$	2 - 1		799
	700	1656.39	111.7108 - 172.0826	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	2 - 3		799
	700	1659.25						799
	350	1661.32	111.5061 - 171.6987	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	1 - 2		799
	750	1664.73	112.4089 - 172.4775	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	4 - 4		799
	800	1667.00	112.8837 - 172.8719	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	5 - 5		799
	100	1667.65	152.7008 - 212.6658	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3G^o$	4 - 4		799
	700	1670.08	111.5061 - 171.3847	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	1 - 1		799
	600	1672.00	152.8579 - 212.6658	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3G^o$	3 - 4		799
	10	1673.65						799
	250	1675.47	112.0132 - 171.6987	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	3 - 2		799

MN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
300	1675.78		112.4089 - 172.0826	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3F^\circ$	4 - 3		799
30	1678.02		112.8837 - 172.4775	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3F^\circ$	5 - 4		799
0	1678.83		111.7108 - 171.2773	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3D^\circ$	2 - 3		799
450	1683.12		152.9867 - 212.3998	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3G^\circ$	2 - 3		799
0	1684.60		111.5061 - 170.8670	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3D^\circ$	1 - 2		799
0	1684.81							799
300	1685.97		130.9693 - 190.2828	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^\circ$	3 - 3		799
500	1690.12		130.9693 - 190.1362	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^\circ$	3 - 2		799
750	1691.68		131.1705 - 190.2828	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^\circ$	4 - 3		799
0	1692.83		111.5061 - 170.5778	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3D^\circ$	1 - 1		799
750	1693.15		138.1232 - 197.1853	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - z^3I^\circ$	6 - 7		799
800	1698.30		112.8837 - 171.7662	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3D^\circ$	5 - 4		799
750	1698.70		112.4089 - 171.2773	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3D^\circ$	4 - 3		799
400	1698.91		131.1705 - 190.0324	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^\circ$	4 - 4		799
700	1699.06							799
20	1705.63		119.4460 - 178.0755	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	2 - 3		799
10	1705.93		119.9620 - 178.5794	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	3 - 4		799
750	1707.43		137.9308 - 196.4983	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - z^3I^\circ$	5 - 6		799
200	1712.78		131.1705 - 189.5539	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^\circ$	4 - 5		799
100	1717.04							799
650	1718.67		119.4460 - 177.6304	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	2 - 2		799
750	1720.52		137.8536 - 195.9755	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - z^3I^\circ$	4 - 5		799
750	1720.74		119.9620 - 178.0755	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	3 - 3		799
750	1721.41		131.4633 - 189.5539	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^\circ$	5 - 5		799
650	1722.94		131.1705 - 189.2112	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^\circ$	4 - 4		799
750	1724.83		120.6036 - 178.5794	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	4 - 4		799
600	1730.55							799
200	1731.68		131.4633 - 189.2112	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^\circ$	5 - 4		799
100	1734.04		119.9620 - 177.6304	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	3 - 2		799
300	1736.52		131.1705 - 188.7564	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^\circ$	4 - 3		799
250	1740.02		120.6036 - 178.0755	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	4 - 3		799
850	1742.10		112.8837 - 170.2855	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	5 - 6		799
850	1751.59		112.4089 - 169.5000	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	4 - 5		799
750	1759.82		112.0132 - 168.8387	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	3 - 4		799
700	1762.17		152.7008 - 209.4478	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^\circ$	4 - 4		799
750	1762.94							799
850	1766.27		112.8837 - 169.5000	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	5 - 5		799
400	1766.34		152.7008 - 209.3155	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^\circ$	4 - 3		799
750	1767.09		111.7108 - 168.3011	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	2 - 3		799
450	1771.24		152.8579 - 209.3155	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^\circ$	3 - 3		799
650	1772.11		112.4089 - 168.8387	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	4 - 4		799
300	1773.06							799
750	1773.51		111.5061 - 167.8913	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	1 - 2		799
600	1776.59		112.0132 - 168.3011	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	3 - 3		799
300	1777.02		152.9867 - 209.2610	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^\circ$	2 - 2		799
450	1779.98		111.7108 - 167.8913	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^3G^\circ$	2 - 2		799
750	1782.21							799
600	1784.64		138.1232 - 194.1558	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^\circ$	6 - 6		799
200	1784.89		137.8536 - 193.8797	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^\circ$	4 - 5		799
750	1786.02		119.4460 - 175.4358	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^\circ$	2 - 3		799
750	1787.04							799
750	1787.38		137.9308 - 193.8797	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^\circ$	5 - 5		799
750	1788.64		137.8536 - 193.7618	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^\circ$	4 - 4		799
300	1789.23							799

MN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	1789.62	112.0132 - 167.8913	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^4G^\circ$	3 - 2		799
	750	1790.44	119.9620 - 175.8137	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^\circ$	3 - 4		799
	10	1791.10	137.9308 - 193.7618	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^\circ$	5 - 4		799
	350	1791.58	131.4633 - 187.2783	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - z^3H^\circ$	5 - 5		799
	80	1793.54	138.1232 - 193.8797	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^\circ$	6 - 5		799
	800	1795.65	130.9693 - 186.6592	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - z^3H^\circ$	3 - 4		799
	800	1795.79	120.6036 - 176.2894	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^\circ$	4 - 5		799
	150	1802.09						799
	10	1802.63	119.9620 - 175.4358	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^\circ$	3 - 3		799
	0	1811.28	120.6036 - 175.8137	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^\circ$	4 - 4		799
	0	1811.61						799
	350	1887.15	119.9620 - 172.9533	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	3 - 3		799
	40	1888.45	119.4460 - 172.3990	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	2 - 2		799
	350	1899.48	119.4460 - 172.0906	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	2 - 1		799
	0	1899.88						799
	600	1907.03	119.9620 - 172.3990	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	3 - 2		799
	750	1910.25	120.6036 - 172.9533	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	4 - 3		799
	20	1913.08						799
	0	1913.82	119.4460 - 171.6987	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	2 - 2		799
	30	1918.61	119.9620 - 172.0826	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	3 - 3		047
	40	1925.41						799
	20	1927.78	120.6036 - 172.4775	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	4 - 4		799
	20	1929.34	119.4460 - 171.2773	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	2 - 3	P	047
	30	1932.85	119.9620 - 171.6987	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^\circ$	3 - 2		799
	0	1942.60						799
	20	1944.73	119.4460 - 170.8670	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	2 - 2	P	047
	20	1948.75	119.9620 - 171.2773	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	3 - 3		047
	50	1954.47						799
	300	1955.66						799
	250	1964.44	119.9620 - 170.8670	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	3 - 2		799
	80	1973.41	120.6036 - 171.2773	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3D^\circ$	4 - 3		799
	650	1997.54	138.1232 - 188.1848	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$b^3H - z^3H^\circ$	6 - 6		799

MANGANESE V (Mn^{4+}), $Z = 25$
Ground State $1s^22s^22p^63s^23p^63d^3(^4F_{3/2})$ (21 electrons)
Ionization Potential [584 000] cm^{-1} ; [72.4] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	382.056	.8351 - 262.5749	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	100	382.905	1.4122 - 262.5749	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	20	382.987	.3590 - 261.4644	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	20	383.426	0. - 260.8062	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	80	383.688	.8351 - 261.4644	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	80	383.948	.3590 - 260.8062	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	30	385.350	17.8924 - 277.3981	$3d^3 - 3d^2(^1G)4p$	$a^2G - x^2F^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	10	385.698	1.4122 - 260.6808	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2F^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	50	387.307	18.3988 - 276.5920	$3d^3 - 3d^2(^1G)4p$	$a^2G - x^2F^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	50	393.328	18.3988 - 272.6404	$3d^3 - 3d^2(^1G)4p$	$a^2G - z^2H^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	40	394.320	17.8924 - 271.4946	$3d^3 - 3d^2(^1G)4p$	$a^2G - z^2H^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397
	20	396.886	24.6300 - 276.5920	$3d^3 - 3d^2(^1G)4p$	$a^2D - x^2F^\circ$	$\begin{matrix} 1 & 1 \\ 2 & 2 \\ 3 & 3 \end{matrix}$		397

MN V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
200	398.604	.8351 - 251.7196		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		046
30	399.530	22.9188 - 273.2123		$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
10	399.795	23.0816 - 273.2123		$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		397
50	399.896	22.9188 - 272.9829		$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
30	400.159	23.0816 - 272.9829		$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		397
70	401.778	16.5946 - 265.4890		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
70	402.286	24.6300 - 273.2123		$3d^3 - 3d^2(^3P)4p$	$a^2D - y^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		397
70	402.348	24.6705 - 273.2123		$3d^3 - 3d^2(^3P)4p$	$a^2D - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
170	402.512	17.0486 - 265.4890		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
80	402.742	16.4340 - 264.7317		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		397
20	403.002	16.5946 - 264.7317		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
20	403.282	16.4340 - 264.4021		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		397
80	403.538	16.5946 - 264.4021		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
50	403.671	.3590 - 248.0884		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
180	403.739	17.8924 - 265.5793		$3d^3 - 3d^2(^1G)4p$	$a^2G - y^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
150	404.311	18.3988 - 265.7340		$3d^3 - 3d^2(^1G)4p$	$a^2G - y^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
300	404.355	25.3338 - 272.6404		$3d^3 - 3d^2(^1G)4p$	$a^2H - z^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$		397
120	404.446	.8351 - 248.0884		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
80	404.497	0. - 247.2221		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
20	404.806	22.9188 - 269.9558		$3d^3 - 3d^2(^3P)4p$	$a^2P - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
190	405.082	.3590 - 247.2221		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
180	405.619	.3590 - 246.8976		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
260	405.646	24.9748 - 271.4946		$3d^3 - 3d^2(^1G)4p$	$a^2H - z^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$		397
380	406.020	1.4122 - 247.7052		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
50	406.237	0. - 246.1612		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
300	406.402	.8351 - 246.8976		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
200	406.832	.3590 - 246.1612		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
90	407.292	17.0486 - 262.5749		$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
40	407.333	.8351 - 246.3247		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
250	408.311	1.4122 - 246.3247		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
70	408.380	16.5946 - 261.4644		$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
120	408.728	.8351 - 245.4975		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
40	409.212	16.4340 - 260.8062		$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		397
80	409.333	.8351 - 245.1360		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
40	409.489	16.5946 - 260.8062		$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
100	409.540	18.3988 - 262.5749		$3d^3 - 3d^2(^3P)4p$	$a^2G - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
140	409.797	.3590 - 244.3814		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		397
600	410.302	1.4122 - 245.1360		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
100	410.377	0. - 243.6791		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
250	410.451	1.4122 - 245.0467		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		397
600	410.598	.8351 - 244.3814		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
480	410.980	.3590 - 243.6791		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
400	411.319	0. - 243.1214		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
320	411.577	1.4122 - 244.3814		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
100	411.788	.8351 - 243.6791		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
80	411.883	17.8924 - 260.6808		$3d^3 - 3d^2(^1D)4p$	$a^2G - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
120	411.924	.3590 - 243.1214		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
120	412.131	62.6082 - 305.2474		$3d^3 - 3d^2(^1S)4p$	$b^2D - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
250	412.528	.3590 - 242.7669		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$		397
80	412.555	1.4122 - 243.8031		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
460	412.742	18.3988 - 260.6808		$3d^3 - 3d^2(^1D)4p$	$a^2G - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
50	413.235	17.0486 - 259.0438		$3d^3 - 3d^2(^1D)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
180	413.382	0. - 241.9071		$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		397
460	413.751	17.8924 - 259.5822		$3d^3 - 3d^2(^1D)4p$	$a^2G - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		397

MN V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	414.326	1.4122 - 242.7669	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{7}{2}$		397
	140	414.934	16.4340 - 257.4368	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^o$	$\frac{1}{2} - \frac{3}{2}$		397
	80	415.194	62.8535 - 303.7021	$3d^3 - 3d^2(^1S)4p$	$b^2D - x^2P^o$	$\frac{3}{2} - \frac{1}{2}$		397
	250	415.207	16.5946 - 257.4368	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		397
	50	415.354	24.9748 - 265.7340	$3d^3 - 3d^2(^1G)4p$	$a^2H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$		397
	600	415.620	24.9748 - 265.5793	$3d^3 - 3d^2(^1G)4p$	$a^2H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$		397
	650	415.976	25.3338 - 265.7340	$3d^3 - 3d^2(^1G)4p$	$a^2H - y^2G^o$	$\frac{11}{2} - \frac{9}{2}$		397
	250	415.991	17.0486 - 257.4368	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		397
	70	416.810	22.9188 - 262.8359	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^o$	$\frac{3}{2} - \frac{5}{2}$		397
	5	417.137	24.6705 - 264.4021	$3d^3 - 3d^2(^3P)4p$	$a^2D - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$		397
	30	417.827	22.9188 - 262.2528	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	10	418.113	23.0816 - 262.2528	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$		397
	350	419.802	24.6300 - 262.8359	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		397
	110	420.834	24.6300 - 262.2528	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	200	420.905	24.6705 - 262.2528	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	10	421.268	23.0816 - 260.4608	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^4D^o$	$\frac{1}{2} - \frac{1}{2}$		397
	10	421.408	16.5946 - 253.8938	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		397
	100	422.006	23.0816 - 260.0428	$3d^3 - 3d^2(^1D)4p$	$a^2P - z^2P^o$	$\frac{1}{2} - \frac{1}{2}$		397
	50	422.233	24.6300 - 261.4644	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^o$	$\frac{5}{2} - \frac{5}{2}$		397
	230	422.492	40.7071 - 277.3981	$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$		397
	300	423.428	40.4233 - 276.5920	$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^o$	$\frac{3}{2} - \frac{7}{2}$		397
	250	423.504	22.9188 - 259.0438	$3d^3 - 3d^2(^1D)4p$	$a^2P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		397
	10	423.644	24.6300 - 260.6808	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2F^o$	$\frac{3}{2} - \frac{7}{2}$		397
	80	423.795	23.0816 - 259.0438	$3d^3 - 3d^2(^1D)4p$	$a^2P - z^2P^o$	$\frac{1}{2} - \frac{3}{2}$		397
	20	423.937	40.7071 - 276.5920	$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^o$	$\frac{5}{2} - \frac{7}{2}$		397
	30	424.105	24.6705 - 260.4608	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		397
	180	424.859	24.6705 - 260.0428	$3d^3 - 3d^2(^1D)4p$	$a^2D - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$		397
	30	425.620	24.6300 - 259.5822	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		397
	20	425.695	24.6705 - 259.5822	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2F^o$	$\frac{3}{2} - \frac{5}{2}$		397
	20	426.410	22.9188 - 257.4368	$3d^3 - 3d^2(^3P)4p$	$a^2P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		397
	200	426.594	24.6300 - 259.0438	$3d^3 - 3d^2(^1D)4p$	$a^2D - z^2P^o$	$\frac{5}{2} - \frac{3}{2}$		397
	40	427.668	17.8924 - 251.7196	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{7}{2} - \frac{9}{2}$		397
	600	428.594	18.3988 - 251.7196	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{9}{2}$		397
	500	429.047	17.8924 - 250.9665	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		397
	20	429.554	24.6300 - 257.4368	$3d^3 - 3d^2(^3P)4p$	$a^2D - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		397
	100	429.984	18.3988 - 250.9665	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{9}{2} - \frac{7}{2}$		397
	10	430.105	40.7071 - 273.2123	$3d^3 - 3d^2(^3P)4p$	$a^2F - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$		397
	60	431.978	16.5946 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{5}{2}$		397
	50	432.827	17.0486 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$		397
	130	432.947	22.9188 - 253.8938	$3d^3 - 3d^2(^3P)4p$	$a^2P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		397
	120	433.256	23.0816 - 253.8938	$3d^3 - 3d^2(^3P)4p$	$a^2P - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$		397
	80	433.298	16.4340 - 247.2221	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$		397
	400	433.543	17.0486 - 247.7052	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$		397
	120	433.599	16.5946 - 247.2221	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	260	434.210	16.5946 - 246.8976	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		397
	50	434.412	17.8924 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2D^o$	$\frac{7}{2} - \frac{7}{2}$		397
	150	434.580	16.4340 - 246.5391	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$		397
	50	434.887	16.5946 - 246.5391	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		397
	140	435.073	17.0486 - 246.8976	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		397
	100	435.299	16.4340 - 246.1612	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$		397
	140	435.602	16.5946 - 246.1612	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	600	435.669	40.4233 - 269.9558	$3d^3 - 3d^2(^3P)4p$	$a^2F - x^2D^o$	$\frac{7}{2} - \frac{5}{2}$		397
	250	436.104	18.3988 - 247.7052	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^4D^o$	$\frac{9}{2} - \frac{7}{2}$		397
	350	436.162	17.0486 - 246.3247	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2F^o$	$\frac{3}{2} - \frac{7}{2}$		397

MN V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
500	436.179	436.179	40.7071 - 269.9665	$3d^3 - 3d^2(^3P)4p$	$a^2F - x^2D^\circ$	2, 3		397
60	436.253	436.253	24.6705 - 253.8938	$3d^3 - 3d^2(^3P)4p$	$a^2D - z^2S^\circ$	1, 2		397
10	436.472	436.472	17.0486 - 246.1612	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^\circ$	3		397
110	436.670	436.670	17.8924 - 246.8976	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2D^\circ$	2, 3		397
90	436.867	436.867	16.5946 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2F^\circ$	3		397
50	437.746	437.746	17.8924 - 246.3247	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2F^\circ$	2, 3		397
450	438.737	438.737	18.3988 - 246.3247	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2F^\circ$	2, 3		397
350	439.354	439.354	17.8924 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2F^\circ$	2, 3		397
20	439.886	439.886	17.0486 - 244.3814	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4F^\circ$	3		397
20	440.368	440.368	16.5946 - 243.6791	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4F^\circ$	3		397
80	441.025	441.025	24.9748 - 251.7196	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^2G^\circ$	2, 3		397
1000	441.722	441.722	25.3338 - 251.7196	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^2G^\circ$	2, 3		397
850	442.493	442.493	24.9748 - 250.9665	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^2G^\circ$	2, 3		397
250	443.829	443.829	40.4233 - 265.7340	$3d^3 - 3d^2(^1G)4p$	$a^2F - y^2G^\circ$	1, 2		397
150	444.109	444.109	22.9188 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^2D^\circ$	3		397
30	444.324	444.324	40.4233 - 265.4890	$3d^3 - 3d^2(^3P)4p$	$a^2F - z^4P^\circ$	3		397
200	444.692	444.692	40.7071 - 265.5793	$3d^3 - 3d^2(^1G)4p$	$a^2F - y^2G^\circ$	1, 2		397
50	445.697	445.697	18.3988 - 242.7669	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^4G^\circ$	2, 3		397
150	445.824	445.824	22.9188 - 247.2221	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4D^\circ$	3		397
150	446.147	446.147	23.0816 - 247.2221	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4D^\circ$	3		397
60	446.396	446.396	17.8924 - 241.9071	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^4G^\circ$	2, 3		397
280	447.509	447.509	24.6300 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2D^\circ$	2, 3		397
300	447.587	447.587	24.6705 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2D^\circ$	2, 3		397
140	447.942	447.942	22.9188 - 246.1612	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^2D^\circ$	3		397
240	448.267	448.267	23.0816 - 246.1612	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^2D^\circ$	3		397
220	449.278	449.278	22.9188 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^2F^\circ$	3		397
70	449.333	449.333	24.6705 - 247.2221	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4D^\circ$	2, 3		397
80	449.615	449.615	40.4233 - 262.8359	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2D^\circ$	1, 2		397
30	449.908	449.908	24.6300 - 246.8976	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4D^\circ$	2, 3		397
120	449.989	449.989	24.6705 - 246.8976	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4D^\circ$	2, 3		397
250	451.066	451.066	24.6300 - 246.3247	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2F^\circ$	2, 3		397
50	451.379	451.379	40.7071 - 262.2528	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2D^\circ$	1, 2		397
70	451.483	451.483	24.6705 - 246.1612	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2D^\circ$	2, 3		397
150	452.760	452.760	24.6300 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2F^\circ$	2, 3		397
50	452.846	452.846	24.6705 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2F^\circ$	2, 3		397
110	454.013	454.013	40.4233 - 260.6808	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2F^\circ$	1, 2		397
30	454.132	454.132	22.9188 - 243.1214	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4F^\circ$	3		397
30	454.459	454.459	23.0816 - 243.1214	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4F^\circ$	3		397
40	454.954	454.954	25.3338 - 245.1360	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^4F^\circ$	3		397
20	456.520	456.520	24.6300 - 243.6791	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4F^\circ$	2, 3		397
30	456.637	456.637	24.6705 - 243.6791	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4F^\circ$	2, 3		397
90	456.876	456.876	40.7071 - 259.5822	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2F^\circ$	1, 2		397
30	458.425	458.425	24.6300 - 242.7669	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4G^\circ$	2, 3		397
20	460.332	460.332	24.6705 - 241.9071	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4G^\circ$	2, 3		397
50	465.574	465.574	62.6082 - 277.3981	$3d^3 - 3d^2(^1G)4p$	$b^2D - x^2F^\circ$	1, 2		397
250	466.104	466.104	62.8535 - 277.3981	$3d^3 - 3d^2(^1G)4p$	$b^2D - x^2F^\circ$	1, 2		397
400	467.319	467.319	62.6082 - 276.5920	$3d^3 - 3d^2(^1G)4p$	$b^2D - x^2F^\circ$	1, 2		397
300	474.820	474.820	62.6082 - 273.2123	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^2P^\circ$	1, 2		397
20	474.966	474.966	40.4233 - 250.9665	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2G^\circ$	2, 3		397
80	475.376	475.376	62.8535 - 273.2123	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^2P^\circ$	1, 2		397
200	475.896	475.896	62.8535 - 272.9829	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^2P^\circ$	1, 2		397
200	482.278	482.278	62.6082 - 269.9558	$3d^3 - 3d^2(^3P)4p$	$b^2D - x^2D^\circ$	1, 2		397
70	482.432	482.432	40.4233 - 247.7052	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^4D^\circ$	2, 3		397
110	482.829	482.829	62.8535 - 269.9665	$3d^3 - 3d^2(^3P)4p$	$b^2D - x^2D^\circ$	1, 2		397

MN V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	484.985	40.7071 - 246.8976	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		397
	140	485.670	40.4233 - 246.3247	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2F^o$	$\frac{2}{2} - \frac{2}{2}$		397
	100	488.301	40.7071 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		397
	40	499.433	62.6082 - 262.8359	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		397
	40	501.508	62.8535 - 262.2528	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	60	504.869	62.6082 - 260.6808	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		397
	30	508.319	62.8535 - 259.5822	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2F^o$	$\frac{2}{2} - \frac{2}{2}$		397
	80	539.138	62.6082 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2D^o$	$\frac{2}{2} - \frac{2}{2}$		397
	60	539.856	62.8535 - 248.0884	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	60	540.253	62.6082 - 247.7052	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^4D^o$	$\frac{2}{2} - \frac{2}{2}$		397
	50	543.351	62.8535 - 246.8976	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^4D^o$	$\frac{2}{2} - \frac{2}{2}$		397
	130	544.315	62.6082 - 246.3247	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2F^o$	$\frac{5}{2} - \frac{2}{2}$		397
	70	545.532	62.8535 - 246.1612	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		397
	70	546.779	62.6082 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2F^o$	$\frac{5}{2} - \frac{2}{2}$		397
	80	547.515	62.8535 - 245.4975	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2F^o$	$\frac{2}{2} - \frac{2}{2}$		397
	150	1086.042	177.8734 - 269.9558	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^4F - x^2D^o$	$\frac{2}{2} - \frac{3}{2}$	Q	966
	80	1157.028	183.5378 - 269.9665	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^2F - x^2D^o$	$\frac{2}{2} - \frac{2}{2}$		966
	50	1169.472	177.3270 - 262.8359	$3d^2(^3F)4s - 3d^2(^1D)4p$	$b^2F - y^2D^o$	$\frac{2}{2} - \frac{2}{2}$		966
	80	1172.071	184.6356 - 269.9558	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^2F - x^2D^o$	$\frac{2}{2} - \frac{5}{2}$		966
	20	1197.885	177.3270 - 260.8062	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^2F - y^4D^o$	$\frac{2}{2} - \frac{2}{2}$		966
	15	1199.696	177.3270 - 260.6808	$3d^2(^3F)4s - 3d^2(^1D)4p$	$b^4F - y^2F^o$	$\frac{3}{2} - \frac{2}{2}$		966
	100	1218.059	176.9463 - 259.0438	$3d^2(^3F)4s - 3d^2(^1D)4p$	$b^2F - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		966
	40	1218.891	183.5378 - 265.5793	$3d^2(^3F)4s - 3d^2(^1G)4p$	$b^2F - y^2G^o$	$\frac{2}{2} - \frac{2}{2}$		966
	30	1231.661	183.5378 - 264.7317	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^2F - z^4P^o$	$\frac{2}{2} - \frac{2}{2}$		966
	20	1301.590	184.6356 - 261.4644	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^2F - y^4D^o$	$\frac{2}{2} - \frac{5}{2}$		966
	450	1315.008	184.6356 - 260.6808	$3d^2(^3F)4s - 3d^2(^1D)4p$	$b^2F - y^2F^o$	$\frac{2}{2} - \frac{2}{2}$		966
	80	1316.555	194.0114 - 269.9665	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - x^2D^o$	$\frac{3}{2} - \frac{2}{2}$		966
	15	1316.793	194.0114 - 269.9558	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - x^2D^o$	$\frac{2}{2} - \frac{2}{2}$		966
	5	1328.190	194.6648 - 269.9558	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$		966
	800	1359.268	203.8273 - 277.3981	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - x^2F^o$	$\frac{2}{2} - \frac{2}{2}$		966
	100	1367.126	178.5724 - 251.7196	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2G^o$	$\frac{2}{2} - \frac{2}{2}$		966
	150	1369.184	200.1768 - 273.2123	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^2P^o$	$\frac{1}{2} - \frac{2}{2}$		966
	450	1373.512	200.1768 - 272.9829	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		966
	900	1373.995	203.8118 - 276.5920	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - x^2F^o$	$\frac{2}{2} - \frac{2}{2}$		966
	200	1374.275	203.8273 - 276.5920	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - x^2F^o$	$\frac{2}{2} - \frac{2}{2}$		966
	800	1378.497	200.6701 - 273.2123	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^2P^o$	$\frac{2}{2} - \frac{2}{2}$		966
	250	1382.881	200.6701 - 272.9829	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		966
	150	1394.552	193.7816 - 265.4890	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{3}{2} - \frac{2}{2}$		966
	100	1399.051	194.0114 - 265.4890	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		966
	150	1409.436	193.7816 - 264.7317	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{5}{2} - \frac{2}{2}$		966
	500	1411.939	194.6648 - 265.4890	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^4P^o$	$\frac{2}{2} - \frac{2}{2}$		966
	30	1413.215	177.3270 - 248.0884	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^o$	$\frac{5}{2} - \frac{2}{2}$		966
	500	1419.605	194.2886 - 264.7317	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		966
	80	1420.630	194.0114 - 264.4021	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		966
	100	1422.991	176.9463 - 247.2221	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{2}{2} - \frac{2}{2}$		966
	400	1424.217	177.8734 - 248.0884	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^o$	$\frac{3}{2} - \frac{2}{2}$		966
	700	1424.777	195.3030 - 265.4890	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{5}{2} - \frac{5}{2}$		966
	150	1426.263	194.2886 - 264.4021	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		966
	800	1430.713	177.3270 - 247.2221	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		966
	400	1431.981	177.8734 - 247.7052	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{2}{2} - \frac{2}{2}$		966
	500	1432.858	200.1768 - 269.9665	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - x^2D^o$	$\frac{2}{2} - \frac{2}{2}$		966
	400	1433.932	194.6648 - 264.4021	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		966
	600	1436.917	176.9463 - 246.5391	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{5}{2} - \frac{1}{2}$		966
	500	1437.409	177.3270 - 246.8976	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{2}{2} - \frac{2}{2}$		966

MN V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	1440.318	195.3030 - 264.7317	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	90	1443.084	200.6701 - 269.9665	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - x^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	600	1443.322	200.6701 - 269.9558	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - x^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	400	1444.779	176.9463 - 246.1612	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	700	1446.475	178.5724 - 247.7052	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	600	1448.130	193.7816 - 262.8359	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	600	1448.787	177.8734 - 246.8976	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	150	1449.328	177.3270 - 246.3247	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	450	1452.774	177.3270 - 246.1612	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	1000	1452.897	203.8118 - 272.6404	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - z^2H^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \\ 4 \\ 4 \end{smallmatrix}$		966
	500	1452.977	194.0114 - 262.8359	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	150	1453.621	193.7816 - 262.5749	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - y^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	350	1457.454	236.6347 - 305.2474	$3d^2(^1S)4s - 3d^2(^1S)4p$	$a^2S - x^2P^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	200	1458.787	176.9463 - 245.4975	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	150	1460.892	177.8734 - 246.3247	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	500	1465.388	194.0114 - 262.2528	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	250	1466.935	177.3270 - 245.4975	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	20	1471.368	194.2886 - 262.2528	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	500	1475.980	178.5724 - 246.3247	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	300	1477.475	203.8118 - 271.4946	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - z^2H^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \\ 4 \\ 4 \end{smallmatrix}$		966
	800	1477.810	203.8273 - 271.4946	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - z^2H^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \\ 4 \\ 4 \end{smallmatrix}$		966
	200	1478.787	177.8734 - 245.4975	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	350	1479.531	194.6648 - 262.2528	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	250	1480.753	195.3030 - 262.8359	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	700	1483.072	183.5378 - 250.9665	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2G^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	900	1486.494	195.3030 - 262.5749	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	700	1486.704	177.8734 - 245.1360	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	800	1490.664	184.6356 - 251.7196	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2G^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	200	1491.038	236.6347 - 303.7021	$3d^2(^1S)4s - 3d^2(^1S)4p$	$a^2S - x^2P^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	600	1491.329	177.3270 - 244.3814	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	700	1494.771	193.7816 - 260.6808	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	700	1497.024	194.6648 - 261.4644	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	400	1497.125	194.0114 - 260.8062	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - y^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	400	1498.509	176.9463 - 243.6791	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	1000	1502.316	178.5724 - 245.1360	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	350	1503.365	194.2886 - 260.8062	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	800	1503.581	177.8734 - 244.3814	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	900	1504.341	178.5724 - 245.0467	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \\ 4 \\ 4 \end{smallmatrix}$		966
	800	1507.107	177.3270 - 243.6791	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	4	1507.59	184.6356 - 250.9665	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2G^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$	P	791
	800	1511.149	176.9463 - 243.1214	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	350	1511.451	195.3030 - 261.4644	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	350	1511.887	194.6648 - 260.8062	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	500	1514.444	194.0114 - 260.0428	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - z^2P^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	1000	1516.756	177.8734 - 243.8031	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \\ 4 \\ 4 \end{smallmatrix}$		966
	350	1519.515	178.5724 - 244.3814	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	800	1519.597	177.8734 - 243.6791	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	400	1519.746	193.7816 - 259.5822	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	500	1519.879	177.3270 - 243.1214	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	600	1525.078	194.0114 - 259.5822	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	900	1528.127	177.3270 - 242.7669	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	250	1529.575	195.3030 - 260.6808	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2F^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	450	1532.286	193.7816 - 259.0438	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - z^2P^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966
	700	1533.018	178.5724 - 243.8031	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\begin{smallmatrix} 1 \\ 1 \\ 2 \\ 2 \\ 3 \\ 3 \end{smallmatrix}$		966

MN V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	900	1539.362	176.9463 - 241.9071	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	100	1540.415	194.6648 - 259.5822	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	700	1540.996	177.8734 - 242.7669	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	1000	1548.430	177.3270 - 241.9071	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		637
	30	1555.709	195.3030 - 259.5822	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	200	1557.776	178.5724 - 242.7669	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	450	1568.861	195.3030 - 259.0438	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - z^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	600	1570.261	183.5378 - 247.2221	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	900	1575.968	184.6356 - 248.0884	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	100	1576.669	194.0114 - 257.4368	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	450	1578.300	183.5378 - 246.8976	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	350	1593.059	194.6648 - 257.4368	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	400	1596.873	183.5378 - 246.1612	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
		1600.1	.3590 - 62.8535	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,397
		1612.4	.8351 - 62.8535	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,397
	600	1613.984	183.5378 - 245.4975	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
		1618.8	.8351 - 62.6082	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,397
	100	1618.970	203.8118 - 265.5793	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - y^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	700	1619.366	203.8273 - 265.5793	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - y^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	1000	1621.026	184.6356 - 246.3247	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
		1634.1	1.4122 - 62.6082	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,397
	20	1713.202	183.5378 - 241.9071	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	40	1841.390	193.7816 - 248.0884	$3d^2(^1D)4s - 3d^2(^3F)4p$	$c^2D - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	100	1861.607	200.1768 - 253.8938	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^2S^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	300	1878.854	200.6701 - 253.8938	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^2S^\circ$	$\frac{3}{2} - \frac{3}{2}$		966
	250	1914.515	194.6648 - 246.8976	$3d^2(^3P)4s - 3d^2(^3F)4p$	$b^4P - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		966

MANGANESE VI (Mn⁵⁺), Z = 25
Ground State $1s^22s^22p^63s^23p^63d^2(^3F_2)$ (20 electrons)
Ionization Potential 772 250 cm^{-1} ; 95.748 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	141.119	.746 - 709.370	$3p^63d^2 - 3p^63d8f$	$g^3F - ^3G^\circ$	3 - 4		1110
	1	141.193	0. - 708.250	$3p^63d^2 - 3p^63d8f$	$g^3F - ^3G^\circ$	2 - 3		1110
	10	141.277	1.669 - 709.500	$3p^63d^2 - 3p^63d8f$	$g^3F - ^3G^\circ$	4 - 5		1110
	8	145.117	.746 - 689.844	$3p^63d^2 - 3p^63d7f$	$g^3F - ^3G^\circ$	3 - 4		1110
	4	145.169	0. - 688.846	$3p^63d^2 - 3p^63d7f$	$g^3F - ^3G^\circ$	2 - 3		1110
	2	145.257	.746 - 689.191	$3p^63d^2 - 3p^63d7f$	$g^3F - ^3F^\circ$	3 - 4		1110
	16	145.280	1.669 - 689.995	$3p^63d^2 - 3p^63d7f$	$g^3F - ^3G^\circ$	4 - 5		1110
	2	145.304	0. - 688.212	$3p^63d^2 - 3p^63d7f$	$g^3F - ^3F^\circ$	2 - 2		1110
	2	145.414	.746 - 688.438	$3p^63d^2 - 3p^63d7f$	$g^3F - ^3F^\circ$	3 - 3		1110
	2	145.452	1.669 - 689.191	$3p^63d^2 - 3p^63d7f$	$g^3F - ^3F^\circ$	4 - 4		1110
	2	146.118	25.511 - 709.890	$3p^63d^2 - 3p^63d8f$	$^1G - ^1H^\circ$	4 - 5		1110
	1	148.273	15.336 - 689.778	$3p^63d^2 - 3p^63d7f$	$^1D - ^3D^\circ$	2 - 3		1110
	1	148.476	15.336 - 688.844	$3p^63d^2 - 3p^63d7f$	$^1D - ^1D^\circ$	2 - 2		1110
	2	148.846	18.057 - 689.892	$3p^63d^2 - 3p^63d7f$	$^3P - ^3D^\circ$	1 - 2		1110
	2	148.909	17.782 - 689.333	$3p^63d^2 - 3p^63d7f$	$^3P - ^3D^\circ$	0 - 1		1110
	4	148.998	18.628 - 689.778	$3p^63d^2 - 3p^63d7f$	$^3P - ^3D^\circ$	2 - 3		1110
	8	150.324	25.511 - 690.741	$3p^63d^2 - 3p^63d7f$	$^1G - ^1H^\circ$	4 - 5		1110
	1	151.617	1.669 - 661.233	$3p^63d^2 - 3p^63d6f$	$g^3F - ^1H^\circ$	4 - 5		1110

MN VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	35	151.736	.746 - 659.783	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3G^\circ$	3 - 4		1110
	20	151.769	0. - 658.896	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3G^\circ$	2 - 3		1110
	45	151.899	1.669 - 660.000	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3G^\circ$	4 - 5		1110
	10	151.920	0. - 658.238	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3F^\circ$	2 - 3		1110
	20	151.949	1.669 - 659.783	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3G^\circ$	4 - 4		1110
	8	152.046	0. - 657.696	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3F^\circ$	2 - 2		1110
	5	152.093	.746 - 658.238	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3F^\circ$	3 - 3		1110
	10	152.182	1.669 - 658.777	$3p^63d^2 - 3p^63d6f$	$g^3F - ^3F^\circ$	4 - 4		1110
	2	154.994	15.336 - 660.522	$3p^63d^2 - 3p^63d6f$	$^1D - ^1F^\circ$	2 - 3		1110
	12	155.119	15.336 - 660.007	$3p^63d^2 - 3p^63d6f$	$^1D - ^3D^\circ$	2 - 3		1110
	2	155.317	15.336 - 659.181	$3p^63d^2 - 3p^63d6f$	$^1D - ^1D^\circ$	2 - 2		1110
	10	155.747	17.782 - 659.849	$3p^63d^2 - 3p^63d6f$	$^3P - ^3D^\circ$	0 - 1		1110
	20	155.789	18.057 - 659.951	$3p^63d^2 - 3p^63d6f$	$^3P - ^3D^\circ$	1 - 2		1110
	5	155.813	18.057 - 659.849	$3p^63d^2 - 3p^63d6f$	$^3P - ^3D^\circ$	1 - 1		1110
	25	155.914	18.628 - 660.007	$3p^63d^2 - 3p^63d6f$	$^3P - ^3D^\circ$	2 - 3		1110
	60	157.301	25.511 - 661.233	$3p^63d^2 - 3p^63d6f$	$^1G - ^1H^\circ$	4 - 5		1110
	2	157.908	25.511 - 658.777	$3p^63d^2 - 3p^63d6f$	$^1G - ^3F^\circ$	4 - 4		1110
	6	158.139	25.511 - 657.867	$3p^63d^2 - 3p^63d6f$	$^1G - ^1G^\circ$	4 - 4		1110
	1	163.557	0. - 611.405	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3D^\circ$	2 - 3		1110
	1	163.663	1.669 - 612.678	$3p^63d^2 - 3p^63d5f$	$g^3F - ^1H^\circ$	4 - 5		1110
	5	163.740	0. - 610.723	$3p^63d^2 - 3p^63d5f$	$g^3F - ^1F^\circ$	2 - 3		1110
	5	163.939	.746 - 610.723	$3p^63d^2 - 3p^63d5f$	$g^3F - ^1F^\circ$	3 - 3		1110
	180	164.051	.746 - 610.314	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3G^\circ$	3 - 4		1110
	2	164.188	1.669 - 610.723	$3p^63d^2 - 3p^63d5f$	$g^3F - ^1F^\circ$	4 - 3		1110
	180	164.224	1.669 - 610.595	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3G^\circ$	4 - 5		1110
	20	164.249	.746 - 609.568	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3G^\circ$	3 - 3		1110
	30	164.300	1.669 - 610.314	$3p^63d^2 - 3p^63d5f$	$g^3F - ^1G^\circ$	4 - 4		1110
	25	164.365	0. - 608.407	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3F^\circ$	2 - 3		1110
	10	164.378	.746 - 609.095	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3F^\circ$	3 - 4		1110
	55	164.421	0. - 608.193	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3F^\circ$	2 - 2		1110
	60	164.566	.746 - 608.407	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3F^\circ$	3 - 3		1110
	85	164.629	1.669 - 609.095	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3F^\circ$	4 - 4		1110
	60	164.639	.746 - 608.125	$3p^63d^2 - 3p^63d5f$	$g^3F - ^1G^\circ$	3 - 4		1110
	1	164.815	1.669 - 608.407	$3p^63d^2 - 3p^63d5f$	$g^3F - ^3F^\circ$	4 - 3		1110
	20	164.892	1.669 - 608.125	$3p^63d^2 - 3p^63d5f$	$g^3F - ^1G^\circ$	4 - 4		1110
	10	166.115	59.265 - 661.258	$3p^63d^2 - 3p^63d6f$	$^1S - ^1P^\circ$	0 - 1		1110
	20	167.765	15.336 - 611.405	$3p^63d^2 - 3p^63d5f$	$^1D - ^3D^\circ$	2 - 3		1110
	70	167.957	15.336 - 610.723	$3p^63d^2 - 3p^63d5f$	$^1D - ^1F^\circ$	2 - 3		1110
	70	168.147	15.336 - 610.051	$3p^63d^2 - 3p^63d5f$	$^1D - ^1D^\circ$	2 - 2		1110
	15	168.282	15.336 - 609.568	$3p^63d^2 - 3p^63d5f$	$^1D - ^3G^\circ$	2 - 3		1110
	10	168.321	18.057 - 612.161	$3p^63d^2 - 3p^63d5f$	$^3P - ^3P^\circ$	1 - 1		1110
	15	168.353	18.057 - 612.044	$3p^63d^2 - 3p^63d5f$	$^3P - ^3P^\circ$	1 - 2		1110
	15	168.515	18.628 - 612.044	$3p^63d^2 - 3p^63d5f$	$^3P - ^3P^\circ$	2 - 2		1110
	70	168.549	18.057 - 611.340	$3p^63d^2 - 3p^63d5f$	$^3P - ^3D^\circ$	1 - 2		1110
	40	168.664	17.782 - 610.678	$3p^63d^2 - 3p^63d5f$	$^3P - ^3D^\circ$	0 - 1		1110
	160	168.691	18.628 - 611.405	$3p^63d^2 - 3p^63d5f$	$^3P - ^3D^\circ$	2 - 3		1110
	5	168.740	18.057 - 610.678	$3p^63d^2 - 3p^63d5f$	$^3P - ^3D^\circ$	1 - 1		1110
	20	168.888	18.628 - 610.723	$3p^63d^2 - 3p^63d5f$	$^3P - ^1F^\circ$	2 - 3		1110
	1	169.551	18.628 - 608.407	$3p^63d^2 - 3p^63d5f$	$^3P - ^3F^\circ$	2 - 3		1110
	220	170.303	25.511 - 612.678	$3p^63d^2 - 3p^63d5f$	$^1G - ^1H^\circ$	4 - 5		1110
	1	170.910	25.511 - 610.595	$3p^63d^2 - 3p^63d5f$	$^1G - ^3G^\circ$	4 - 5		1110
	1	170.990	25.511 - 610.314	$3p^63d^2 - 3p^63d5f$	$^1G - ^3G^\circ$	4 - 4		1110
	70	171.348	25.511 - 609.095	$3p^63d^2 - 3p^63d5f$	$^1G - ^3F^\circ$	4 - 4		1110
	120	171.633	25.511 - 608.125	$3p^63d^2 - 3p^63d5f$	$^1G - ^1G^\circ$	4 - 4		1110

MN VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	110	178.515	15.336 - 575.512	$3p^6 3d^2 - 3p^5(3d^3(b^2D))$	$^1D - ^1P^o$	2 - 1		1110
	10	179.572	18.628 - 575.512	$3p^6 3d^2 - 3p^5(3d^3(b^2D))$	$^3P - ^1P^o$	2 - 1		1110
	40	180.474	59.265 - 613.361	$3p^6 3d^2 - 3p^6 3d5f$	$^1S - ^1P^o$	0 - 1		1110
	60	180.626	15.336 - 568.974	$3p^6 3d^2 - 3p^5(3d^3(a^2F))$	$^1D - ^1F^o$	2 - 3		1110
	15	180.817	15.336 - 568.390	$3p^6 3d^2 - 3p^5(3d^3(a^4P))$	$^1D - ^3S^o$	2 - 1		1110
	160	181.357	0. - 551.400	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3D^o$	2 - 1		1110
	80	181.602	0. - 550.654	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3D^o$	2 - 2		1110
	50	181.617	17.782 - 568.390	$3p^6 3d^2 - 3p^5(3d^3(a^4P))$	$^3P - ^3S^o$	0 - 1		1110
	80	181.708	18.057 - 568.390	$3p^6 3d^2 - 3p^5(3d^3(a^4P))$	$^3P - ^3S^o$	1 - 1		1110
	130	181.849	.746 - 550.654	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3D^o$	3 - 2		1110
	120	181.897	18.628 - 568.390	$3p^6 3d^2 - 3p^5(3d^3(a^4P))$	$^3P - ^3S^o$	2 - 1		1110
	70	181.980	.746 - 550.258	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3D^o$	3 - 3		1110
	90	182.048	0. - 549.303	$3p^6 3d^2 - 3p^5(3d^3(a^2P))$	$g^3F - ^1P^o$	2 - 1		1110
	250	182.286	1.669 - 550.258	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3D^o$	4 - 3		1110
	350	184.001	25.511 - 568.974	$3p^6 3d^2 - 3p^5(3d^3(a^2F))$	$^1G - ^1F^o$	4 - 3		1110
	40	186.545	15.336 - 551.400	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^1D - ^3D^o$	2 - 1		1110
	5	186.805	15.336 - 550.654	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^1D - ^3D^o$	2 - 2		1110
	10	186.942	15.336 - 550.258	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^1D - ^3D^o$	2 - 3		1110
	90	187.278	15.336 - 549.303	$3p^6 3d^2 - 3p^5(3d^3(a^2P))$	$^1D - ^1P^o$	2 - 1		1110
	40	187.398	17.782 - 551.400	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^3P - ^3D^o$	0 - 1		1110
	30	187.495	18.057 - 551.400	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^3P - ^3D^o$	1 - 1		1110
	10	187.695	18.628 - 551.400	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^3P - ^3D^o$	2 - 1		1110
	130	187.756	18.057 - 550.654	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^3P - ^3D^o$	1 - 2		1110
	80	187.955	18.628 - 550.654	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^3P - ^3D^o$	2 - 2		1110
	250	188.097	18.628 - 550.258	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^3P - ^3D^o$	2 - 3		1110
	50	188.137	17.782 - 549.303	$3p^6 3d^2 - 3p^5(3d^3(a^2P))$	$^3P - ^1P^o$	0 - 1		1110
	450	188.160	25.511 - 556.973	$3p^6 3d^2 - 3p^5(3d^3(a^2H))$	$^1G - ^1G^o$	4 - 4		1110
	15	188.233	18.057 - 549.303	$3p^6 3d^2 - 3p^5(3d^3(a^2P))$	$^3P - ^1P^o$	1 - 1		1110
	10	188.438	18.628 - 549.303	$3p^6 3d^2 - 3p^5(3d^3(a^2P))$	$^3P - ^1P^o$	2 - 1		1110
	90	188.748	.746 - 530.550	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3F^o$	3 - 4		1110
	60	188.862	0. - 529.488	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3F^o$	2 - 3		1110
	500	189.078	1.669 - 530.550	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3F^o$	4 - 4		1110
	400	189.129	.746 - 529.488	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3F^o$	3 - 3		1110
	70	189.460	1.669 - 529.488	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3F^o$	4 - 3		1110
	100	189.569	0. - 527.514	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3F^o$	2 - 2		1110
	30	189.837	.746 - 527.514	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$g^3F - ^3F^o$	3 - 2		1110
	20	190.365	.746 - 526.054	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3F^o$	3 - 4		1110
	10	190.480	0. - 524.985	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3F^o$	2 - 3		1110
	15	190.565	25.511 - 550.258	$3p^6 3d^2 - 3p^5(3d^3(a^4F))$	$^1G - ^3D^o$	4 - 3		1110
	150	190.625	0. - 524.590	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3F^o$	2 - 2		1110
	350	190.700	1.669 - 526.054	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3F^o$	4 - 4		1110
	250	190.753	.746 - 524.985	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3F^o$	3 - 3		1110
	30	190.890	.746 - 524.608	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3D^o$	3 - 3		1110
	120	191.059	.746 - 524.146	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3D^o$	3 - 2		1110
	200	191.091	1.669 - 524.985	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3F^o$	4 - 3		1110
	70	191.130	0. - 523.203	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3D^o$	2 - 1		1110
	200	191.227	1.669 - 524.608	$3p^6 3d^2 - 3p^6 3d5p$	$g^3F - ^3D^o$	4 - 3		1110
	350	192.050	0. - 520.698	$3p^6 3d^2 - 3p^6 3d4f$	$g^3F - ^3G^o$	2 - 3		1110
	500	192.101	.746 - 521.305	$3p^6 3d^2 - 3p^6 3d4f$	$g^3F - ^3G^o$	3 - 4		1110
	450	192.225	1.669 - 521.892	$3p^6 3d^2 - 3p^6 3d4f$	$g^3F - ^3G^o$	4 - 5		1110
	50	192.327	.746 - 520.698	$3p^6 3d^2 - 3p^6 3d4f$	$g^3F - ^3G^o$	3 - 3		1110
	80	192.441	1.669 - 521.305	$3p^6 3d^2 - 3p^6 3d4f$	$g^3F - ^3G^o$	4 - 4		1110
	10	192.675	1.669 - 520.698	$3p^6 3d^2 - 3p^6 3d4f$	$g^3F - ^3G^o$	4 - 3		1110
	60	193.706	59.265 - 575.512	$3p^6 3d^2 - 3p^5(3d^3(b^2D))$	$^1S - ^1P^o$	0 - 1		1110

MN VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
200	194.857		15.336 - 528.532	$3p^63d^2 - 3p^63d5p$	$^1D - ^1F^o$	2 - 3		1110
300	195.802		15.336 - 526.055	$3p^63d^2 - 3p^5(3d^3(a^2G))$	$^1D - ^1F^o$	2 - 3		1110
40	196.111		18.628 - 528.532	$3p^63d^2 - 3p^63d5p$	$^3P - ^1F^o$	2 - 3		1110
300	196.531		15.336 - 524.162	$3p^63d^2 - 3p^5(3d^3(b^2D))$	$^1D - ^1D^o$	2 - 2		1110
150	196.809		15.336 - 523.443	$3p^63d^2 - 3p^63d5p$	$^1D - ^1D^o$	2 - 2		1110
60	197.070		18.628 - 526.055	$3p^63d^2 - 3p^5(3d^3(a^2G))$	$^3P - ^1F^o$	2 - 3		1110
10	197.423		18.057 - 524.590	$3p^63d^2 - 3p^63d5p$	$^3P - ^3F^o$	1 - 2		1110
150	197.635		18.628 - 524.608	$3p^63d^2 - 3p^63d5p$	$^3P - ^3D^o$	2 - 3		1110
10	197.856		17.782 - 523.203	$3p^63d^2 - 3p^63d5p$	$^3P - ^3D^o$	0 - 1		1110
70	198.792		25.511 - 528.532	$3p^63d^2 - 3p^63d5p$	$^1G - ^1F^o$	4 - 3		1110
20	198.933		.746 - 503.432	$3p^63d^2 - 3p^63d4f$	$g^3F - ^3F^o$	3 - 4		1110
20	198.947		0. - 502.639	$3p^63d^2 - 3p^63d4f$	$g^3F - ^3F^o$	2 - 3		1110
130	199.213		0. - 501.976	$3p^63d^2 - 3p^63d4f$	$g^3F - ^3F^o$	2 - 2		1110
200	199.246		.746 - 502.639	$3p^63d^2 - 3p^63d4f$	$g^3F - ^3F^o$	3 - 3		1110
270	199.297		1.669 - 503.432	$3p^63d^2 - 3p^63d4f$	$g^3F - ^3F^o$	4 - 4		1110
10	199.509		.746 - 501.976	$3p^63d^2 - 3p^63d4f$	$g^3F - ^3F^o$	3 - 2		1110
5	199.612		1.669 - 502.639	$3p^63d^2 - 3p^63d4f$	$g^3F - ^3F^o$	4 - 3		1110
300	199.768		25.511 - 526.092	$3p^63d^2 - 3p^63d4f$	$^1G - ^1H^o$	4 - 5		1110
5	201.457		25.511 - 521.892	$3p^63d^2 - 3p^63d4f$	$^1G - ^3G^o$	4 - 5		1110
20	201.949		25.511 - 520.698	$3p^63d^2 - 3p^63d4f$	$^1G - ^3G^o$	4 - 3		1110
60	202.678		25.511 - 518.905	$3p^63d^2 - 3p^63d4f$	$^1G - ^1G^o$	4 - 4		1110
5	203.198		59.265 - 551.400	$3p^63d^2 - 3p^5(3d^3(a^4F))$	$^1S - ^3D^o$	0 - 1		1110
30	204.067		59.265 - 549.303	$3p^63d^2 - 3p^5(3d^3(a^2P))$	$^1S - ^1P^o$	0 - 1		1110
2	205.492		15.336 - 501.976	$3p^63d^2 - 3p^63d4f$	$^1D - ^3F^o$	2 - 2		1110
150	211.870		59.265 - 531.252	$3p^63d^2 - 3p^63d5p$	$^1S - ^1P^o$	0 - 1		1110
100	307.109		.746 - 326.3726	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3F^o$	3 - 4		128
60	307.842		0. - 324.8491	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3F^o$	2 - 3		128
400	307.999		1.669 - 326.3726	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3F^o$	4 - 4		128
400	308.560		.746 - 324.8491	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3F^o$	3 - 3		128
300	308.853		0. - 323.7961	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3F^o$	2 - 2		128
240	309.440		1.669 - 324.8491	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3F^o$	4 - 3		128
200	309.579		.746 - 323.7961	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3F^o$	3 - 2		128
200	310.058		.746 - 323.2825	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3D^o$	3 - 3		128
180	310.182		0. - 322.4096	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3D^o$	2 - 2		128
800	310.908		1.669 - 323.2825	$3p^63d^2 - 3p^63d4p$	$g^3F - ^3D^o$	4 - 3		128
200	311.748		15.336 - 336.1308	$3p^63d^2 - 3p^63d4p$	$^1D - ^1P^o$	2 - 1		128
160	312.692		0. - 319.8212	$3p^63d^2 - 3p^63d4p$	$g^3F - ^1D^o$	2 - 2		128
120	314.979		18.628 - 336.1308	$3p^63d^2 - 3p^63d4p$	$^3P - ^1P^o$	2 - 1		128
180	320.598		18.057 - 329.9920	$3p^63d^2 - 3p^63d4p$	$^3P - ^3P^o$	1 - 2		128
180	320.681		17.782 - 329.6345	$3p^63d^2 - 3p^63d4p$	$^3P - ^3P^o$	0 - 1		128
180	320.874		18.057 - 329.7293	$3p^63d^2 - 3p^63d4p$	$^3P - ^3P^o$	1 - 0		128
180	320.979		18.057 - 329.6345	$3p^63d^2 - 3p^63d4p$	$^3P - ^3P^o$	1 - 1		128
220	321.176		18.628 - 329.9920	$3p^63d^2 - 3p^63d4p$	$^3P - ^3P^o$	2 - 2		128
180	321.541		18.628 - 329.6345	$3p^63d^2 - 3p^63d4p$	$^3P - ^3P^o$	2 - 1		128
400	325.146		25.511 - 333.0545	$3p^63d^2 - 3p^63d4p$	$^1G - ^1F^o$	4 - 3		128
40	326.571		18.628 - 324.8491	$3p^63d^2 - 3p^63d4p$	$^3P - ^3F^o$	2 - 3		128
20	327.08		18.057 - 323.7961	$3p^63d^2 - 3p^63d4p$	$^3P - ^3F^o$	1 - 2		128
200	328.232		18.628 - 323.2825	$3p^63d^2 - 3p^63d4p$	$^3P - ^3D^o$	2 - 3		128
400	328.431		15.336 - 319.8212	$3p^63d^2 - 3p^63d4p$	$^1D - ^1D^o$	2 - 2		128
180	328.558		18.057 - 322.4096	$3p^63d^2 - 3p^63d4p$	$^3P - ^3D^o$	1 - 2		128
100	329.043		17.782 - 321.6935	$3p^63d^2 - 3p^63d4p$	$^3P - ^3D^o$	0 - 1		128
40	329.177		18.628 - 322.4096	$3p^63d^2 - 3p^63d4p$	$^3P - ^3D^o$	2 - 2		128
100	329.320		18.057 - 321.6935	$3p^63d^2 - 3p^63d4p$	$^3P - ^3D^o$	1 - 1		128
7	801.182		319.8212 - 444.6371	$3p^63d4p - 3p^63d4d$	$^1D^o - ^1D$	2 - 2		637

MN VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	814.580	323.2825 - 446.0442	$3p^6 3d4p - 3p^6 3d4d$	$^3D^\circ - ^3P$	3 - 2		637
	16	851.705	321.6935 - 439.1050	$3p^6 3d4p - 3p^6 3d4d$	$^3D^\circ - ^3F$	1 - 2		637
	20	852.996	322.4096 - 439.6434	$3p^6 3d4p - 3p^6 3d4d$	$^3D^\circ - ^3F$	2 - 3		637
	30	855.056	323.2825 - 440.2341	$3p^6 3d4p - 3p^6 3d4d$	$^3D^\circ - ^3F$	3 - 4		637
	5	856.935	322.4096 - 439.1050	$3p^6 3d4p - 3p^6 3d4d$	$^3D^\circ - ^3F$	2 - 2		637
	7	859.396	323.2825 - 439.6434	$3p^6 3d4p - 3p^6 3d4d$	$^3D^\circ - ^3F$	3 - 3		637
	16	861.681	329.9920 - 446.0442	$3p^6 3d4p - 3p^6 3d4d$	$^3P^\circ - ^3P$	2 - 2		637
	5	865.060	329.9920 - 445.5909	$3p^6 3d4p - 3p^6 3d4d$	$^3P^\circ - ^3P$	2 - 1		637
	6	866.662	324.8491 - 440.2341	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3F$	3 - 4		637
	5	867.236	323.7961 - 439.1050	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3F$	2 - 2		637
	7	871.118	324.8491 - 439.6434	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3F$	3 - 3		637
	50	872.240	333.0545 - 447.7018	$3p^6 3d4p - 3p^6 3d4d$	$^1F^\circ - ^1G$	3 - 4		637
	20	878.257	326.3726 - 440.2341	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3F$	4 - 4		637
	45	915.050	319.8212 - 429.1048	$3p^6 3d4p - 3p^6 3d4d$	$^1D^\circ - ^1F$	2 - 3		637
	10	921.600	336.1308 - 444.6371	$3p^6 3d4p - 3p^6 3d4d$	$^1P^\circ - ^1D$	1 - 2		637
	55	923.400	323.7961 - 432.0905	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3G$	2 - 3		637
	60	927.614	324.8491 - 432.6526	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3G$	3 - 4		637
	5	932.476	324.8491 - 432.0905	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3G$	3 - 3		637
	90	933.785	326.3726 - 433.4636	$3p^6 3d4p - 3p^6 3d4d$	$^3F^\circ - ^3G$	4 - 5		637
	7	936.183	329.6345 - 436.4510	$3p^6 3d4p - 3p^6 3d4d$	$^3P^\circ - ^3S$	1 - 1		637
	13	939.329	329.9920 - 436.4510	$3p^6 3d4p - 3p^6 3d4d$	$^3P^\circ - ^3S$	2 - 1		637
	40	984.111	329.9920 - 431.6066	$3p^6 3d4p - 3p^6 3d4d$	$^3P^\circ - ^3D$	2 - 3		637
	15	985.951	329.6345 - 431.0594	$3p^6 3d4p - 3p^6 3d4d$	$^3P^\circ - ^3D$	1 - 2		637
	18	1039.690	336.1308 - 432.3133	$3p^6 3d4p - 3p^6 3d4d$	$^1P^\circ - ^1P$	1 - 1		637
	20	1041.121	333.0545 - 429.1048	$3p^6 3d4p - 3p^6 3d4d$	$^1F^\circ - ^1F$	3 - 3		637
	230	1236.230	255.2397 - 336.1308	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^1P^\circ$	2 - 1		637
	90	1255.766	250.0966 - 329.7293	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^\circ$	1 - 0		637
	100	1258.413	250.5270 - 329.9920	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^\circ$	2 - 2		637
	200	1264.101	250.5270 - 329.6345	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^\circ$	2 - 1		637
	500	1272.444	251.4030 - 329.9920	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^\circ$	3 - 2		637
	700	1285.102	255.2397 - 333.0545	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^1F^\circ$	2 - 3		637
	1000	1333.874	251.4030 - 326.3726	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3F^\circ$	3 - 4		637
	800	1345.494	250.5270 - 324.8491	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3F^\circ$	2 - 3		637
	600	1356.852	250.0966 - 323.7961	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3F^\circ$	1 - 2		637
	500	1391.173	250.5270 - 322.4096	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^\circ$	2 - 2		637
	750	1391.218	251.4030 - 323.2825	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^\circ$	3 - 3		637
	180	1396.708	250.0966 - 321.6935	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^\circ$	1 - 1		637
	55	1405.156	250.5270 - 321.6935	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^\circ$	2 - 1		637
	120	1408.312	251.4030 - 322.4096	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^\circ$	3 - 2		637
	30	1458.660	255.2397 - 323.7961	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^3F^\circ$	2 - 2		637
	23	1488.755	255.2397 - 322.4096	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^3D^\circ$	2 - 2		637
	1000	1548.430	255.2397 - 319.8212	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^1D^\circ$	2 - 2		637

MANGANESE VII (Mn⁶⁺), Z = 25
Ground State 1s²2s²2p⁶3s²3p⁶3d⁵(²D_{3/2}) (19 electrons)
Ionization Potential 962 001 cm⁻¹; 119.27 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
20	111.889		0.0 - 893.742	3p ⁶ 3d - 3p ⁶ 9f	g ² D - ² F°	3/2 - 1/2		365
10	112.060		1.338 - 893.742	3p ⁶ 3d - 3p ⁶ 9f	g ² D - ² F°	3/2 - 1/2		365
2	114.205		0.0 - 875.620	3p ⁶ 3d - 3p ⁶ 8f	g ² D - ² F°	3/2 - 1/2		1085
2	114.380		1.338 - 875.620	3p ⁶ 3d - 3p ⁶ 8f	g ² D - ² F°	3/2 - 1/2		1085
10	117.793		0.0 - 848.947	3p ⁶ 3d - 3p ⁶ 7f	g ² D - ² F°	3/2 - 1/2		1085
15	117.978		1.338 - 848.954	3p ⁶ 3d - 3p ⁶ 7f	g ² D - ² F°	3/2 - 1/2		1085
30	123.790		0.0 - 807.820	3p ⁶ 3d - 3p ⁶ 6f	g ² D - ² F°	3/2 - 1/2		1085
50	123.993		1.338 - 807.835	3p ⁶ 3d - 3p ⁶ 6f	g ² D - ² F°	3/2 - 1/2		1085
2	133.417		0.0 - 749.532	3p ⁶ 3d - 3p ⁵ 3d(³ D°)4s	g ² D - ² D°	3/2 - 1/2		1085
35	133.636		0.0 - 748.302	3p ⁶ 3d - 3p ⁵ 3d(³ D°)4s	g ² D - ² D°	3/2 - 1/2		1085
60	133.655		1.338 - 749.532	3p ⁶ 3d - 3p ⁵ 3d(³ D°)4s	g ² D - ² D°	3/2 - 1/2		1085
5	133.875		1.338 - 748.302	3p ⁶ 3d - 3p ⁵ 3d(³ D°)4s	g ² D - ² D°	3/2 - 1/2		1085
25	134.190		1.338 - 746.550	3p ⁶ 3d - 3p ⁵ 3d(¹ F°)4s	g ² D - ² F°	3/2 - 1/2		1085
30	134.628		1.338 - 744.126	3p ⁶ 3d - 3p ⁵ 3d(¹ D°)4s	g ² D - ² D°	3/2 - 1/2		1085
15	134.972		0.0 - 740.894	3p ⁶ 3d - 3p ⁵ 3d(¹ D°)4s	g ² D - ² D°	3/2 - 1/2		1085
75	135.148		0.0 - 739.930	3p ⁶ 3d - 3p ⁵ 3d(¹ F°)4s	g ² D - ² F°	3/2 - 1/2		1085
100	135.362		0.0 - 738.765	3p ⁶ 3d - 3p ⁶ 5f	g ² D - ² F°	3/2 - 1/2		1085
3	135.394		1.338 - 739.930	3p ⁶ 3d - 3p ⁵ 3d(¹ F°)4s	g ² D - ² F°	3/2 - 1/2		1085
120	135.475		1.338 - 739.482	3p ⁶ 3d - 3p ⁶ 5f	g ² D - ² F°	3/2 - 1/2		1085
8	135.532		0.0 - 737.833	3p ⁶ 3d - 3p ⁵ 3d(³ D°)4s	g ² D - ⁴ D°	3/2 - 1/2		1085
10	135.609		1.338 - 738.765	3p ⁶ 3d - 3p ⁶ 5f	g ² D - ² F°	3/2 - 1/2		1085
15	135.900		1.338 - 737.173	3p ⁶ 3d - 3p ⁵ 3d(³ D°)4s	g ² D - ⁴ D°	3/2 - 1/2		1085
35	136.177		1.338 - 735.676	3p ⁶ 3d - 3p ⁵ 3d(³ D°)4s	g ² D - ⁴ D°	3/2 - 1/2		1085
70	138.441		0.0 - 722.331	3p ⁶ 3d - 3p ⁵ 3d(³ F°)4s	g ² D - ² F°	3/2 - 1/2		1085
3	138.697		1.338 - 722.331	3p ⁶ 3d - 3p ⁵ 3d(³ F°)4s	g ² D - ² F°	3/2 - 1/2		1085
85	139.595		1.338 - 717.696	3p ⁶ 3d - 3p ⁵ 3d(³ F°)4s	g ² D - ² F°	3/2 - 1/2		1085
1	139.862		0.0 - 714.990	3p ⁶ 3d - 3p ⁵ 3d(³ F°)4s	g ² D - ⁴ F°	3/2 - 1/2		1085
15	140.323		0.0 - 712.642	3p ⁶ 3d - 3p ⁵ 3d(³ F°)4s	g ² D - ⁴ F°	3/2 - 1/2		1085
20	141.044		1.338 - 710.337	3p ⁶ 3d - 3p ⁵ 3d(³ F°)4s	g ² D - ⁴ F°	3/2 - 1/2		1085
25	141.757		0.0 - 705.425	3p ⁶ 3d - 3p ⁵ 3d(³ P°)4s	g ² D - ² P°	3/2 - 1/2		1085
50	142.028		1.338 - 705.425	3p ⁶ 3d - 3p ⁵ 3d(³ P°)4s	g ² D - ² P°	3/2 - 1/2		1085
30	142.615		0.0 - 701.189	3p ⁶ 3d - 3p ⁵ 3d(³ P°)4s	g ² D - ² P°	3/2 - 1/2		1085
20	143.87		1.338 - 696.42	3p ⁶ 3d - 3p ⁵ 3d(³ P°)4s	g ² D - ⁴ P°	3/2 - 1/2		261,142
250	162.336		0.0 - 616.007	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	3/2 - 1/2		1085
300	162.656		1.338 - 616.132	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	3/2 - 1/2		1085
100	162.689		1.338 - 616.007	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	3/2 - 1/2		1085
300	182.499		0.0 - 547.949	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	3/2 - 1/2		1085
200	182.692		0.0 - 547.367	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	3/2 - 1/2		1085
100	182.945		1.338 - 547.949	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	3/2 - 1/2		1085
500	183.141		1.338 - 547.367	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	3/2 - 1/2		1085
100	183.708		0.0 - 544.342	3p ⁶ 3d - 3p ⁵ (3d ² (³ P))	g ² D - ² P°	3/2 - 1/2		1085
300	184.161		1.338 - 544.342	3p ⁶ 3d - 3p ⁵ (3d ² (³ P))	g ² D - ² P°	3/2 - 1/2		1085
200	184.538		0.0 - 541.894	3p ⁶ 3d - 3p ⁵ (3d ² (³ P))	g ² D - ² P°	3/2 - 1/2		1085
600	202.840		1.338 - 494.337	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² F°	3/2 - 1/2		1085
400	204.117		0.0 - 489.916	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² F°	3/2 - 1/2		1085
50	204.675		1.338 - 489.916	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² F°	3/2 - 1/2		1085
300	238.617		0.0 - 419.081	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² F°	3/2 - 1/2		1085
25	239.381		1.338 - 419.081	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² F°	3/2 - 1/2		1085
500	244.766		1.338 - 409.891	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² F°	3/2 - 1/2		1085
100	244.935		0.0 - 408.273	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² P°	3/2 - 1/2		1085
300	245.739		1.338 - 408.273	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² P°	3/2 - 1/2		1085
250	247.473		0.0 - 404.085	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² P°	3/2 - 1/2		1085
50	249.929		0.0 - 400.11	3p ⁶ 3d - 3p ⁶ 4p	g ² D - ² P°	3/2 - 1/2		365,1085
1000	250.771		1.338 - 400.11	3p ⁶ 3d - 3p ⁶ 4p	g ² D - ² P°	3/2 - 1/2		365,1085

MN VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	400	251.479	0.0 - 397.65	$3p^6 3d - 3p^6 4p$	$g^2 D - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		365, 1085
	750	252.985	1.338 - 396.618	$3p^6 3d - 3p^5(3d^2(^1G))$	$g^2 D - ^2 F^o$	$\frac{5}{2} - \frac{3}{2}$		1085
	400	253.654	0.0 - 394.238	$3p^6 3d - 3p^5(3d^2(^1G))$	$g^2 D - ^2 F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	15	254.517	1.338 - 394.238	$3p^6 3d - 3p^5(3d^2(^1G))$	$g^2 D - ^2 F^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	30	282.095	397.65 - 752.15	$3p^6 4p - 3p^6 6s$	$^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		365
	100	284.059	400.11 - 752.15	$3p^6 4p - 3p^6 6s$	$^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		365
	150	462.363	397.65 - 613.94	$3p^6 4p - 3p^6 5s$	$^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$		365
	300	467.662	400.11 - 613.94	$3p^6 4p - 3p^6 5s$	$^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		365
		1229.0	318.74 - 400.11	$3p^6 4s - 3p^6 4p$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	P	375, 365
		1267.3	318.74 - 397.65	$3p^6 4s - 3p^6 4p$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{1}{2}$	P	375, 365

MANGANESE VIII (Mn^{7+}), Z = 25
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 (^1S_0)$ (18 electrons)
Ionization Potential 1 569 000 cm^{-1} ; 194.5 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	60	96.341	0.0 - 1038.00	$3p^6 - 3p^5(^2P_{1/2})4d$	$g^1 S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1		241,9
	70	97.411	0.0 - 1026.58	$3p^6 - 3p^5(^2P_{3/2})4d$	$g^1 S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1		241,9
	150	122.168	0.0 - 818.545	$3p^6 - 3p^5(^2P_{1/2})4s$	$g^1 S - (\frac{1}{2}, \frac{1}{2})^o$	0 - 1		366
	100	124.055	0.0 - 806.095	$3p^6 - 3p^5(^2P_{3/2})4s$	$g^1 S - (\frac{3}{2}, \frac{1}{2})^o$	0 - 1		366
	20	134.69	367.94 + H - 1110.38 + H	$3p^5 3d - 3p^5 4f$	$^3 P^o - ^3 D$	0 - 1		806
	40	134.79	369.97 + H - 1111.87 + H	$3p^5 3d - 3p^5 4f$	$^3 P^o - ^3 D$	1 - 2		806
	30	135.06	369.97 + H - 1110.38 + H	$3p^5 3d - 3p^5 4f$	$^3 P^o - ^3 D$	1 - 1		806
	80	135.15	373.75 + H - 1113.67 + H	$3p^5 3d - 3p^5 4f$	$^3 P^o - ^3 D$	2 - 3		806, 375
	20	135.48	373.75 + H - 1111.87 + H	$3p^5 3d - 3p^5 4f$	$^3 P^o - ^3 D$	2 - 2		806, 375
	100	137.50	385.83 + H - 1113.11 + H	$3p^5 3d - 3p^5 4f$	$^3 F^o - ^3 G$	4 - 5		806
	70	137.82	388.84 + H - 1114.43 + H	$3p^5 3d - 3p^5 4f$	$^3 F^o - ^3 G$	3 - 4		806
	60	137.92	392.39 + H - 1117.45 + H	$3p^5 3d - 3p^5 4f$	$^3 F^o - ^3 G$	2 - 3		806
	50	139.93	421.36 + H - 1136.00 + H	$3p^5 3d - 3p^5 4f$	$^1 D^o - ^1 F$	2 - 3		806
	50	140.73	418.45 + H - 1129.03 + H	$3p^5 3d - 3p^5 4f$	$^3 D^o - ^3 F$	2 - 3		806
	70	141.29	414.37 + H - 1122.13 + H	$3p^5 3d - 3p^5 4f$	$^1 F^o - ^3 F$	3 - 4		806
	100	141.76	412.99 + H - 1118.41 + H	$3p^5 3d - 3p^5 4f$	$^3 D^o - ^1 G$	3 - 4		806
	900	185.46	0.0 - 539.20	$3p^6 - 3p^5 3d$	$g^1 S - ^1 P^o$	0 - 1		295, 256

MANGANESE IX (Mn^{8+}), Z = 25
Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 (^2P_{3/2}^o)$ (17 electrons)
Ionization Potential [1 789 000] cm^{-1} ; [221.8] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		73.8	0.0 - 1355.	$3s^2 3p^5 - 3s^2 3p^4(^1D)5s$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		271
	3	87.27	0.0 - 1145.70	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		241, 271
	8	87.552	0.0 - 1142.20	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		241, 271
	2	87.79	0.0 - 1139.1	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		271
	6	87.94	0.0 - 1137.1	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		271
		87.958	0.0 - 1137.1	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		241

MN IX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	88.258	12.5465 - 1145.70	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		241,271
	6	88.423	0.0 - 1130.70	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		241,271
	4	88.773	12.5465 - 1139.1	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		241,271
	4	88.923	12.5465 - 1137.1	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		241,271
		89.448	12.5465 - 1130.70	$3s^2 3p^5 - 3s^2 3p^4(^1D)4d$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		241
	4	89.783	0.0 - 1113.80	$3s^2 3p^5 - 3s^2 3p^4(^1P)4d$	$g^2 P^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		241,271
	4	89.914	0.0 - 1112.20	$3s^2 3p^5 - 3s^2 3p^4(^1P)4d$	$g^2 P^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		241,271
	8	90.034	0.0 - 1110.70	$3s^2 3p^5 - 3s^2 3p^4(^1P)4d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		241,271
	9	90.134	0.0 - 1109.50	$3s^2 3p^5 - 3s^2 3p^4(^1P)4d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		241,271
		90.599	12.5465 - 1116.30	$3s^2 3p^5 - 3s^2 3p^4(^1P)4d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		241
	8	91.02	12.5465 - 1110.70	$3s^2 3p^5 - 3s^2 3p^4(^1P)4d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		271
	50	105.256	0.0 - 950.06	$3s^2 3p^5 - 3s^2 3p^4(^1S)4s$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		182
	500	109.783	0.0 - 910.89	$3s^2 3p^5 - 3s^2 3p^4(^1D)4s$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		182
	400	111.262	12.5465 - 911.31	$3s^2 3p^5 - 3s^2 3p^4(^1D)4s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		182
	200	111.500	0.0 - 896.86	$3s^2 3p^5 - 3s^2 3p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		182
	500	112.415	0.0 - 889.56	$3s^2 3p^5 - 3s^2 3p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		182
	200	113.080	12.5465 - 896.86	$3s^2 3p^5 - 3s^2 3p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		182
	300	113.627	0.0 - 880.07	$3s^2 3p^5 - 3s^2 3p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		182
	50	114.023	12.5465 - 889.56	$3s^2 3p^5 - 3s^2 3p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		182
	50	114.472	0.0 - 873.58	$3s^2 3p^5 - 3s^2 3p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{5}{2}$		182
		118.510	450.0 + R - 1293.81 + R	$3s^2 3p^4(^1P)3d - 3s^2 3p^4(^1P)4f$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		241
		121.12	400.0 + C - 1225.63 + C	$3s^2 3p^4(^1P)3d - 3s^2 3p^4(^1P)4f$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		241
		121.351	420.0 + F - 1244.06 + F	$3s^2 3p^4(^1P)3d - 3s^2 3p^4(^1P)4f$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		241
		121.442	560.0 + L - 1383.44 + L	$3s^2 3p^4(^1D)3d - 3s^2 3p^4(^1D)4f$	$^2G - ^2H^\circ$	$\frac{3}{2} - \frac{1}{2}$		241
		121.633	410.0 + P - 1232.14 + P	$3s^2 3p^4(^1P)3d - 3s^2 3p^4(^1P)4f$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		241
		123.85	550.0 + K - 1357.43 + K	$3s^2 3p^4(^1D)3d - 3s^2 3p^4(^1D)4f$	$^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		241
		184.80	0.0 - 541.150	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		260
	900	188.48	0.0 - 530.560	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		260,256
	800	189.16	12.5465 - 541.150	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		260,256
		189.98	0.0 - 526.386	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		260
	700	191.60	0.0 - 521.868	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		260,256
	600	194.61	12.5465 - 526.386	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		260,256
	500	196.38	12.5465 - 521.868	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		260,256
	600	199.32	0.0 - 501.708	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		260,256
	600	204.43	12.5465 - 501.708	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		260,256
	450	376.778	0.0 - 265.408	$3s^2 3p^5 - 3s3p^6$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		726
	285	395.473	12.5465 - 265.408	$3s^2 3p^5 - 3s3p^6$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		726

MANGANESE X (Mn⁹⁺), Z = 25
Ground State $1s^2 2s^2 2p^6 3s^2 3p^4(^3P_2)$ (16 electrons)
Ionization Potential [2 003 000] cm^{-1} ; [248.3] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	8	82.828	33.8186 - 1241.14	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4d$	$^1D - ^1F^\circ$	2 - 3		241,271
	4	83.068	33.8186 - 1237.65	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4d$	$^1D - ^1D^\circ$	2 - 2		241,271
	7	83.518	0. - 1197.35	$3s^2 3p^4 - 3s^2 3p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	2 - 3		241,271
		84.21	11.797 - 1199.3	$3s^2 3p^4 - 3s^2 3p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	0 - 1		271
	4	84.292	10.019 - 1196.37	$3s^2 3p^4 - 3s^2 3p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	1 - 2		241,271
	100	100.173	33.8186 - 1032.09	$3s^2 3p^4 - 3s^2 3p^3(^2P^\circ)4s$	$^1D - ^1P^\circ$	2 - 1		181

MN X — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	100.585	0. - 994.18	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	2 - 3		181
	100	100.787	0. - 992.22	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	2 - 2		181
	50	101.808	10.019 - 992.22	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	1 - 2		181
	50	101.854	10.019 - 991.86	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	1 - 1		181
	50	102.030	11.797 - 991.86	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	0 - 1		181
	300	103.269	33.8186 - 1002.16	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$^1D - ^1D^{\circ}$	2 - 2		181
	200	103.521	0. - 965.97	$3s^23p^4 - 3s^23p^3(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	2 - 1		181
	50	104.310	73.544 - 1032.09	$3s^23p^4 - 3s^23p^3(^2P^{\circ})4s$	$^1S - ^1P^{\circ}$	0 - 1		181
	100	104.608	10.019 - 965.97	$3s^23p^4 - 3s^23p^3(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	1 - 1		181
	50	104.806	11.797 - 965.97	$3s^23p^4 - 3s^23p^3(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	0 - 1		181
		107.34	500.00 + W - 1431.62 + W	$3s^23p^3(^4S^{\circ})3d - 3s^23p^3(^4S^{\circ})4f$	$^5D^{\circ} - ^5F$	1 - 2		241
		107.36	530.00 + T - 1461.45 + T	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^3F^{\circ} - ^3G$	4 - 5		241
		107.39	498.00 + Y - 1429.18 + Y	$3s^23p^3(^4S^{\circ})3d - 3s^23p^3(^4S^{\circ})4f$	$^5D^{\circ} - ^5F$	3 - 4		241
		107.472	497.00 + Z - 1427.48 + Z	$3s^23p^3(^4S^{\circ})3d - 3s^23p^3(^4S^{\circ})4f$	$^5D^{\circ} - ^5F$	4 - 5		241
		108.93	520.00 + U - 1438.02 + U	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^3G^{\circ} - ^3H$	4 - 5		241
		108.97	510.00 + V - 1427.68 + V	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^3G^{\circ} - ^3H$	5 - 6		241
	600	192.08	0. - 520.62	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 2		239,256
	600	193.43	33.8186 - 550.80	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^1F^{\circ}$	2 - 3		295,256
	600	194.30	0. - 514.67	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 3		295,256
		194.37	10.019 - 524.52	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1 - 1		239
	600	195.03	11.797 - 524.52	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	0 - 1		295,256
	500	195.85	10.019 - 520.62	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1 - 2		295,256
		198.42	73.544 - 577.53	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1S - ^1P^{\circ}$	0 - 1		239
	800	199.08	33.8186 - 536.13	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^1D^{\circ}$	2 - 2		260,256
	900	202.93	0. - 492.77	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 2		239,256
		203.12	0. - 492.32	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 1		239
		207.15	10.019 - 492.77	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	1 - 2		239
	400	207.98	33.8186 - 514.67	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$^1D - ^3D^{\circ}$	2 - 3	Q	256,375
		217.88	33.8186 - 492.77	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^3P^{\circ}$	2 - 2		239
		218.11	33.8186 - 492.32	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^3P^{\circ}$	2 - 1		239
	160	333.798	33.8186 - 333.401	$3s^23p^4 - 3s3p^5$	$^1D - ^1P^{\circ}$	2 - 1		726
	110	371.905	0. - 268.874	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	2 - 1		726
	40	379.368	10.019 - 273.615	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	1 - 0		726
	160	383.036	0. - 261.072	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	2 - 2		726
	5	384.827	73.544 - 333.401	$3s^23p^4 - 3s3p^5$	$^1S - ^1P^{\circ}$	0 - 1		726
	20	386.316	10.019 - 268.874	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	1 - 1		726
	70	388.988	11.797 - 268.874	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	0 - 1		726
	70	398.322	10.019 - 261.072	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	1 - 2		726
		1360.	0. - 73.544	$3s^23p^4 - 3s^23p^4$	$g^3P - ^1S$	2 - 0	F,P	375,726
		1574.	10.019 - 73.544	$3s^23p^4 - 3s^23p^4$	$g^3P - ^1S$	1 - 0	F,P	375,726

MANGANESE XI (Mn^{10+}), Z = 25
Ground State $1s^22s^22p^63s^23p^3(^4S_{3/2})$ (15 electrons)
Ionization Potential [2 307 000] cm^{-1} ; [286.0] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		75.059	0. - 1332.28	$3s^23p^3 - 3s^23p^2(^3P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		241
		75.227	0. - 1329.31	$3s^23p^3 - 3s^23p^2(^3P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		241
		75.477	0. - 1324.91	$3s^23p^3 - 3s^23p^2(^3P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		241
		75.819	42.702 - 1361.63	$3s^23p^3 - 3s^23p^2(^1D)4d$	$^2D^{\circ} - ^2F$	$\frac{5}{2} - \frac{5}{2}$		241
		75.879	42.702 - 1360.59	$3s^23p^3 - 3s^23p^2(^1D)4d$	$^2D^{\circ} - ^2F$	$\frac{5}{2} - \frac{7}{2}$		241
		76.380	39.384 - 1348.63	$3s^23p^3 - 3s^23p^2(^3P)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		241

MN XI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
400 600		76.763	42.702 - 1345.41	$3s^2 3p^3 - 3s^2 3p^2(^3P)4d$	$^2D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		76.858	73.552 - 1374.65	$3s^2 3p^3 - 3s^2 3p^2(^1D)4d$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		77.270	42.702 - 1336.86	$3s^2 3p^3 - 3s^2 3p^2(^3P)4d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		77.402	39.384 - 1331.34	$3s^2 3p^3 - 3s^2 3p^2(^3P)4d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		77.556	73.552 - 1362.94	$3s^2 3p^3 - 3s^2 3p^2(^1D)4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		78.056	68.945 - 1350.08	$3s^2 3p^3 - 3s^2 3p^2(^3P)4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		91.646	0. - 1091.16	$3s^2 3p^3 - 3s^2 3p^2(^3P)4s$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		92.240	0. - 1084.13	$3s^2 3p^3 - 3s^2 3p^2(^3P)4s$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		92.75	42.702 - 1120.87	$3s^2 3p^3 - 3s^2 3p^2(^1D)4s$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		94.327	42.702 - 1102.84	$3s^2 3p^3 - 3s^2 3p^2(^3P)4s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		95.390	73.552 - 1121.88	$3s^2 3p^3 - 3s^2 3p^2(^1D)4s$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		241
		98.023	450.00 + K - 1470.17 + K	$3s^2 3p^2(^3P)3d - 3s^2 3p^2(^3P)4f$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{5}{2}$ $\frac{9}{2} - \frac{3}{2}$		241
		98.064	450.26 + K - 1470.00 + K	$3s^2 3p^2(^3P)3d - 3s^2 3p^2(^3P)4f$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{5}{2}$ $\frac{9}{2} - \frac{3}{2}$		241
		99.02	475.00 + R - 1484.90 + R	$3s^2 3p^2(^1D)3d - 3s^2 3p^2(^1D)4f$	$^2G - ^2H^\circ$	$\frac{7}{2} - \frac{5}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{5}{2}$ $\frac{9}{2} - \frac{3}{2}$		241
		99.356	479.52 + F - 1486.00 + F	$3s^2 3p^2(^1D)3d - 3s^2 3p^2(^1D)4f$	$^2G - ^2H^\circ$	$\frac{7}{2} - \frac{5}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{5}{2}$ $\frac{9}{2} - \frac{3}{2}$		241
		194.07	0. - 515.21	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$g^4S^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$	Q	256
		200.67	42.702 - 541.03	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239,256
		202.38	42.702 - 536.80	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239
	204.29	73.552 - 563.06	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	204.98	73.552 - 561.40	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	207.02	0. - 483.04	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	208.02	0. - 480.72	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	209.57	0. - 477.17	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	210.16	39.384 - 515.21	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	211.54	42.702 - 515.43	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	213.75	68.945 - 536.80	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	215.86	73.552 - 536.80	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	216.60	68.945 - 530.62	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	228.52	39.384 - 476.98	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	235.55	42.702 - 467.24	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		239	
	1	306.458	39.384 - 365.689	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	110	310.547	39.384 - 361.400	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	1	313.777	42.702 - 361.400	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	20	322.427	68.945 - 379.093	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	40	327.288	73.552 - 379.093	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	1	336.995	68.945 - 365.689	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	1	341.929	68.945 - 361.400	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	110	347.404	73.552 - 361.400	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	110	363.441	39.384 - 314.532	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$	P	726
	40	366.060	42.702 - 315.881	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	1	367.877	42.702 - 314.532	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	40	377.154	0. - 265.144	$3s^2 3p^3 - 3s3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	70	382.142	0. - 261.683	$3s^2 3p^3 - 3s3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
	110	393.743	0. - 253.974	$3s^2 3p^3 - 3s3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$		726
		407.187	68.945 - 314.532	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$	P	726
		412.667	73.552 - 315.881	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$	P	726
	0	1359.59	0. - 73.552	$3s^2 3p^3 - 3s^2 3p^3$	$g^4S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$	F	940
		1450.43	0. - 68.945	$3s^2 3p^3 - 3s^2 3p^3$	$g^4S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{3}{2}$	F,P	442

MANGANESE XII (Mn¹¹⁺), Z = 25
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [2 536 000] cm⁻¹; [314.4] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
400		70.72	0. - 1414.0	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	0 - 1		970
		70.89	15.0165 - 1425.6	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ F°	2 - 3		970
		71.04	7.2206 - 1414.9	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	1 - 2		970
		71.09	7.2206 - 1414.0	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	1 - 1		970
		71.32	15.0165 - 1417.1	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	2 - 3		970
		71.69	42.142 - 1437.1	3s ² 3p ² - 3s ² 3p4d	¹ D - ³ F°	2 - 3		970
		72.82	82.8589 + S - 1456.1 + S	3s ² 3p ² - 3s ² 3p4d	¹ S - ¹ P°	0 - 1		970
		85.19	7.2206 - 1181.30	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	1 - 2		854
		85.59	0. - 1168.30	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	0 - 1		970
		85.72	15.0165 - 1181.30	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	2 - 2		854
		86.34	333.97 - 1492.2	3s3p ³ - 3s ² 3p4f	¹ D° - ³ G	2 - 3		970
		86.71	15.0165 - 1168.30	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	2 - 1		854
		90.373	1262.30 + D - 2368.82 + D	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	4 - 5		241
		90.701	1266.30 + D - 2368.82 + D	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	3 - 4		241
		97.85	517.36 - 1539.3	3s ² 3p3d - 3s ² 3p4f	¹ F° - ¹ G	3 - 4		970
		99.49	530.17 + S - 1535.3 + S	3s ² 3p3d - 3s ² 3p4f	¹ P° - ¹ D	1 - 2		970
		191.23	7.2206 - 530.17 + S	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	1 - 1	Q	256
		210.43	42.142 - 517.36	3s ² 3p ² - 3s ² 3p3d	¹ D - ³ F°	2 - 3		239
		212.81	0. - 469.91	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	0 - 1		239
		215.03	7.2206 - 472.25	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	1 - 2		239
		216.12	7.2206 - 469.91	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	1 - 1		239
		217.39	0. - 460.00	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	0 - 1		239
		218.56	15.0165 - 472.54	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	2 - 3		239
		218.70	15.0165 - 472.25	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	2 - 2		239
		219.54	7.2206 - 462.70	3s ² 3p ² - 3s ² 3p3d	g ³ P - ¹ D°	1 - 2		239
		223.56	82.8589 + S - 530.17 + S	3s ² 3p ² - 3s ² 3p3d	¹ S - ¹ P°	0 - 1		239
		224.62	7.2206 - 452.42	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	1 - 2		239
		228.61	15.0165 - 452.42	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	2 - 2		239
		237.78	42.142 - 462.70	3s ² 3p ² - 3s ² 3p3d	¹ D - ¹ D°	2 - 2		239
		259.33	0. - 385.62	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	0 - 1		239
		264.26	7.2206 - 385.62	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	1 - 1		239
		269.82	15.0165 - 385.62	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	2 - 1		239
		275.78	42.142 - 404.75	3s ² 3p ² - 3s3p ³	¹ D - ¹ P°	2 - 1		239
		329.28	0. - 303.69	3s ² 3p ² - 3s3p ³	g ³ P - ³ P°	0 - 1		239
		337.29	7.2206 - 303.69	3s ² 3p ² - 3s3p ³	g ³ P - ³ P°	1 - 1		239
		342.67	42.142 - 333.97	3s ² 3p ² - 3s3p ³	¹ D - ¹ D°	2 - 2		239
		346.04	15.0165 - 303.98	3s ² 3p ² - 3s3p ³	g ³ P - ³ P°	2 - 2		239
		386.27	0. - 258.89	3s ² 3p ² - 3s3p ³	g ³ P - ³ D°	0 - 1		239
		388.58	7.2206 - 264.55	3s ² 3p ² - 3s3p ³	g ³ P - ³ D°	1 - 2		242
		397.46	15.0165 - 266.60	3s ² 3p ² - 3s3p ³	g ³ P - ³ D°	2 - 3		239
	397.55						251	
0	1322.08	7.2206 - 82.8589 + S	3s ² 3p ² - 3s ² 3p ²	g ³ P - ¹ S	1 - 0	F,P	726,442	
	1474.	15.0165 - 82.8589 + S	3s ² 3p ² - 3s ² 3p ²	g ³ P - ¹ S	2 - 0	F,P	375,726	

MANGANESE XIII (Mn¹²⁺), Z = 25
Ground State 1s²2s²2p⁶3s²3p(²P_{1/2}) (13 electrons)
Ionization Potential [2 771 000] cm⁻¹; [343.6] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
100	66.574		0. - 1502.09	3s ² 3p - 3s ² 4d	g ² P° - ² D	1 - 3		180
200	67.215		15.2950 - 1503.08	3s ² 3p - 3s ² 4d	g ² P° - ² D	1 - 3		180
	79.16		204.00 + X - 1467.30 + X	3s3p ² - 3s3p4s	⁴ P - ⁴ P°	1 - 2		241
	83.23		608.0 + T - 1809.5 + T	3s3p3d - 3s3p4f	⁴ F° - ⁴ G	1 - 1		241
	83.41		600.0 + R - 1798.9 + R	3s3p3d - 3s3p4f	⁴ F° - ⁴ G	1 - 1		241
	83.52		604.0 + S - 1801.3 + S	3s3p3d - 3s3p4f	⁴ F° - ⁴ G	1 - 1		241
	87.30		440.70 - 1586.20	3s ² 3d - 3s ² 4f	² D - ² F°	1 - 2		241
	87.40		442.23 - 1586.40	3s ² 3d - 3s ² 4f	² D - ² F°	1 - 2		241
	226.91		0. - 440.70	3s ² 3p - 3s ² 3d	g ² P° - ² D	1 - 2		239
	232.12		201.00 + X - 631.81 + X	3s3p ² - 3s3p3d	⁴ P - ⁴ D°	1 - 2		239
	233.73		204.00 + X - 631.84 + X	3s3p ² - 3s3p3d	⁴ P - ⁴ D°	1 - 2		239
	234.24		15.2950 - 442.23	3s ² 3p - 3s ² 3d	g ² P° - ² D	1 - 2		239
	235.08		15.2950 - 440.70	3s ² 3p - 3s ² 3d	g ² P° - ² D	1 - 2		239
	272.09		0. - 367.53	3s ² 3p - 3s3p ²	g ² P° - ² P	1 - 2		239
	277.42		0. - 360.46	3s ² 3p - 3s3p ²	g ² P° - ² P	1 - 2		239
	283.91		15.2950 - 367.53	3s ² 3p - 3s3p ²	g ² P° - ² P	1 - 2		239
	289.74		15.2950 - 360.46	3s ² 3p - 3s3p ²	g ² P° - ² P	1 - 2		239
	294.95		0. - 339.03	3s ² 3p - 3s3p ²	g ² P° - ² S	1 - 2		239
	308.75		204.00 + X - 527.89 + X	3s3p ² - 3p ³	⁴ P - ⁴ S°	1 - 2		239
	308.92		15.2950 - 339.03	3s ² 3p - 3s3p ²	g ² P° - ² S	1 - 2		239
	361.57		0. - 276.58	3s ² 3p - 3s3p ²	g ² P° - ² D	1 - 2		239
	380.42		15.2950 - 278.18	3s ² 3p - 3s3p ²	g ² P° - ² D	1 - 2		239
	382.76		15.2950 - 276.58	3s ² 3p - 3s3p ²	g ² P° - ² D	1 - 2		239

MANGANESE XIV (Mn¹³⁺), Z = 25
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential 3 250 000 cm⁻¹; 403.0 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	38.54		0. - 2594.71	3s ² - 3s6p	g ¹ S - ¹ P°	1 - 1		851
	41.51		223.50 + C - 2632.56 + C	3s3p - 3s6d	³ P° - ³ D	1 - 2		851
	41.72		234.96 + C - 2631.89 + C	3s3p - 3s6d	³ P° - ³ D	2 - 3		851
	43.00		234.96 + C - 2560.54 + C	3s3p - 3s6s	³ P° - ³ S	2 - 1		851
	43.74		0. - 2286.24	3s ² - 3s5p	g ¹ S - ¹ P°	1 - 1		851
	47.38		218.75 + C - 2329.35 + C	3s3p - 3s5d	³ P° - ³ D	0 - 1		851
	47.67		223.50 + C - 2321.26 + C	3s3p - 3s5d	³ P° - ³ D	1 - 2		851
	47.93		234.96 + C - 2321.34 + C	3s3p - 3s5d	³ P° - ³ D	2 - 3		851
	49.42		328.03 - 2351.50	3s3p - 3s5d	¹ P° - ¹ D	1 - 2		851
	49.63		635.54 + C - 2650.39 + C	3s3d - 3s6f	³ D - ³ F°	3 - 4		851
	50.03		223.50 + C - 2222.30 + C	3s3p - 3s5s	³ P° - ³ S	1 - 1		851
20	57.224		635.54 + C - 2383.06 + C	3s3d - 3s5f	³ D - ³ F°	3 - 4		180
	57.71		234.96 + C - 1967.76 + C	3s3p - 3p4p	³ P° - ³ S	2 - 1		851
	57.81		234.96 + C - 1964.76 + C	3s3p - 3p4p	³ P° - ³ P	2 - 2		851
	57.97		234.96 + C - 1959.99 + C	3s3p - 3p4p	³ P° - ³ P	2 - 1		851
	58.19		234.96 + C - 1953.47 + C	3s3p - 3p4p	³ P° - ³ D	2 - 3		851
100	59.325		0. - 1685.63	3s ² - 3s4p	g ¹ S - ¹ P°	1 - 1		180
50	62.526		218.75 + C - 1818.09 + C	3s3p - 3s4d	³ P° - ³ D	0 - 1		180

MN XIV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	62.694	223.50+C - 1818.56+C	3s3p - 3s4d	$^3P^{\circ} - ^3D$	1 - 2		180
	20	62.713	223.50+C - 1818.09+C	3s3p - 3s4d	$^3P^{\circ} - ^3D$	1 - 1		180
	200	63.109	234.96+C - 1819.52+C	3s3p - 3s4d	$^3P^{\circ} - ^3D$	2 - 3		180
	20	63.146	234.96+C - 1818.56+C	3s3p - 3s4d	$^3P^{\circ} - ^3D$	2 - 2		180
		63.23	540.03+C - 2121.56+C	$3p^2 - 3p4d$	$^3P - ^3P^{\circ}$	2 - 2		851
		63.45	521.02 - 2097.06	$3p^2 - 3p4d$	$^1D - ^1F^{\circ}$	2 - 3		851
		64.03	526.12+C - 2087.86+C	$3p^2 - 3p4d$	$^3P - ^3D^{\circ}$	1 - 2		851
		64.23	540.03+C - 2096.93+C	$3p^2 - 3p4d$	$^3P - ^3D^{\circ}$	2 - 3		851
		67.02	328.03 - 1820.12	3s3p - 3s4d	$^1P^{\circ} - ^1D$	1 - 2		241
		72.45	521.02 - 1901.26	$3p^2 - 3s4f$	$^1D - ^1F^{\circ}$	2 - 3		854
	20	74.063	218.75+C - 1568.95+C	3s3p - 3s4s	$^3P^{\circ} - ^3S$	0 - 1		180
	50	74.327	223.50+C - 1568.95+C	3s3p - 3s4s	$^3P^{\circ} - ^3S$	1 - 1		180
	100	74.961	234.96+C - 1568.95+C	3s3p - 3s4s	$^3P^{\circ} - ^3S$	2 - 1		180
		75.94	540.03+C - 1856.86+C	$3p^2 - 3p4s$	$^3P - ^3P^{\circ}$	2 - 2		851
		78.35	883.69+C - 2159.95+C	3p3d - 3p4f	$^3F^{\circ} - ^3G$	4 - 5		241
		78.42	866.52+C - 2141.63+C	3p3d - 3p4f	$^3F^{\circ} - ^3G$	2 - 3		241
		78.54	874.40+C - 2147.64+C	3p3d - 3p4f	$^3F^{\circ} - ^3G$	3 - 4		241
		79.10	883.69+C - 2147.64+C	3p3d - 3p4f	$^3F^{\circ} - ^3G$	4 - 4		241
	100	79.720	633.55+C - 1887.94+C	3s3d - 3s4f	$^3D - ^3F^{\circ}$	1 - 2		180
	200	79.761	634.26+C - 1888.01+C	3s3d - 3s4f	$^3D - ^3F^{\circ}$	2 - 3		180
	300	79.826	635.54+C - 1888.26+C	3s3d - 3s4f	$^3D - ^3F^{\circ}$	3 - 4		180
		80.06	919.11+Y - 2168.17+Y	3p3d - 3p4f	$^3P^{\circ} - ^3D$	0 - 1		241
		80.27	923.31+Z - 2169.11+Z	3p3d - 3p4f	$^3D^{\circ} - ^3D$	2 - 2		241
		80.46	927.46+C - 2170.25+C	3p3d - 3p4f	$^3D^{\circ} - ^3D$	3 - 3		241
		81.05	927.46+C - 2161.21+C	3p3d - 3p4f	$^3D^{\circ} - ^3F$	3 - 4		241
		83.78	981.0+K - 2174.6+K	3p3d - 3p4f	$^1P^{\circ} - ^1D$	1 - 2		241
		84.09	712.04 - 1901.26	3s3d - 3s4f	$^1D - ^1F^{\circ}$	2 - 3		241
		241.07	218.75+C - 633.55+C	3s3p - 3s3d	$^3P^{\circ} - ^3D$	0 - 1		267
		243.45	223.50+C - 634.26+C	3s3p - 3s3d	$^3P^{\circ} - ^3D$	1 - 2		251
		243.88	223.50+C - 633.55+C	3s3p - 3s3d	$^3P^{\circ} - ^3D$	1 - 1		267
		249.64	234.96+C - 635.54+C	3s3p - 3s3d	$^3P^{\circ} - ^3D$	2 - 3		251
		260.41	328.03 - 712.04	3s3p - 3s3d	$^1P^{\circ} - ^1D$	1 - 2		854
		304.85	0 - 328.03	$3s^2 - 3s3p$	$g^1S - ^1P^{\circ}$	1 - 1		239
		315.93	223.50+C - 540.03+C	3s3p - $3p^2$	$^3P^{\circ} - ^3P$	1 - 2	P	239
		325.34	218.75+C - 526.12+C	3s3p - $3p^2$	$^3P^{\circ} - ^3P$	0 - 1		239
		327.79	234.96+C - 540.03+C	3s3p - $3p^2$	$^3P^{\circ} - ^3P$	2 - 2	P	239
		330.45	223.50+C - 526.12+C	3s3p - $3p^2$	$^3P^{\circ} - ^3P$	1 - 1	P	239
		331.7	1820.12 - 2121.56+C	3s4d - 3p4d	$^1D - ^3P^{\circ}$	2 - 2	P	375,1135
		339.19	223.50+C - 518.32+C	3s3p - $3p^2$	$^3P^{\circ} - ^3P$	1 - 0		239
		342.56	635.54+C - 927.46+C	3s3d - 3p3d	$^3D - ^3D^{\circ}$	3 - 3		251
		343.45	234.96+C - 526.12+C	3s3p - $3p^2$	$^3P^{\circ} - ^3P$	2 - 1	P	239
		346.7	635.54+C - 924.01+C	3s3d - 3p3d	$^3D - ^3P^{\circ}$	3 - 2	P	375,251
		349.64	328.03 - 614.04	3s3p - $3p^2$	$^1P^{\circ} - ^1S$	1 - 0		251
		402.99	635.54+C - 883.69+C	3s3d - 3p3d	$^3D - ^3F^{\circ}$	3 - 4		251
		416.42	634.26+C - 874.40+C	3s3d - 3p3d	$^3D - ^3F^{\circ}$	2 - 3		251
		425.6	0 - 234.96+C	$3s^2 - 3s3p$	$g^1S - ^3P^{\circ}$	1 - 2	P	375,239
		429.24	633.55+C - 866.52+C	3s3d - 3p3d	$^3D - ^3F^{\circ}$	1 - 2		251
		447.4	0 - 223.50+C	$3s^2 - 3s3p$	$g^1S - ^3P^{\circ}$	1 - 1	P	375,1135
		518.16	328.03 - 521.02	3s3p - $3p^2$	$^1P^{\circ} - ^1D$	1 - 2		854

MANGANESE XV (Mn¹⁴⁺), Z = 25
 Ground State 1s²2s²2p⁶3s(²S_{1/2}) (11 electrons)
 Ionization Potential 3 509 800 cm⁻¹; 435.16 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		19.155	0. - 5220.6	2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	265
		19.450	0. - 5141.4	2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	265
		30.81	0. - 3246.0	2p ⁶ 3s - 2p ⁶ 10p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		851
		31.37	0. - 3188.0	2p ⁶ 3s - 2p ⁶ 9p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		851
0		32.230	0. - 3102.699	2p ⁶ 3s - 2p ⁶ 8p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
		33.55	277.031 - 3258.0	2p ⁶ 3p - 2p ⁶ 10d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		851
0		33.635	0. - 2973.093	2p ⁶ 3s - 2p ⁶ 7p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
		34.02	259.916 - 3199.3	2p ⁶ 3p - 2p ⁶ 9d	² P° - ² D	$\frac{1}{2} - \frac{1}{2}$		851
		34.22	277.031 - 3199.3	2p ⁶ 3p - 2p ⁶ 9d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		851
		35.04	259.916 - 3113.8	2p ⁶ 3p - 2p ⁶ 8d	² P° - ² D	$\frac{1}{2} - \frac{1}{2}$		851
0		35.229	277.031 - 3115.601	2p ⁶ 3p - 2p ⁶ 8d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		118
2		36.099	0. - 2770.159	2p ⁶ 3s - 2p ⁶ 6p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
1		36.119	0. - 2768.625	2p ⁶ 3s - 2p ⁶ 6p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
1		36.577	259.916 - 2993.874	2p ⁶ 3p - 2p ⁶ 7d	² P° - ² D	$\frac{1}{2} - \frac{1}{2}$		118
2		36.803	277.031 - 2994.201	2p ⁶ 3p - 2p ⁶ 7d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		118
		37.12	259.916 - 2953.9	2p ⁶ 3p - 2p ⁶ 7s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		851
		37.36	277.031 - 2953.9	2p ⁶ 3p - 2p ⁶ 7s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		851
		37.42	633.728 - 3306.0	2p ⁶ 3d - 2p ⁶ 11f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		851
		38.02	633.728 - 3264.0	2p ⁶ 3d - 2p ⁶ 10f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		851
		38.89	633.728 - 3205.0	2p ⁶ 3d - 2p ⁶ 9f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		851
2		39.287	259.916 - 2805.287	2p ⁶ 3p - 2p ⁶ 6d	² P° - ² D	$\frac{1}{2} - \frac{1}{2}$		118
3		39.547	277.031 - 2805.668	2p ⁶ 3p - 2p ⁶ 6d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		118
1		40.151	633.728 - 3125.0	2p ⁶ 3d - 2p ⁶ 8f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		118
1		40.285	259.916 - 2742.007	2p ⁶ 3p - 2p ⁶ 6s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		118
1		40.572	277.031 - 2742.007	2p ⁶ 3p - 2p ⁶ 6s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		118
4		41.185	0. - 2428.068	2p ⁶ 3s - 2p ⁶ 5p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
3		41.243	0. - 2424.653	2p ⁶ 3s - 2p ⁶ 5p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
1		42.152	631.511 - 3003.877	2p ⁶ 3d - 2p ⁶ 7f	² D - ² F°	$\frac{3}{2} - \frac{5}{2}$		118
2		42.185	633.728 - 3004.239	2p ⁶ 3d - 2p ⁶ 7f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		118
3		44.820	259.916 - 2491.062	2p ⁶ 3p - 2p ⁶ 5d	² P° - ² D	$\frac{1}{2} - \frac{1}{2}$		118
4		45.154	277.031 - 2491.674	2p ⁶ 3p - 2p ⁶ 5d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		118
2		45.659	631.511 - 2821.659	2p ⁶ 3d - 2p ⁶ 6f	² D - ² F°	$\frac{3}{2} - \frac{5}{2}$		118
3		45.700	633.728 - 2821.912	2p ⁶ 3d - 2p ⁶ 6f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		118
2		47.270	259.916 - 2375.192	2p ⁶ 3p - 2p ⁶ 5s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		118
2		47.666	277.031 - 2375.192	2p ⁶ 3p - 2p ⁶ 5s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		118
4		52.977	631.511 - 2518.78	2p ⁶ 3d - 2p ⁶ 5f	² D - ² F°	$\frac{3}{2} - \frac{5}{2}$		118
5		53.032	633.728 - 2518.98	2p ⁶ 3d - 2p ⁶ 5f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		118
1		55.731	633.728 - 2428.068	2p ⁶ 3d - 2p ⁶ 5p	² D - ² P°	$\frac{5}{2} - \frac{3}{2}$	P	118
5		56.270	0. - 1777.145	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
4		56.484	0. - 1770.412	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		118
20		60.720	259.916 - 1906.819	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{1}{2} - \frac{1}{2}$		118
30		61.319	277.031 - 1907.847	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		118
5		61.361	277.031 - 1906.819	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		118
1		71.038	259.916 - 1667.471	2p ⁶ 3p - 2p ⁶ 4s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		118
1		71.927	277.031 - 1667.471	2p ⁶ 3p - 2p ⁶ 4s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		118
		75.182	631.511 - 1961.616	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$		118
		75.286	633.728 - 1961.996	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F°	$\frac{5}{2} - \frac{5}{2}$		118
		87.47	633.728 - 1777.145	2p ⁶ 3d - 2p ⁶ 4p	² D - ² P°	$\frac{5}{2} - \frac{3}{2}$		118
		87.80	631.511 - 1770.412	2p ⁶ 3d - 2p ⁶ 4p	² D - ² P°	$\frac{3}{2} - \frac{1}{2}$		118
4		163.41	1906.819 - 2518.78	2p ⁶ 4d - 2p ⁶ 5f	² D - ² F°	$\frac{3}{2} - \frac{5}{2}$		1091
30		163.63	1907.847 - 2518.98	2p ⁶ 4d - 2p ⁶ 5f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$		1091
30		178.61	1961.616 - 2521.50	2p ⁶ 4f - 2p ⁶ 5g	² F° - ² G	$\frac{7}{2} - \frac{7}{2}$		1091
30		178.69	1961.996 - 2521.62	2p ⁶ 4f - 2p ⁶ 5g	² F° - ² G	$\frac{7}{2} - \frac{9}{2}$		1091
600		192.22	1907.847 - 2428.068	2p ⁶ 4d - 2p ⁶ 5p	² D - ² P°	$\frac{5}{2} - \frac{3}{2}$	Q	256

MN XV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		269.11	259.916 - 631.511	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		118
		280.35	277.031 - 633.728	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		118
		282.10	277.031 - 631.511	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		118
		360.97	0. - 277.031	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		118
	250	384.74	0. - 259.916	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		118,437

MANGANESE XVI (Mn^{15+}), $Z = 25$
Ground State $1s^2 2s^2 2p^6 (^1S_0)$ (10 electrons)
Ionization Potential 9 139 000 cm^{-1} ; 1133.1 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	11.853	0. - 8439.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}^\circ) 6d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	10	11.971	0. - 8354.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}^\circ) 6d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	20	12.373	0. - 8084.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}^\circ) 5d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	50	12.510	0. - 7994.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}^\circ) 5d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	60	13.46	0. - 7429.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}^\circ) 4d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	50	13.602	0. - 7349.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}^\circ) 4d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	30	14.098	0. - 7092.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}^\circ) 4s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		716
	20	15.238	0. - 6562.5	$2s^2 2p^6 - 2s^2 2p^6 3p$	$g^1S - ^1P^\circ$	0 - 1		716
	20	15.314	0. - 6530.8	$2s^2 2p^6 - 2s^2 2p^6 3p$	$g^1S - ^3P^\circ$	0 - 1		716
	100	16.617	0. - 6018.3	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}^\circ) 3d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	80	16.879	0. - 5923.5	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}^\circ) 3d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
	40	17.095	0. - 5849.7	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}^\circ) 3d$	$g^1S - \frac{3}{2}^1P^\circ$	0 - 1		716
		18.654	0. - 5360.8	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}^\circ) 3s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		766
		18.935	0. - 5281.2	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}^\circ) 3s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		766
		46.59	5862.4 + C - 8009. + F	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{3/2}^\circ) 5f$	$^3F^\circ - \frac{3}{2}^3F^\circ$	4 - 5	P	1055
		55.539	5535.8 + C - 7336.3 + C	$2s^2 2p^5 (^2P^\circ) 3p - 2s^2 2p^5 (^2P^\circ) 4d$	$^1P^\circ - ^1D^\circ$	1 - 2		395
		55.643	5515.9 + C - 7313.1 + C	$2s^2 2p^5 (^2P^\circ) 3p - 2s^2 2p^5 (^2P^\circ) 4d$	$^3D^\circ - ^3F^\circ$	2 - 3		395
		56.017	5526.9 + C - 7312.1 + C	$2s^2 2p^5 (^2P^\circ) 3p - 2s^2 2p^5 (^2P^\circ) 4d$	$^3D^\circ - ^3F^\circ$	3 - 4		395
		56.096	5629.6 + C - 7412.3 + C	$2s^2 2p^5 (^2P^\circ) 3p - 2s^2 2p^5 (^2P^\circ) 4d$	$^3P^\circ - ^3F^\circ$	1 - 2		395
		56.189	5632.2 + C - 7411.9 + C	$2s^2 2p^5 (^2P^\circ) 3p - 2s^2 2p^5 (^2P^\circ) 4d$	$^1D^\circ - ^1F^\circ$	2 - 3		395
		56.409	5548.7 + C - 7321.5 + C	$2s^2 2p^5 (^2P^\circ) 3p - 2s^2 2p^5 (^2P^\circ) 4d$	$^3P^\circ - ^3D^\circ$	2 - 3		395
		65.91	5844.7 + C - 7361.9 + C	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{3/2}^\circ) 4f$	$^3P^\circ - \frac{3}{2}^3F^\circ$	2 - 2		1055
		66.11	5862.4 + C - 7375.0 + C	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{3/2}^\circ) 4f$	$^3F^\circ - \frac{3}{2}^3F^\circ$	4 - 5		1055
		66.30	5914.4 + C - 7422.7 + C	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{1/2}^\circ) 4f$	$^3F^\circ - \frac{3}{2}^3F^\circ$	2 - 3		1055
		66.39	5867.7 + C - 7374.0 + C	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{3/2}^\circ) 4f$	$^3F^\circ - \frac{3}{2}^3F^\circ$	3 - 4		1055
		66.48	5973.6 + C - 7477.7 + C	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{1/2}^\circ) 4f$	$^1D^\circ - \frac{3}{2}^1D^\circ$	2 - 3		1055
		66.72	5970.8 + C - 7469.6 + C	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{1/2}^\circ) 4f$	$^1F^\circ - \frac{3}{2}^1D^\circ$	3 - 4		1055
		67.09	5887.8 + C - 7378.3 + C	$2s^2 2p^5 (^2P^\circ) 3d - 2s^2 2p^5 (^2P_{3/2}^\circ) 4f$	$^3D^\circ - \frac{3}{2}^3D^\circ$	3 - 4		1055

MANGANESE XVII (Mn¹⁶⁺), Z = 25
Ground State 1s²2s²2p⁵(²P_{3/2}) (9 electrons)
Ionization Potential [9 872 000] cm⁻¹; [1224] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
20	12.181		0. - 8209.5	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)4d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		716
40	12.643		0. - 7909.5	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		716
40	15.404		0. - 6491.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
50	15.570		85.627 - 6508.0	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
30	15.615		0. - 6404.2	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
100	15.670		0. - 6381.6	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
50	15.732		0. - 6356.5	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		850
60	15.826		85.627 - 6404.2	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
70	15.871		0. - 6300.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
20	15.889		0. - 6297.2	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		850
20	15.926		0. - 6279.0	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² F	$\frac{3}{2} - \frac{3}{2}$		850
10	15.946		85.627 - 6356.5	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		850
10	15.958		0. - 6266.5	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
10	15.987		0. - 6255.1	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		850
60	16.041		0. - 6234.0	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ F	$\frac{3}{2} - \frac{3}{2}$		850
50	16.054		0. - 6228.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		850
50	16.090		0. - 6215.1	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		850
20	16.121		0. - 6207.1	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ D	$\frac{3}{2} - \frac{3}{2}$	Q	716
20	16.278		85.627 - 6228.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ P	$\frac{1}{2} - \frac{3}{2}$		850
200	16.880		0. - 5923.6	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3s	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		850
20	17.131		85.627 - 5923.6	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3s	g ² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		850
50	17.301		0. - 5780.0	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3s	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		850
30	17.465		0. - 5725.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		850
50	17.541		0. - 5700.9	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		850
50	17.550		85.627 - 5783.4	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3s	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		850
50	17.716		0. - 5644.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		850
20	17.729		85.627 - 5725.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		850
30	17.794		0. - 5619.9	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		850
0	17.807		85.627 - 5700.9	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ² P	$\frac{1}{2} - \frac{3}{2}$		850
	17.862		85.627 - 5683.9	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ⁴ P	$\frac{1}{2} - \frac{3}{2}$	P	375
0	17.987		85.627 - 5644.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P° - ⁴ P	$\frac{1}{2} - \frac{3}{2}$		850
450	99.995		0. - 1000.050	2s ² 2p ⁵ - 2s2p ⁶	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	P	1104,1136
250	109.359		85.627 - 1000.050	2s ² 2p ⁵ - 2s2p ⁶	g ² P° - ² S	$\frac{1}{2} - \frac{1}{2}$	P	1104,1136
	1168.		0. - 85.627	2s ² 2p ⁵ - 2s ² 2p ⁵	g ² P° - g ² P°	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1104

MANGANESE XVIII (Mn¹⁷⁺), Z = 25
Ground State 1s²2s²2p⁴(³P₂) (8 electrons)
Ionization Potential [10 620 000] cm⁻¹; [1317] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
20	14.650		0.0 - 6822.1	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ¹ D°	2 - 2	Q	716
30	14.698		0.0 - 6803.6	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	2 - 3		877
110	14.752		0.0 - 6779.7	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	2 - 2		877
30	14.816		73.59 - 6822.1	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ¹ D°	1 - 2	Q	716
350	14.877		0.0 - 6721.8	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ D°	2 - 3		877
50	15.024		150.64 - 6806.4	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	¹ D - ³ P°	2 - 1	Q	716

MN XVIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
40	15.096	15.188	292.07 - 6916.1	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1S - ^1P^o$	0 - 1	P	947
		15.238	150.64 - 6734.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$^1D - ^1D^o$	2 - 2	P	877,947
	30	15.403	0.0 - 6562.5	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 3		877
	300	16.185	73.59 - 6565.8	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1 - 2		877
	10	16.20	0.0 - 6178.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	2 - 3		865
50	16.255	16.425	150.64 - 6324.5	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$^1D - ^1P^o$	2 - 1	Q	143
	150	16.451	0.0 - 6152.1	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	2 - 2		865
	200	16.521	66.58 - 6154.9	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	0 - 1		865
	200	16.540	73.59 - 6152.1	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	1 - 2		865
	250	16.577	0.0 - 6052.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1		865
	150	16.70	150.64 - 6196.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$^1D - ^1D^o$	2 - 2		865
	150	16.724	292.07 - 6324.5	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$^1S - ^1P^o$	0 - 1		865
	110	16.90	0.0 - 5989.6+K	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^5S^o$	2 - 2	P	375
	4	84.05	73.59 - 6052.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1 - 1		865
	4	89.03	73.59 - 5989.6+K	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^5S^o$	1 - 2	P	375
	4	89.59	0.0 - 1189.82	$2s^2 2p^4 - 2s^2 2p^5$	$g^3P - ^1P^o$	2 - 1		1091
	10	91.90	66.58 - 1189.82	$2s^2 2p^4 - 2s^2 2p^5$	$g^3P - ^1P^o$	0 - 1		1091
	300	96.23	73.59 - 1189.82	$2s^2 2p^4 - 2s^2 2p^5$	$g^3P - ^1P^o$	1 - 1		1091
	200	108.76	919.46 - 2007.55	$2s^2 2p^5 - 2p^6$	$^3P^o - ^1S$	1 - 0		1091
	80	111.39	150.64 - 1189.82	$2s^2 2p^4 - 2s^2 2p^5$	$^1D - ^1P^o$	2 - 1		1091
200	113.30	0.0 - 919.46	$2s^2 2p^4 - 2s^2 2p^5$	$g^3P - ^3P^o$	2 - 1		1091	
375	115.38	292.07 - 1189.82	$2s^2 2p^4 - 2s^2 2p^5$	$^1S - ^1P^o$	0 - 1		1091	
150	117.25	73.59 - 956.22	$2s^2 2p^4 - 2s^2 2p^5$	$g^3P - ^3P^o$	1 - 0		1091	
110	118.22	0.0 - 866.70	$2s^2 2p^4 - 2s^2 2p^5$	$g^3P - ^3P^o$	2 - 2		1091	
150	122.29	315.38 - 2007.55	$2s^2 2p^5 - 2p^6$	$^1P^o - ^1S$	1 - 0		1091	
200	126.09	73.59 - 866.70	$2s^2 2p^4 - 2s^2 2p^5$	$g^3P - ^3P^o$	1 - 2		1091	
30	139.65	150.64 - 866.70	$2s^2 2p^4 - 2s^2 2p^5$	$^1D - ^3P^o$	2 - 2		1091	
	342.4	0.0 - 292.07	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1091	
	457.7	73.59 - 292.07	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1091	
	663.8	0.0 - 150.64	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F,P	375,1091	
	707.1	150.64 - 292.07	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1091	
	1190.	66.58 - 150.64	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1091	
	1298.	73.59 - 150.64	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 2	F,P	375,1091	
	1359.	0.0 - 73.59	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F,P	375,1091	
	1502.	0.0 - 66.58	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1091	

MANGANESE XIX (Mn^{18+}), Z = 25
Ground State $1s^2 2s^2 2p^3(^4S_{3/2}^o)$ (7 electrons)
Ionization Potential [11 590 000] cm^{-1} ; [1437] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10	13.950	14.067	0.0 - 7170.0+R	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$g^4S^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	Q	716
		14.098	131.80 - 7240.7+F	$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P	877
65	14.122	14.138	0.0 - 7093.0	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		877
		14.154	162.54 - 7243.7+F	$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P	877
			162.54 - 7235.6+F	$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P	877
			162.54 - 7227.6+F	$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P	877
						$\frac{3}{2} - \frac{3}{2}$		

MN XIX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	14.205	0.0 - 7043.8+B	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$g^4 S^\circ - ^4 D$	$\frac{3}{2} - \frac{5}{2}$	Q	716
		14.258	162.54 - 7176.1+F	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2 D^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	P	877
		14.364	162.54 - 7124.3+F	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2 D^\circ - ^2 F$	$\frac{3}{2} - \frac{7}{2}$	P	877
		14.782	291.81 - 7056.9+F	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2 P^\circ - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	P	877
	10	85.41	0.0 - 1170.88	$2s^2 2p^3 - 2s2p^4$	$g^4 S^\circ - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1091
	4	88.08	709.07 - 1844.39	$2s2p^4 - 2p^5$	$^4 P - ^2 P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1091
	4	88.75	0.0 - 1126.81	$2s^2 2p^3 - 2s2p^4$	$g^4 S^\circ - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	89.26	131.80 - 1252.16	$2s^2 2p^3 - 2s2p^4$	$^2 D^\circ - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	92.71	765.76 - 1844.39	$2s2p^4 - 2p^5$	$^4 P - ^2 P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1091
	300	96.24	131.80 - 1170.88	$2s^2 2p^3 - 2s2p^4$	$^2 D^\circ - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1091
	10	99.01	242.19 - 1252.16	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 P$	$\frac{1}{2} - \frac{1}{2}$		1091
	250	99.17	162.54 - 1170.88	$2s^2 2p^3 - 2s2p^4$	$^2 D^\circ - ^2 P$	$\frac{5}{2} - \frac{3}{2}$		1091
	110	100.50	131.80 - 1126.81	$2s^2 2p^3 - 2s2p^4$	$^2 D^\circ - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	101.92	0.0 - 981.14	$2s^2 2p^3 - 2s2p^4$	$g^4 S^\circ - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1091
	250	104.13	291.81 - 1252.16	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	104.90	981.14 - 1934.42	$2s2p^4 - 2p^5$	$^2 D - ^2 P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	107.68	242.19 - 1170.88	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1091
	110	113.04	242.19 - 1126.81	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 S$	$\frac{1}{2} - \frac{1}{2}$		1091
	50	113.75	291.81 - 1170.88	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1091
	30	115.84	981.14 - 1844.39	$2s2p^4 - 2p^5$	$^2 D - ^2 P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1091
	110	117.41	992.68 - 1844.39	$2s2p^4 - 2p^5$	$^2 D - ^2 P^\circ$	$\frac{5}{2} - \frac{3}{2}$		1091
	200	117.74	131.80 - 981.14	$2s^2 2p^3 - 2s2p^4$	$^2 D^\circ - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1091
	10	119.76	291.81 - 1126.81	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		1091
	300	120.46	162.54 - 992.68	$2s^2 2p^3 - 2s2p^4$	$^2 D^\circ - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1091
	150	127.28	0.0 - 785.67	$2s^2 2p^3 - 2s2p^4$	$g^4 S^\circ - ^4 P$	$\frac{3}{2} - \frac{1}{2}$		1091
	200	130.59	0.0 - 765.76	$2s^2 2p^3 - 2s2p^4$	$g^4 S^\circ - ^4 P$	$\frac{5}{2} - \frac{3}{2}$		1091
	50	130.97	1170.88 - 1934.42	$2s2p^4 - 2p^5$	$^2 P - ^2 P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	135.33	242.19 - 981.14	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1091
	10	139.36	1126.81 - 1844.39	$2s2p^4 - 2p^5$	$^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$		1091
	300	141.03	0.0 - 709.07	$2s^2 2p^3 - 2s2p^4$	$g^4 S^\circ - ^4 P$	$\frac{3}{2} - \frac{5}{2}$		1091
	50	142.68	291.81 - 992.68	$2s^2 2p^3 - 2s2p^4$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		1091
	30	146.57	1252.16 - 1934.42	$2s2p^4 - 2p^5$	$^2 P - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1091
	80	148.48	1170.88 - 1844.39	$2s2p^4 - 2p^5$	$^2 P - ^2 P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1091
		342.7	0.0 - 291.81	$2s^2 2p^3 - 2s^2 2p^3$	$g^4 S^\circ - ^2 P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091
		412.9	0.0 - 242.19	$2s^2 2p^3 - 2s^2 2p^3$	$g^4 S^\circ - ^2 P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		615.2	0.0 - 162.54	$2s^2 2p^3 - 2s^2 2p^3$	$g^4 S^\circ - ^2 D^\circ$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,1091
		625.0	131.80 - 291.81	$2s^2 2p^3 - 2s^2 2p^3$	$^2 D^\circ - ^2 P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091
		758.7	0.0 - 131.80	$2s^2 2p^3 - 2s^2 2p^3$	$g^4 S^\circ - ^2 D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091
		773.6	162.54 - 291.81	$2s^2 2p^3 - 2s^2 2p^3$	$^2 D^\circ - ^2 P^\circ$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1091
		905.9	131.80 - 242.19	$2s^2 2p^3 - 2s^2 2p^3$	$^2 D^\circ - ^2 P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		1255.	162.54 - 242.19	$2s^2 2p^3 - 2s^2 2p^3$	$^2 D^\circ - ^2 P^\circ$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,1091

MANGANESE XX (Mn¹⁹⁺), Z = 25
Ground State 1s²2s²2p²(³P₀) (6 electrons)
Ionization Potential [12 410 000] cm⁻¹; [1539] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	250	13.46	212.27 - 7641.7	$2s^2 2p^2 - 2s^2 2p3d$	$^1 D - ^1 F^\circ$	2 - 3		877
		13.483	59.583 - 7476.5+B	$2s^2 2p^2 - 2s^2 2p3d$	$g^3 P - ^3 D^\circ$	1 - 2	P	949
		13.495	98.655 - 7510.5+B	$2s^2 2p^2 - 2s^2 2p3d$	$g^3 P - ^3 P^\circ$	2 - 2	P	877
		13.514	98.655 - 7498.4	$2s^2 2p^2 - 2s^2 2p3d$	$g^3 P - ^3 D^\circ$	2 - 3	P	877
		13.604	212.27 - 7564.2+B	$2s^2 2p^2 - 2s^2 2p3d$	$^1 D - ^1 P^\circ$	2 - 1	P	949
		13.701	98.655 - 7397.3+B	$2s^2 2p^2 - 2s^2 2p3d$	$g^3 P - ^3 F^\circ$	2 - 3	P	949

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		13.826	333.06 - 7564.2+B	$2s^2 2p^2 - 2s^2 2p 3d$	$^1S - ^1P^\circ$	0 - 1	P	949
		13.908	742.94 - 7932.9+F	$2s 2p^3 - 2s 2p^2(^4P)3d$	$^3D^\circ - ^3F$	3 - 4	P	877
		14.47	98.655 - 7011.4	$2s^2 2p^2 - 2s^2 2p 3s$	$g^3P - ^3P^\circ$	2 - 2	P	375
10	89.85	59.583 - 1172.55	59.583 - 1172.55	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^1P^\circ$	1 - 1		1091
4	90.76	443.99 - 1545.80	443.99 - 1545.80	$2s 2p^3 - 2p^4$	$^5S^\circ - ^3P$	2 - 2		1091
30	97.51	0.0 - 1025.52	0.0 - 1025.52	$2s^2 2p^2 - 2s 2p^3$	$g^2P - ^3S^\circ$	0 - 1		1091
80	103.53	59.583 - 1025.52	59.583 - 1025.52	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^\circ$	1 - 1		1091
250	104.13	212.27 - 1172.55	212.27 - 1172.55	$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1P^\circ$	2 - 1		1091
10	104.67	742.94 - 1698.28	742.94 - 1698.28	$2s 2p^3 - 2p^4$	$^3D^\circ - ^1D$	3 - 2		1091
30	105.24	98.655 - 1048.86	98.655 - 1048.86	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^1D^\circ$	2 - 2		1091
200	107.89	98.655 - 1025.52	98.655 - 1025.52	$2s^2 2p^2 - 2s 2p^3$	$g^2P - ^3S^\circ$	2 - 1		1091
65	111.00	722.71 - 1623.65	722.71 - 1623.65	$2s 2p^3 - 2p^4$	$^3D^\circ - ^3P$	2 - 1		1091
35	111.01	723.09 - 1623.90	723.09 - 1623.90	$2s 2p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 0		1091
10	111.04	723.09 - 1623.65	723.09 - 1623.65	$2s 2p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 1		1091
10	116.70	0.0 - 856.91	0.0 - 856.91	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^\circ$	0 - 1		1091
50	119.12	333.06 - 1172.55	333.06 - 1172.55	$2s^2 2p^2 - 2s 2p^3$	$^1S - ^1P^\circ$	0 - 1		1091
250	119.54	212.27 - 1048.86	212.27 - 1048.86	$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1D^\circ$	2 - 2		1091
4	120.82	870.59 - 1698.28	870.59 - 1698.28	$2s 2p^3 - 2p^4$	$^3P^\circ - ^1D$	2 - 2		1091
80	121.49	722.71 - 1545.80	722.71 - 1545.80	$2s 2p^3 - 2p^4$	$^3D^\circ - ^3P$	2 - 2		1091
50	121.55	723.09 - 1545.80	723.09 - 1545.80	$2s 2p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 2		1091
110	123.30	59.583 - 870.59	59.583 - 870.59	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^\circ$	1 - 2		1091
110	124.56	742.94 - 1545.80	742.94 - 1545.80	$2s 2p^3 - 2p^4$	$^3D^\circ - ^3P$	3 - 2		1091
110	125.42	59.583 - 856.91	59.583 - 856.91	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^\circ$	1 - 1		1091
30	126.46	59.583 - 850.35	59.583 - 850.35	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^\circ$	1 - 0		1091
10	129.31	850.35 - 1623.65	850.35 - 1623.65	$2s 2p^3 - 2p^4$	$^3P^\circ - ^3P$	0 - 1		1091
200	129.55	98.655 - 870.59	98.655 - 870.59	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^\circ$	2 - 2		1091
10	130.38	856.91 - 1623.90	856.91 - 1623.90	$2s 2p^3 - 2p^4$	$^3P^\circ - ^3P$	1 - 0		1091
10	131.88	98.655 - 856.91	98.655 - 856.91	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^\circ$	2 - 1		1091
50	132.79	870.59 - 1623.65	870.59 - 1623.65	$2s 2p^3 - 2p^4$	$^3P^\circ - ^3P$	2 - 1		1091
30	135.06	1172.55 - 1912.96	1172.55 - 1912.96	$2s 2p^3 - 2p^4$	$^1P^\circ - ^1S$	1 - 0		1091
30	138.30	0.0 - 723.09	0.0 - 723.09	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^\circ$	0 - 1		1091
10	145.16	856.91 - 1545.80	856.91 - 1545.80	$2s 2p^3 - 2p^4$	$^3P^\circ - ^3P$	1 - 2		1091
4	148.10	870.59 - 1545.80	870.59 - 1545.80	$2s 2p^3 - 2p^4$	$^3P^\circ - ^3P$	2 - 2		1091
10	150.71	59.583 - 723.09	59.583 - 723.09	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^\circ$	1 - 1		1091
80	150.80	59.583 - 722.71	59.583 - 722.71	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^\circ$	1 - 2		1091
80	153.98	1048.86 - 1698.28	1048.86 - 1698.28	$2s 2p^3 - 2p^4$	$^1D^\circ - ^1D$	2 - 2		1091
50	155.21	98.655 - 742.94	98.655 - 742.94	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^\circ$	2 - 3		1091
10	167.12	1025.52 - 1623.90	1025.52 - 1623.90	$2s 2p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 0		1091
10	167.19	1025.52 - 1623.65	1025.52 - 1623.65	$2s 2p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 1		1091
4	190.23	1172.55 - 1698.28	1172.55 - 1698.28	$2s 2p^3 - 2p^4$	$^1P^\circ - ^1D$	1 - 2		1091
4	192.20	1025.52 - 1545.80	1025.52 - 1545.80	$2s 2p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 2		1091
		289.57	98.655 - 443.99	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^5S^\circ$	2 - 2	P	375,1091
		365.7	59.583 - 333.06	$2s^2 2p^2 - 2s^2 2p^2$	$g^3P - ^1S$	1 - 0	F,P	375,1091
		426.6	98.655 - 333.06	$2s^2 2p^2 - 2s^2 2p^2$	$g^3P - ^1S$	2 - 0	F,P	375,1091
		471.1	0.0 - 212.27	$2s^2 2p^2 - 2s^2 2p^2$	$g^3P - ^1D$	0 - 2	F,P	375,1091
		654.9	59.583 - 212.27	$2s^2 2p^2 - 2s^2 2p^2$	$g^3P - ^1D$	1 - 2	F,P	375,1091
		827.9	212.27 - 333.06	$2s^2 2p^2 - 2s^2 2p^2$	$^1D - ^1S$	2 - 0	F,P	375,1091
		880.2	98.655 - 212.27	$2s^2 2p^2 - 2s^2 2p^2$	$g^3P - ^1D$	2 - 2	F,P	375,1091
		1014.	0.0 - 98.655	$2s^2 2p^2 - 2s^2 2p^2$	$g^3P - g^3P$	0 - 2	F,P	375,1091
		1678.	0.0 - 59.583	$2s^2 2p^2 - 2s^2 2p^2$	$g^3P - g^3P$	0 - 1	F,P	375,1091

MANGANESE XXI (Mn²⁰⁺), Z = 25
 Ground State 1s²2s²2p(²P_{1/2}) (5 electrons)
 Ionization Potential [13 260 000] cm⁻¹; [1644] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
30	10.04		99.40 - 10063.+K	2s ² 2p - 2s ² 4s	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	P	375
	12.446		0.0 - 8034.7+F	2s ² 2p - 2s2p(³ P)3p	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	877
	12.496		99.40 - 8102.0+F	2s ² 2p - 2s2p(³ P)3p	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	877
	12.705		0.0 - 7870.9+F	2s ² 2p - 2s2p(³ P)3p	g ² P° - ² P	$\frac{1}{2} - \frac{1}{2}$	P	877
	12.742		687.52 - 8538.6	2s2p ² - 2s2p(¹ P)3d	² D - ² D°	$\frac{3}{2} - \frac{3}{2}$	Q	716,877
	12.860		704.21 - 8480.3+F	2s2p ² - 2s2p(¹ P)3d	² D - ² F°	$\frac{5}{2} - \frac{3}{2}$	P	877
	12.886		0.0 - 7760.4+F	2s ² 2p - 2s ² 3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	877
	12.973		470.70+L - 8179.0+F	2s2p ² - 2s2p(³ P)3d	⁴ P - ⁴ D°	$\frac{5}{2} - \frac{3}{2}$	P	877
	13.016		99.40 - 7782.3+F	2s ² 2p - 2s ² 3d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	877
	13.134		924.74 - 8538.6	2s2p ² - 2s2p(¹ P)3d	² P - ² D°	$\frac{3}{2} - \frac{3}{2}$	Q	716,877
0	13.167		704.21 - 8299.0+F	2s2p ² - 2s2p(³ P)3d	² D - ² F°	$\frac{5}{2} - \frac{3}{2}$	P	877
	13.241		687.52 - 8239.8+F	2s2p ² - 2s2p(³ P)3d	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$	P	877
	13.366		704.21 - 8185.9+F	2s2p ² - 2s2p(³ P)3d	² D - ² D°	$\frac{5}{2} - \frac{3}{2}$	P	877
	13.73		99.40 - 7384.+K	2s ² 2p - 2s ² 3s	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	P	375
	50	108.14	0.0 - 924.74	2s ² 2p - 2s2p ²	g ² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		1091
	10	109.78	0.0 - 910.90	2s ² 2p - 2s2p ²	g ² P° - ² P	$\frac{1}{2} - \frac{1}{2}$		1091
	10	115.69	470.70+L - 1335.1	2s2p ² - 2p ³	⁴ P - ² D°	$\frac{5}{2} - \frac{3}{2}$		1091
	300	120.50	687.52 - 1517.4	2s2p ² - 2p ³	² D - ² P°	$\frac{3}{2} - \frac{3}{2}$		1091
	250	121.16	99.40 - 924.74	2s ² 2p - 2s2p ²	g ² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		1091
	50	122.97	704.21 - 1517.4	2s2p ² - 2p ³	² D - ² P°	$\frac{3}{2} - \frac{3}{2}$		1091
110	123.23	99.40 - 910.90	2s ² 2p - 2s2p ²	g ² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		1091	
150	124.08	0.0 - 805.94	2s ² 2p - 2s2p ²	g ² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		1091	
80	125.35	379.71+L - 1177.5+L	2s2p ² - 2p ³	⁴ P - ⁴ S°	$\frac{3}{2} - \frac{3}{2}$		1091	
150	127.36	687.52 - 1472.7	2s2p ² - 2p ³	² D - ² P°	$\frac{3}{2} - \frac{1}{2}$		1091	
110	132.90	425.03+L - 1177.5+L	2s2p ² - 2p ³	⁴ P - ⁴ S°	$\frac{3}{2} - \frac{3}{2}$		1091	
10	140.55	805.94 - 1517.4	2s2p ² - 2p ³	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		1091	
110	141.49	470.70+L - 1177.5+L	2s2p ² - 2p ³	⁴ P - ⁴ S°	$\frac{5}{2} - \frac{3}{2}$		1091	
30	141.53	99.40 - 805.94	2s ² 2p - 2s2p ²	g ² P° - ² S	$\frac{3}{2} - \frac{3}{2}$		1091	
80	145.45	0.0 - 687.52	2s ² 2p - 2s2p ²	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		1091	
30	149.97	805.94 - 1472.7	2s2p ² - 2p ³	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		1091	
30	154.43	687.52 - 1335.1	2s2p ² - 2p ³	² D - ² D°	$\frac{3}{2} - \frac{5}{2}$		1091	
80	158.51	704.21 - 1335.1	2s2p ² - 2p ³	² D - ² D°	$\frac{5}{2} - \frac{3}{2}$		1091	
30	160.42	687.52 - 1310.9	2s2p ² - 2p ³	² D - ² D°	$\frac{3}{2} - \frac{3}{2}$		1091	
30	164.83	704.21 - 1310.9	2s2p ² - 2p ³	² D - ² D°	$\frac{5}{2} - \frac{3}{2}$		1091	
10	164.87	910.90 - 1517.4	2s2p ² - 2p ³	² P - ² P°	$\frac{1}{2} - \frac{3}{2}$		1091	
50	165.34	99.40 - 704.21	2s ² 2p - 2s2p ²	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		1091	
50	168.72	924.74 - 1517.4	2s2p ² - 2p ³	² P - ² P°	$\frac{3}{2} - \frac{3}{2}$		1091	
30	177.99	910.90 - 1472.7	2s2p ² - 2p ³	² P - ² P°	$\frac{1}{2} - \frac{3}{2}$		1091	
10	182.48	924.74 - 1472.7	2s2p ² - 2p ³	² P - ² P°	$\frac{3}{2} - \frac{1}{2}$		1091	
10	198.04	805.94 - 1310.9	2s2p ² - 2p ³	² S - ² D°	$\frac{1}{2} - \frac{3}{2}$		1091	
4	243.69	924.74 - 1335.1	2s2p ² - 2p ³	² P - ² D°	$\frac{3}{2} - \frac{3}{2}$		1091	
10	258.95	924.74 - 1310.9	2s2p ² - 2p ³	² P - ² D°	$\frac{3}{2} - \frac{3}{2}$		1091	

MANGANESE XXII (Mn²¹⁺), Z = 25
Ground State 1s²2s²(¹S₀) (4 electrons)
Ionization Potential [14 420 000] cm⁻¹; [1788] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	11.793	359.97 - 8840.9	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	1 - 2	Q	643
	70	11.876	359.97 - 8780.3	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	1 - 0		643
		11.899	437.29 - 8840.9	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	2 - 2	P	619
	30	11.906	437.29 - 8836.4	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ D	2 - 3		643
		11.959	333.34 - 8695.4	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ D	0 - 1	P	619
	10	11.971	0. - 8353.5	1s ² 2s ² - 1s ² 2s3p	g ¹ S - ¹ P°	0 - 1		643
	0	11.997	0. - 8335.4	1s ² 2s ² - 1s ² 2s3p	g ¹ S - ³ P°	0 - 1		643
	0	12.079	708.77 - 8987.6	1s ² 2s2p - 1s ² 2s3s	¹ P° - ¹ S	1 - 0		643
	120	12.172	708.77 - 8924.4	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ D	1 - 2		643
	30	12.336	333.34 - 8439.7	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	0 - 1		643
	50	12.368	359.97 - 8445.2	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	1 - 2		643
		12.385	967.94 - 9042.2	1s ² 2p ² - 1s ² 2p3d	³ P - ¹ P°	1 - 1	P	619
	10	12.427	708.77 - 8755.8	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ P	1 - 1		643
	20	12.447	1008.13 - 9042.2	1s ² 2p ² - 1s ² 2p3d	³ P - ¹ P°	2 - 1		643
	80	12.488	967.94 - 8975.6	1s ² 2p ² - 1s ² 2p3d	³ P - ³ P°	1 - 2		643
	0	12.507	437.29 - 8439.7	2s2p - 2s3d	³ P° - ³ D	2 - 1	Q	643
	80	12.553	1008.13 - 8974.4	1s ² 2p ² - 1s ² 2p3d	³ P - ³ P°	2 - 1		643
	80	12.580	1008.13 - 8957.3	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	2 - 3		643
	110	12.643	1125.66 - 9035.2	1s ² 2p ² - 1s ² 2p3d	¹ D - ¹ F°	2 - 3		877
	60	12.656	967.94 - 8869.3	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	1 - 1		643
	50	12.670	967.94 - 8860.6	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	1 - 2		643
	10	12.706						643
	20	12.738	1008.13 - 8860.6	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	2 - 2		643
		12.800	708.77 - 8521.2 + B	1s ² 2s2p - 1s ² 2s3d	¹ P° - ¹ D	1 - 2	P	619
	30	12.816	1125.66 - 8928.4	1s ² 2p ² - 1s ² 2p3d	¹ D - ¹ D°	2 - 2		643
	30	12.935	437.29 - 8168.3	1s ² 2s2p - 1s ² 2s3s	³ P° - ³ S	2 - 1		643
	20	13.199	1125.66 - 8702.0	1s ² 2p ² - 1s ² 2p3s	¹ D - ¹ P°	2 - 1		643
	300	141.09	0. - 708.77	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ¹ P°	0 - 1		1091
	30	145.27	437.29 - 1125.66	1s ² 2s2p - 1s ² 2p ²	³ P° - ¹ D	2 - 2		1091
	50	154.28	359.97 - 1008.13	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	1 - 2		1091
	50	157.58	333.34 - 967.94	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	0 - 1		1091
	50	159.33	708.77 - 1336.40	1s ² 2s2p - 1s ² 2p ²	¹ P° - ¹ S	1 - 0		1091
	30	164.48	359.97 - 967.94	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	1 - 1		1091
	80	175.18	437.29 - 1008.13	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	2 - 2		1091
	10	181.69	359.97 - 910.36	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	1 - 0		1091
	50	188.45	437.29 - 967.94	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	2 - 1		1091
	4	239.87	708.77 - 1125.66	1s ² 2s2p - 1s ² 2p ²	¹ P° - ¹ D	1 - 2		1091
	30	277.80	0. - 359.97	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ³ P°	0 - 1		730

MANGANESE XXIII (Mn²²⁺), Z = 25
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential 15 162 000 cm⁻¹; 1879.9 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		2.013	0. - 49677.	1s ² 2s - 1s(2s2p(¹ P°))	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	631
		6.925	0. - 14440.0	1s ² 2s - 1s ² 9p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.018	0. - 14249.0	1s ² 2s - 1s ² 8p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.110	374.68 - 14439.4	1s ² 2p - 1s ² 9d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.158	0. - 13970.0	1s ² 2s - 1s ² 7p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.164	483.28 - 14442.0	1s ² 2p - 1s ² 9d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	643

MN XXIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.208	374.68 - 14248.2	$1s^2 2p - 1s^2 8d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.263	483.28 - 14251.8	$1s^2 2p - 1s^2 8d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.355	374.68 - 13970.9	$1s^2 2p - 1s^2 7d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.387	0. - 13537.0	$1s^2 2s - 1s^2 6p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.413	483.28 - 13973.2	$1s^2 2p - 1s^2 7d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.595	374.68 - 13541.3	$1s^2 2p - 1s^2 6d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P	643
		7.656	483.28 - 13545.0	$1s^2 2p - 1s^2 6d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	P	643
		7.797	0. - 12825.0	$1s^2 2s - 1s^2 5p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		643
		8.029	374.68 - 12829.6	$1s^2 2p - 1s^2 5d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$		643
		8.090	483.28 - 12844.3	$1s^2 2p - 1s^2 5d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$		643
		8.689	0. - 11509.0	$1s^2 2s - 1s^2 4p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	977
		8.699	0. - 11495.4	$1s^2 2s - 1s^2 4p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	977
		8.968	374.68 - 11525.4	$1s^2 2p - 1s^2 4d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P	977
		9.025	374.68 - 11454.4	$1s^2 2p - 1s^2 4s$	$2P^\circ - 2S$	$\frac{1}{2} - \frac{1}{2}$	P	977
		9.053	483.28 - 11529.3	$1s^2 2p - 1s^2 4d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	P	977
		9.115	483.28 - 11454.4	$1s^2 2p - 1s^2 4s$	$2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$	P	977
		11.554	0. - 8655.23	$1s^2 2s - 1s^2 3p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	977
		11.597	0. - 8622.89	$1s^2 2s - 1s^2 3p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	977
		12.018	374.68 - 8695.53	$1s^2 2p - 1s^2 3d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P	977
	20	12.162	483.28 - 8705.61	$1s^2 2p - 1s^2 3d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	P	977,273
	20	12.274	374.68 - 8522.27	$1s^2 2p - 1s^2 3s$	$2P^\circ - 2S$	$\frac{1}{2} - \frac{1}{2}$	P	977,273
	200	12.439	483.28 - 8522.27	$1s^2 2p - 1s^2 3s$	$2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$	P	977,273
	50	206.921	0. - 483.28	$1s^2 2s - 1s^2 2p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	977,730
	50	266.896	0. - 374.68	$1s^2 2s - 1s^2 2p$	$g^2 S - 2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	977,730

MANGANESE XXIV (Mn^{23+}), $Z = 25$
Ground State $1s^2(^1S_0)$ (2 electrons)
Ionization Potential 65 664 000 cm^{-1} ; 8141.35 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1.584	0. - 63130.83	$1s^2 - 1s 5p$	$g^1 S - 1P^\circ$	0 - 1	P	918
		1.621	0. - 61705.38	$1s^2 - 1s 4p$	$g^1 S - 1P^\circ$	0 - 1	P	918
		1.706	0. - 58627.07	$1s^2 - 1s 3p$	$g^1 S - 1P^\circ$	0 - 1	P	918
	1	2.006	0. - 49853.12	$1s^2 - 1s 2p$	$g^1 S - 1P^\circ$	0 - 1	P	918,856
		2.016	0. - 49614.12	$1s^2 - 1s 2p$	$g^1 S - 3P^\circ$	0 - 1	P	918
		2.025	0. - 49375.97	$1s^2 - 1s 2s$	$g^1 S - 3S$	0 - 1	F,P	631,918
		10.855	49375.97 - 58588.49	$1s 2s - 1s 3p$	$3S - 3P^\circ$	1 - 2	P	918
		10.889	49375.97 - 58559.26	$1s 2s - 1s 3p$	$3S - 3P^\circ$	1 - 1	P	918
		11.099	49617.32 - 58627.07	$1s 2s - 1s 3p$	$1S - 1P^\circ$	0 - 1	P	918
		298.25	49375.97 - 49711.26	$1s 2s - 1s 2p$	$3S - 3P^\circ$	1 - 2	P	918
		419.90	49375.97 - 49614.12	$1s 2s - 1s 2p$	$3S - 3P^\circ$	1 - 1	P	918
		424.09	49617.32 - 49853.12	$1s 2s - 1s 2p$	$1S - 1P^\circ$	0 - 1	P	918
		1053.63	58493.58 - 58588.49	$1s 3s - 1s 3p$	$3S - 3P^\circ$	1 - 2	P	918
		1433.28	58557.30 - 58627.07	$1s 3s - 1s 3p$	$1S - 1P^\circ$	0 - 1	P	918
		1522.53	58493.58 - 58559.26	$1s 3s - 1s 3p$	$3S - 3P^\circ$	1 - 1	P	918

MANGANESE XXV (Mn²⁴⁺), Z = 25
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 69 136 800 cm⁻¹; 8571.94 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.506	0.0 - 66386.9903	1s - 5p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.542	0.0 - 64839.0610	1s - 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.626	0.0 - 61495.0590	1s - 3p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.925	0.0 - 51954.8900	1s - 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.930	0.0 - 51808.8900	1s - 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	1042
		6.862	51813.0100 - 66386.9903	2s - 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		6.928	51954.8900 - 66390.0437	2p - 5d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042
		7.677	51813.0100 - 64839.0610	2s - 4p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		7.758	51954.8900 - 64845.0244	2p - 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042
		10.328	51813.0100 - 61495.0590	2s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		10.466	51954.8900 - 61509.1865	2p - 3d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042
		20.268	61453.0100 - 66386.9903	3s - 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		20.429	61495.0590 - 66390.0437	3p - 5d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042
		20.482	61509.1865 - 66391.5681	3d - 5f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$	P	1042
		29.533	61453.0100 - 64839.0610	3s - 4p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		29.851	61495.0590 - 64845.0244	3p - 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042
		29.951	61509.1865 - 64848.0007	3d - 4f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$	P	1042
		704.821	51813.0100 - 51954.8900	2s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042

IRON, Z = 26
 Unclassified Lines

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1.8283						1059
		1.8309						1059
		1.8344						1059
		1.8389						1059
		1.8424						1059
	5	6.725						643
	15	7.106						643
	9	7.143						643
	16	7.210						643
	14	7.230						643
	15	7.277						643
	19	7.355						643
	15	7.612						643
	28	7.901						643
	23	8.082						643
	20	8.118						643
	21	8.167						643
	14	8.240						643
	15	8.334						643
	15	8.348						643
	23	8.406						643
	20	8.439						643
	21	8.452						643
	14	8.494						643
	17	8.510						643
	26	8.543						643
	17	8.563						643
	29	8.583						643
	23	8.714						643
	10	8.797						643
	16	8.807						643
	20	8.823						643
	18	8.850						643
	16	8.900						643
	15	8.908						643
	22	8.915						643
	16	8.921						643
	19	8.946						643
	21	9.022						643
	17	9.042						643
	28	9.120						643
	24	9.129						643
	40	9.145						643
	31	9.155						643
	34	9.248						643
	18	9.271						643
	22	9.287						643
	32	9.380						643
	22	9.401						643
	31	9.486						643
	0	9.507						643
	0	9.568						643
	11	9.619						643
	28	9.644						643

FE UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	206.180						856
	30	206.264						856
	40	207.124						856
	30	207.935						856
	300	210.03						256
	300	210.40						256
	200	210.67						256
	30	220.882						856
	200	222.189						365
	200	223.870						365
	30	225.867						856
	30	228.057						856
	40	249.389						856
	40	256.919						856
		1249.20						593
	4	1370.11						089
	1	1428.84						089
	7	1440.63						089
	40	1544.90						089
	10	1553.77						089
	0	1574.12						816
	10	1667.95						089
	100	1681.05						089
	100	1731.77						089
	20	1734.54						089
	20	1737.83						089
	20	1740.14						089
	20	1766.36						089
	15	1777.35						089
	15	1779.35						089
	15	1814.06						089
	0	1839.65						816
	40	1842.97						089
	2	1872.65						816
	0	1875.14						816
	1	1878.06						816
	0	1878.20						816
	70	1878.31						089
	2	1879.86						816
	2	1884.73						816
	150	1888.03						089
	150	1901.71						089
	0	1958.84						816

IRON I (Fe⁰⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p⁶3d⁶4s²(⁵D₄) (26 electrons)
Ionization Potential 63 480 cm⁻¹; 7.870 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References	
41	0	1737.63	0. - 57.550000	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s4p(³ P°)	ga ⁵ D - t ³ F°	4 - 4	Q	816,375	
	0	1761.08	0. - 56.783317	3d ⁶ 4s ² - 3d ⁶ (a ¹ G)4s4p(³ P°)	ga ⁵ D - u ³ F°	4 - 3	Q	816,375	
	0	1851.39	0. - 54.013747	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s4p(³ P°)	ga ⁵ D - t ³ F°	4 - 5	Q	816,375	
	100	1855.58	0. - 53.891520	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s4p(³ P°)	ga ⁵ D - t ³ D°	4 - 3		605	
	0	1856.21	.415932 - 54.28909	3d ⁶ 4s ² -	ga ⁵ D - 22°	3 - 3	Q	816,375	
	40	1859.26	0. - 53.78474	3d ⁶ 4s ² -	ga ⁵ D - 20°	4 - 3		378	
39	100	1862.318	.415932 - 54.112218	3d ⁶ 4s ² - 3d ⁶ (a ³ P)4s4p(³ P°)	ga ⁵ D - t ³ P°	3 - 2		292	
40	10	1863.54	0. - 53.66109	3d ⁶ 4s ² - 3d ⁷ (a ² D)4p	ga ⁵ D - y ¹ F°	4 - 3		605	
	300	1865.30	0. - 53.61044	3d ⁶ 4s ² -	ga ⁵ D - 17°	4 - 4		378	
42	80	1866.07	.415932 - 54.00478	3d ⁶ 4s ² - 3d ⁶ (a ³ P)4s4p(³ P°)	ga ⁵ D - t ³ P°	3 - 3		605	
39	40	1866.815	.704004 - 54.271057	3d ⁶ 4s ² - 3d ⁶ (a ³ P)4s4p(³ P°)	ga ⁵ D - t ³ P°	2 - 1		292	
	0	1870.36	.415932 - 53.88191	3d ⁶ 4s ² -	ga ⁵ D - 21°	3 - 4	Q	816,375	
39	160	1872.359	.704004 - 54.112218	3d ⁶ 4s ² - 3d ⁶ (a ³ P)4s4p(³ P°)	ga ⁵ D - t ³ P°	2 - 2		292	
	160	1873.052	0. - 53.38868	3d ⁶ 4s ² -	ga ⁵ D - 27°	4 - 3		292	
39	100	1873.259	.888129 - 54.271057	3d ⁶ 4s ² - 3d ⁶ (a ³ P)4s4p(³ P°)	ga ⁵ D - t ³ P°	1 - 1		292	
39	40	1876.419	.978072 - 54.271057	3d ⁶ 4s ² - 3d ⁶ (a ³ P)4s4p(³ P°)	ga ⁵ D - t ³ P°	0 - 1		292	
39	20	1878.849	.888129 - 54.112218	3d ⁶ 4s ² - 3d ⁶ (a ³ P)4s4p(³ P°)	ga ⁵ D - t ³ P°	1 - 2		292	
41	35	1880.14	.704004 - 53.891520	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s4p(³ P°)	ga ⁵ D - t ³ D°	2 - 3		605	
		40	1883.91	.704004 - 53.78474	3d ⁶ 4s ² -	ga ⁵ D - 20°	2 - 3		378
40	300	1887.761	.415932 - 53.38868	3d ⁶ 4s ² -	ga ⁵ D - 27°	3 - 3		292	
		80	1888.32	.704004 - 53.66109	3d ⁶ 4s ² - 3d ⁷ (a ² D)4p	ga ⁵ D - y ¹ F°	2 - 3		605
40	200	1891.74	.888129 - 53.74939	3d ⁶ 4s ² -	ga ⁵ D - 19°	1 - 2		378	
		20	1899.21	.704004 - 53.35753	3d ⁶ 4s ² -	ga ⁵ D - 16°	2 - 3		378
38	20	1903.39	.415932 - 52.95368	3d ⁶ 4s ² -	ga ⁵ D - s ³ D°	3 - 3	P	605	
37	0	1910.53	.888129 - 53.229942	3d ⁶ 4s ² - 3d ⁷ (a ² D)4p	ga ⁵ D - t ³ D°	1 - 1	Q	816,375	
	500	1934.528	0. - 51.691935	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	4 - 3		292	
	35	500	1937.274	0. - 51.619069	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	4 - 3		292
	37	500	1940.649	.415932 - 51.944774	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	3 - 2		292
	35	200	1945.090	.415932 - 51.827401	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	3 - 2	P	292
	37	400	1945.274	.704004 - 52.110587	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	2 - 1	P	292
35	40	1946.219	0. - 51.381455	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	4 - 4		292	
36	600	1946.983	0. - 51.361394	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	4 - 3		795,292	
37	500	1950.223	.415932 - 51.691935	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	3 - 3		292	
35	500	1951.571	.704004 - 51.944774	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	2 - 2	P	292	
37	500	1952.262	.888129 - 52.110587	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	1 - 1		292	
36	500	1952.579	.415932 - 51.63007	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	3 - 2		795,292	
35	500	1953.001	.415932 - 51.619069	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	3 - 3		795,292	
36	400	1955.690	.704004 - 51.83687	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	2 - 1		292	
35	500	1956.052	.704004 - 51.827401	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	2 - 2	P	292	
36	600	1957.838	0. - 51.076626	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	4 - 4		795,292	
37	600	1958.598	.888129 - 51.944774	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	1 - 2		292	
36	300	1958.724	.888129 - 51.941786	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	1 - 0	P	292	
35	600	1960.139	0. - 51.016658	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	4 - 5		795,292	
37	500	1961.236	.704004 - 51.691935	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ P°	2 - 3		292	
35	500	1962.031	.978072 - 51.945805	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	0 - 1		292	
35	600	1962.107	.415932 - 51.381455	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	3 - 4		292	
36	10	1962.746	.888129 - 51.83687	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	1 - 1		292	
36	400	1962.871	.415932 - 51.361394	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	3 - 3		292	
35	500	1963.110	.888129 - 51.827401	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	1 - 2		292	
35	200	1963.629	.704004 - 51.63007	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	2 - 2		292	
35	400	1964.043	.704004 - 51.619069	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - u ³ F°	2 - 3		292	
36	10	1970.771	.888129 - 51.63007	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	1 - 2		292	
36	20	1973.911	.415932 - 51.076626	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	3 - 4		292	
36	20	1974.059	.704004 - 51.361394	3d ⁶ 4s ² - 3d ⁶ (a ³ D)4s(a ⁶ D)5p	ga ⁵ D - t ³ D°	2 - 3		292	

IRON II (Fe¹⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p⁶3d⁶4s(⁶D_{9/2}) (25 electrons)
Ionization Potential 130 563 cm⁻¹; 16.188 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
31	1	896.504	.384790 - 111.9290	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 29°	2 - 5		292
31	0	898.776	.667683 - 111.9290	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 29°	2 - 5		292
31	5	900.360	.862613 - 111.9290	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 29°	2 - 5		292
	1	918.118	.862613 - 109.7800	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 28°	3 - 3		292
	0	919.095	.977053 - 109.7800	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 28°	1 - 2		292
28	2	923.880	0. - 108.2392	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 24°	2 - 2		749
30	2	924.970	.667683 - 108.7800	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 27°	5 - 1		292
25	5	926.215	0. - 107.9647	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 21°	2 - 2		749
30	1	926.618	.862613 - 108.7800	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 27°	3 - 3		292
24	2	926.900	0. - 107.8866	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 20°	2 - 2		292
28	2	927.178	.384790 - 108.2392	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 24°	2 - 2		749
30	1	927.632	.977053 - 108.7800	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 27°	1 - 2		292
26	1	928.107	.384790 - 108.1306	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 22°	2 - 5		292
29	2	928.470	.667683 - 108.3717	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 25°	5 - 3		292
25	1	929.538	.384790 - 107.9647	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 21°	2 - 2		292
28	1	929.612	.667683 - 108.2392	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 24°	2 - 2		292
27	1	930.030	.667683 - 108.1916	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 23°	5 - 3		292
29	1	930.165	.862613 - 108.3717	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 25°	2 - 2		292
24	1	930.219	.384790 - 107.8866	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 20°	2 - 2		292
26	1	930.558	.667683 - 108.1306	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 22°	5 - 5		292
29	2	931.142	.977053 - 108.3717	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 25°	2 - 2		292
27	1	931.709	.862613 - 108.1916	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 23°	3 - 3		292
26	0	932.244	.862613 - 108.1306	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 22°	2 - 2		292
27	0	932.687	.977053 - 108.1916	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 23°	1 - 2		292
22	0	935.783	0. - 106.8632	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 16°	2 - 2		292
23	1	936.484	.384790 - 107.1656	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 17°	2 - 2		292
23	1	938.967	.667683 - 107.1656	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 17°	5 - 5		292
22	2	939.159	.384790 - 106.8632	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 16°	2 - 2		292
22	1	941.660	.667683 - 106.8632	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 16°	2 - 2		292
56	0	942.589	1.872567 - 107.9647	3d ⁷ -	a ⁴ F - 21°	2 - 2		292
55	1	943.267	1.872567 - 107.8866	3d ⁷ -	a ⁴ F - 20°	2 - 2		292
58	2	943.910	2.837950 - 108.7800	3d ⁷ -	a ⁴ F - 27°	5 - 3		292
57	3	945.095	2.430097 - 108.2392	3d ⁷ -	a ⁴ F - 24°	2 - 2		292
	0	946.051	2.430097 - 108.1306	3d ⁷ -	a ⁴ F - 22°	2 - 2		292
	0	947.564	2.430097 - 107.9647	3d ⁷ -	a ⁴ F - 21°	2 - 2		292
53	1	952.470	1.872567 - 106.8632	3d ⁷ -	a ⁴ F - 16°	2 - 2		292
	0	954.496	2.430097 - 107.1962	3d ⁷ -	a ⁴ F - 18°	2 - 2		292
	0	954.786	2.430097 - 107.1656	3d ⁷ -	a ⁴ F - 17°	2 - 2		292
77	1	995.829	7.955299 - 108.3738	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 26°	2 - 2		292
	0	999.003	8.680454 - 108.7800	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 27°	3 - 3		292
77	0	1000.183	8.391938 - 108.3738	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 26°	5 - 2		292
	0	1000.665	8.846768 - 108.7800	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 27°	2 - 2		292
	0	1005.082	8.391938 - 107.8866	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 20°	5 - 2		292
76	2	1007.657	7.955299 - 107.1962	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 18°	2 - 2		292
75	3	1007.975	7.955299 - 107.1656	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 17°	2 - 2		292
74	3	1011.037	7.955299 - 106.8632	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 16°	2 - 2		292
76	2	1012.088	8.391938 - 107.1962	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 18°	2 - 2		292
75	25	1012.417	8.391938 - 107.1656	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 17°	5 - 2		292
76	1	1015.083	.384790 - 98.89871	3d ⁶ (a ⁵ D)4s - 3d ⁶ (b ¹ G)4p	ga ⁶ D - 2F°	2 - 2		292
74	2	1015.520	8.391938 - 106.8632	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 16°	5 - 2		292
	1	1038.370	13.474411 - 109.7800	3d ⁷ -	a ⁴ P - 28°	3 - 3		292
	5	1055.262	0. - 94.763219	3d ⁶ (a ⁵ D)4s - 3d ⁵ (a ⁴ D)4s4p(³ P°)	ga ⁶ D - 6P°	2 - 2	P	749
	5	1059.564	.384790 - 94.763219	3d ⁶ (a ⁵ D)4s - 3d ⁵ (a ⁴ D)4s4p(³ P°)	ga ⁶ D - 6P°	2 - 2	P	749
	5	1060.442	.384790 - 94.68509	3d ⁶ (a ⁵ D)4s - 3d ⁵ (a ⁴ D)4s4p(³ P°)	ga ⁶ D - 6P°	2 - 2	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1062.152	0. - 94.148518	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - w^4G^o$	2 0		P 749
	2	1062.750	.667683 - 94.763219	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6P^o$	2 0		P 749
	2	1063.021	.667683 - 94.73917	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^4P^o$	2 0		P 749
	5	1063.176	0. - 94.057773	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	1	1063.625	.862613 - 94.88074	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^4P^o$	2 0		P 749
	1	1063.633	.667683 - 94.68509	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6P^o$	2 0		P 749
	1	1063.972	0. - 93.987457	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	0	1064.921	.977053 - 94.88074	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^4P^o$	2 0		P 749
	2	1065.843	.862613 - 94.68509	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6P^o$	2 0		P 749
	5	1066.529	.977053 - 94.73917	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^4P^o$	2 0		P 749
	5	1067.544	.384790 - 94.057773	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	5	1068.346	.384790 - 93.987457	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	1	1070.135	.384790 - 93.830979	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	2	1071.247	.862613 - 94.211739	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^4P^o$	2 0		P 749
	5	1071.584	.667683 - 93.987457	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	2	1073.321	.862613 - 94.031378	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	2	1073.384	.667683 - 93.830979	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	0	1074.641	.977053 - 94.031378	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	2	1075.635	.862613 - 93.830979	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	1	1076.852	.977053 - 93.84034	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6D^o$	2 0		P 749
	30	1081.875	0. - 92.432136	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
	1	1083.420	0. - 92.300277	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
	0	1086.458	.384790 - 92.42698	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - v^4F^o$	2 0		P 749
	10	1087.956	.384790 - 92.300277	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
	5	1089.688	.384790 - 92.154165	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
	1	1091.523	1.872567 - 93.48765	$3d^7 - 3d^6(b^3F)4p$	$a^4F - u^4F^o$	2 0		P 749
	1	1091.560	1.872567 - 93.48458	$3d^7 - 3d^6(b^3F)4p$	$a^4F - u^4F^o$	2 0		P 749
	2	1093.058	.667683 - 92.154165	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
	2	1094.678	.667683 - 92.018729	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
	1	1095.802	1.872567 - 93.12990	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4D^o$	2 0		P 749
	1	1095.911	.667683 - 91.915950	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
18	5	1096.607	.384790 - 91.575139	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
18	1	1096.782	.667683 - 91.843470	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
18	30	1096.877	0. - 91.167937	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
	1	1097.019	.862613 - 92.018729	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
	4	1098.244	2.430097 - 93.48458	$3d^7 - 3d^6(b^3F)4p$	$a^4F - u^4F^o$	2 0		P 749
	1	1098.257	.862613 - 91.915950	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
18	2	1099.132	.862613 - 91.843470	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
	0	1099.321	2.430097 - 93.39536	$3d^7 - 3d^6(b^3F)4p$	$a^4F - u^4F^o$	2 0		P 749
	0	1099.639	.977053 - 91.915950	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
18	5	1100.020	.667683 - 91.575139	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
	1	1100.429	.977053 - 91.850722	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$ga^6D - ^6F^o$	2 0		P 749
18	1	1100.517	.977053 - 91.843470	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
18	2	1101.526	.384790 - 91.167937	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
18	0	1102.384	.862613 - 91.575139	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
	0	1102.538	2.430097 - 93.12990	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4D^o$	2 0		P 749
	1	1102.71	.384790 - 91.070547	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^4F^o$	2 0		P 292
	1	1104.272	2.837950 - 93.39536	$3d^7 - 3d^6(b^3F)4p$	$a^4F - u^4F^o$	2 0		P 749
18	0	1104.969	.667683 - 91.167937	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6P^o$	2 0		P 749
	0	1105.350	2.430097 - 92.89950	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4D^o$	2 0		P 749
	2	1105.754	7.955299 - 98.39133	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4D - ^4D^o$	2 0		P 749
	2	1106.203	7.955299 - 98.35466	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4D - ^4F^o$	2 0		P 749
	5	1106.362	0. - 90.386528	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$ga^6D - ^4F^o$	2 0		P 292
	1	1107.430	1.872567 - 92.171716	$3d^7 - 3d^6(b^3F)4p$	$a^4F - u^2G^o$	2 0		P 749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
	1	1108.512	3.117461 - 93.32848	$3d^7 - 3d^6(b^3F)4p$	$a^4F - u^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	1	1109.716	8.391938 - 98.50510	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	0	1110.005	8.680454 - 98.77014	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	1	1111.119	8.391938 - 98.39133	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	30	1112.048	0. - 89.924175	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$	P	749	
	35	1112.086	.977053 - 90.898873	$3d^6(a^5D)4s - 3d^6(b^3P)4p$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$		488	
	0	1112.937	2.430097 - 92.28246	$3d^7 - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4F - v^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749	
	0	1113.467	2.837950 - 92.64751	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	0	1115.044	.384790 - 90.067347	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6F^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	0	1115.349	.384790 - 90.042779	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$ga^6D - ^4G^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	0	1115.661	.667683 - 90.300625	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6F^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	0	1118.116	2.837950 - 92.27412	$3d^7 - 3d^6(b^3P)4p$	$a^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	0	1119.204	8.846768 - 98.19600	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^4D - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	1	1119.370	3.117461 - 92.45346	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	1	1120.559	3.117461 - 92.35861	$3d^7 - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4F - v^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	40	1121.975	0. - 89.128561	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	30	1122.843	.384790 - 89.444458	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{5}{2}$	P	749	
	10	1124.123	.667683 - 89.625940	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	30	1125.448	0. - 88.853533	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6D^\circ$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	20	1126.421	.667683 - 89.444458	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{5}{2}$	P	749	
	20	1126.591	.862613 - 89.625940	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	20	1126.840	.384790 - 89.128561	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	20	1126.955	.384790 - 89.119457	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6D^\circ$	$\frac{1}{2} - \frac{5}{2}$	P	749	
	5	1127.098	0. - 88.723400	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	10	1127.860	.667683 - 89.331195	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6D^\circ$	$\frac{5}{2} - \frac{3}{2}$	P	749	
	40	1128.046	.977053 - 89.625940	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	5	1128.180	2.430097 - 91.070547	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4F^\circ$	$\frac{1}{2} - \frac{5}{2}$	Q	292	
	1	1128.557	.862613 - 89.471365	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	20	1128.899	.862613 - 89.444458	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	5	1129.621	1.872567 - 90.397868	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$	P	749	
	1	1129.765	1.872567 - 90.386528	$3d^7 - 3d^6(a^5D)4p$	$a^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$	P	749	
	30	1130.443	.667683 - 89.128561	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6P^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	0	1130.560	.667683 - 89.119457	$3d^6(a^5D)4s - 3d^6(a^5D)5p$	$ga^6D - ^6D^\circ$	$\frac{1}{2} - \frac{5}{2}$	P	749	
	0	1130.863	1.872567 - 90.300625	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^6F^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	2	1131.594	2.837950 - 91.208887	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	1	1132.001	1.872567 - 90.211700	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4G^\circ$	$\frac{1}{2} - \frac{11}{2}$	P	749	
	40	1133.405	.384790 - 88.61452	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6D^\circ$	$\frac{7}{2} - \frac{9}{2}$	P	749	
	5	1133.654	2.837950 - 91.048256	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	20	1133.665	0. - 88.20945	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6D^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	15	1133.675	2.430097 - 90.638822	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4D^\circ$	$\frac{1}{2} - \frac{5}{2}$	P	749	
	0	1134.170	1.872567 - 90.042779	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4G^\circ$	$\frac{1}{2} - \frac{9}{2}$	P	749	
	1	1135.302	3.117461 - 91.199746	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	0	1135.548	2.837950 - 90.901124	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749	
	1	1135.577	2.837950 - 90.898873	$3d^7 - 3d^6(b^3P)4p$	$a^4F - ^4P^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	0	1136.780	2.430097 - 90.397868	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4D^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	0	1137.258	3.117461 - 91.048256	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	0	1137.681	21.251608 - 109.14968	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^\circ)$	$a^4H - ^2I^\circ$	$\frac{1}{2} - \frac{11}{2}$	P	749	
	0	1138.038	2.430097 - 90.300625	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^6F^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	40	1138.632	.384790 - 88.20945	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749	
	1	1138.941	2.837950 - 90.638822	$3d^7 - 3d^6(a^5D)5p$	$a^4F - ^4D^\circ$	$\frac{1}{2} - \frac{5}{2}$	P	749	
	20	1142.312	.667683 - 88.20945	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$ga^6D - ^6D^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749	
	10	20	1142.366	0. - 87.537652	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$ga^6D - y^6F^\circ$	$\frac{1}{2} - \frac{7}{2}$	P	749
	10	90	1143.226	0. - 87.471765	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$ga^6D - y^6F^\circ$	$\frac{1}{2} - \frac{9}{2}$	P	749
	156	5	1144.052	20.830582 - 108.2392	$3d^6(a^3P)4s -$	$b^4P - 24^\circ$	$\frac{1}{2} - \frac{7}{2}$		488

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10	40	1144.273	.667683 - 88.05938	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	110	1144.939	0. - 87.340983	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1145.515	.667683 - 87.96465	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1146.364	21.251608 - 108.48387	$3d^6(a^3H)4s - 3d^5(a^2G)4s4p(^1P^o)$	$a^4H - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	20	1146.831	.862613 - 88.05938	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	20	1146.952	.384790 - 87.572431	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	55	1147.409	.384790 - 87.537652	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1147.576	21.430359 - 108.57056	$3d^6(a^3H)4s - 3d^5(a^2G)4s4p(^1P^o)$	$a^4H - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	40	1148.079	.862613 - 87.96465	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	90	1148.277	.384790 - 87.471765	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1148.719	21.430359 - 108.48387	$3d^6(a^3H)4s - 3d^5(a^2G)4s4p(^1P^o)$	$a^4H - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	1	1148.733	2.837950 - 89.890373	$3d^7 - 3d^6(b^3F)4p$	$a^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	1	1148.772	21.581638 - 108.63109	$3d^6(a^3H)4s - 3d^5(a^2G)4s4p(^1P^o)$	$a^4H - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1148.956	.862613 - 87.89812	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	20	1149.589	.977053 - 87.96465	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	10	1150.290	.667683 - 87.60225	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	30	1150.469	.977053 - 87.89812	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	30	1150.685	.667683 - 87.572431	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	70	1151.146	.667683 - 87.537652	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1152.428	.862613 - 87.63592	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1152.875	.862613 - 87.60225	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	20	1153.272	.862613 - 87.572431	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1153.950	.977053 - 87.63592	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$ga^6D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	5	1154.399	.977053 - 87.60225	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$ga^6D - y^6F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
157	2	1155.273	21.812055 - 108.3717	$3d^6(a^3P)4s -$	$b^4P - 25^o$	$\frac{3}{2} - \frac{3}{2}$		488
	2	1156.575	23.317633 - 109.7800	$3d^54s^2 -$	$a^6S - 28^o$	$\frac{3}{2} - \frac{3}{2}$		292
	1	1158.115	8.391938 - 94.73917	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1159.334	7.955299 - 94.211739	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1160.089	8.680454 - 94.88074	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1162.332	8.846768 - 94.88074	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1164.474	7.955299 - 93.830979	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1165.232	8.391938 - 94.211739	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1166.042	22.810357 - 108.57056	$3d^6(a^3F)4s - 3d^5(a^2G)4s4p(^1P^o)$	$b^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1166.974	22.939358 - 108.63109	$3d^6(a^3F)4s - 3d^5(a^2G)4s4p(^1P^o)$	$b^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1168.252	23.031300 - 108.62925	$3d^6(a^3F)4s - 3d^5(a^2G)4s4p(^1P^o)$	$b^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1168.552	21.430359 - 107.00635	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1169.190	7.955299 - 93.48458	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$a^4D - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1170.297	8.391938 - 93.84034	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1171.633	8.680454 - 94.031378	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1173.921	8.846768 - 94.031378	$3d^6(a^5D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
0	1174.059	7.955299 - 93.12990	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$a^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1175.699	23.317633 - 108.3738	$3d^54s^2 -$	$a^6S - 26^o$	$\frac{3}{2} - \frac{3}{2}$		292	
1	1180.109	8.391938 - 93.12990	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$a^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
2	1180.430	8.680454 - 93.39536	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$a^4D - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1181.362	8.680454 - 93.32848	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$a^4D - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1181.891	1.872567 - 86.48275	$3d^7 - 3d^6(a^1F)4p$	$a^4F - u^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1183.438	2.430097 - 86.929649	$3d^7 - 3d^6(b^3P)4p$	$a^4F - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
10	1183.829	7.955299 - 92.42698	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
2	1185.712	2.430097 - 86.767577	$3d^7 - 3d^6(b^3P)4p$	$a^4F - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1185.857	7.955299 - 92.28246	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
10	1187.417	7.955299 - 92.171716	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$a^4D - u^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
0	1187.705	22.810357 - 107.00635	$3d^6(a^3F)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^4F - ^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1188.815	2.430097 - 86.54749	$3d^7 - 3d^6(a^1F)4p$	$a^4F - u^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
0	1189.726	22.637205 - 106.69017	$3d^6(a^3F)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^4F - ^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	1191.356		8.391938 - 92.32989	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1191.474		2.837950 - 86.767577	$3d^7 - 3d^6(b^3P)4p$	$a^4F - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	1192.030		8.391938 - 92.28246	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1192.148		8.391938 - 92.27412	$3d^6(a^5D)4s - 3d^6(b^3P)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1194.657		2.837950 - 86.543974	$3d^7 - 3d^6(b^3P)4p$	$a^4F - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1195.055		8.680454 - 92.35861	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1195.465		8.680454 - 92.32989	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1196.263		8.680454 - 92.27412	$3d^6(a^5D)4s - 3d^6(b^3P)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1196.671		21.251608 - 104.81680	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
1	1197.435		8.846768 - 92.35861	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4D - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1197.498		21.430359 - 104.93780	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
0	1198.064		8.846768 - 92.314758	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1198.087		25.805328 - 109.27171	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^2I^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
1	1198.366		21.581638 - 105.02860	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
0	1198.660		3.117461 - 86.543974	$3d^7 - 3d^6(b^3P)4p$	$a^4F - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
55	1198.931		21.251608 - 104.65926	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{13}{2} - \frac{13}{2}$	P	749
40	1199.236		21.430359 - 104.81680	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
20	1199.671		21.581638 - 104.93780	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
20	1200.240		21.711917 - 105.02860	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1201.415		21.581638 - 104.81680	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{7}{2} - \frac{11}{2}$	P	749
1	1201.506		21.430359 - 104.65926	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$	P	749
0	1201.549		21.711917 - 104.93780	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4H^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
2	1202.591							749
5	1204.035		15.84465 - 98.89871	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$	P	749
2	1205.117		26.170181 - 109.14968	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^2H - ^2I^o$	$\frac{11}{2} - \frac{13}{2}$	P	749
2	1205.997		26.352766 - 109.27171	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^2H - ^2I^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
1	1207.360		7.955299 - 90.780621	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1207.898							749
1	1208.237		25.805328 - 108.57056	$3d^6(a^3G)4s - 3d^5(a^2G)4s4p(^1P^o)$	$a^4G - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
1	1209.431		7.955299 - 90.638822	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1209.929		25.981629 - 108.63109	$3d^6(a^3G)4s - 3d^5(a^2G)4s4p(^1P^o)$	$a^4G - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1211.986		8.391938 - 90.901124	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1212.966		7.955299 - 90.397868	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
20	1213.149		7.955299 - 90.386528	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		292
2	1213.738		8.680454 - 91.070547	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
3	1213.759		8.391938 - 90.780621	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1214.150		8.846768 - 91.208887	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
1	1214.398		7.955299 - 90.300625	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1217.848		7.955299 - 90.067347	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
0	1218.088		8.391938 - 90.487810	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1218.231		7.955299 - 90.042779	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$a^4D - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	Q	749
30	1219.802		21.251608 - 103.2321	$3d^6(a^3H)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4H - ^4I^o$	$\frac{13}{2} - \frac{15}{2}$	P	749
1	1220.872		8.391938 - 90.300625	$3d^6(a^5D)4s - 3d^6(a^3D)5p$	$a^4D - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
40	1224.132		21.430359 - 103.1209	$3d^6(a^3H)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4H - ^4I^o$	$\frac{11}{2} - \frac{13}{2}$	P	749
20	1225.497		21.251608 - 102.8512	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4K^o$	$\frac{13}{2} - \frac{15}{2}$	P	749
20	1228.521		21.581638 - 102.9803	$3d^6(a^3H)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4H - ^4I^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
1	1230.597		25.428784 - 106.69017	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
10	1230.927		21.711917 - 102.9515	$3d^6(a^3H)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4H - ^4I^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
10	1233.661		21.430359 - 102.4899	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4K^o$	$\frac{11}{2} - \frac{13}{2}$	P	749
5	1234.386		13.673185 - 94.68509	$3d^7 - 3d^5(a^4D)4s4p(^3P^o)$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1236.34		25.805328 - 106.69017	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		816
0	1237.93		8.846768 - 89.625940	$3d^6(a^5D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$a^4D - ^6P^o$	$\frac{1}{2} - \frac{1}{2}$		816
2	1238.257		21.581638 - 102.3403	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4H - ^4K^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
5	1239.871		26.352766 - 107.00635	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$	P	749

Fe II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
9	5	1241.928	26.170181 - 106.69017	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749	
	1	1242.046	15.84465 - 96.35696	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^2G - t^2F^o$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	2	1244.750	26.352766 - 106.69017	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^2H - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$	P	749	
	2	1245.340						749	
	2	1246.760						749	
	2	1247.816	22.810357 - 102.9515	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4F - ^4I^o$	$\frac{7}{2} - \frac{9}{2}$	Q	749	
	2	1249.798	26.170181 - 106.1831	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^2H - ^2K^o$	$\frac{11}{2} - \frac{13}{2}$	P	749	
	5	1250.597						749	
	20	1255.406	13.474411 - 93.12990	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	0	1257.18	27.620412 - 107.1656	$3d^6(a^3F)4s -$	$a^2F - 17^o$	$\frac{5}{2} - \frac{7}{2}$	Q	816	
	10	1259.053	13.474411 - 92.89950	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	10	1259.179	20.34030 - 99.75712	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$	P	749	
	0	1259.636	25.428784 - 104.81680	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749	
	110	1260.533	0. - 79.33150	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	5	1260.829	20.34030 - 99.65322	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$	P	749	
	10	1262.141	25.428784 - 104.65926	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$	P	749	
	10	1262.212	13.673185 - 92.89950	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	0	1263.055	13.474411 - 92.64751	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	0	1263.200	22.409852 - 101.57390	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	1	1263.704	25.805328 - 104.93780	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^4H^o$	$\frac{9}{2} - \frac{9}{2}$	P	749	
	1	1265.071	25.981629 - 105.02860	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749	
	10	1265.639	25.805328 - 104.81680	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$	P	749	
	10	1265.781	20.80577 - 99.80840	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	5	1266.234	7.955299 - 86.929649	$3d^6(a^5D)4s - 3d^6(b^3P)4p$	$a^4D - v^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749	
	15	1266.253	26.055423 - 105.02860	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^4H^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	5	1266.525	25.981629 - 104.93780	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^o)$	$a^4G - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749	
	9	30	1266.677	.384790 - 79.33150	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	9	55	1267.422	.384790 - 79.28511	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	5	1268.143	13.474411 - 92.32989	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^4P - v^4F^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	1	1268.557	20.80577 - 99.63552	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	2	1269.040	13.474411 - 92.27412	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$	P	749	
	1	1269.353	13.673185 - 92.45346	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	1	1269.823	13.474411 - 92.225538	$3d^7 - 3d^6(a^3D)5p$	$a^4P - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$	P	749	
	1	1269.959	13.904824 - 92.64751	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	9	2	1271.232	.667683 - 79.33150	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	1	1271.347	13.673185 - 92.32989	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^4P - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	1	1271.592	13.673185 - 92.314758	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	9	55	1271.983	.667683 - 79.28511	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	5	1272.250	13.673185 - 92.27412	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$	P	749	
	9	35	1272.613	.667683 - 79.24617	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
	5	1272.655	.667683 - 79.24360	$3d^6(a^5D)4s - 3d^6(a^1D)4p$	$ga^6D - w^2P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	2	1273.036	13.673185 - 92.225538	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	5	1273.097	13.904824 - 92.45346	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	2	1274.063	26.170181 - 104.65926	$3d^6(a^3H)4s - 3d^5(a^2I)4s4p(^3P^o)$	$b^2H - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$	P	749	
	9	20	1275.144	.862613 - 79.28511	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
	2	1275.349	13.904824 - 92.314758	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	9	55	1275.778	.862613 - 79.24617	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	60	1275.807	20.516960 - 98.89871	$3d^7 - 3d^6(b^1G)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	10	1275.820	.862613 - 79.24360	$3d^6(a^5D)4s - 3d^6(a^1D)4p$	$ga^6D - w^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	10	1276.801	13.904824 - 92.225538	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	9	60	1277.643	.977053 - 79.24617	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^1P^o)$	$ga^6D - x^6P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
	10	1277.685	.977053 - 79.24360	$3d^6(a^5D)4s - 3d^6(a^1D)4p$	$ga^6D - w^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	5	1279.101	25.787598 - 103.96749	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^2P - ^2S^o$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	5	1280.526	20.80577 - 98.89871	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$	P	749	

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
20	1283.063		20.34030 - 98.27877	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
1	1286.914		20.830582 - 98.53585	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1287.423		20.830582 - 98.50510	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1289.094		13.474411 - 91.048256	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
5	1289.312		20.830582 - 98.39133	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
40	1290.194		20.830582 - 98.33828	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
20	1290.772		20.80577 - 98.27877	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
30	1291.581		13.474411 - 90.898873	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1292.406		13.673185 - 91.048256	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1293.044		26.055423 - 103.39129	$3d^6(a^3G)4s - 3d^5(a^5D_3)4f$	$a^4G - 3[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	749
0	1293.543		13.474411 - 90.780621	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		292
30	1294.906		13.673185 - 90.898873	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1295.903		21.430359 - 98.59665	$3d^6(a^3H)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^4H - ^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
40	1296.084		13.474411 - 90.629902	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1296.287		13.904824 - 91.048256	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
10	1297.933		20.80577 - 97.85135	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
2	1298.116		26.932748 - 103.96749	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^2P - ^2S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
5	1298.802		13.904824 - 90.898873	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
30	1299.432		13.673185 - 90.629902	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1299.804		13.904824 - 90.83948	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1299.994		13.474411 - 90.397868	$3d^7 - 3d^6(a^5D)5p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1303.030		26.932748 - 103.67622	$3d^6(a^3P)4s - 3d^5(a^5D_2)4f$	$b^2P - 2[1]^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	749
5	1303.355		13.904824 - 90.629902	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1303.899		21.812055 - 98.50510	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
5	1304.436		25.787598 - 102.44910	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1305.520		22.409852 - 99.00770	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1305.784		15.84465 - 92.42698	$3d^7 - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^2G - v^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
20	1306.742		21.812055 - 98.33828	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1306.830		18.360646 - 94.88074	$3d^7 - 3d^5(a^4P)4s4p(^3P^\circ)$	$a^2P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	749
2	1307.263		20.830582 - 97.32627	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1308.968		32.875646 - 109.27171	$3d^6(a^1I)4s - 3d^5(a^2I)4s4p(^3P^\circ)$	$a^2I - ^2I^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
30	1309.555		32.909905 - 109.27171	$3d^6(a^1I)4s - 3d^5(a^2I)4s4p(^3P^\circ)$	$a^2I - ^2I^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
10	1309.581		22.409852 - 98.77014	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1309.929		18.360646 - 94.70066	$3d^7 - 3d^6(b^3F)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1310.151		15.84465 - 92.171716	$3d^7 - 3d^6(b^3F)4p$	$a^2G - u^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1310.588		30.388542 - 106.69017	$3d^6(a^3G)4s - 3d^5(a^2I)4s4p(^3P^\circ)$	$b^2G - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
30	1311.062		32.875646 - 109.14968	$3d^6(a^1I)4s - 3d^5(a^2I)4s4p(^3P^\circ)$	$a^2I - ^2I^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
2	1311.762		16.36936 - 92.602703	$3d^7 - 3d^6(b^3F)4p$	$a^2G - u^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
5	1316.492		22.637205 - 98.59665	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
5	1317.030		22.409852 - 98.33828	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
5	1317.545		22.637205 - 98.53585	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1318.065		27.314922 - 103.1837	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^2F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1318.565		20.516960 - 96.35696	$3d^7 - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^2D - t^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1318.726		22.939358 - 98.77014	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
2	1320.060		22.637205 - 98.39133	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1320.327		23.031300 - 98.77014	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1320.559		22.810357 - 98.53585	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1320.765		27.620412 - 103.3341	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1321.096		22.810357 - 98.50510	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1323.084		22.810357 - 98.39133	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1323.258		26.932748 - 102.50381	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1323.351		22.939358 - 98.50510	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
5	1324.254		21.812055 - 97.32627	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1325.991		22.939358 - 98.35466	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
0	1327.14	7.955299 - 83.305251		$3d^6(a^3D)4s - 3d^6(a^1F)4p$	$a^4D - v^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	816
0	1328.786	22.939358 - 98.19600		$3d^6(a^3F)4s - 3d^6(a^4D)4s4p(^3P^o)$	$b^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1328.793	20.80577 - 96.06206		$3d^7 - 3d^6(a^4G)4s4p(^3P^o)$	$a^2H - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1330.01	23.317633 - 98.50510		$3d^54s^2 - 3d^5(a^4D)4s4p(^3P^o)$	$a^6S - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	816
2	1330.052							749
1	1330.405	20.830582 - 95.99569		$3d^6(a^3P)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4P - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
0	1330.412	23.031300 - 98.19600		$3d^6(a^3F)4s - 3d^6(a^4D)4s4p(^3P^o)$	$b^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
10	1330.952	27.314922 - 102.44910		$3d^6(a^3F)4s - 3d^6(a^4D)4s4p(^3P^o)$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1335.410	27.620412 - 102.50381		$3d^6(a^3F)4s - 3d^6(a^4D)4s4p(^3P^o)$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1336.386	27.620412 - 102.44910		$3d^6(a^3F)4s - 3d^6(a^4D)4s4p(^3P^o)$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1336.712	21.251608 - 96.06206		$3d^6(a^3H)4s - 3d^6(a^4G)4s4p(^3P^o)$	$a^4H - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1340.260	25.787598 - 100.40036		$3d^6(a^3P)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^2P - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
5	1345.382	25.428784 - 99.75712		$3d^6(a^3G)4s - 3d^6(b^1G)4p$	$a^4G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
10	1347.265	25.428784 - 99.65322		$3d^6(a^3G)4s - 3d^6(a^4G)4s4p(^3P^o)$	$a^4G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
5	1348.005	20.516960 - 94.70066		$3d^7 - 3d^6(b^3F)4p$	$a^2D - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
5	1349.592	32.909905 - 107.00635		$3d^6(a^1D)4s - 3d^6(a^2I)4s4p(^3P^o)$	$a^2I - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1353.023	20.830582 - 94.73917		$3d^6(a^3P)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4P - ^4P^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1354.013	20.830582 - 94.68509		$3d^6(a^3P)4s - 3d^6(a^4D)4s4p(^3P^o)$	$b^4P - ^6P^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1354.459	25.805328 - 99.63552		$3d^6(a^3G)4s - 3d^6(a^4G)4s4p(^3P^o)$	$a^4G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1354.747	32.875646 - 106.69017		$3d^6(a^1D)4s - 3d^6(a^2I)4s4p(^3P^o)$	$a^2I - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
0	1354.87	20.34030 - 94.148518		$3d^7 - 3d^6(a^4G)4s4p(^3P^o)$	$a^2H - w^4G^o$	$\frac{7}{2} - \frac{7}{2}$	Q	816
0	1356.483	22.637205 - 96.35696		$3d^6(a^3F)4s - 3d^6(a^4G)4s4p(^3P^o)$	$b^4F - t^2F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
20	1357.796	32.875646 - 106.5244		$3d^6(a^1D)4s - 3d^6(a^2I)4s4p(^3P^o)$	$a^2I - ^2K^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1358.788							749
20	1358.937	26.170181 - 99.75712		$3d^6(a^3H)4s - 3d^6(b^1G)4p$	$b^2H - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
20	1359.063	22.637205 - 96.21742		$3d^6(a^3F)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
12	1360.16	.977053 - 74.498057		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$ga^6D - x^2D^o$	$\frac{7}{2} - \frac{7}{2}$	Q	439
5	1360.450	33.501253 - 107.00635		$3d^6(a^1G)4s - 3d^6(a^2I)4s4p(^3P^o)$	$c^2G - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
20	1360.858	26.170181 - 99.65322		$3d^6(a^3H)4s - 3d^6(a^4G)4s4p(^3P^o)$	$b^2H - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
25	1361.366	26.352766 - 99.80840		$3d^6(a^3H)4s - 3d^6(b^1G)4p$	$b^2H - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
30	1361.373	13.474411 - 86.929649		$3d^7 - 3d^6(b^3P)4p$	$a^4P - v^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1361.504	22.409852 - 95.85805		$3d^6(a^3P)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4P - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1362.267	22.810357 - 96.21742		$3d^6(a^3F)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1362.535	21.308040 - 94.70066		$3d^7 - 3d^6(b^3F)4p$	$a^2D - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
10	1362.748	20.830582 - 94.211739		$3d^6(a^3P)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4P - ^4P^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
20	1364.384	13.474411 - 86.767577		$3d^7 - 3d^6(b^3P)4p$	$a^4P - v^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
40	1364.578	26.352766 - 99.63552		$3d^6(a^3H)4s - 3d^6(a^4G)4s4p(^3P^o)$	$b^2H - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
20	1364.756	32.909905 - 106.1831		$3d^6(a^1D)4s - 3d^6(a^2I)4s4p(^3P^o)$	$a^2I - ^2K^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
10	1365.678	33.466463 - 106.69017		$3d^6(a^1G)4s - 3d^6(a^2I)4s4p(^3P^o)$	$c^2G - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
20	1366.394	22.810357 - 95.99569		$3d^6(a^3F)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
30	1366.720	25.428784 - 98.59665		$3d^6(a^3G)4s - 3d^6(a^4D)4s4p(^3P^o)$	$a^4G - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1367.161	20.34030 - 93.48458		$3d^7 - 3d^6(b^3F)4p$	$a^2H - u^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1367.950							749
10	1368.094	13.673185 - 86.767577		$3d^7 - 3d^6(b^3P)4p$	$a^4P - v^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1368.262	27.314922 - 100.40036		$3d^6(a^3F)4s - 3d^6(a^4P)4s4p(^3P^o)$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
1	1368.493	13.474411 - 86.54749		$3d^7 - 3d^6(a^1F)4p$	$a^4P - u^2F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1368.575	21.812055 - 94.88074		$3d^6(a^3P)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4P - ^4P^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
5	1368.807	22.939358 - 95.99569		$3d^6(a^3F)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
20	1369.707	13.474411 - 86.48275		$3d^7 - 3d^6(a^1F)4p$	$a^4P - u^2F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
10	1369.856	20.830582 - 93.830979		$3d^6(a^3P)4s - 3d^6(a^4D)4s4p(^3P^o)$	$b^4P - ^6D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
2	1370.191	25.787598 - 98.77014		$3d^6(a^3P)4s - 3d^6(a^4D)4s4p(^3P^o)$	$b^2P - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
0	1370.532	23.031300 - 95.99569		$3d^6(a^3F)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
55	1371.022	21.251608 - 94.189888		$3d^6(a^3H)4s - 3d^6(a^4G)4s4p(^3P^o)$	$a^4H - w^4G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
0	1371.232	21.812055 - 94.73917		$3d^6(a^3P)4s - 3d^6(a^4P)4s4p(^3P^o)$	$b^4P - ^4P^o$	$\frac{7}{2} - \frac{7}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
5	1371.390		22.939358 - 95.85805	$3d^6(a^3F)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
0	1372.226		13.673185 - 86.54749	$3d^7 - 3d^6(a^1F)4p$	$a^4P - u^3F^o$	2 1 1 1 1 1 1 1 1 1	P	749
40	1372.292		13.673185 - 86.543974	$3d^7 - 3d^6(b^3P)4p$	$a^4P - v^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
5	1373.122		23.031300 - 95.85805	$3d^6(a^3F)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
30	1373.718		30.388542 - 103.1837	$3d^6(a^3G)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^2G - ^2F^o$	2 1 1 1 1 1 1 1 1 1	P	749
0	1374.005		27.620412 - 100.40036	$3d^6(a^3F)4s - 3d^5(a^4P)4s4p(^3P^o)$	$a^2F - ^2D^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1374.393		21.430359 - 94.189888	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - w^4G^o$	1 1 1 1 1 1 1 1 1 1	P	749
5	1374.827		23.031300 - 95.76770	$3d^6(a^3F)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4F - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
10	1374.939		25.805328 - 98.53585	$3d^6(a^3G)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4G - ^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
55	1375.172		21.430359 - 94.148518	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - w^4G^o$	1 1 1 1 1 1 1 1 1 1	P	749
1	1375.859		20.80577 - 93.48765	$3d^7 - 3d^6(b^3F)4p$	$a^2H - u^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
10	1376.668		13.904824 - 86.543974	$3d^7 - 3d^6(b^3P)4p$	$a^4P - v^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
0	1377.676		25.805328 - 98.39133	$3d^6(a^3G)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4G - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1377.99		30.764485 - 103.3341	$3d^6(a^3G)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^2G - ^2F^o$	2 1 1 1 1 1 1 1 1 1	Q	816
30	1378.036		25.787598 - 98.35466	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^2P - ^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1378.280		25.981629 - 98.53585	$3d^6(a^3G)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4G - ^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1378.347		25.787598 - 98.33828	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^2P - ^4S^o$	2 1 1 1 1 1 1 1 1 1	P	749
55	1379.470		21.581638 - 94.073248	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - w^4G^o$	1 1 1 1 1 1 1 1 1 1	P	749
5	1379.615		13.904824 - 86.388820	$3d^7 - 3d^6(b^3P)4p$	$a^4P - v^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
10	1380.411		27.314922 - 99.75712	$3d^6(a^3F)4s - 3d^5(b^1G)4p$	$a^2F - ^2G^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1380.711		26.170181 - 98.59665	$3d^6(a^3H)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^2H - ^4F^o$	1 1 1 1 1 1 1 1 1 1	P	749
10	1381.221		21.812055 - 94.211739	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4P - ^4P^o$	2 1 1 1 1 1 1 1 1 1	P	749
20	1381.730		25.981629 - 98.35466	$3d^6(a^3G)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4G - ^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1381.954		21.711917 - 94.073248	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - w^4G^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1382.394		27.314922 - 99.65322	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^2F - ^2G^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1382.565		22.409852 - 94.73917	$3d^6(a^3F)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4P - ^4P^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1382.732		27.314922 - 99.63552	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^2F - ^2G^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1383.139		20.830582 - 93.12990	$3d^6(a^3P)4s - 3d^5(b^3F)4p$	$b^4P - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
70	1383.580		21.711917 - 93.98817	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - w^4G^o$	2 1 1 1 1 1 1 1 1 1	P	749
5	1384.671		21.812055 - 94.031378	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4P - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1385.272		27.620412 - 99.80840	$3d^6(a^3F)4s - 3d^5(b^1G)4p$	$a^2F - ^2G^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1385.456		20.516960 - 92.695374	$3d^7 - 3d^6(b^3P)4p$	$a^2D - u^2D^o$	2 1 1 1 1 1 1 1 1 1	P	749
20	1386.182		26.055423 - 98.19600	$3d^6(a^3G)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4G - ^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1386.462		22.637205 - 94.763219	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4F - ^4P^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1386.797		26.170181 - 98.27877	$3d^6(a^3H)4s - 3d^5(b^1G)4p$	$b^2H - ^3H^o$	1 1 1 1 1 1 1 1 1 1	P	749
55	1387.219		20.34030 - 92.42698	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^2H - v^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1387.445		26.932748 - 99.00770	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^2P - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
0	1387.87		31.364440 - 103.41808	$3d^6(a^3D)4s - 3d^5(a^3D_3)4f$	$b^4D - 3[0]^o$	2 1 1 1 1 1 1 1 1 1	Q	816
10	1387.94		31.999048 - 104.04635	$3d^7 - 3d^6(a^3D_0)4f$	$b^2F - 0[3]^o$	2 1 1 1 1 1 1 1 1 1	Q	436
5	1388.524		21.812055 - 93.830979	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4P - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
5	1388.597		27.620412 - 99.63552	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^2F - ^2G^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1389.660		20.34030 - 92.300277	$3d^7 - 3d^5(a^4D)4s4p(^3P^o)$	$a^2H - ^6F^o$	2 1 1 1 1 1 1 1 1 1	749	
5	1390.318		26.352766 - 98.27877	$3d^6(a^3H)4s - 3d^5(b^1G)4p$	$b^2H - ^3H^o$	1 1 1 1 1 1 1 1 1 1	P	749
1	1391.309		22.810357 - 94.68509	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4F - ^4P^o$	2 1 1 1 1 1 1 1 1 1	P	749
70	1392.149		20.34030 - 92.171716	$3d^7 - 3d^6(b^3F)4p$	$a^2H - u^2G^o$	1 1 1 1 1 1 1 1 1 1	P	749
90	1392.817		20.80577 - 92.602703	$3d^7 - 3d^6(b^3F)4p$	$a^2H - u^2G^o$	1 1 1 1 1 1 1 1 1 1	P	749
2	1393.214		20.34030 - 92.11678	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^2H - x^3H^o$	1 1 1 1 1 1 1 1 1 1	P	749
1	1393.49		22.939358 - 94.70066	$3d^6(a^3F)4s - 3d^5(b^3F)4p$	$b^4F - ^3D^o$	2 1 1 1 1 1 1 1 1 1	Q	816
1	1394.713		20.516960 - 92.216320	$3d^7 - 3d^6(b^3P)4p$	$a^2D - u^2D^o$	2 1 1 1 1 1 1 1 1 1	P	749
2	1396.228		22.409852 - 94.031378	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4P - ^4D^o$	2 1 1 1 1 1 1 1 1 1	P	749
5	1396.234		20.80577 - 92.42698	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^2H - v^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
1	1396.964		27.314922 - 98.89871	$3d^6(a^3F)4s - 3d^5(b^1G)4p$	$a^2F - ^2F^o$	2 1 1 1 1 1 1 1 1 1	P	749
0	1396.974		21.812055 - 93.39536	$3d^6(a^3P)4s - 3d^5(b^3F)4p$	$b^4P - u^4F^o$	2 1 1 1 1 1 1 1 1 1	P	749
30	1397.572		22.637205 - 94.189888	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - w^4G^o$	2 1 1 1 1 1 1 1 1 1	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	1397.845	25.787598 - 97.32627	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	10	1398.380	22.637205 - 94.148518	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - w^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1398.629	26.352766 - 97.85135	$3d^6(a^3H)4s - 3d^5(b^1G)4p$	$b^2H - ^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1399.057	20.80577 - 92.28246	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$a^2H - v^4F^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	1	1399.962	22.409852 - 93.84034	$3d^6(a^3P)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4P - ^6D^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
	0	1400.452	26.932748 - 98.33828	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^2P - ^4S^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	0	1401.229	20.80577 - 92.171716	$3d^7 - 3d^6(b^3F)4p$	$a^2H - u^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	30	1401.774	22.810357 - 94.148518	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - w^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1403.101	1.872567 - 73.143288	$3d^7 - 3d^6(a^1G)4p$	$a^4F - w^2G^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	10	1403.255	22.810357 - 94.073248	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - w^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1404.119	1.872567 - 73.091590	$3d^7 - 3d^6(a^1G)4p$	$a^4F - w^2G^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	40	1405.608	1.872567 - 73.016147	$3d^7 - 3d^6(a^1G)4p$	$a^4F - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	30	1405.800	22.939358 - 94.073248	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - w^4G^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
	1	1406.718	21.812055 - 92.89950	$3d^6(a^3P)4s - 3d^6(b^3F)4p$	$b^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
	5	1407.483	22.939358 - 93.98817	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - w^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	110	1408.478	21.251608 - 92.25021	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
	10	1409.307	23.031300 - 93.98817	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - w^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1410.139	21.251608 - 92.16660	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
	1	1410.273	21.308040 - 92.216320	$3d^7 - 3d^6(b^3P)4p$	$a^2D - u^2D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	0	1410.621	21.711917 - 92.602703	$3d^6(a^3H)4s - 3d^6(b^3F)4p$	$a^4H - u^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	15	1411.424	22.637205 - 93.48765	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	25	1411.485	22.637205 - 93.48458	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
47	70	1412.842	1.872567 - 72.651876	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	70	1413.702	21.430359 - 92.16660	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
	2	1414.699	21.430359 - 92.11678	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{11}{2} - \frac{9}{2}$	P	749
	2	1414.882	22.810357 - 93.48765	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	1	1414.943	22.810357 - 93.48458	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	2	1415.763	25.428784 - 96.06206	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
	1	1415.934	2.430097 - 73.054881	$3d^7 - 3d^6(a^1G)4p$	$a^4F - x^2F^o$	$\frac{7}{2} - \frac{5}{2}$	P	749
	1	1416.630	21.581638 - 92.171716	$3d^6(a^3H)4s - 3d^6(b^3F)4p$	$a^4H - u^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1416.710	2.430097 - 73.016147	$3d^7 - 3d^6(a^1G)4p$	$a^4F - x^2F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	5	1416.732	22.810357 - 93.39536	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{7}{2} - \frac{5}{2}$	P	749
	2	1417.469	22.939358 - 93.48765	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	40	1417.733	21.581638 - 92.11678	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	1	1418.286	21.581638 - 92.08926	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{9}{2} - \frac{7}{2}$	P	749
	1	1418.587	22.637205 - 93.12990	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4D^o$	$\frac{3}{2} - \frac{7}{2}$	P	749
	20	1418.853	1.872567 - 72.352024	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4F^o$	$\frac{9}{2} - \frac{1}{2}$	P	749
	10	1419.325	22.939358 - 93.39536	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1419.445	31.999048 - 102.44910	$3d^7 - 3d^5(a^4D)4s4p(^3P^o)$	$b^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$	P	749
	1	1419.603	21.711917 - 92.154165	$3d^6(a^3H)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^4H - ^6F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	0	1419.771	25.805328 - 96.23920	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	1	1420.356	21.711917 - 92.11678	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	0	1420.368	21.812055 - 92.216320	$3d^6(a^3P)4s - 3d^6(b^3P)4p$	$b^4P - u^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1420.575	13.474411 - 83.86845	$3d^7 - 3d^6(a^1F)4p$	$a^4P - v^2D^o$	$\frac{5}{2} - \frac{5}{2}$	P	749
	1	1420.585	26.932748 - 97.32627	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	1	1420.674	22.939358 - 93.32848	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	40	1420.912	21.711917 - 92.08926	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4H - x^4H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	1	1421.180	23.031300 - 93.39536	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1421.441	2.837950 - 73.189110	$3d^7 - 3d^6(a^3D)4p$	$a^4F - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
	5	1422.080	22.810357 - 93.12990	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	10	1422.532	23.031300 - 93.32848	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1423.922						749
	8	1424.08	2.430097 - 72.650658	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4F^o$	$\frac{7}{2} - \frac{9}{2}$	P	488
	2	1424.309	31.364440 - 101.57390	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
47	2	1424.597	13.673185 - 83.86845	$3d^7 - 3d^6(a^1F)4p$	$a^4P - v^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749	
	55	1424.717	2.430097 - 72.619490	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{2}{2} - \frac{5}{2}$	P	749	
	10	1424.786	31.387948 - 101.57390	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$	P	749	
	2	1425.610	38.660043 - 108.804667	$3d^6(a^3D)4p - 3d^6(a^3D)5s$	$z^6D - ^4D$	$\frac{2}{2} - \frac{1}{2}$	Q	749	
	10	1426.21	18.886780 - 89.003460	$3d^7 - 3d^6(b^3P)4p$	$a^2P - ^2S^\circ$	$\frac{1}{2} - \frac{1}{2}$		436	
	1	1426.761	22.810357 - 92.89950	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4D^\circ$	$\frac{2}{2} - \frac{5}{2}$	P	749	
	2	1427.148	3.117461 - 73.187280	$3d^7 - 3d^6(a^3D)4p$	$a^4F - y^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	2	1427.798	31.364440 - 101.40238	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	2	1427.879	31.368450 - 101.40238	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	2	1428.688	8.846768 - 78.84196	$3d^6(a^3D)4s - 3d^6(a^1D)4p$	$a^4D - w^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	Q	749	
	1	1429.276	22.637205 - 92.602703	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^2F - u^2G^\circ$	$\frac{3}{2} - \frac{2}{2}$	P	749	
	1	1429.391	22.939358 - 92.89950	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{2}{2}$	P	749	
	10	1430.167	2.430097 - 72.352024	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	30	1430.781	26.170181 - 96.06206	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2H - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	30	1430.893	26.352766 - 96.23920	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2H - ^2H^\circ$	$\frac{3}{2} - \frac{2}{2}$	P	749	
10	1432.492	2.430097 - 72.238513	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
10	1432.822	22.810357 - 92.602703	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
15	1432.875	22.637205 - 92.42698	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{3}{2} - \frac{2}{2}$	P	749		
47	5	1433.044	2.837950 - 72.619490	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749	
	0	1433.568	22.939358 - 92.695374	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$b^4F - u^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749	
	2	1434.145	20.34030 - 90.067347	$3d^7 - 3d^6(a^3D)5p$	$a^2H - ^6F^\circ$	$\frac{1}{2} - \frac{3}{2}$	Q	749	
	1	1434.669	20.34030 - 90.042779	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4G^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	47	55	1434.996	2.837950 - 72.524566	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$	P	749
		1	1435.475	22.939358 - 92.602703	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^2G^\circ$	$\frac{5}{2} - \frac{2}{2}$	P	749
	2	1435.848	22.637205 - 92.28246	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{3}{2} - \frac{2}{2}$	P	749	
	1	1436.041	30.764485 - 100.40036	$3d^6(a^3G)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^2G - ^2D^\circ$	$\frac{2}{2} - \frac{1}{2}$	P	749	
	2	1436.438	22.810357 - 92.42698	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	0	1436.447	23.031300 - 92.64751	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4D^\circ$	$\frac{3}{2} - \frac{2}{2}$	P	749	
	20	1438.133	2.430097 - 71.964710	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4P^\circ$	$\frac{2}{2} - \frac{1}{2}$	P	749	
	10	1438.135	22.637205 - 92.171716	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	5	1438.445	22.810357 - 92.32989	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{2}{2} - \frac{1}{2}$	P	749	
	30	1439.427	22.810357 - 92.28246	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	2	1439.600	22.810357 - 92.27412	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$b^4F - ^4P^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
1	1440.510	30.388542 - 99.80840	$3d^6(a^3G)4s - 3d^6(b^1G)4p$	$b^2G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
1	1440.523	22.939358 - 92.35861	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
47	5	1440.775	3.117461 - 72.524566	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	2	1440.910	2.837950 - 72.238513	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749	
5	1441.119	22.939358 - 92.32989	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749		
5	1441.575	30.388542 - 99.75712	$3d^6(a^3G)4s - 3d^6(b^1G)4p$	$b^2G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
2	1441.725	22.810357 - 92.171716	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - u^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
2	1442.104	22.939358 - 92.28246	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
2	1442.278	22.939358 - 92.27412	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$b^4F - ^4P^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749		
47	5	1442.433	23.031300 - 92.35861	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	20	1442.746	3.117461 - 72.429711	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	1	1443.031	23.031300 - 92.32989	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^4F - v^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	1	1443.481	22.939358 - 92.216320	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$b^4F - u^2D^\circ$	$\frac{5}{2} - \frac{1}{2}$	P	749	
	20	1443.737	30.388542 - 99.65322	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	1	1444.193	23.031300 - 92.27412	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$b^4F - ^4P^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	10	1444.981	2.837950 - 72.043026	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4P^\circ$	$\frac{5}{2} - \frac{1}{2}$	P	749	
	2	1445.400	23.031300 - 92.216320	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$b^4F - u^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	0	1446.737	3.117461 - 72.238513	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	10	1447.272	3.117461 - 72.212978	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	1	1448.194	3.117461 - 72.168998	$3d^7 - 3d^6(a^3D)4p$	$a^4F - w^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	40	1448.393	27.314922 - 96.35696	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^2F - t^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$	P	749	

Fe II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
193	2	1450.020	27.314922 - 96.27949	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^2F - t^2F^o$	$\frac{7}{2} - \frac{5}{2}$	P	749
	1	1451.616	30.764485 - 99.65322	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2G - ^2G^o$	$\frac{7}{2} - \frac{5}{2}$	P	749
	10	1451.989	30.764485 - 99.63552	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	40	1454.311	25.428784 - 94.189888	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
	1	1454.830	27.620412 - 96.35696	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^2F - t^2F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	2	1455.186	25.428784 - 94.148518	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{11}{2} - \frac{9}{2}$	P	749
	20	1456.472	27.620412 - 96.27949	$3d^6(a^3F)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^2F - t^2F^o$	$\frac{5}{2} - \frac{5}{2}$	P	749
	0	1457.431	20.830582 - 89.444458	$3d^6(a^3P)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4P - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$	P	749
	40	1459.304	23.317633 - 91.843470	$3d^54s^2 - 3d^6(a^5D)5p$	$a^6S - ^6P^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
	0	1461.145	.862613 - 69.30209	$3d^6(a^3D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1461.840	18.360646 - 86.767577	$3d^7 - 3d^6(b^3P)4p$	$a^2P - v^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749	
2	1462.318	25.805328 - 94.189888	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{9}{2} - \frac{11}{2}$	P	749	
193	40	1463.204	25.805328 - 94.148518	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	1	1463.592	.977053 - 69.30209	$3d^6(a^3D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - x^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
	1	1464.817	25.805328 - 94.073248	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{9}{2} - \frac{7}{2}$	P	749
	40	1465.040	23.317633 - 91.575139	$3d^54s^2 - 3d^6(a^5D)5p$	$a^6S - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$	P	749
	2	1466.220	25.787598 - 93.98817	$3d^6(a^3P)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2P - w^4G^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
	2	1466.988	25.981629 - 94.148518	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	30	1468.610	25.981629 - 94.073248	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	5	1469.383	25.428784 - 93.48458	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^o$	$\frac{11}{2} - \frac{9}{2}$	P	749
	0	1469.68	22.939358 - 90.9815	$3d^6(a^3F)4s -$	$b^4F - 10^o$	$\frac{5}{2} - \frac{3}{2}$	Q	816
	2	1470.015	15.84465 - 83.871184	$3d^7 - 3d^6(a^1F)4p$	$a^2G - v^2G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
1	1470.162	26.170181 - 94.189888	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2H - w^4G^o$	$\frac{11}{2} - \frac{11}{2}$	P	749	
1	1470.203	26.055423 - 94.073248	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
193	1	1470.447	25.981629 - 93.98817	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{7}{2} - \frac{5}{2}$	P	749
	5	1470.662	31.811822 - 99.80840	$3d^7 - 3d^6(b^1G)4p$	$b^2F - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	20	1472.044	26.055423 - 93.98817	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^o)$	$a^4G - w^4G^o$	$\frac{5}{2} - \frac{5}{2}$	P	749
	0	1472.966	30.388542 - 98.27877	$3d^6(a^3G)4s - 3d^6(b^1G)4p$	$b^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
	1	1473.090	2.430097 - 70.314604	$3d^7 - 3d^6(a^6G)4p$	$a^4F - x^2G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	40	1473.833	23.317633 - 91.167937	$3d^54s^2 - 3d^6(a^5D)5p$	$a^6S - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	0	1474.033	36.126387 - 103.96749	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^2D - ^2S^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	1	1474.723	31.999048 - 99.80840	$3d^7 - 3d^6(b^1G)4p$	$b^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	1	1475.019	26.352766 - 94.148518	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2H - w^4G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	10	1475.694	27.314922 - 95.07964	$3d^6(a^3F)4s - 3d^5(b^3P)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
5	1475.839	31.999048 - 99.75712	$3d^7 - 3d^6(b^1G)4p$	$b^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749	
10	1476.030	22.637205 - 90.386528	$3d^6(a^3F)4s - 3d^6(a^5D)4p$	$b^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	292	
193	5	1477.491	25.805328 - 93.48765	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^o$	$\frac{9}{2} - \frac{7}{2}$	P	749
	2	1477.558	25.805328 - 93.48458	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	10	1478.105	31.999048 - 99.65322	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$b^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	1	1478.344	31.364440 - 99.00770	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	1	1478.431	31.368450 - 99.00770	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	2	1479.848	22.637205 - 90.211700	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
	0	1480.42	22.939358 - 90.487810	$3d^6(a^3F)4s - 3d^6(a^5D)5p$	$b^4F - ^6F^o$	$\frac{5}{2} - \frac{5}{2}$	P	645
	2	1481.349	25.981629 - 93.48765	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	1	1481.417	25.981629 - 93.48458	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	1	1481.441	16.36936 - 83.871184	$3d^7 - 3d^6(a^1F)4p$	$a^2G - v^2G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
0	1482.393	22.939358 - 90.397868	$3d^6(a^3F)4s - 3d^6(a^5D)5p$	$b^4F - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$	P	749	
2	1483.377	25.981629 - 93.39536	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^o$	$\frac{7}{2} - \frac{5}{2}$	P	749	
193	5	1483.554	31.364440 - 98.77014	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	5	1483.556	22.637205 - 90.042779	$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	1	1483.642	31.368450 - 98.77014	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	2	1484.072	31.387948 - 98.77014	$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
	5	1485.003	26.055423 - 93.39536	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	2	1485.342	25.805328 - 93.12990	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	1485.566	26.170181 - 93.48458		$3d^6(a^3H)4s - 3d^6(b^3F)4p$	$b^2H - u^4F^\circ$	11	P	749
10	1486.479	26.055423 - 93.32848		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^4F^\circ$	11	P	749
1	1486.834	22.810357 - 90.067347		$3d^6(a^3F)4s - 3d^6(a^3D)5p$	$b^4F - ^6F^\circ$	11	P	749
1	1487.377	22.810357 - 90.042779		$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4G^\circ$	11	P	749
1	1489.250	31.387948 - 98.53585		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4F^\circ$	11	P	749
2	1489.410	31.364440 - 98.50510		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	11	P	749
30	1489.932	31.387948 - 98.50510		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	11	P	749
5	1490.605	30.764485 - 97.85135		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$b^2G - ^2H^\circ$	11	P	749
1	1490.757	22.810357 - 89.890373		$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4G^\circ$	11	P	749
5	1491.365	31.483176 - 98.53585		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4F^\circ$	11	P	749
2	1492.049	31.483176 - 98.50510		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	11	P	749
2	1492.462	31.387948 - 98.39133		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	11	P	749
20	1492.577	25.428784 - 92.42698		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - v^4F^\circ$	11	P	749
1	1493.279	31.387948 - 98.35466		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4F^\circ$	11	P	749
5	1493.629	22.939358 - 89.890373		$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4G^\circ$	11	P	749
2	1493.967	16.36936 - 83.305251		$3d^7 - 3d^6(a^3F)4p$	$a^2G - v^2G^\circ$	11	P	749
0	1494.081	36.252918 - 103.1837		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^2D - ^2F^\circ$	11	P	749
1	1494.376	25.981629 - 92.89950		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - ^4D^\circ$	11	P	749
10	1494.586	31.483176 - 98.39133		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	11	P	749
20	1494.595	25.787598 - 92.695374		$3d^6(a^3P)4s - 3d^6(b^3P)4p$	$b^2P - u^2D^\circ$	11	P	749
10	1494.776	31.999048 - 98.89871		$3d^7 - 3d^6(b^3G)4p$	$b^2F - ^2F^\circ$	11	P	749
0	1496.019	26.055423 - 92.89950		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - ^4D^\circ$	11	P	749
40	1496.526	25.428784 - 92.25021		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - x^4H^\circ$	11	P	749
2	1497.065	25.805328 - 92.602703		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^2G^\circ$	11	P	749
20	1498.287	25.428784 - 92.171716		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^2G^\circ$	11	P	749
1	1499.339	23.031300 - 89.727342		$3d^6(a^3F)4s - 3d^6(b^3F)4p$	$b^4F - ^4G^\circ$	11	P	749
5	1501.027	25.981629 - 92.602703		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^2G^\circ$	11	P	749
1	1501.680	26.055423 - 92.64751		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - ^4D^\circ$	11	P	749
20	1504.277	25.805328 - 92.28246		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - v^4F^\circ$	11	P	749
0	1504.996	25.981629 - 92.42698		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - v^4F^\circ$	11	P	749
0	1505.37	25.787598 - 92.216320		$3d^6(a^3P)4s - 3d^6(b^3P)4p$	$b^2P - u^2D^\circ$	11	P	816
10	1506.539	0. - 66.377283		$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$ga^4D - x^4F^\circ$	11	P	749
1	1506.787	25.805328 - 92.171716		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^2G^\circ$	11	P	749
20	1506.903	25.805328 - 92.16660		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - x^4H^\circ$	11	P	749
5	1507.198	25.981629 - 92.32989		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - v^4F^\circ$	11	P	749
1	1507.779	36.126387 - 102.44910		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^2D - ^2D^\circ$	11	P	749
1	1508.107	23.317633 - 89.625940		$3d^54s^2 - 3d^5(a^4P)4s4p(^3P^\circ)$	$a^6S - ^6P^\circ$	11	P	749
5	1508.223	26.055423 - 92.35861		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - v^4F^\circ$	11	P	749
2	1508.277	25.981629 - 92.28246		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - v^4F^\circ$	11	P	749
2	1508.467	25.981629 - 92.27412		$3d^6(a^3G)4s - 3d^6(b^3P)4p$	$a^4G - ^4P^\circ$	11	P	749
2	1508.877	26.055423 - 92.32989		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - v^4F^\circ$	11	P	749
0	1509.279	26.170181 - 92.42698		$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2H - v^4F^\circ$	11	P	749
1	1509.414	36.252918 - 102.50381		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^2D - ^2D^\circ$	11	P	749
1	1509.435	26.352766 - 92.602703		$3d^6(a^3H)4s - 3d^6(b^3F)4p$	$b^2H - u^2G^\circ$	11	P	749
1	1510.148	26.055423 - 92.27412		$3d^6(a^3G)4s - 3d^6(b^3P)4p$	$a^4G - ^4P^\circ$	11	P	749
20	1510.661	36.252918 - 102.44910		$3d^6(a^3D)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$b^2D - ^2D^\circ$	11	P	749
1	1510.801	25.981629 - 92.171716		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - u^2G^\circ$	11	P	749
1	1511.467	26.055423 - 92.216320		$3d^6(a^3G)4s - 3d^6(b^3P)4p$	$a^4G - u^2D^\circ$	11	P	749
30	1512.055	25.981629 - 92.11678		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - x^4H^\circ$	11	P	749
1	1512.214	1.872567 - 68.000788		$3d^7 - 3d^6(a^3G)4p$	$a^4F - y^4H^\circ$	11	P	749
1	1512.246	23.317633 - 89.444458		$3d^54s^2 - 3d^5(a^4P)4s4p(^3P^\circ)$	$a^6S - ^6P^\circ$	11	P	749
2	1513.316	26.170181 - 92.25021		$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2H - x^4H^\circ$	11	P	749
10	1514.375	26.055423 - 92.08926		$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$a^4G - x^4H^\circ$	11	P	749
2	1515.117	26.170181 - 92.171716		$3d^6(a^3H)4s - 3d^6(b^3F)4p$	$b^2H - u^2G^\circ$	11	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1515.171	18.360646 - 84.35980	$3d^7 - 3d^6(a^1F)4p$	$a^2P - v^2D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1515.877	30.388542 - 96.35696	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2G - t^2F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1515.937	20.516960 - 86.48275	$3d^7 - 3d^6(a^1F)4p$	$a^2D - u^2F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1516.569	31.387948 - 97.32627	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4D - ^2P^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1518.685	38.858958 - 104.70542	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6D$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1519.437	26.352766 - 92.16660	$3d^6(a^3H)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2H - x^4H^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1519.504	23.317633 - 89.128561	$3d^54s^2 - 3d^5(a^4P)4s4p(^3P^\circ)$	$a^6S - ^6P^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1520.416	38.858958 - 104.63043	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6P$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1520.874	38.660043 - 104.41169	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6D$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1521.586	38.660043 - 104.38094	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6F$	$\frac{3}{2}, \frac{5}{2}$	P	749
	10	1522.684	30.388542 - 96.06206	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2G - ^4H^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1523.280	39.109307 - 104.75711	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6D$	$\frac{3}{2}, \frac{5}{2}$	P	749
	20	1523.374	1.872567 - 67.516332	$3d^7 - 3d^6(a^3G)4p$	$a^4F - y^2H^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1523.990	39.013206 - 104.63043	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6P$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1525.072	2.430097 - 68.000788	$3d^7 - 3d^6(a^3G)4p$	$a^4F - y^2H^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1525.743	38.458981 - 104.00081	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6P$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1526.205	38.858958 - 104.38094	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6F$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1526.369	30.764485 - 96.27949	$3d^6(a^3G)4s - 3d^5(a^4G)4s4p(^3P^\circ)$	$b^2G - t^2F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	30	1526.536	18.360646 - 83.86845	$3d^7 - 3d^6(a^1F)4p$	$a^2P - v^2D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	10	1526.913	38.458981 - 103.95059	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6F$	$\frac{3}{2}, \frac{5}{2}$	P	749
	20	1527.239	38.458981 - 103.93660	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6F$	$\frac{3}{2}, \frac{5}{2}$	P	749
	40	1527.347	18.886780 - 84.35980	$3d^7 - 3d^6(a^1F)4p$	$a^2P - v^2D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1527.645	38.660043 - 104.12027	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6P$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1528.742	39.013206 - 104.42646	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6F$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1528.979	32.875646 - 98.27877	$3d^6(a^1D)4s - 3d^6(b^1G)4p$	$a^2I - ^2H^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1529.509	27.314922 - 92.695374	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$a^2F - u^2D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1530.438	38.660043 - 104.00081	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6P$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1530.680	38.858958 - 104.18938	$3d^6(a^3D)4p - 3d^6(a^3H)4d$	$z^6D^\circ - ^4F$	$\frac{3}{2}, \frac{5}{2}$	P	749
	10	1531.615	38.660043 - 103.95059	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6F$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1532.301	38.858958 - 104.12027	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6D^\circ - ^6P$	$\frac{3}{2}, \frac{5}{2}$	P	749
	10	1532.815	21.308040 - 86.54749	$3d^7 - 3d^6(a^1F)4p$	$a^2D - u^2F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1534.838	26.055423 - 91.208887	$3d^6(a^3G)4s - 3d^6(a^3D)5p$	$a^4G - ^4F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1538.044	13.673185 - 78.690846	$3d^7 - 3d^6(a^1D)4p$	$a^4P - w^2D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1539.046	25.805328 - 90.780621	$3d^6(a^3G)4s - 3d^6(a^3D)5p$	$a^4G - ^4F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	5	1539.462	25.428784 - 90.386528	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1541.026	23.317633 - 88.20945	$3d^54s^2 - 3d^5(a^4P)4s4p(^3P^\circ)$	$a^6S - ^6D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	292
	1	1542.508	31.387948 - 96.21742	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1543.234	25.981629 - 90.780621	$3d^6(a^3G)4s - 3d^6(a^3D)5p$	$a^4G - ^4F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1543.277	8.391938 - 73.189110	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$a^4D - y^2P^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1543.617	25.428784 - 90.211700	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	10	1544.777	31.483176 - 96.21742	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1545.202	1.872567 - 66.589008	$3d^7 - 3d^6(a^3G)4p$	$a^4F - y^4H^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1545.677	7.955299 - 72.651876	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$a^4D - w^4D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	0	1545.706	7.955299 - 72.650658	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$a^4D - w^4F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1545.808	30.388542 - 95.07964	$3d^6(a^3G)4s - 3d^5(b^3P)4p$	$b^2G - ^2F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1546.451	7.955299 - 72.619490	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$a^4D - w^4D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1547.239	31.364440 - 95.99569	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1547.802	31.387948 - 95.99569	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	2	1548.204	1.872567 - 66.463528	$3d^7 - 3d^6(a^3G)4p$	$a^4F - y^4H^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	1	1548.438	25.805328 - 90.386528	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	30	1548.697	2.430097 - 67.000517	$3d^7 - 3d^6(a^1F)4p$	$a^4F - y^2D^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
	10	1549.593	27.620412 - 92.154165	$3d^6(a^3F)4s - 3d^5(a^4D)4s4p(^3P^\circ)$	$a^2F - ^6F^\circ$	$\frac{3}{2}, \frac{5}{2}$	Q	749
	90	1550.274	1.872567 - 66.377283	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^\circ$	$\frac{3}{2}, \frac{5}{2}$	P	749
45	1	1550.52	31.364440 - 95.85805	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^4D - ^4D^\circ$	$\frac{3}{2}, \frac{5}{2}$	Q	816

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
46	1	1550.638	31.368450 - 95.85805	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	0	1551.17	31.811822 - 96.27949	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - t^4F^o$	$\frac{3}{2} - \frac{5}{2}$	Q	816	
	20	1551.930	2.837950 - 67.273826	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^2D^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	1	1552.677	25.981629 - 90.386528	$3d^6(a^3G)4s - 3d^6(a^5D)4p$	$a^4G - ^4F^o$	$\frac{2}{2} - \frac{9}{2}$	P	749	
	0	1552.716	31.364440 - 95.76770	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749	
	1	1552.813	31.368450 - 95.76770	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	10	1553.810	31.999048 - 96.35696	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$b^4F - t^4F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	1	1554.08	37.227326 - 101.57390	$3d^6(a^1S)4s - 3d^5(a^4D)4s4p(^3P^o)$	$a^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	816	
	1	1554.751	25.981629 - 90.300625	$3d^6(a^3G)4s - 3d^6(a^5D)5p$	$a^4G - ^6F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	0	1554.843	30.764485 - 95.07964	$3d^6(a^3G)4s - 3d^5(b^3P)4p$	$b^2G - ^2F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	2	1555.655	30.764485 - 95.04610	$3d^6(a^3G)4s - 3d^5(b^3P)4p$	$b^2G - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	1	1556.129	25.805328 - 90.067347	$3d^6(a^3G)4s - 3d^6(a^5D)5p$	$a^4G - ^6F^o$	$\frac{9}{2} - \frac{9}{2}$	P	749	
	1	1556.608	2.430097 - 66.672334	$3d^7 - 3d^6(a^3G)4p$	$a^4F - y^4H^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
	46	70	1558.541	2.837950 - 67.000517	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	46	55	1558.692	3.117461 - 67.273826	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^2D^o$	$\frac{2}{2} - \frac{2}{2}$	P	749
	45	110	1559.085	1.872567 - 66.012750	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749
	5	1559.269	8.391938 - 72.524566	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	45	90	1560.252	2.430097 - 66.522304	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749
	44	20	1561.067	1.872567 - 65.931334	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{9}{2} - \frac{2}{2}$	P	749
20	1562.270	7.955299 - 71.964710	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4P^o$	$\frac{2}{2} - \frac{3}{2}$	P	749		
45	160	1563.790	2.430097 - 66.377283	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
30	1565.360	3.117461 - 67.000517	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749		
2	1566.346	20.516960 - 84.35980	$3d^7 - 3d^6(a^3F)4p$	$a^2D - v^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749		
44	110	1566.822	1.872567 - 65.696038	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
45	55	1568.020	2.837950 - 66.612656	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
2	1568.646	8.680454 - 72.429711	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4D^o$	$\frac{2}{2} - \frac{2}{2}$	P	749		
44	110	1569.674	1.872567 - 65.580041	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{9}{2} - \frac{11}{2}$	P	749	
45	110	1570.244	2.837950 - 66.522304	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1570.498	38.660043 - 102.334112	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{2}{2} - \frac{2}{2}$	P	749		
10	1571.065	8.391938 - 72.043026	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749		
44	20	1571.137	2.430097 - 66.078269	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{2}{2} - \frac{5}{2}$	P	749	
1	1572.21	22.939358 - 86.543974	$3d^6(a^3F)4s - 3d^6(b^3P)4p$	$b^4F - v^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	816		
5	1572.749	8.846768 - 72.429711	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749		
45	5	1572.756	2.430097 - 66.012750	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{2}{2} - \frac{9}{2}$	P	749	
5	1573.000	8.391938 - 71.964710	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749		
45	55	1573.828	2.837950 - 66.377283	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
55	1574.038	20.34030 - 83.871184	$3d^7 - 3d^6(a^1F)4p$	$a^2H - v^2G^o$	$\frac{11}{2} - \frac{9}{2}$	P	749		
1	1574.399	31.364440 - 94.88074	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749		
44	30	1574.772	2.430097 - 65.931334	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
45	70	1574.922	3.117461 - 66.612656	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{3}{2} - \frac{2}{2}$	P	749	
0	1575.420	38.858958 - 102.334112	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749		
1	1575.80	44.915046 - 108.3738	$3d^6(a^1F)4s -$	$c^2F - 26^o$	$\frac{2}{2} - \frac{2}{2}$	Q	816		
1	1576.433	39.109307 - 102.543648	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{1}{2} - \frac{3}{2}$	P	749		
45	55	1577.167	3.117461 - 66.522304	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1578.012	38.660043 - 102.030912	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{2}{2} - \frac{2}{2}$	P	749		
2	1578.128	8.846768 - 72.212978	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4P^o$	$\frac{1}{2} - \frac{1}{2}$	P	749		
5	1578.219	8.680454 - 72.043026	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749		
20	1578.495	20.516960 - 83.86845	$3d^7 - 3d^6(a^1F)4p$	$a^2D - v^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749		
20	1578.501	31.387948 - 94.73917	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749		
2	1579.257	39.013206 - 102.334112	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749		
44	110	1580.629	2.430097 - 65.696038	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{2}{2} - \frac{9}{2}$	P	749	
44	3	1581.270	2.837950 - 66.078269	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
2	1581.290	38.458981 - 101.698489	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{9}{2} - \frac{9}{2}$	P	749		
5	1581.421	31.811822 - 95.04610	$3d^7 - 3d^6(b^3P)4p$	$b^2F - ^2F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749		

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
44	2	1582.372	8.846768 - 72.043026	$3d^6(a^5D)4s - 3d^6(a^3D)4p$	$a^4D - w^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
	2	1582.981	38.858958 - 102.030912	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{3}{2} - \frac{2}{2}$	P	749
	0	1584.417	42.334822 - 105.44954	$3d^6(a^3D)4p - 3d^6(a^3D)5d$	$z^6F^o - ^4G$	$\frac{3}{2} - \frac{2}{2}$	P	749
	110	1584.952	2.837950 - 65.931334	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	5	1585.274	31.999048 - 95.07964	$3d^7 - 3d^5(b^3P)4p$	$b^2F - ^2F^o$	$\frac{2}{2} - \frac{2}{2}$	P	749
	2	1585.655	20.80577 - 83.871184	$3d^7 - 3d^6(a^3F)4p$	$a^2H - v^2G^o$	$\frac{2}{2} - \frac{2}{2}$	P	749
	30	1585.999	21.308040 - 84.35980	$3d^7 - 3d^6(a^3F)4p$	$a^2D - v^2D^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
	3	1586.288	42.114818 - 105.15509	$3d^6(a^5D)4p - 3d^6(a^3F)4d$	$z^6F^o - ^4G$	$\frac{3}{2} - \frac{2}{2}$	P	749
	2	1586.333	38.660043 - 101.698489	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6D^o - ^6D$	$\frac{2}{2} - \frac{2}{2}$	P	749
	110	1588.290	3.117461 - 66.078269	$3d^7 - 3d^6(a^3G)4p$	$a^4F - x^4G^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
5	1588.688	0. - 62.945038	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$ga^6D - x^4D^o$	$\frac{3}{2} - \frac{7}{2}$	P	749	
2	1590.124	.384790 - 63.272976	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$ga^6D - x^4D^o$	$\frac{2}{2} - \frac{5}{2}$	P	749	
1	1590.559	42.334822 - 105.20579	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{5}{2} - \frac{5}{2}$	P	749	
2	1591.122	42.439822 - 105.28853	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{1}{2} - \frac{3}{2}$	P	749	
2	1591.622	42.401302 - 105.23029	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6D$	$\frac{3}{2} - \frac{1}{2}$	P	749	
0	1591.632	42.237033 - 105.06563	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{3}{2} - \frac{2}{2}$	P	749	
5	1592.243	42.401302 - 105.20579	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{3}{2} - \frac{5}{2}$	P	749	
1	1592.909	33.501253 - 96.27949	$3d^6(a^3G)4s - 3d^5(a^3G)4s4p(^3P^o)$	$c^2G - t^2F^o$	$\frac{2}{2} - \frac{5}{2}$	P	749	
5	1593.532	42.114818 - 104.86850	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{2}{2} - \frac{2}{2}$	P	749	
2	1593.661	42.114818 - 104.86343	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{2}{2} - \frac{11}{2}$	P	749	
10	1594.113	42.334822 - 105.06563	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{3}{2} - \frac{7}{2}$	P	749	
1	1595.416	2.430097 - 65.109679	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^2G^o$	$\frac{2}{2} - \frac{7}{2}$	P	749	
10	1596.641	42.237033 - 104.86850	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{2}{2} - \frac{2}{2}$	P	749	
1	1596.82	41.968046 - 104.59327	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{11}{2} - \frac{11}{2}$	Q	816	
1	1598.455	21.308040 - 83.86845	$3d^7 - 3d^6(a^3F)4p$	$a^2D - v^2D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749	
55	1600.013	20.80577 - 83.305251	$3d^7 - 3d^6(a^3F)4p$	$a^2H - v^2G^o$	$\frac{3}{2} - \frac{7}{2}$	P	749	
5	1600.552	42.114818 - 104.59327	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{2}{2} - \frac{11}{2}$	P	749	
20	1600.714	31.368450 - 93.84034	$3d^6(a^3D)4s - 3d^5(a^3D)4s4p(^3P^o)$	$b^4D - ^6D^o$	$\frac{1}{2} - \frac{3}{2}$	Q	749	
5	1601.220	31.387948 - 93.84034	$3d^6(a^3D)4s - 3d^5(a^3D)4s4p(^3P^o)$	$b^4D - ^6D^o$	$\frac{2}{2} - \frac{2}{2}$	P	749	
1	1601.460	31.387948 - 93.830979	$3d^6(a^3D)4s - 3d^5(a^3D)4s4p(^3P^o)$	$b^4D - ^6D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749	
20	1601.669						749	
10	1602.210	1.872567 - 64.286345	$3d^7 - 3d^6(a^3F)4p$	$a^4F - z^2F^o$	$\frac{2}{2} - \frac{7}{2}$	P	749	
40	1602.596	41.968046 - 104.36682	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6G$	$\frac{11}{2} - \frac{11}{2}$	P	749	
5	1604.583	16.36936 - 78.690846	$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^2D^o$	$\frac{2}{2} - \frac{7}{2}$	P	749	
70	1605.324	15.84465 - 78.137364	$3d^7 - 3d^6(a^3D)4p$	$a^2G - v^2F^o$	$\frac{2}{2} - \frac{7}{2}$	P	749	
1	1605.41	21.581638 - 83.871184	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$a^4H - v^2G^o$	$\frac{2}{2} - \frac{2}{2}$	P	816	
1	1605.865	2.837950 - 65.109679	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^2G^o$	$\frac{4}{2} - \frac{7}{2}$	P	749	
1	1606.010	42.114818 - 104.38094	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6F$	$\frac{2}{2} - \frac{7}{2}$	P	749	
1	1607.960	42.439822 - 104.63043	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6P$	$\frac{1}{2} - \frac{3}{2}$	P	749	
0	1607.990	42.237033 - 104.42646	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6F$	$\frac{2}{2} - \frac{5}{2}$	P	749	
8	160	1608.451	0. - 62.171615	$3d^6(a^5D)4s - 3d^5(a^5S)$	$ga^6D - y^6P^o$	$\frac{2}{2} - \frac{7}{2}$	P	749
2	1609.168	42.237033 - 104.38094	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6F$	$\frac{2}{2} - \frac{7}{2}$	P	749	
2	1610.314	31.387948 - 93.48765	$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^4D - u^4F^o$	$\frac{3}{2} - \frac{7}{2}$	P	749	
90	1610.923	1.872567 - 63.948790	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	$\frac{2}{2} - \frac{9}{2}$	P	749	
40	1611.201	0. - 62.065521	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$ga^6D - y^4F^o$	$\frac{2}{2} - \frac{7}{2}$	P	749	
2	1611.540	43.238586 - 105.29101	$3d^6(a^3D)4p - 3d^6(a^3F)4d$	$z^6P^o - ^4G$	$\frac{3}{2} - \frac{7}{2}$	P	749	
2	1612.099	31.364440 - 93.39536	$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^4D - u^4F^o$	$\frac{2}{2} - \frac{7}{2}$	P	749	
43	135	1612.806	1.872567 - 63.876317	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	$\frac{2}{2} - \frac{11}{2}$	P	749
2	1613.183	31.999048 - 93.98817	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$b^2F - w^4G^o$	$\frac{7}{2} - \frac{5}{2}$		816	
1	1613.29	.977053 - 62.962205	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$ga^6D - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P	816	
1	1613.357	41.968046 - 103.95059	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6F$	$\frac{11}{2} - \frac{3}{2}$	P	749	
2	1613.722	41.968046 - 103.93660	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6F$	$\frac{11}{2} - \frac{11}{2}$	P	749	
1	1613.944	31.368450 - 93.32848	$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^4D - u^4F^o$	$\frac{1}{2} - \frac{3}{2}$	P	749	
1	1616.326	42.114818 - 103.98351	$3d^6(a^3D)4p - 3d^6(a^3G)5s$	$z^6F^o - e^2G$	$\frac{2}{2} - \frac{7}{2}$	P	749	

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
8	20	1616.652	2.430097 - 64.286345	$3d^7 - 3d^6(a^3F)4p$	$a^4F - z^2F^o$	7 7	P	749	
	1	1617.187	42.114818 - 103.95059	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^o - ^6F$	7 7	P	749	
	160	1618.468	.384790 - 62.171615	$3d^6(a^5D)4s - 3d^5(a^6S)$	$ga^6D - y^6P^o$	7 7	P	749	
	0	1618.955	42.658224 - 104.42646	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6F$	7 7	P	749	
	2	1618.961	16.36936 - 78.137364	$3d^7 - 3d^6(a^1D)4p$	$a^2G - v^2F^o$	7 7	P	749	
	2	1619.342	42.658224 - 104.41169	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6D$	7 7	P	749	
	0	1619.526	42.237033 - 103.98351	$3d^6(a^5D)4p - 3d^6(a^3G)5s$	$z^6F^o - e^2G$	7 7	P	749	
	0	1619.644	31.387948 - 93.12990	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$b^4D - ^4D^o$	7 7	P	749	
	2	1620.061	0. - 61.726077	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$ga^6D - y^4D^o$	7 7	P	749	
	1	1620.149	42.658224 - 104.38094	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6F$	7 7	P	749	
8	10	1621.252	.384790 - 62.065521	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$ga^6D - y^4F^o$	7 7	P	749	
	160	1621.686	.384790 - 62.049025	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - y^6P^o$	7 7	P	749	
	5	1621.867	2.430097 - 64.087418	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	7 7	P	749	
	1	1622.146	31.483176 - 93.12990	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$b^4D - ^4D^o$	7 7	P	749	
	1	1622.464	43.238586 - 104.87323	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^4D$	7 7	P	749	
	43	110	1623.092	2.430097 - 64.040886	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	7 7	P	749
	10	1623.707	2.837950 - 64.425408	$3d^7 - 3d^6(a^3F)4p$	$a^4F - z^2F^o$	7 7	P	749	
	43	135	1625.522	2.430097 - 63.948790	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	7 7	P	749
	0	1625.711	31.387948 - 92.89950	$3d^6(a^5D)4s - 3d^6(b^3F)4p$	$b^4D - ^4D^o$	7 7	P	749	
	70	1625.912	.667683 - 62.171615	$3d^6(a^5D)4s - 3d^5(a^6S)$	$ga^6D - y^6P^o$	7 7	P	749	
8	1	1626.443	.667683 - 62.151561	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$ga^6D - y^4F^o$	7 7	P	749	
	1	1626.894	43.238586 - 104.70542	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6D$	7 7	P	749	
	1	1627.020	42.658224 - 104.12027	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6P$	7 7	P	749	
	2	1627.130	.667683 - 62.125600	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$ga^6D - z^2D^o$	7 7	P	749	
	30	1627.382	2.837950 - 64.286345	$3d^7 - 3d^6(a^3F)4p$	$a^4F - z^2F^o$	7 7	P	749	
	1	1628.722	.667683 - 62.065521	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$ga^6D - y^4F^o$	7 7	P	749	
	1	1628.881	43.238586 - 104.63043	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6P$	7 7	P	749	
	8	135	1629.160	.667683 - 62.049025	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - y^6P^o$	7 7	P	749
	40	1629.371	16.36936 - 77.742730	$3d^7 - 3d^6(a^1D)4p$	$a^2G - v^2F^o$	7 7	P	749	
	2	1630.189	42.658224 - 104.00081	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6P$	7 7	P	749	
8	110	1631.128	.667683 - 61.974933	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - y^6P^o$	7 7	P	749	
	5	1632.307	.862613 - 62.125600	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$ga^6D - z^2D^o$	7 7	P	749	
	43	55	1632.667	2.837950 - 64.087418	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	7 7	P	749
	43	90	1633.909	2.837950 - 64.040886	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	7 7	P	749
	70	1634.350	.862613 - 62.049025	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - y^6P^o$	7 7	P	749	
	68	110	1635.401	7.955299 - 69.10238	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^1P^o$	7 7	P	749
	2	1635.810	13.474411 - 74.606841	$3d^7 - 3d^6(a^3D)4p$	$a^4P - x^2D^o$	7 7	Q	749	
	8	110	1636.331	.862613 - 61.974933	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - y^6P^o$	7 7	P	749
	42	110	1637.399	1.872567 - 62.945038	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	7 7	P	749
	8	110	1639.401	.977053 - 61.974933	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - y^6P^o$	7 7	P	749
42	2	1639.609	31.368450 - 92.35861	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4D - v^4F^o$	7 7	P	749	
	43	110	1640.152	3.117461 - 64.087418	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^o$	7 7	P	749
	20	1640.856	31.483176 - 92.42698	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4D - v^4F^o$	7 7	P	749	
	90	1641.762	8.391938 - 69.30209	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^4P^o$	7 7	P	749	
	10	1642.427	18.360646 - 79.24617	$3d^7 - 3d^5(a^6S)4s4p(^1P^o)$	$a^2P - x^6P^o$	7 7	P	749	
	10	1642.496	18.360646 - 79.24360	$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2P^o$	7 7	P	749	
	2	1642.927	48.039090 - 108.90664	$3d^7 - 3d^5(a^2G)4s4p(^1P^o)$	$d^2D - ^4H^o$	7 7	Q	749	
	90	1643.578	2.430097 - 63.272976	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	7 7	P	749	
	2	1644.756	31.483176 - 92.28246	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4D - v^4F^o$	7 7	P	749	
	30	1645.016	1.872567 - 62.662244	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^2I^o$	7 7	P	749	
68	1	1645.707	44.446878 - 105.21114	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^2D^o - ^4G$	7 7	P	749	
	110	1646.185	8.680454 - 69.42698	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^4P^o$	7 7	P	749	
	1	1646.510	38.164194 - 98.89871	$3d^6(a^1D)4s - 3d^6(b^1G)4p$	$c^2D - ^2F^o$	7 7	P	749	
	90	1647.163	8.391938 - 69.10238	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^4P^o$	7 7	P	749	

Fe II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
42	30	1647.546	31.999048 - 92.695374	$3d^7 - 3d^6(b^3P)4p$	$b^2F - u^2D^o$	$\frac{7}{2} - \frac{5}{2}$	P	749
	5	1647.758	31.483176 - 92.171716	$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^4D - u^2G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	2	1648.403	44.784761 - 105.44954	$3d^6(a^3D)4p - 3d^6(a^5D)5d$	$z^4D^o - ^4G$	$\frac{3}{2} - \frac{7}{2}$	P	749
	2	1649.112						749
	5	1649.323	44.232512 - 104.86343	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4F^o - ^4G$	$\frac{9}{2} - \frac{11}{2}$	P	749
55	1649.426	2.837950 - 63.465109	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	$\frac{5}{2} - \frac{3}{2}$	P	749	
68	90	1649.576	8.680454 - 69.30209	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	0	1650.065	31.999048 - 92.602703	$3d^7 - 3d^6(b^3F)4p$	$b^2F - u^2G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
68	70	1650.704	8.846768 - 69.42698	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
	10	1651.615	31.811822 - 92.35861	$3d^7 - 3d^5(a^4G)4s4p(^3P^o)$	$b^2F - v^4F^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
0	1652.44	47.674721 - 108.1916	$3d^7 -$	$d^2D - 23^o$	$\frac{3}{2} - \frac{5}{2}$	Q	816	
	0	1652.489	2.430097 - 62.945038	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	$\frac{7}{2} - \frac{5}{2}$		292
0	1652.911	43.620957 - 104.12027	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6P^o - ^6P$	$\frac{3}{2} - \frac{5}{2}$	P	749	
	20	1653.403	18.360646 - 78.84196	$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
20	1654.062	44.753799 - 105.21114	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4F^o - ^4G$	$\frac{7}{2} - \frac{9}{2}$	P	749	
	10	1654.114	8.846768 - 69.30209	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
2	1654.263	1.872567 - 62.322431	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^2G^o$	$\frac{3}{2} - \frac{7}{2}$	P	749	
	30	1654.478	3.117461 - 63.559488	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
42	2	1654.670	2.837950 - 63.272976	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
	0	1654.91	.667683 - 61.093413	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$ga^6D - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$	Q	816
68	10	1655.028	8.680454 - 69.10238	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$a^4D - x^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
	1	1655.253	31.811822 - 92.225538	$3d^7 - 3d^6(a^5D)5p$	$b^2F - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
20	1655.506	31.811822 - 92.216320	$3d^7 - 3d^6(b^3P)4p$	$b^2F - u^2D^o$	$\frac{5}{2} - \frac{3}{2}$	P	749	
	1	1656.142	44.446878 - 104.82816	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4D^o - ^6D$	$\frac{7}{2} - \frac{5}{2}$	P	749
5	1656.461	45.079879 - 105.44954	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4F^o - ^4G$	$\frac{5}{2} - \frac{7}{2}$	P	749	
	2	1656.743	18.886780 - 79.24617	$3d^7 - 3d^5(a^6S)4s4p(^1P^o)$	$a^2P - x^6P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
5	1656.814	18.886780 - 79.24360	$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	4	1657.07	3.117461 - 63.465109	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P	645
1	1657.249	45.289801 - 105.63075	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4F^o - ^4G$	$\frac{3}{2} - \frac{5}{2}$	P	749	
	30	1657.545	18.360646 - 78.690846	$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
10	1658.401	1.872567 - 62.171615	$3d^7 - 3d^5(a^6S)$	$a^4F - y^6P^o$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	90	1658.772	1.872567 - 62.158110	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
40	110	1659.482	2.430097 - 62.689880	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{1}{2} - \frac{1}{2}$	P	749
	1	1660.388	42.439822 - 102.666694	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
5	1660.839	1.872567 - 62.083108	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{1}{2} - \frac{1}{2}$	P	749	
			$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^2G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749	
41	15	1660.886	42.334822 - 102.543648	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{5}{2} - \frac{3}{2}$	P	749
	30	1661.324	1.872567 - 62.065521	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^o$	$\frac{9}{2} - \frac{7}{2}$	P	749
42	2	1662.358	3.117461 - 63.272976	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
	10	1662.425	36.126387 - 96.27949	$3d^6(a^3D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2D - t^2F^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
1	1662.722	42.401302 - 102.543648	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{3}{2} - \frac{5}{2}$	P	749	
	110	1663.222	2.837950 - 62.962205	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
42	5	1663.697	2.837950 - 62.945038	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	5	1663.782	36.252918 - 96.35696	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2D - t^2F^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
0	1663.788	42.439822 - 102.543648	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{1}{2} - \frac{3}{2}$	P	749	
	2	1663.974	42.237033 - 102.334112	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{7}{2} - \frac{5}{2}$	P	749
1	1665.133	44.784761 - 104.84002	$3d^6(a^5D)4p -$	$z^4D^o - 38$	$\frac{5}{2} - \frac{5}{2}$	P	749	
	1	1665.929	36.252918 - 96.27949	$3d^6(a^5D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^2D - t^2F^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
0	1666.06	33.466463 - 93.48765	$3d^6(a^1G)4s - 3d^6(b^3F)4p$	$c^2G - u^4F^o$	$\frac{9}{2} - \frac{7}{2}$	Q	816	
	20	1666.686	42.334822 - 102.334112	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{5}{2} - \frac{3}{2}$	P	749
55	1667.913	18.886780 - 78.84196	$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2P^o$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	0	1668.535	42.401302 - 102.334112	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{9}{2} - \frac{7}{2}$	P	749
5	1669.001	42.114818 - 102.030912	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^o - ^6D$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	5	1669.003	45.289801 - 105.20579	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4F^o - ^6G$	$\frac{3}{2} - \frac{5}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
40	40	1669.663	2.430097 - 62.322431	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	150	1670.746	1.872567 - 61.726077	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
40	70	1670.790	2.837950 - 62.689880	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
40	30	1670.991	3.117461 - 62.962205	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1672.412	42.237033 - 102.030912	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1672.427	45.079879 - 104.87323	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^6F^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
102	0	1672.675	44.784761 - 104.56923	$3d^6(a^5D)4p -$	$z^4D^\circ - 36$	$\frac{5}{2} - \frac{5}{2}$	P	749
	110	1673.464	15.84465 - 75.600931	$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1674.188	41.968046 - 101.698489	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^\circ - ^6D$	$\frac{11}{2} - \frac{11}{2}$	P	749
41	55	1674.256	2.430097 - 62.158110	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
41	1	1674.440	2.430097 - 62.151561	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
40	70	1674.716	3.117461 - 62.829075	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
41	0	1676.156	31.387948 - 91.048256	$3d^6(a^3D)4s - 3d^6(a^3D)5p$	$b^4D - ^4D^\circ$	$\frac{4}{2} - \frac{4}{2}$	P	749
	10	1676.361	2.430097 - 62.083108	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	70	1676.856	2.430097 - 62.065521	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	40	1677.842	18.886780 - 78.487153	$3d^7 - 3d^6(a^3D)4p$	$a^2P - w^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
	0	1678.312	42.114818 - 101.698489	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6F^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
40	1	1678.629	3.117461 - 62.689880	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
102	70	1679.378	16.36936 - 75.915215	$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	30	1679.494	13.474411 - 73.016147	$3d^7 - 3d^6(a^3G)4p$	$a^4P - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1680.36	31.387948 - 90.898873	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	816
	40	1681.111	2.837950 - 62.322431	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1682.822	45.206450 - 104.63043	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4D^\circ - ^6P$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1682.993	31.483176 - 90.901124	$3d^6(a^3D)4s - 3d^6(a^3D)5p$	$b^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
41	2	1683.315	2.837950 - 62.244520	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$	P	749
	5	1684.004	45.044168 - 104.42646	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4D^\circ - ^6F$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1684.276	42.658224 - 102.030912	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6P^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
41	70	1685.954	2.837950 - 62.151561	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
40	70	1686.455	2.430097 - 61.726077	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
39	40	1686.692	2.837950 - 62.125600	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
102	5	1686.788	1.872567 - 61.156835	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4H^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1687.739	31.387948 - 90.638822	$3d^6(a^3D)4s - 3d^6(a^3D)5p$	$b^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1688.289	16.36936 - 75.600931	$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
41	30	1688.403	2.837950 - 62.065521	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
85	55	1689.832	13.474411 - 72.651876	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1690.456	31.483176 - 90.638822	$3d^6(a^3D)4s - 3d^6(a^3D)5p$	$b^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
85	20	1690.758	13.474411 - 72.619490	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$	P	749
	0	1691.010	33.466463 - 92.602703	$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$c^2G - u^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
41	40	1691.273	3.117461 - 62.244520	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1691.564	1.872567 - 60.989444	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4H^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1692.175	43.238586 - 102.334112	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6P^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
38	40	1692.499	1.872567 - 60.956781	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
85	30	1693.476	13.474411 - 72.524566	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$	P	749
	0	1693.602	43.620957 - 102.666694	$3d^6(a^3D)4p - 3d^6(a^3D)6s$	$z^6P^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1693.759	42.658224 - 101.698489	$3d^6(a^3D)4p - 3d^6(a^3D)6s$	$z^6P^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
41	40	1693.936	3.117461 - 62.151561	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1694.484	1.872567 - 60.887598	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4H^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
39	10	1694.681	3.117461 - 62.125600	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
85	20	1696.459	13.673185 - 72.619490	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	135	1696.794	1.872567 - 60.807230	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1697.139	43.620957 - 102.543648	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^6P^\circ - ^6D$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1697.225	36.126387 - 95.04610	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1697.428	31.387948 - 90.300625	$3d^6(a^3D)4s - 3d^6(a^3D)5p$	$b^4D - ^6F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
40	20	1698.135	2.837950 - 61.726077	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
85	20	1698.438	13.474411 - 72.352024	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$	P	749
	20	1699.195	13.673185 - 72.524566	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1699.908	36.252918 - 95.07964	$3d^6(a^3D)4s - 3d^5(b^3P)4p$	$b^2D - ^3F^\circ$	$\frac{3}{2} - \frac{2}{2}$	P	749
	2	1700.902	43.238586 - 102.030912	$3d^6(a^5D)4p - 3d^6(a^3D)6s$	$z^6P^\circ - ^6D$	$\frac{5}{2} - \frac{7}{2}$	P	749
85	2	1701.719	13.474411 - 72.238513	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749
	5	1701.939	13.673185 - 72.429711	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749
38	110	1702.044	1.872567 - 60.625449	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$	P	749
	5	1702.730	20.516960 - 79.24617	$3d^7 - 3d^5(a^6S)4s4p(^3P^\circ)$	$a^2D - x^6P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749
	20	1702.805	20.516960 - 79.24360	$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1703.196	43.620957 - 102.334112	$3d^6(a^3D)4p - 3d^6(a^3D)6s$	$z^6P^\circ - ^6D$	$\frac{3}{2} - \frac{5}{2}$	P	749
	2	1703.735	13.474411 - 72.168998	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
39	40	1704.643	2.430097 - 61.093413	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
85	2	1704.815						749
	1	1705.910	13.904824 - 72.524566	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749
38	55	1706.145	2.430097 - 61.041748	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749
84	2	1706.678	8.680454 - 67.273826	$3d^6(a^3D)4s - 3d^6(a^3F)4p$	$a^4D - y^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749
	90	1707.399	13.474411 - 72.043026	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
84	5	1707.669	2.430097 - 60.989444	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4H^\circ$	$\frac{3}{2} - \frac{9}{2}$	P	749
	84	10	1708.240	13.673185 - 72.212978	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$	P
38		110	1708.622	2.430097 - 60.956781	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$	P
84	55	1709.553	2.837950 - 61.332764	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	55	1709.685	13.474411 - 71.964710	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749
84	2	1710.930	36.252918 - 94.70066	$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749
	2	1711.536	8.846768 - 67.273826	$3d^6(a^3D)4s - 3d^6(a^3F)4p$	$a^4D - y^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749
84	5	1711.684	7.955299 - 66.377283	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749
	5	1712.064						749
38	160	1712.999	2.430097 - 60.807230	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$	P	749
84	10	1713.213	13.673185 - 72.043026	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
84	1	1713.724	44.232512 - 102.584963	$3d^6(a^5D)4p - 3d^6(a^3G)5s$	$z^4F^\circ - ^4G$	$\frac{5}{2} - \frac{11}{2}$	P	749
	15	1714.676	8.680454 - 67.000517	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
84	5	1714.710	2.837950 - 61.156835	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4H^\circ$	$\frac{3}{2} - \frac{7}{2}$	P	749
	30	1715.026	13.904824 - 72.212978	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749
84	40	1715.515	13.673185 - 71.964710	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749
84	0	1716.321	13.904824 - 72.168998	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749
	39	55	1716.577	2.837950 - 61.093413	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P
39	5	1717.107	16.36936 - 74.606841	$3d^7 - 3d^6(a^3D)4p$	$a^2G - x^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$	P	749
	5	1717.448	30.388542 - 88.61452	$3d^6(a^3G)4s - 3d^5(a^4P)4s4p(^3P^\circ)$	$b^2G - ^6D^\circ$	$\frac{9}{2} - \frac{9}{2}$		749
38	5	1717.716	18.360646 - 76.577482	$3d^7 - 3d^6(a^1S)4p$	$a^2P - x^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749
	5	1717.761	3.117461 - 61.332764	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
38	55	1718.101	2.837950 - 61.041748	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749
	20	1718.984	20.516960 - 78.690846	$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
38	5	1719.330	44.232512 - 102.394718	$3d^6(a^3D)4p - 3d^6(a^3D)6s$	$z^4F^\circ - ^4D$	$\frac{3}{2} - \frac{7}{2}$	P	749
	84	30	1720.039	13.904824 - 72.043026	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P
2		1720.271	8.391938 - 66.522304	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749
110	1720.613	2.837950 - 60.956781	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$	P	749	
	2	1721.080	31.368450 - 89.471365	$3d^6(a^3D)4s - 3d^6(a^3D)5p$	$b^4D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$	Q	749
84	1	1721.738	25.787598 - 83.86845	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$b^2P - v^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1721.934	45.044168 - 103.118400	$3d^6(a^5D)4p - 3d^6(a^3D)6s$	$z^4D^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P	749
84	30	1722.432	7.955299 - 66.012750	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$	P	749
	2	1722.697	44.753799 - 102.802312	$3d^6(a^5D)4p - 3d^6(a^3D)6s$	$z^4F^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$	P	749
84	1	1722.994	45.079879 - 103.118400	$3d^6(a^3D)4p - 3d^6(a^3D)6s$	$z^4F^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1723.616	44.784761 - 102.802312	$3d^6(a^5D)4p - 3d^6(a^3D)6s$	$z^4D^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P	749
84	40	1724.574	8.391938 - 66.377283	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$	P	749
	50	1724.853	3.117461 - 61.093413	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1724.855	45.289801 - 103.265694	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^4F^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	P	749
	70	1724.963	2.430097 - 60.402342	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
	5	1725.390	44.92955 - 102.88712	$3d^6(a^1F)4s - 3d^6(a^3D_3)4f$	$c^2F - 4[4]^o$	$\frac{3}{2} - \frac{3}{2}$	Q	749
	2	1725.690	44.446878 - 102.394718	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	P	749
	1	1725.979	21.308040 - 79.24617	$3d^7 - 3d^5(a^6S)4s4p(^1P^o)$	$a^2D - x^6P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1726.056	21.308040 - 79.24360	$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1726.156	8.680454 - 66.612656	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	90	1726.392	3.117461 - 61.041748	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1726.584	3.117461 - 61.035287	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	20	1726.918	15.84465 - 73.751282	$3d^7 - 3d^6(a^1I)4p$	$a^2G - w^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1727.325						749
	2	1728.288	46.967444 - 104.82816	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4P^o - ^6D$	$\frac{5}{2} - \frac{5}{2}$	P	749
	1	1728.639	47.389779 - 105.23877	$3d^6(a^5D)4p -$	$z^4P^o - 40$	$\frac{3}{2} - \frac{5}{2}$	P	749
	20	1728.852	8.680454 - 66.522304	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
	10	1729.325						749
110	55	1731.038	18.360646 - 76.129446	$3d^7 - 3d^6(a^1S)4p$	$a^2P - x^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1731.125	8.846768 - 66.612656	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	20	1731.336	15.84465 - 73.60350	$3d^7 - 3d^6(a^1I)4p$	$a^2G - w^2H^o$	$\frac{3}{2} - \frac{11}{2}$	P	749
	30	1731.879	7.955299 - 65.696038	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4G^o$	$\frac{7}{2} - \frac{9}{2}$	P	749
	5	1732.275	31.999048 - 89.727342	$3d^7 - 3d^6(b^3F)4p$	$b^2F - ^4G^o$	$\frac{7}{2} - \frac{3}{2}$	Q	749
	5	1732.575						749
	2	1733.072	26.170181 - 83.871184	$3d^6(a^3H)4s - 3d^6(a^1F)4p$	$b^2H - v^2G^o$	$\frac{11}{2} - \frac{9}{2}$	P	749
110	10	1733.382	18.886780 - 76.577482	$3d^7 - 3d^6(a^1S)4p$	$a^2P - x^2P^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	1	1733.513	8.391938 - 66.078269	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1733.860						749
	200	1733.88	50.212826 - 107.8866	$3d^6(b^3P)4s -$	$c^4P - 20^o$	$\frac{5}{2} - \frac{7}{2}$	Q	436
	10	1734.080	33.501253 - 91.167937	$3d^6(a^1G)4s - 3d^6(a^5D)5p$	$c^2G - ^6P^o$	$\frac{7}{2} - \frac{7}{2}$	Q	749
	10	1734.448						749
	20	1735.496	20.516960 - 78.137364	$3d^7 - 3d^6(a^1D)4p$	$a^2D - v^2F^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	1	1735.811	44.784761 - 102.394718	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^4D^o - ^4D$	$\frac{5}{2} - \frac{7}{2}$	P	749
	10	1736.602	42.334822 - 99.918569	$3d^6(a^5D)4p - 3d^6(a^3F)5s$	$z^6F^o - f^4F$	$\frac{5}{2} - \frac{3}{2}$		749
	20	1737.185	2.837950 - 60.402342	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^o$	$\frac{5}{2} - \frac{5}{2}$	P	749
	10	1737.940	8.391938 - 65.931334	$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4G^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	10	1738.105	21.308040 - 78.84196	$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2P^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
	20	1740.312	45.206450 - 102.666694	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^4D^o - ^6D$	$\frac{1}{2} - \frac{1}{2}$	Q	749
	1	1741.340	26.932748 - 84.35980	$3d^6(a^3P)4s - 3d^6(a^1F)4p$	$b^2P - v^2D^o$	$\frac{1}{2} - \frac{1}{2}$	P	749
	40	1741.560						749
		1741.82	0. - 57.411065	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{9}{2} - \frac{5}{2}$	F,P	375,749
	55	1742.709	16.36936 - 73.751282	$3d^7 - 3d^6(a^1I)4p$	$a^2G - w^2H^o$	$\frac{7}{2} - \frac{7}{2}$	P	749
	20	1743.338						749
	10	1744.526						749
	0	1744.99	20.830582 - 78.137364	$3d^6(a^3P)4s - 3d^6(a^1D)4p$	$b^4P - v^2F^o$	$\frac{5}{2} - \frac{7}{2}$	Q	816
101	5	1745.242	15.84465 - 73.143288	$3d^7 - 3d^6(a^1G)4p$	$a^2G - w^2G^o$	$\frac{9}{2} - \frac{7}{2}$	P	749
101	2	1745.661	3.117461 - 60.402342	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	110	1746.818	15.84465 - 73.091590	$3d^7 - 3d^6(a^1G)4p$	$a^2G - w^2G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	0	1748.880	47.389779 - 104.56923	$3d^6(a^5D)4p -$	$z^4P^o - 36$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1748.890	21.308040 - 78.487153	$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	30	1749.123	15.84465 - 73.016147	$3d^7 - 3d^6(a^1G)4p$	$a^2G - x^2F^o$	$\frac{9}{2} - \frac{7}{2}$	P	749
	5	1749.358	52.29939 - 109.46312	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{5}{2} - \frac{7}{2}$	P	749
	10	1749.602	52.29939 - 109.45525	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{5}{2} - \frac{5}{2}$	P	749
	10	1749.777	52.29939 - 109.44953	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{5}{2} - \frac{3}{2}$	P	749
		1751.05	.384790 - 57.493321	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{7}{2} - \frac{3}{2}$	F,P	375,749
	20	1753.26	47.389779 - 104.42646	$3d^6(a^5D)4p - 3d^6(a^5D)5d$	$z^4P^o - ^6F$	$\frac{3}{2} - \frac{3}{2}$	Q	389
		1753.58	.384790 - 57.411065	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{7}{2} - \frac{3}{2}$	F,P	375,749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
101	20	1755.850	26.352766 - 83.305251	$3d^6(a^3H)4s - 3d^6(a^1F)4p$	$b^2H - v^2G^o$	$\frac{3}{2} - \frac{7}{2}$	P	749
	2	1756.84	33.466463 - 90.386528	$3d^6(a^1G)4s - 3d^6(a^3D)4p$	$c^2G - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	Q	816
	5	1756.960				$\frac{3}{2} - \frac{3}{2}$		749
		1757.14	.667683 - 57.578484	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,749
	30	1757.743	52.58251 - 109.47365	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{3}{2} - \frac{3}{2}$	P	749
	20	1758.065	52.58251 - 109.46312	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1758.312	52.58251 - 109.45525	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1759.77	.667683 - 57.493321	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,749
	10	1759.773	2.837950 - 59.663456	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	20	1760.390	15.84465 - 72.650658	$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	Q	749
	110	1761.372	16.36936 - 73.143288	$3d^7 - 3d^6(a^1G)4p$	$a^2G - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1761.84	1.872567 - 58.631531	$3d^7 - 3d^6(b^1G)4s$	$a^4F - d^2G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
		1762.32	.667683 - 57.411065	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,749
	10	1762.977	16.36936 - 73.091590	$3d^7 - 3d^6(a^1G)4p$	$a^2G - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1763.17	.862613 - 57.578484	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,749
	20	1764.119	16.36936 - 73.054881	$3d^7 - 3d^6(a^1G)4p$	$a^2G - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	20	1765.325	16.36936 - 73.016147	$3d^7 - 3d^6(a^1G)4p$	$a^2G - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1765.83	.862613 - 57.493321	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,749
		1766.74	.977053 - 57.578484	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - d^4P$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,749
	1	1767.75	36.126387 - 92.695374	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^2D - u^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	816
5	1768.012				$\frac{3}{2} - \frac{3}{2}$		749	
40	1769.275	52.96582 - 109.48615	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{3}{2} - \frac{1}{2}$	P	749	
30	1769.666	52.96582 - 109.47365	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1769.993	52.96582 - 109.46312	$3d^5(a^6S)4s4p(^3P^o) - 3d^54s(a^7S)4d$	$z^8P^o - ^8D$	$\frac{3}{2} - \frac{3}{2}$	P	749	
5	1771.260				$\frac{3}{2} - \frac{3}{2}$		749	
5	1771.510				$\frac{3}{2} - \frac{3}{2}$		749	
10	1771.960	21.308040 - 77.742730	$3d^7 - 3d^6(a^1D)4p$	$a^2D - v^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
110	1772.513	15.84465 - 72.261729	$3d^7 - 3d^6(a^1G)4p$	$a^2G - x^2H^o$	$\frac{3}{2} - \frac{1}{2}$	P	749	
2	1773.22	36.252918 - 92.64751	$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^2D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	816	
99	30	1776.649	15.84465 - 72.130390	$3d^7 - 3d^6(a^1G)4p$	$a^2G - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
0	1777.45	44.232512 - 100.49202	$3d^6(a^5D)4p - 3d^6(a^3F)5s$	$z^4F^o - e^2F$	$\frac{3}{2} - \frac{7}{2}$	Q	816	
10	1777.898	18.360646 - 74.606841	$3d^7 - 3d^6(a^3D)4p$	$a^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	1778.22	2.430097 - 58.666258	$3d^7 - 3d^6(b^1G)4s$	$a^4F - d^2G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749	
	1779.31	2.430097 - 58.631531	$3d^7 - 3d^6(b^1G)4s$	$a^4F - d^2G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749	
2	1780.99	31.387948 - 87.537652	$3d^6(a^3D)4s - 3d^5(a^4G)4s4p(^3P^o)$	$b^4D - y^6F^o$	$\frac{3}{2} - \frac{7}{2}$	Q	816	
30	1781.343	18.360646 - 74.498057	$3d^7 - 3d^6(a^3D)4p$	$a^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
5	1781.530	7.955299 - 64.087418	$3d^6(a^3D)4s - 3d^6(a^3F)4p$	$a^4D - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	Q	749	
2	1781.702	8.680454 - 64.806487	$3d^6(a^3D)4s - 3d^6(a^3P)4p$	$a^4D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		488	
20	1782.012				$\frac{3}{2} - \frac{3}{2}$		749	
191	160	1785.272	23.317633 - 79.33150	$3d^54s^2 - 3d^5(a^6S)4s4p(^1P^o)$	$a^6S - x^6P^o$	$\frac{5}{2} - \frac{7}{2}$	P	749
5	1785.922	7.955299 - 63.948790	$3d^6(a^3D)4s - 3d^6(a^3F)4p$	$a^4D - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749	
1	1786.448	13.673185 - 69.650484	$3d^7 - 3d^6(a^6G)4p$	$a^4P - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		292	
191	110	1786.752	23.317633 - 79.28511	$3d^54s^2 - 3d^5(a^6S)4s4p(^1P^o)$	$a^6S - x^6P^o$	$\frac{5}{2} - \frac{5}{2}$	P	749
191	40	1787.996	23.317633 - 79.24617	$3d^54s^2 - 3d^5(a^6S)4s4p(^1P^o)$	$a^6S - x^6P^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
	40	1788.078	23.317633 - 79.24360	$3d^54s^2 - 3d^6(a^1D)4p$	$a^6S - w^2P^o$	$\frac{5}{2} - \frac{3}{2}$	P	749
2	1789.90	16.36936 - 72.238513	$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	816	
	1791.21	2.837950 - 58.666258	$3d^7 - 3d^6(b^1G)4s$	$a^4F - d^2G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749	
	1792.32	2.837950 - 58.631531	$3d^7 - 3d^6(b^1G)4s$	$a^4F - d^2G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749	
99	110	1793.367	16.36936 - 72.130390	$3d^7 - 3d^6(a^1G)4p$	$a^2G - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
1	1794.77	30.764485 - 86.48275	$3d^6(a^2G)4s - 3d^6(a^1F)4p$	$b^2G - u^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Q	816	
2	1795.11	44.784761 - 100.49202	$3d^6(a^5D)4p - 3d^6(a^3F)5s$	$z^4D^o - e^2F$	$\frac{5}{2} - \frac{3}{2}$	Q	816	
20	1796.915				$\frac{3}{2} - \frac{3}{2}$		749	
40	1796.98	8.391938 - 64.040886	$3d^6(a^3D)4s - 3d^6(a^3F)4p$	$a^4D - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	P	645	
5	1798.025	38.214507 - 93.830979	$3d^6(a^1D)4s - 3d^5(a^4D)4s4p(^3P^o)$	$c^2D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$		749	

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
142	100	1798.157	20.516960 - 76.129446	$3d^7 - 3d^6(a^1S)4p$	$a^2D - x^2P^o$	1-1	P	749	
	10	1798.196	18.886780 - 74.498057	$3d^7 - 3d^6(a^3D)4p$	$a^2P - x^2D^o$	1-1	P	749	
		1800.22	3.117461 - 58.666258	$3d^7 - 3d^6(b^1G)4s$	$a^4F - d^2G$	1-1	F,P	375,749	
		1800.449	31.387948 - 86.929649	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - v^4D^o$	1-1	P	749	
	1	1800.55	1.872567 - 57.411065	$3d^7 - 3d^54s^2$	$a^4F - d^4P$	1-1	F,P	375,749	
		1801.08	13.904824 - 69.42698	$3d^7 - 3d^5(a^6S)4s4p(^3P^o)$	$a^4P - x^4P^o$	1-1	P	816	
	66	5	1803.541	31.483176 - 86.929649	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - v^4D^o$	1-1	P	749
		0	1804.166	46.967444 - 102.394718	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^4P^o - ^4D$	1-1	P	749
		0	1804.646	47.389779 - 102.802312	$3d^6(a^5D)4p - 3d^6(a^5D)6s$	$z^4P^o - ^4D$	1-1	P	749
		1	1804.827	8.680454 - 64.087418	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4G^o$	1-1	P	749
		1	1804.95	31.364440 - 86.767577	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - v^4D^o$	1-1	P	816
		1	1805.718	31.387948 - 86.767577	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - v^4D^o$	1-1	P	749
		142	20	1807.740	7.955299 - 63.272976	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P
	0		1808.828	31.483176 - 86.767577	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - v^4D^o$	1-1	P	749
90	1809.318		21.308040 - 76.577482	$3d^7 - 3d^6(a^1S)4p$	$a^2D - x^2P^o$	1-1	P	749	
	3		1810.57	38.164194 - 93.39536	$3d^6(a^1D)4s - 3d^6(b^3F)4p$	$c^2D - u^4F^o$	1-1	P	816
	0		1812.266	31.364440 - 86.543974	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - v^4D^o$	1-1	P	749
1	1814.01		44.446878 - 99.573225	$3d^6(a^5D)4p - 3d^6(a^3F)5s$	$z^4D^o - ^4F$	1-1	P	816	
66	30		1815.410	20.516960 - 75.600931	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^2F^o$	1-1	P	749
	20	1815.766	8.391938 - 63.465109	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
	0	1815.87	44.753799 - 99.824045	$3d^6(a^5D)4p - 3d^6(a^3F)5s$	$z^4F^o - ^4F$	1-1	Q	816	
	0	1816.09	2.430097 - 57.493321	$3d^7 - 3d^54s^2$	$a^4F - d^4P$	1-1	F,P	375,749	
	0	1817.509	31.368450 - 86.388820	$3d^6(a^3D)4s - 3d^6(b^3P)4p$	$b^4D - v^4D^o$	1-1	P	749	
66	70	1818.521	7.955299 - 62.945038	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
66	2	1818.81	2.430097 - 57.411065	$3d^7 - 3d^54s^2$	$a^4F - d^4P$	1-1	F,P	375,749	
	2	1819.646	31.811822 - 86.767577	$3d^7 - 3d^6(b^3P)4p$	$b^2F - v^4D^o$	1-1	P	749	
	2	1820.479	31.999048 - 86.929649	$3d^7 - 3d^6(b^3P)4p$	$b^2F - v^4D^o$	1-1	P	749	
	40	1822.123	8.391938 - 63.272976	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
	1	1822.189	8.680454 - 63.559488	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
	10	1823.870	18.360646 - 73.189110	$3d^7 - 3d^6(a^3D)4p$	$a^2P - y^2P^o$	1-1	P	749	
	5	1823.931	18.360646 - 73.187280	$3d^7 - 3d^6(a^3D)4p$	$a^2P - y^2P^o$	1-1	P	749	
	1	1824.105	21.308040 - 76.129446	$3d^7 - 3d^6(a^1S)4p$	$a^2D - x^2P^o$	1-1	P	749	
	2	1824.979	20.80577 - 75.600931	$3d^7 - 3d^6(a^3D)4p$	$a^2H - w^2F^o$	1-1	P	749	
	20	1825.329	8.680454 - 63.465109	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
66	1826.80	2.837950 - 57.578484	$3d^7 - 3d^54s^2$	$a^4F - d^4P$	1-1	F,P	375,749		
	50	1826.962	31.811822 - 86.54749	$3d^7 - 3d^6(a^1F)4p$	$b^2F - u^2F^o$	1-1	P	749	
	30	1826.999	7.955299 - 62.689880	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^o$	1-1	P	749	
66	30	1827.729	8.846768 - 63.559488	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
5	1828.346	18.360646 - 73.054881	$3d^7 - 3d^6(a^1G)4p$	$a^2P - x^2F^o$	1-1	P	749		
20	1828.854	15.84465 - 70.523706	$3d^7 - 3d^6(a^6G)4p$	$a^2G - x^2G^o$	1-1	P	749		
0	1829.126	31.811822 - 86.48275	$3d^7 - 3d^6(a^1F)4p$	$b^2F - u^2F^o$	1-1	P	749		
1829.65	2.837950 - 57.493321	$3d^7 - 3d^54s^2$	$a^4F - d^4P$	1-1	F,P	375,749			
66	30	1830.262	52.58251 - 107.2195	$3d^5(a^6S)4s4p(^3P^o) - 3d^54p^2$	$z^3P^o - ^8P$	1-1	P	749	
	20	1830.463	54.275637 - 108.90664	$3d^54s^2 - 3d^5(a^2G)4s4p(^1P^o)$	$b^4G - ^4H^o$	1-1	P	749	
	20	1830.734	54.283220 - 108.90664	$3d^54s^2 - 3d^5(a^2G)4s4p(^1P^o)$	$b^4G - ^4H^o$	1-1	Q	749	
	20	1830.887	8.846768 - 63.465109	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
	40	1831.261	21.308040 - 75.915215	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^2F^o$	1-1	P	749	
	30	1831.753	8.680454 - 63.272976	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
	30	1831.980	54.283220 - 108.86898	$3d^54s^2 - 3d^5(a^2G)4s4p(^1P^o)$	$b^4G - ^4H^o$	1-1	P	749	
	1832.40	2.837950 - 57.411065	$3d^7 - 3d^54s^2$	$a^4F - d^4P$	1-1	F,P	375,749		
	20	1832.500	8.391938 - 62.962205	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^o$	1-1	P	749	
	40	1833.076	8.391938 - 62.945038	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - x^4D^o$	1-1	P	749	
2	1833.233	31.999048 - 86.54749	$3d^7 - 3d^6(a^1F)4p$	$b^2F - u^2F^o$	1-1	P	749		
55	1833.631	52.29939 - 106.8360	$3d^5(a^6S)4s4p(^3P^o) - 3d^54p^2$	$z^3P^o - ^8P$	1-1	P	749		

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
98	55	1833.662	54.273641 - 108.80931	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$	P	749	
	1	1833.813	38.164194 - 92.695374	$3d^5(a^1D)4s - 3d^6(b^3P)4p$	$c^2D - u^2D^\circ$	$\frac{3}{2} - \frac{7}{2}$	P	749	
	40	1834.964	54.232195 - 108.72916	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4H^\circ$	$\frac{11}{2} - \frac{13}{2}$	P	749	
	40	1835.411	31.999048 - 86.48275	$3d^7 - 3d^6(a^1F)4p$	$b^2F - u^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749	
	110	1835.874	15.84465 - 70.314604	$3d^7 - 3d^6(a^6G)4p$	$a^2G - x^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$	P	749	
		1836.18	3.117461 - 57.578484	$3d^7 - 3d^5 4s^2$	$a^4F - d^4P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,749	
		1839.05	3.117461 - 57.493321	$3d^7 - 3d^5 4s^2$	$a^4F - d^4P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749	
	5	1839.460						749	
	5	1839.674	54.273641 - 108.63109	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	5	1839.742	54.275637 - 108.63109	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	10	1839.804	54.275637 - 108.62925	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749	
	20	1839.998	54.283220 - 108.63109	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749	
	65	0	1840.320	54.232195 - 108.57056	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$	P	749
		20	1841.542	18.886780 - 73.189110	$3d^7 - 3d^6(a^3D)4p$	$a^2P - y^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749
10		1841.604	18.886780 - 73.187280	$3d^7 - 3d^6(a^3D)4p$	$a^2P - y^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
30		1841.690	8.391938 - 62.689880	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749	
10		1841.725	54.273641 - 108.57056	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$	P	749	
1		1842.050	54.283220 - 108.57056	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749	
20		1842.240	8.680454 - 62.962205	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749	
		1842.52	0. - 54.273641	$3d^6(a^5D)4s - 3d^5 4s^2$	$ga^6D - b^4G$	$\frac{9}{2} - \frac{9}{2}$	F,P	375,749	
20		1843.193	52.96582 - 107.2195	$3d^5(a^6S)4s4p(^3P^\circ) - 3d^5 4p^2$	$z^3P^\circ - ^3P$	$\frac{9}{2} - \frac{9}{2}$	P	749	
15		1843.199	52.58251 - 106.8360	$3d^5(a^6S)4s4p(^3P^\circ) - 3d^5 4p^2$	$z^3P^\circ - ^3P$	$\frac{9}{2} - \frac{9}{2}$	P	749	
10		1843.261	54.232195 - 108.48387	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$	P	749	
		1843.92	0. - 54.232195	$3d^6(a^5D)4s - 3d^5 4s^2$	$ga^6D - b^4G$	$\frac{9}{2} - \frac{11}{2}$	F,P	375,749	
5		1844.59	44.232512 - 98.445400	$3d^6(a^5D)4p - 3d^6(a^3H)5s$	$z^4F^\circ - e^4H$	$\frac{9}{2} - \frac{9}{2}$		488	
0		1844.671	54.273641 - 108.48387	$3d^5 4s^2 - 3d^5(a^2G)4s4p(^1P^\circ)$	$b^4G - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$	P	749	
30	1844.923	7.955299 - 62.158110	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749		
2	1845.146	7.955299 - 62.151561	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$	P	749		
20	1846.273	18.360646 - 72.524566	$3d^7 - 3d^6(a^3D)4p$	$a^2P - w^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	749		
98	40	1846.574	16.36936 - 70.523706	$3d^7 - 3d^6(a^6G)4p$	$a^2G - x^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749	
65	10	1846.769	8.680454 - 62.829075	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749	
65	10	1847.902	8.846768 - 62.962205	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	749	
141	70	1848.775	20.516960 - 74.606841	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749	
65	30	1851.529	8.680454 - 62.689880	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{1}{2} - \frac{5}{2}$	P	749	
65	20	1852.459	8.846768 - 62.829075	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	749	
	10	1853.732	16.36936 - 70.314604	$3d^7 - 3d^6(a^6G)4p$	$a^2G - x^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$	P	749	
	2	1854.239	8.391938 - 62.322431	$3d^6(a^5D)4s - 3d^6(a^3H)4p$	$a^4D - z^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$	P	749	
		1855.34	.384790 - 54.283220	$3d^6(a^5D)4s - 3d^5 4s^2$	$ga^6D - b^4G$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,749	
		1855.67	.384790 - 54.273641	$3d^6(a^5D)4s - 3d^5 4s^2$	$ga^6D - b^4G$	$\frac{7}{2} - \frac{9}{2}$	F,P	375,749	
20	1856.315	52.96582 - 106.8360	$3d^5(a^6S)4s4p(^3P^\circ) - 3d^5 4p^2$	$z^3P^\circ - ^3P$	$\frac{9}{2} - \frac{7}{2}$	P	749		
0	1856.921	8.391938 - 62.244520	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$	P	749		
5	1856.930	18.360646 - 72.212978	$3d^7 - 3d^6(a^3D)4p$	$a^2P - w^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	749		
		1857.10	.384790 - 54.232195	$3d^6(a^5D)4s - 3d^5 4s^2$	$ga^6D - b^4G$	$\frac{7}{2} - \frac{11}{2}$	F,P	375,749	
	30	1857.959					749		
	5	1859.557	20.830582 - 74.606841	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - x^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	749	
65	40	1859.746	7.955299 - 61.726077	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	749	
97	160	1860.053	15.84465 - 69.606552	$3d^7 - 3d^6(a^6G)4p$	$a^2G - y^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$	P	749	
	1	1861.031	8.391938 - 62.125600	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	749	
	8	1862.81	18.360646 - 72.043026	$3d^7 - 3d^6(a^3D)4p$	$a^2P - w^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	645	
	2	1863.114	8.391938 - 62.065521	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$	P	749	
126	55	1864.647	20.34030 - 73.969767	$3d^7 - 3d^6(a^1I)4p$	$a^2H - y^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$	P	749	
126	90	1864.749	20.34030 - 73.966832	$3d^7 - 3d^6(a^1I)4p$	$a^2H - y^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$	P	749	
		1865.13	.667683 - 54.283220	$3d^6(a^5D)4s - 3d^5 4s^2$	$ga^6D - b^4G$	$\frac{5}{2} - \frac{7}{2}$	F,P	375,749	
		1865.39	.667683 - 54.275637	$3d^6(a^5D)4s - 3d^5 4s^2$	$ga^6D - b^4G$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,749	

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1865.46	.667683 - 54.273641	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - b^4G$	$\frac{5}{2} - \frac{9}{2}$	F,P	375,749
	2	1866.923	8.680454 - 62.244520	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1867.258	50.157452 - 103.71157	$3d^6(b^3F)4s - 3d^6(a^3D_2)4f$	$c^4F - 2[4]^o$	$\frac{5}{2} - \frac{1}{2}$	Q	749
	1	1867.660	18.886780 - 72.429711	$3d^7 - 3d^6(a^3D)4p$	$a^2P - w^4D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	10	1867.942	48.039090 - 101.57390	$3d^7 - 3d^5(a^4D)4s4p(^3P^o)$	$d^2D - ^4P^o$	$\frac{4}{2} - \frac{3}{2}$	Q	749
	30	1869.549	50.187813 - 103.67678	$3d^6(b^3F)4s - 3d^6(a^3D_2)4f$	$c^4F - 2[3]^o$	$\frac{3}{2} - \frac{1}{2}$	Q	749
	5	1869.766	30.388542 - 83.871184	$3d^6(a^3G)4s - 3d^6(a^1F)4p$	$b^2G - v^2G^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	1	1870.72	25.787598 - 79.24360	$3d^6(a^3P)4s - 3d^6(a^1D)4p$	$b^2P - w^2P^o$	$\frac{3}{2} - \frac{1}{2}$	Q	816
	2	1871.077	8.680454 - 62.125600	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
		1871.94	.862613 - 54.283220	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - b^4G$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,749
		1872.20	.862613 - 54.275637	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - b^4G$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,749
	20	1872.638				$\frac{3}{2} - \frac{1}{2}$		749
	0	1872.738	8.846768 - 62.244520	$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4F^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
	3	1874.58	36.126387 - 89.471365	$3d^6(a^3D)4s - 3d^6(a^3D)5p$	$b^2D - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$	Q	816
65	40	1874.972	8.391938 - 61.726077	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
	2	1875.211	13.673185 - 67.000517	$3d^7 - 3d^6(a^3F)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	0	1875.43	54.870528 - 108.1916	$3d^6(b^3P)4s -$	$d^2F - 23^o$	$\frac{5}{2} - \frac{1}{2}$	Q	816
	15	1875.536	36.126387 - 89.444458	$3d^6(a^3D)4s - 3d^5(a^4P)4s4p(^3P^o)$	$b^2D - ^6P^o$	$\frac{3}{2} - \frac{1}{2}$		488
141	40	1876.215	21.308040 - 74.606841	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$	P	749
		1876.22	.977053 - 54.275637	$3d^6(a^5D)4s - 3d^54s^2$	$ga^6D - b^4G$	$\frac{1}{2} - \frac{5}{2}$	F,P	375,749
	97	1876.837	16.36936 - 69.650484	$3d^7 - 3d^6(a^6G)4p$	$a^2G - y^2F^o$	$\frac{7}{2} - \frac{1}{2}$	P	749
125	190	1877.469	20.34030 - 73.60350	$3d^7 - 3d^6(a^1I)4p$	$a^2H - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$	P	749
	97	1878.386	16.36936 - 69.606552	$3d^7 - 3d^6(a^6G)4p$	$a^2G - y^2F^o$	$\frac{7}{2} - \frac{1}{2}$	P	749
141	55	1880.052	21.308040 - 74.498057	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2D^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
126	110	1880.972	20.80577 - 73.969767	$3d^7 - 3d^6(a^1I)4p$	$a^2H - y^2I^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
	0	1883.06	22.810357 - 75.915215	$3d^6(a^3F)4s - 3d^6(a^3D)4p$	$b^4F - w^4F^o$	$\frac{7}{2} - \frac{3}{2}$	Q	816
		1885.67	1.872567 - 54.904222	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{9}{2} - \frac{1}{2}$	F,P	375,749
		1886.86	1.872567 - 54.870528	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{9}{2} - \frac{1}{2}$	F,P	375,749
	1	1888.010	0. - 52.96582	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - z^2P^o$	$\frac{9}{2} - \frac{3}{2}$	P	749
125	160	1888.734	20.80577 - 73.751282	$3d^7 - 3d^6(a^1I)4p$	$a^2H - w^2H^o$	$\frac{9}{2} - \frac{9}{2}$	P	749
	2	1890.256	13.474411 - 66.377283	$3d^7 - 3d^6(a^3G)4p$	$a^4P - x^4F^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
	2	1893.649				$\frac{5}{2} - \frac{1}{2}$		749
125	70	1894.021	20.80577 - 73.60350	$3d^7 - 3d^6(a^1I)4p$	$a^2H - w^2H^o$	$\frac{9}{2} - \frac{11}{2}$	P	749
124	55	1895.688	20.34030 - 73.091590	$3d^7 - 3d^6(a^1G)4p$	$a^2H - w^2G^o$	$\frac{11}{2} - \frac{3}{2}$	P	749
	2	1897.480	8.391938 - 61.093413	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - z^2D^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
140	90	1898.536	20.516960 - 73.189110	$3d^7 - 3d^6(a^3D)4p$	$a^2D - y^2P^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
	1	1900.190	20.516960 - 73.143288	$3d^7 - 3d^6(a^1G)4p$	$a^2D - w^2G^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
	10	1900.67				$\frac{5}{2} - \frac{1}{2}$		488
	30	1901.773	0. - 52.58251	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - z^2P^o$	$\frac{9}{2} - \frac{1}{2}$	P	749
	20	1902.027	13.673185 - 66.24866	$3d^7 - 3d^6(a^3P)4p$	$a^4P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$	P	749
	1	1903.023	31.811822 - 84.35980	$3d^7 - 3d^6(a^1F)4p$	$b^2F - v^2D^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
	5	1903.284	30.764485 - 83.305251	$3d^6(a^3G)4s - 3d^6(a^1F)4p$	$b^2G - v^2G^o$	$\frac{7}{2} - \frac{1}{2}$	P	749
139	5	1903.387	20.516960 - 73.054881	$3d^7 - 3d^6(a^1G)4p$	$a^2D - x^2F^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
139	110	1904.791	20.516960 - 73.016147	$3d^7 - 3d^6(a^1G)4p$	$a^2D - x^2F^o$	$\frac{5}{2} - \frac{1}{2}$	P	749
	1	1905.270	8.846768 - 61.332764	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	749
		1905.70	2.430097 - 54.904222	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{7}{2} - \frac{1}{2}$	F,P	375,749
		1905.77	2.430097 - 54.902315	$3d^7 - 3d^6(b^3P)4s$	$a^4F - c^2P$	$\frac{7}{2} - \frac{1}{2}$	F,P	375,749
		1906.93	2.430097 - 54.870528	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{7}{2} - \frac{1}{2}$	F,P	375,749
		1908.36	1.872567 - 54.273641	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{9}{2} - \frac{9}{2}$	F,P	375,749
	1	1909.808	8.680454 - 61.041748	$3d^6(a^1D)4s - 3d^6(a^3H)4p$	$a^4D - z^4G^o$	$\frac{1}{2} - \frac{5}{2}$	P	749
		1909.87	1.872567 - 54.232195	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{9}{2} - \frac{11}{2}$	F,P	375,749
	1	1910.04	8.680454 - 61.035287	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4P^o$	$\frac{1}{2} - \frac{1}{2}$	P	816
	1	1910.150	21.251608 - 73.60350	$3d^6(a^3H)4s - 3d^6(a^1I)4p$	$a^4H - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		292
	1	1910.445	13.904824 - 66.24866	$3d^7 - 3d^6(a^3P)4p$	$a^4P - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$	P	749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
124	40	1910.675	20.80577 - 73.143288	$3d^7 - 3d^6(a^1G)4p$	$a^2H - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
124	10	1912.564	20.80577 - 73.091590	$3d^7 - 3d^6(a^1G)4p$	$a^2H - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1914.330				$\frac{3}{2} - \frac{3}{2}$		749
	2	1915.328	20.80577 - 73.016147	$3d^7 - 3d^6(a^1G)4p$	$a^2H - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1915.792	.384790 - 52.58251	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - z^8P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1916.239	20.830582 - 73.016147	$3d^6(a^3P)4s - 3d^6(a^1G)4p$	$b^4P - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	40	1917.320	15.84465 - 68.000788	$3d^7 - 3d^6(a^3G)4p$	$a^2G - y^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
138	30	1918.100	20.516960 - 72.651876	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1920.63	2.837950 - 54.904222	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
		1920.70	2.837950 - 54.902315	$3d^7 - 3d^6(b^3P)4s$	$a^4F - c^2P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	0	1920.985	31.811822 - 83.86845	$3d^7 - 3d^6(a^1F)4p$	$b^2F - v^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1921.87	2.837950 - 54.870528	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	0	1922.269	21.581638 - 73.60350	$3d^6(a^3H)4s - 3d^6(a^1I)4p$	$a^4H - w^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	292
	5	1922.692	8.391938 - 60.402342	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	20	1922.797	20.516960 - 72.524566	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$		292
123	135	1925.987	20.34030 - 72.261729	$3d^7 - 3d^6(a^1G)4p$	$a^2H - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	30	1926.240	.384790 - 52.29939	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - z^8P^o$	$\frac{3}{2} - \frac{3}{2}$	P	748
140	5	1927.485	21.308040 - 73.189110	$3d^7 - 3d^6(a^3D)4p$	$a^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
140	25	1927.553	21.308040 - 73.187280	$3d^7 - 3d^6(a^3D)4p$	$a^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1927.919	31.999048 - 83.86845	$3d^7 - 3d^6(a^1F)4p$	$b^2F - v^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1928.52	2.430097 - 54.283220	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
123	2	1928.785	20.80577 - 72.651876	$3d^7 - 3d^6(a^3D)4p$	$a^2H - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1928.88	2.430097 - 54.273641	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	10	1929.196	20.516960 - 72.352024	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1929.709	20.830582 - 72.651876	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1930.42	2.430097 - 54.232195	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	40	1930.915	20.830582 - 72.619490	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1931.00	3.117461 - 54.904222	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
		1931.07	3.117461 - 54.902315	$3d^7 - 3d^6(b^3P)4s$	$a^4F - c^2P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
		1932.25	3.117461 - 54.870528	$3d^7 - 3d^6(b^3P)4s$	$a^4F - d^2F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
139	70	1932.485	21.308040 - 73.054881	$3d^7 - 3d^6(a^1G)4p$	$a^2D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	5	1933.417	8.680454 - 60.402342	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	10	1933.45	20.516960 - 72.238513	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$		645
	1	1934.47	20.830582 - 72.524566	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$		645
96	110	1935.296	15.84465 - 67.516332	$3d^7 - 3d^6(a^3G)4p$	$a^2G - y^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	0	1935.45	22.939358 - 74.606841	$3d^6(a^1F)4s - 3d^6(a^3D)4p$	$b^4F - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Q	816
	15	1936.793	.667683 - 52.29939	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - z^8P^o$	$\frac{3}{2} - \frac{3}{2}$	P	748
96	55	1936.805	16.36936 - 68.000788	$3d^7 - 3d^6(a^3G)4p$	$a^2G - y^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	8	1938.899	23.031300 - 74.606841	$3d^6(a^3F)4s - 3d^6(a^3D)4p$	$b^4F - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		292
	0	1940.939	20.830582 - 72.352024	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1941.995	31.811822 - 83.305251	$3d^7 - 3d^6(a^1F)4p$	$b^2F - v^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1943.81	2.837950 - 54.283220	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
		1944.10	2.837950 - 54.275637	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	0	1944.134	.862613 - 52.29939	$3d^6(a^5D)4s - 3d^5(a^6S)4s4p(^3P^o)$	$ga^6D - z^8P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1944.18	2.837950 - 54.273641	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	5	1946.437	27.314922 - 78.690846	$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$a^2F - w^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	2	1946.85	44.915046 - 96.27949	$3d^6(a^1F)4s - 3d^5(a^1G)4s4p(^3P^o)$	$c^2F - t^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Q	816
123	70	1948.383	20.80577 - 72.130390	$3d^7 - 3d^6(a^1G)4p$	$a^2H - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
	1	1948.883	21.308040 - 72.619490	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1952.15	2.837950 - 54.063459	$3d^7 - 3d^6(b^3P)4s$	$a^4F - c^2P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	1	1952.650	20.830582 - 72.043026	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1954.43	3.117461 - 54.283220	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749
	1	1954.618	13.673185 - 64.834073	$3d^7 - 3d^6(a^3P)4p$	$a^4P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P	749
		1954.72	3.117461 - 54.275637	$3d^7 - 3d^54s^2$	$a^4F - b^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,749

FE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	1955.641	20.830582 - 71.964710	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4P^o$	1-1	P	749
	10	1956.12	21.308040 - 72.429711	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4D^o$	1-1	P	645
	5	1958.09	21.581638 - 72.651876	$3d^6(a^3H)4s - 3d^6(a^3D)4p$	$a^4H - w^4D^o$	1-1		645
	5	1958.121	21.581638 - 72.650658	$3d^6(a^3H)4s - 3d^6(a^3D)4p$	$a^4H - w^4F^o$	1-1		292
	1	1962.07	22.637205 - 73.60350	$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$b^4F - w^2H^o$	1-1		645
		1962.86	3.117461 - 54.063459	$3d^7 - 3d^6(b^3P)4s$	$a^4F - c^2P$	1-1	F,P	375,749
	25	1963.110	21.711917 - 72.651876	$3d^6(a^3H)4s - 3d^6(a^3D)4p$	$a^4H - w^4D^o$	1-1		292
	12	1964.342	21.711917 - 72.619490	$3d^6(a^3H)4s - 3d^6(a^3D)4p$	$a^4H - w^4D^o$	1-1	P	197,292
	1	1964.572	13.904824 - 64.806487	$3d^7 - 3d^6(a^3P)4p$	$a^4P - z^2P^o$	1-1	P	749
	2	1965.921	27.620412 - 78.487153	$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$a^2F - w^2D^o$	1-1	P	749
	20	1966.200	48.039090 - 98.89871	$3d^7 - 3d^6(b^1G)4p$	$d^2D - ^2F^o$	1-1	P	749
	1	1967.635	27.314922 - 78.137364	$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$a^2F - v^2F^o$	1-1	P	749
	20	1968.042	13.474411 - 64.286345	$3d^7 - 3d^6(a^3F)4p$	$a^4P - z^2F^o$	1-1	P	749
	2	1968.216	21.812055 - 72.619490	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^o$	1-1	P	749
	10	1968.684	52.29939 - 103.09473	$3d^3(a^6S)4s4p(^3P^o) - 3d^34s(a^7S)5s$	$z^3P^o - ^8S$	1-1	P	749
	5	1968.896	25.787598 - 76.577482	$3d^6(a^3P)4s - 3d^6(a^1S)4p$	$b^2P - x^2P^o$	1-1	P	749
	2	1970.357	13.673185 - 64.425408	$3d^7 - 3d^6(a^3F)4p$	$a^4P - z^2F^o$	1-1	P	749
	10	1970.662	15.84465 - 66.589008	$3d^7 - 3d^6(a^3G)4p$	$a^2G - y^4H^o$	1-1	P	749
	1	1971.03	21.308040 - 72.043026	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4P^o$	1-1	P	645
		1971.96	7.955299 - 58.666258	$3d^6(a^3D)4s - 3d^6(b^1G)4s$	$a^4D - d^2G$	1-1	F,P	375,749
		1973.31	7.955299 - 58.631531	$3d^6(a^3D)4s - 3d^6(b^1G)4s$	$a^4D - d^2G$	1-1	F,P	375,749
	1	1974.49	20.34030 - 70.986677	$3d^7 - 3d^6(a^1D)4p$	$a^2H - z^2K^o$	1-1		645
	40	1975.548	15.84465 - 66.463528	$3d^7 - 3d^6(a^3G)4p$	$a^2G - y^4H^o$	1-1	P	749
	1	1977.595	13.474411 - 64.040886	$3d^7 - 3d^6(a^3F)4p$	$a^4P - y^4G^o$	1-1	P	749
95	2	1978.919	15.84465 - 66.377283	$3d^7 - 3d^6(a^3G)4p$	$a^2G - x^4F^o$	1-1	P	749
	0	1979.156	21.711917 - 72.238513	$3d^6(a^3H)4s - 3d^6(a^3D)4p$	$a^4H - w^4F^o$	1-1	P	749
	20	1979.719	52.58251 - 103.09473	$3d^3(a^6S)4s4p(^3P^o) - 3d^34s(a^7S)5s$	$z^3P^o - ^8S$	1-1	P	749
	5	1983.033	27.314922 - 77.742730	$3d^6(a^3P)4s - 3d^6(a^1D)4p$	$a^2F - v^2F^o$	1-1	P	749
	1	1983.941	33.466463 - 83.871184	$3d^6(a^1G)4s - 3d^6(a^1F)4p$	$c^2G - v^2G^o$	1-1	P	749
	5	1984.091	21.812055 - 72.212978	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4P^o$	1-1	P	749
	20	1984.956	22.637205 - 73.016147	$3d^6(a^3F)4s - 3d^6(a^1G)4p$	$b^4F - x^2F^o$	1-1	P	749
	40	1986.419	25.787598 - 76.129446	$3d^6(a^3P)4s - 3d^6(a^1S)4p$	$b^2P - x^2P^o$	1-1	P	749
	1	1987.954	16.36936 - 66.672334	$3d^7 - 3d^6(a^3G)4p$	$a^2G - y^4H^o$	1-1	P	749
		1989.09	8.391938 - 58.666258	$3d^6(a^3D)4s - 3d^6(b^1G)4s$	$a^4D - d^2G$	1-1	F,P	375,749
		1990.46	8.391938 - 58.631531	$3d^6(a^3D)4s - 3d^6(b^1G)4s$	$a^4D - d^2G$	1-1	F,P	375,749
	1	1990.805	21.812055 - 72.043026	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4P^o$	1-1		645
	10	1991.252	16.36936 - 66.589008	$3d^7 - 3d^6(a^3G)4p$	$a^2G - y^4H^o$	1-1	P	749
		1991.52	0. - 50.212826	$3d^6(a^3D)4s - 3d^6(b^3P)4s$	$ga^oD - c^4P$	1-1	F,P	375,749
	2	1991.802	22.810357 - 73.016147	$3d^6(a^3F)4s - 3d^6(a^1G)4p$	$b^4F - x^2F^o$	1-1	P	749
95	10	1993.298	15.84465 - 66.012750	$3d^7 - 3d^6(a^3G)4p$	$a^2G - x^4F^o$	1-1	P	749
		1993.72	0. - 50.157452	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$ga^oD - c^4F$	1-1	F,P	375,749
	2	1993.912	21.812055 - 71.964710	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4P^o$	1-1	P	749
	20	1994.857	52.96582 - 103.09473	$3d^3(a^6S)4s4p(^3P^o) - 3d^34s(a^7S)5s$	$z^3P^o - ^8S$	1-1	P	749
	1	1995.119	27.620412 - 77.742730	$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$a^2F - v^2F^o$	1-1	P	749
	2	1995.422	22.409852 - 72.524566	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^o$	1-1	P	749
	2	1996.539	15.84465 - 65.931334	$3d^7 - 3d^6(a^3G)4p$	$a^2G - x^4G^o$	1-1	P	749
	0	1996.933	22.939358 - 73.016147	$3d^6(a^3F)4s - 3d^6(a^1G)4p$	$b^4F - x^2F^o$	1-1	P	749
	4	1997.03	26.055423 - 76.129446	$3d^6(a^3G)4s - 3d^6(a^1S)4p$	$a^4G - x^2P^o$	1-1		645
	1	1999.206	22.409852 - 72.429711	$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^o$	1-1	P	749
187	70	1999.413	22.637205 - 72.651876	$3d^6(a^3F)4s - 3d^6(a^3D)4p$	$b^4F - w^4D^o$	1-1	P	749
	10	1999.462	22.637205 - 72.650658	$3d^6(a^3F)4s - 3d^6(a^3D)4p$	$b^4F - w^4F^o$	1-1	P	292
	30	1999.730	20.516960 - 70.523706	$3d^7 - 3d^6(a^6G)4p$	$a^2D - x^2G^o$	1-1	P	749

IRON III (Fe²⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p⁶3d⁶(⁵D₄) (24 electrons)
Ionization Potential 247 221 cm⁻¹; 30.652 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	200	679.129	20.0511 - 167.2989	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - t ³ G°	6 - 5		188
	150	680.700	20.3008 - 167.2073	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - t ³ G°	5 - 4		188
	150	682.10	20.4819 - 167.0850	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - t ³ G°	4 - 3		188
	70	684.28	20.0511 - 166.18750	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - v ³ H°	6 - 6		188
	70	684.858	20.4819 - 166.498	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - r ³ F°	4 - 3		188
	70	686.63	20.3008 - 165.9396	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - v ³ H°	5 - 5		188
	20	688.53	20.4819 - 165.7191	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - v ³ H°	4 - 4		188
	70	700.575	24.5588 - 167.2989	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ G - t ³ G°	5 - 5		188
	70	703.506	24.9409 - 167.0850	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ G - t ³ G°	4 - 3		188
	70	704.923	25.1424 - 167.002	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ G - r ³ F°	3 - 2		188
	150	705.892	24.5588 - 166.2222	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ G - r ³ F°	5 - 4		188
	70	707.444	25.1424 - 166.498	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ G - r ³ F°	3 - 3		188
	250	722.419	30.3562 - 168.7801	3d ⁶ - 3d ⁵ (b ² G)4p	a ¹ I - w ¹ H°	6 - 5		188
8	200	727.681	0.0 - 137.42300	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	4 - 3		188
	70	728.52	21.4622 - 158.7293	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ F - t ³ D°	4 - 3		188
8	400	728.810	0.0 - 137.20973	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	4 - 4		188
8	200	729.349	0.4362 - 137.54460	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	3 - 2		188
8	300	729.996	0.4362 - 137.42300	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	3 - 3		188
	730.88	0.7389 - 137.5611	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	2 - 1		188	
8	150	730.96	0.7389 - 137.54460	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	2 - 2		188
8	70	731.130	0.4362 - 137.20973	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	3 - 4		188
	70	731.443	21.6999 - 158.4168	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ F - t ³ D°	3 - 2		188
8	150	731.612	0.7389 - 137.42300	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	2 - 3		188
8	150	731.846	0.9324 - 137.5732	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	1 - 0		188
	731.90	0.9324 - 137.5611	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	1 - 1		188	
8	200	732.004	0.9324 - 137.54460	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	1 - 2		188
8	150	732.425	1.0273 - 137.5611	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ D°	0 - 1		188
	70	733.13	21.8572 - 158.2573	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ F - t ³ D°	2 - 1		188
	250	734.296	0.0 - 136.18517	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ F°	4 - 5		188
	70	735.338	0.0 - 135.99062	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ F°	4 - 4		188
	736.47	30.7162 - 166.498	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ D - r ³ F°	2 - 3		188	
	300	737.708	0.4362 - 135.99062	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ F°	3 - 4		188
	70	738.742	30.8578 - 166.2222	3d ⁶ - 3d ⁵ (b ² G)4p	a ³ D - r ³ F°	3 - 4		188
	300	739.264	0.7389 - 136.00874	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ F°	2 - 3		188
	150	739.594	1.0273 - 136.23584	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ F°	0 - 1		188
	250	739.724	0.9324 - 136.11794	3d ⁶ - 3d ⁵ (a ⁴ F)4p	ga ³ D - x ³ F°	1 - 2		188
	746.247	24.5588 - 158.5627	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ G - s ³ F°	5 - 4		188	
	150	751.427						188
	150	751.648	24.9409 - 157.9820	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ G - s ³ F°	4 - 3		188
	150	754.478	25.1424 - 157.6843	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ G - s ³ F°	3 - 2		188
	150	757.167						188
	150	757.279						188
	776.097	70.72501 - 199.57771	3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ G)5p	b ³ G - q ³ F°	3 - 2	Q	188	
	200	782.035	30.8578 - 158.7293	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ D - t ³ D°	3 - 3		188
	200	783.069	30.8578 - 158.5627	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ D - s ³ F°	3 - 4		188
	70	785.76	30.7162 - 157.9820	3d ⁶ - 3d ⁵ (b ² D)4p	a ³ D - s ³ F°	2 - 3		188
	200	792.559	21.4622 - 147.63595	3d ⁶ - 3d ⁵ (b ² F)4p	a ³ F - u ³ D°	4 - 3		188
	70	794.01	21.4622 - 147.40614	3d ⁶ - 3d ⁵ (b ² F)4p	a ³ F - u ³ G°	4 - 5		188
	794.19	21.6999 - 147.61465	3d ⁶ - 3d ⁵ (b ² F)4p	a ³ F - u ³ D°	3 - 2		188	
	150	795.550	21.8572 - 147.55645	3d ⁶ - 3d ⁵ (b ² F)4p	a ³ F - u ³ D°	2 - 1		188
	150	797.055	21.6999 - 147.16136	3d ⁶ - 3d ⁵ (b ² F)4p	a ³ F - u ³ G°	3 - 4		188
	150	797.16	0.0 - 125.44358	3d ⁶ - 3d ⁵ (a ⁴ D)4p	ga ³ D - y ³ F°	4 - 4		188
	70	801.32	20.0511 - 144.84324	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - x ¹ H°	6 - 5		188
19	600	807.547	20.0511 - 143.88374	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ H - v ³ G°	6 - 5		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
19	550	807.855	20.3008 - 144.08597	$3d^6 - 3d^5(a^2G)4p$	$a^3H - v^3G^o$	5 - 4		188
7	300	808.079	0.0 - 123.75039	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	4 - 3		188
19	550	808.840	20.4819 - 144.11664	$3d^6 - 3d^5(a^2G)4p$	$a^3H - v^3G^o$	4 - 3		188
	200	809.675	21.4622 - 144.96850	$3d^6 - 3d^5(b^2F)4p$	$a^3F - t^3F^o$	4 - 4		188
7	450	810.940	0.4362 - 123.75039	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	3 - 3		188
	250	811.246	21.6999 - 144.96850	$3d^6 - 3d^5(b^2F)4p$	$a^3F - t^3F^o$	3 - 4		188
7	550	811.284	0.4362 - 123.69718	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	3 - 2		188
	300	812.931	0.7389 - 123.75039	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	2 - 3		188
7	250	813.288	0.7389 - 123.69718	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	2 - 2		188
6	650	813.382	0.0 - 122.94415	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	4 - 4		188
	300	813.862	21.6999 - 144.57053	$3d^6 - 3d^5(b^2F)4p$	$a^3F - t^3F^o$	3 - 3		188
	70	814.148	0.0 - 122.82955	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	4 - 3		188
7	400	814.242	0.7389 - 123.55295	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	2 - 1		188
	300	814.565	0.9324 - 123.69718	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	1 - 2		188
	200	815.363	21.8572 - 144.50174	$3d^6 - 3d^5(b^2F)4p$	$a^3F - t^3F^o$	2 - 2		188
	70	815.52	0.9324 - 123.55295	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - x^3P^o$	1 - 1		188
	200	815.612	20.3008 - 142.90848	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3H^o$	5 - 5		188
6	400	816.163	0.9324 - 123.45592	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	1 - 0		188
6	400	816.273	0.4362 - 122.94415	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	3 - 4		188
6	450	817.038	0.4362 - 122.82955	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	3 - 3		188
	200	817.166	20.4819 - 142.85559	$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^3H^o$	4 - 4		188
	200	817.348	0.0 - 122.34661	$3d^6 - 3d^5(a^4P)4p$	$ga^3D - z^3D^o$	4 - 3		188
6	200	818.383	0.4362 - 122.62834	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	3 - 2		188
	250	818.598	0.7389 - 122.89884	$3d^6 - 3d^5(a^4P)4p$	$ga^3D - z^3D^o$	2 - 2		188
6	70	818.981	0.7389 - 122.84303	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	2 - 1		188
6	250	819.066	0.7389 - 122.82955	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	2 - 3		188
	70	819.742	0.9324 - 122.92137	$3d^6 - 3d^5(a^4P)4p$	$ga^3D - z^3D^o$	1 - 1		188
	200	819.898	0.9324 - 122.89884	$3d^6 - 3d^5(a^4P)4p$	$ga^3D - z^3D^o$	1 - 2		188
	200	820.271	0.4362 - 122.34661	$3d^6 - 3d^5(a^4P)4p$	$ga^3D - z^3D^o$	3 - 3		188
6	200	820.409	0.7389 - 122.62834	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	2 - 2		188
6	200	820.915	1.0273 - 122.84303	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	0 - 1		188
6	200	821.723	0.9324 - 122.62834	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3D^o$	1 - 2		188
	200	822.314	0.7389 - 122.34661	$3d^6 - 3d^5(a^4P)4p$	$ga^3D - z^3D^o$	2 - 3		188
5	400	823.257	0.0 - 121.46882	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3F^o$	4 - 5		188
	200	824.800	0.0 - 121.24167	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3F^o$	4 - 4		188
5	400	827.777	0.4362 - 121.24167	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3F^o$	3 - 4		188
5	250	829.375	84.36992 - 204.94326	$3d^5(a^2F)4s - 3d^5(a^4D)5p$	$c^3F - u^3F^o$	2 - 2		188
	250	829.375	0.4362 - 121.00878	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3F^o$	3 - 3		188
	70	830.500	24.5588 - 144.96850	$3d^6 - 3d^5(b^2F)4p$	$a^3G - t^3F^o$	5 - 4		188
5	300	831.464	0.7389 - 121.00878	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3F^o$	2 - 3		188
18	300	832.328	20.0511 - 140.19633	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	6 - 7		188
	150	833.532	20.4819 - 140.45310	$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^3F^o$	4 - 3		188
5	250	834.067	0.9324 - 120.82617	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3F^o$	1 - 2		188
43	400	834.944	30.8864 - 150.6549	$3d^6 - 3d^5(b^2F)4p$	$a^3G - w^3F^o$	4 - 3		188
5	150	835.627	1.0273 - 120.69710	$3d^6 - 3d^5(a^4D)4p$	$ga^3D - y^3F^o$	0 - 1		188
	150	835.917	24.9409 - 144.57053	$3d^6 - 3d^5(b^2F)4p$	$a^3G - t^3F^o$	4 - 3		188
18	450	836.521	20.3008 - 139.84618	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	5 - 6		188
33	200	836.628	24.5588 - 144.08597	$3d^6 - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	5 - 4		188
17	450	837.439	20.0511 - 139.46336	$3d^6 - 3d^5(a^4F)4p$	$a^3H - w^3G^o$	6 - 5		188
	200	837.803	25.1424 - 144.50174	$3d^6 - 3d^5(b^2F)4p$	$a^3G - t^3F^o$	3 - 2		188
17	550	838.048	20.3008 - 139.62517	$3d^6 - 3d^5(a^4F)4p$	$a^3H - w^3G^o$	5 - 4		188
	150	838.498	0.4362 - 119.69764	$3d^6 - 3d^5(a^4P)4p$	$ga^3D - z^3P^o$	3 - 2		188
18	150	838.869	20.3008 - 139.50944	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	5 - 5		188
17	300	838.936	20.4819 - 139.68047	$3d^6 - 3d^5(a^4F)4p$	$a^3H - w^3G^o$	4 - 3		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
33	250	838.997	25.1424 - 144.33221	$3d^6 - 3d^5(b^2F)4p$	$a^3G - x^1G^o$	3 - 4		188
	150	839.092	24.9409 - 144.11664	$3d^6 - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	4 - 3		188
17	150	839.195	20.3008 - 139.46336	$3d^6 - 3d^5(a^4F)4p$	$a^3H - w^3G^o$	5 - 5		188
17	300	839.319	20.4819 - 139.62517	$3d^6 - 3d^5(a^4F)4p$	$a^3H - w^3G^o$	4 - 4		188
	200	839.981	0.9324 - 119.98226	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^3P^o$	1 - 1		188
18	250	840.141	20.4819 - 139.50944	$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^1I^o$	4 - 5		188
25	300	840.381	21.6999 - 140.69336	$3d^6 - 3d^5(a^2G)4p$	$a^3F - v^3F^o$	3 - 3		188
33	250	840.518	25.1424 - 144.11664	$3d^6 - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	3 - 3		188
	200	840.629	0.7389 - 119.69764	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^3P^o$	2 - 2		188
33	150	840.741	24.9409 - 143.88374	$3d^6 - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	4 - 5		188
25	300	841.088	21.8572 - 140.75098	$3d^6 - 3d^5(a^2G)4p$	$a^3F - v^3F^o$	2 - 2		188
	150	841.688	30.7162 - 149.52563	$3d^6 - 3d^5(a^2S)4p$	$a^3D - w^3P^o$	2 - 2		188
32	400	842.020	24.5588 - 143.32085	$3d^6 - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	5 - 6		188
	300	842.09	21.6999 - 140.45310	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^1F^o$	3 - 3		188
	300	842.686	30.8578 - 149.52563	$3d^6 - 3d^5(a^2S)4p$	$a^3D - w^3P^o$	3 - 2		188
4	650	844.284	0.0 - 118.44292	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	4 - 3		188
	250	844.838	21.4622 - 139.82717	$3d^6 - 3d^5(a^2G)4p$	$a^3F - y^1G^o$	4 - 4		188
32	150	844.954	24.5588 - 142.90848	$3d^6 - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	5 - 5		188
4	600	845.408	0.4362 - 118.72160	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	3 - 2		188
	70	845.686	0.0 - 118.24652	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^3F^o$	4 - 3		188
16	450	845.925	20.0511 - 138.26447	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	6 - 6		188
	200	846.035	30.7162 - 148.9153	$3d^6 - 3d^5(a^2S)4p$	$a^3D - w^3P^o$	2 - 1		188
150	846.089	30.7258 - 148.9153	$3d^6 - 3d^5(a^2S)4p$	$a^3D - w^3P^o$	1 - 1		188	
4	400	846.534	0.7389 - 118.86787	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	2 - 1		188
4	550	847.425	0.4362 - 118.44292	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	3 - 3		188
4	450	847.578	0.7389 - 118.72160	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	2 - 2		188
32	400	847.700	24.9409 - 142.90848	$3d^6 - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	4 - 5		188
4	400	847.924	0.9324 - 118.86787	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	1 - 1		188
300	847.984	21.6999 - 139.62517	$3d^6 - 3d^5(a^4F)4p$	$a^3F - w^3G^o$	3 - 4		188	
	70	848.07	24.9409 - 142.85559	$3d^6 - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	4 - 4		188
4	250	848.601	1.0273 - 118.86787	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	0 - 1		188
	250	848.729	21.8572 - 139.68047	$3d^6 - 3d^5(a^4F)4p$	$a^3F - w^3G^o$	2 - 3		188
4	200	848.977	0.9324 - 118.72160	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - y^3P^o$	1 - 2		188
32	300	849.524	25.1424 - 142.85559	$3d^6 - 3d^5(a^2H)4p$	$a^3G - w^3H^o$	3 - 4		188
	250	849.569	20.4819 - 138.18793	$3d^6 - 3d^5(a^2H)4p$	$a^3H - x^3G^o$	4 - 3		188
31	450	851.150	24.5588 - 142.0470	$3d^6 - 3d^5(a^4F)4p$	$a^3G - u^3F^o$	5 - 4		188
16	450	851.332	20.3008 - 137.76370	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	5 - 5		188
31	400	851.842	25.1424 - 142.53507	$3d^6 - 3d^5(a^4F)4p$	$a^3G - u^3F^o$	3 - 2		188
31	400	851.992	24.9409 - 142.31290	$3d^6 - 3d^5(a^4F)4p$	$a^3G - u^3F^o$	4 - 3		188
16	150	852.644	20.4819 - 137.76370	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	4 - 5		188
16	70	853.045	20.3008 - 137.52792	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	5 - 4		188
31	70	853.456	25.1424 - 142.31290	$3d^6 - 3d^5(a^4F)4p$	$a^3G - u^3F^o$	3 - 3		188
3	300	854.073	0.4362 - 117.52191	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^3D^o$	3 - 4		188
	70	854.205	0.0 - 117.06856	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^3D^o$	4 - 3		188
16	400	854.367	20.4819 - 137.52792	$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^o$	4 - 4		188
	150	854.532	50.2761 - 167.2989	$3d^6 - 3d^5(b^2G)4p$	$b^3F - t^3G^o$	4 - 5		188
70	855.336	50.2952 - 167.2073	$3d^6 - 3d^5(b^2G)4p$	$b^3F - t^3G^o$	3 - 4		188	
200	855.441	30.7162 - 147.61465	$3d^6 - 3d^5(b^2F)4p$	$a^3D - u^3D^o$	2 - 2		188	
150	855.879	30.7162 - 147.55645	$3d^6 - 3d^5(b^2F)4p$	$a^3D - u^3D^o$	2 - 1		188	
150	855.935	30.7258 - 147.55645	$3d^6 - 3d^5(b^2F)4p$	$a^3D - u^3D^o$	1 - 1		188	
150	856.039	50.1849 - 167.002	$3d^6 - 3d^5(b^2G)4p$	$b^3F - r^3F^o$	2 - 2		188	
70	856.244	50.2952 - 167.0850	$3d^6 - 3d^5(b^2G)4p$	$b^3F - t^3G^o$	3 - 3		188	
300	856.325	30.8578 - 147.63595	$3d^6 - 3d^5(b^2F)4p$	$a^3D - u^3D^o$	3 - 3		188	
70	856.480	30.8578 - 147.61465	$3d^6 - 3d^5(b^2F)4p$	$a^3D - u^3D^o$	3 - 2		188	

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
3	300	857.392	0.4362 - 117.06856	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5D^o$	3 - 3		188
	300	857.690	21.4622 - 138.05459	$3d^6 - 3d^5(a^2H)4p$	$a^3F - x^3G^o$	4 - 5		188
2	250	858.565	0.0 - 116.47544	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5F^o$	4 - 3		188
2	400	858.602	0.0 - 116.46741	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5F^o$	4 - 4		188
	200	859.086	21.6999 - 138.10312	$3d^6 - 3d^5(a^2H)4p$	$a^3F - x^3G^o$	3 - 4		188
3	400	859.626	0.7389 - 117.06856	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5D^o$	2 - 3		188
2	550	859.721	0.0 - 116.31663	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5F^o$	4 - 5		188
11	400	859.838	19.4048 - 135.7057	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^o$	2 - 3		188
2	300	860.315	0.7389 - 116.97505	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5F^o$	2 - 2		188
	150	860.565	50.2952 - 166.498	$3d^6 - 3d^5(b^2G)4p$	$b^3F - r^3F^o$	3 - 3		188
	150	860.889	0.7389 - 116.89822	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5S^o$	2 - 2		188
	150	861.087	20.0511 - 136.18517	$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3F^o$	6 - 5		188
11	250	861.284	20.6884 - 136.7938	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^o$	1 - 2		188
2	550	861.761	0.9324 - 116.97505	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5F^o$	1 - 2		188
2	650	861.832	0.4362 - 116.46741	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5F^o$	3 - 4		188
2	300	862.028	0.9324 - 116.93757	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5F^o$	1 - 1		188
3	150	862.191	0.4362 - 116.41939	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5D^o$	3 - 2		188
	150	862.326	0.9324 - 116.89822	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5S^o$	1 - 2		188
2	200	862.468	50.2761 - 166.2222	$3d^6 - 3d^5(b^2G)4p$	$b^3F - r^3F^o$	4 - 4		188
	300	862.735	1.0273 - 116.93757	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5F^o$	0 - 1		188
	70	863.004	19.4048 - 135.2790	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3D^o$	2 - 2		188
	250	863.232	20.6884 - 136.53245	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3F^o$	1 - 2		188
	250	863.302	35.8037 - 151.6373	$3d^6 - 3d^5(a^2S)4p$	$a^1D - y^1P^o$	2 - 1		188
11	70	863.730	20.6884 - 136.4649	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^o$	1 - 1		188
2	400	864.034	0.7389 - 116.47544	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5F^o$	2 - 3		188
	150	864.375	20.3008 - 135.99062	$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3F^o$	5 - 4		188
	250	864.425	20.0511 - 135.73531	$3d^6 - 3d^5(a^4F)4p$	$a^3H - y^3G^o$	6 - 5		188
3	70	864.450	0.7389 - 116.41939	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5D^o$	2 - 2	P	188
	70	865.267	19.4048 - 134.97622	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3D^o$	2 - 3		188
3	250	865.896	0.9324 - 116.41939	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5D^o$	1 - 2		188
3	70	866.905	1.0273 - 116.38007	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^5D^o$	0 - 1		188
11	300	867.639	21.2085 - 136.4649	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^o$	0 - 1		188
	200	868.428	21.4622 - 136.61278	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	4 - 4	P	188
	50	868.473	19.4048 - 134.5494	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	2 - 1	P	188
	300	868.836	21.6999 - 136.79705	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	3 - 3		188
	200	870.041	20.3008 - 135.23974	$3d^6 - 3d^5(a^4F)4p$	$a^3H - y^3G^o$	5 - 4		188
	150	870.235	21.6999 - 136.61278	$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	3 - 4		188
	150	870.274	24.5588 - 139.46336	$3d^6 - 3d^5(a^4F)4p$	$a^3G - w^3G^o$	5 - 5		188
	300	870.621	19.4048 - 134.26542	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	2 - 2		188
	150	871.552	21.4622 - 136.20013	$3d^6 - 3d^5(a^2D)4p$	$a^3F - z^3F^o$	4 - 3		188
	250	871.968	24.9409 - 139.62517	$3d^6 - 3d^5(a^4F)4p$	$a^3G - w^3G^o$	4 - 4		188
250	872.027	0.4362 - 115.11092	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - z^5H^o$	3 - 4		188	
38	200	873.080	25.1424 - 139.68047	$3d^6 - 3d^5(a^4F)4p$	$a^3G - w^3G^o$	3 - 3		188
	150	873.130	20.6884 - 135.2171	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3D^o$	1 - 1		188
	550	873.462	30.3562 - 144.84324	$3d^6 - 3d^5(a^2H)4p$	$a^1I - x^1H^o$	6 - 5		188
	70	873.988	21.6999 - 136.11794	$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^3F^o$	3 - 2		188
	150	874.129	20.6884 - 135.0881	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	1 - 0		188
	70	874.560	21.8572 - 136.20013	$3d^6 - 3d^5(a^2D)4p$	$a^3F - z^3F^o$	2 - 3		188
	150	875.090	21.4622 - 135.73531	$3d^6 - 3d^5(a^4F)4p$	$a^3F - y^3G^o$	4 - 5		188
	300	875.423	30.3562 - 144.58683	$3d^6 - 3d^5(a^2G)4p$	$a^1I - y^1H^o$	6 - 5		188
	300	876.021	30.8864 - 145.03861	$3d^6 - 3d^5(a^2G)4p$	$a^1G - x^1F^o$	4 - 3		188
	200	876.483	21.4622 - 135.55441	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	4 - 4		188
200	876.564	30.8864 - 144.96850	$3d^6 - 3d^5(b^2F)4p$	$a^1G - t^1F^o$	4 - 4		188	
200	876.679	20.4819 - 134.54900	$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^3G^o$	4 - 3		188	

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	878.264	20.6884 - 134.5494	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	1 - 1	P	188
	200	878.316	21.4622 - 135.31642	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	4 - 5	P	188
	250	879.505	30.8864 - 144.58683	$3d^6 - 3d^5(a^2G)4p$	$a^1G - y^1H^o$	4 - 5		188
	300	880.008	0.0 - 113.63534	$3d^6 - 3d^5(a^2G)4p$	$ga^3D - z^3G^o$	4 - 4		188
24	400	880.447	21.6999 - 135.2790	$3d^6 - 3d^5(a^2D)4p$	$a^3F - x^3D^o$	3 - 2		188
24	400	880.949	21.4622 - 134.97622	$3d^6 - 3d^5(a^2D)4p$	$a^3F - x^3D^o$	4 - 3		188
30	450	881.088	24.5588 - 138.05459	$3d^6 - 3d^5(a^2H)4p$	$a^3G - x^3G^o$	5 - 5		188
	200	881.477	30.8864 - 144.33221	$3d^6 - 3d^5(b^2F)4p$	$a^1G - x^1G^o$	4 - 4		188
24	250	882.147	21.8572 - 135.2171	$3d^6 - 3d^5(a^2D)4p$	$a^3F - x^3D^o$	2 - 1		188
	70	882.295	21.2085 - 134.5494	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	0 - 1		188
30	200	883.090	21.8572 - 135.09684	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	2 - 3		188
	400	883.688	24.9409 - 138.10312	$3d^6 - 3d^5(a^2H)4p$	$a^3G - x^3G^o$	4 - 4		188
30	250	884.263	57.2217 - 170.3106	$3d^6 - 3d^5(b^2G)4p$	$b^1G - u^1F^o$	4 - 3		188
	300	884.600	25.1424 - 138.18793	$3d^6 - 3d^5(a^2H)4p$	$a^3G - x^3G^o$	3 - 3		188
	70	886.138	21.6999 - 134.54900	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	3 - 3		188
	200	887.372	21.8572 - 134.54900	$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	2 - 3		188
15	150	888.777	20.0511 - 132.56471	$3d^6 - 3d^5(a^2I)4p$	$a^3H - y^3H^o$	6 - 5		188
15	150	890.008	20.3008 - 132.65917	$3d^6 - 3d^5(a^2I)4p$	$a^3H - y^3H^o$	5 - 4		188
15	600	890.755	20.3008 - 132.56471	$3d^6 - 3d^5(a^2I)4p$	$a^3H - y^3H^o$	5 - 5		188
15	650	891.172	20.0511 - 132.26266	$3d^6 - 3d^5(a^2I)4p$	$a^3H - y^3H^o$	6 - 6		188
15	550	891.442	20.4819 - 132.65917	$3d^6 - 3d^5(a^2I)4p$	$a^3H - y^3H^o$	4 - 4		188
49	400	892.417	24.5588 - 136.61278	$3d^6 - 3d^5(a^2F)4p$	$a^3G - w^3F^o$	5 - 4		188
	250	894.008	24.9409 - 136.79705	$3d^6 - 3d^5(a^2F)4p$	$a^3G - w^3F^o$	4 - 3		188
37	70	896.072	30.7162 - 142.31290	$3d^6 - 3d^5(a^2F)4p$	$a^3D - u^3F^o$	2 - 3		188
	70	896.380	57.2217 - 168.7801	$3d^6 - 3d^5(b^2G)4p$	$b^1G - w^1H^o$	4 - 5		188
	70	897.580	20.3008 - 131.71079	$3d^6 - 3d^5(a^2I)4p$	$a^3H - z^3H^o$	5 - 5		188
	150	897.747	25.1424 - 136.53245	$3d^6 - 3d^5(a^2F)4p$	$a^3G - w^3F^o$	3 - 2		188
	70	898.805	24.9409 - 136.20013	$3d^6 - 3d^5(a^2D)4p$	$a^3G - z^3F^o$	4 - 3		188
	70	899.052	20.4819 - 131.71079	$3d^6 - 3d^5(a^2I)4p$	$a^3H - z^3H^o$	4 - 5		188
	550	899.417	30.3562 - 141.53955	$3d^6 - 3d^5(a^2H)4p$	$a^1I - y^1I^o$	6 - 6		188
	150	900.432	25.1424 - 136.20013	$3d^6 - 3d^5(a^2D)4p$	$a^3G - z^3F^o$	3 - 3		188
	200	900.940	24.5588 - 135.55441	$3d^6 - 3d^5(a^2F)4p$	$a^3G - y^3G^o$	5 - 4		188
	300	901.034	20.0511 - 131.03507	$3d^6 - 3d^5(a^2I)4p$	$a^3H - z^3I^o$	6 - 7		188
	200	902.869	24.5588 - 135.31642	$3d^6 - 3d^5(a^2F)4p$	$a^3G - y^3G^o$	5 - 5		188
	200	904.320	30.8864 - 141.46653	$3d^6 - 3d^5(a^2F)4p$	$a^1G - v^1D^o$	4 - 3		188
450	905.338	20.3008 - 130.75684	$3d^6 - 3d^5(a^2I)4p$	$a^3H - z^3I^o$	5 - 6		188	
70	905.964	21.6999 - 132.07991	$3d^6 - 3d^5(a^2D)4p$	$a^3F - x^3F^o$	3 - 3		188	
70	907.041	21.8572 - 132.10494	$3d^6 - 3d^5(a^2D)4p$	$a^3F - x^3F^o$	2 - 2		188	
250	907.891	30.8578 - 141.00299	$3d^6 - 3d^5(a^2G)4p$	$a^3D - v^3F^o$	3 - 4		188	
300	908.131	30.8864 - 141.00299	$3d^6 - 3d^5(a^2G)4p$	$a^1G - v^3F^o$	4 - 4		188	
70	908.800	30.7162 - 140.75098	$3d^6 - 3d^5(a^2G)4p$	$a^3D - v^3F^o$	2 - 2		188	
150	908.885	30.7258 - 140.75098	$3d^6 - 3d^5(a^2G)4p$	$a^3D - v^3F^o$	1 - 2		188	
250	909.178	20.0511 - 130.04056	$3d^6 - 3d^5(a^2I)4p$	$a^3H - z^3K^o$	6 - 7		188	
150	909.279	30.7162 - 140.69336	$3d^6 - 3d^5(a^2G)4p$	$a^3D - v^3F^o$	2 - 3		188	
200	910.639	35.8037 - 145.61839	$3d^6 - 3d^5(b^2F)4p$	$a^1D - x^1D^o$	2 - 2		188	
250	910.693	30.8864 - 140.69336	$3d^6 - 3d^5(a^2G)4p$	$a^1G - v^3F^o$	4 - 3		188	
400	910.961	20.4819 - 130.25627	$3d^6 - 3d^5(a^2I)4p$	$a^3H - z^3I^o$	4 - 5		188	
70	911.205	21.6999 - 131.44503	$3d^6 - 3d^5(a^2D)4p$	$a^3F - z^3D^o$	3 - 2		188	
150	911.265	30.7162 - 140.45310	$3d^6 - 3d^5(a^2F)4p$	$a^3D - y^3F^o$	2 - 3		188	
150	912.197	50.4123 - 160.0379	$3d^6 - 3d^5(b^2D)4p$	$b^3P - v^3P^o$	2 - 2		188	
300	912.683	30.8864 - 140.45310	$3d^6 - 3d^5(a^2F)4p$	$a^1G - y^3F^o$	4 - 3		188	
200	912.794	20.3008 - 129.85480	$3d^6 - 3d^5(a^2I)4p$	$a^3H - z^3K^o$	5 - 6		188	
70	913.132	19.4048 - 128.91751	$3d^6 - 3d^5(a^2D)4p$	$a^3P - y^3P^o$	2 - 2		188	
70	913.324	30.3562 - 139.84618	$3d^6 - 3d^5(a^2H)4p$	$a^1I - y^1I^o$	6 - 6		188	

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm $^{-1}$)	Configurations	Terms	J - J	Notes	References
	150	913.919	24.9409 - 134.36040	$3d^6 - 3d^5(a^2F)4p$	$a^3G - z^1G^o$	4 - 4		188
	200	915.455	35.8037 - 145.03861	$3d^6 - 3d^5(a^2G)4p$	$a^3D - x^1F^o$	2 - 3		188
	150	917.684	30.8578 - 139.82717	$3d^6 - 3d^5(a^2G)4p$	$a^3D - y^1G^o$	3 - 4		188
	250	917.932	30.8864 - 139.82717	$3d^6 - 3d^5(a^2G)4p$	$a^1G - y^1G^o$	4 - 4		188
	70	918.800	49.5769 - 158.4168	$3d^6 - 3d^5(b^2D)4p$	$b^3P - t^3D^o$	1 - 2		188
	70	923.215	50.4123 - 158.7293	$3d^6 - 3d^5(b^2D)4p$	$b^3P - t^3D^o$	2 - 3		188
	250	928.004	42.8969 - 150.6549	$3d^6 - 3d^5(b^2F)4p$	$a^1F - w^1F^o$	3 - 3		188
	300	928.474	24.5588 - 132.26266	$3d^6 - 3d^5(a^2I)4p$	$a^3G - y^3H^o$	5 - 6		188
	300	929.163	24.9409 - 132.56471	$3d^6 - 3d^5(a^2I)4p$	$a^3G - y^3H^o$	4 - 5		188
	250	930.086	25.1424 - 132.65917	$3d^6 - 3d^5(a^2I)4p$	$a^3G - y^3H^o$	3 - 4		188
	70	931.124	21.2085 - 128.60565	$3d^6 - 3d^5(a^4D)4p$	$a^3P - y^3P^o$	0 - 1		188
10	450	934.703	19.4048 - 126.39057	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3S^o$	2 - 1		188
	150	942.363	42.8969 - 149.01336	$3d^6 - 3d^5(a^2H)4p$	$a^1F - w^1G^o$	3 - 4		188
10	400	946.056	20.6884 - 126.39057	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3S^o$	1 - 1		188
	300	948.322	19.4048 - 124.85404	$3d^6 - 3d^5(a^4D)4p$	$a^3P - y^3D^o$	2 - 3		188
	250	948.918	30.3562 - 135.73947	$3d^6 - 3d^5(a^2I)4p$	$a^1I - z^1I^o$	6 - 6		188
	650	950.334	30.3562 - 135.58208	$3d^6 - 3d^5(a^4F)4p$	$a^1I - y^5G^o$	6 - 6		188
10	200	950.722	21.2085 - 126.39057	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3S^o$	0 - 1		188
	200	953.383	35.8037 - 140.69336	$3d^6 - 3d^5(a^2G)4p$	$a^1D - v^3F^o$	2 - 3		188
	150	955.141	30.8578 - 135.55441	$3d^6 - 3d^5(a^2F)4p$	$a^3D - y^3G^o$	3 - 4		188
46	300	955.572	35.8037 - 140.45310	$3d^6 - 3d^5(a^2F)4p$	$a^1D - y^1F^o$	2 - 3		188
	70	956.355	30.7162 - 135.2790	$3d^6 - 3d^5(a^2D)4p$	$a^3D - x^3D^o$	2 - 2		188
	70	959.070	20.6884 - 124.95488	$3d^6 - 3d^5(a^4D)4p$	$a^3P - y^3D^o$	1 - 1		188
	70	959.329	30.8578 - 135.09684	$3d^6 - 3d^5(a^4F)4p$	$a^3D - y^5G^o$	3 - 3		188
	250	959.552	20.6884 - 124.90392	$3d^6 - 3d^5(a^4D)4p$	$a^3P - y^3D^o$	1 - 2		188
	70	960.454	30.8578 - 134.97622	$3d^6 - 3d^5(a^2D)4p$	$a^3D - x^3D^o$	3 - 3		188
	150	961.709	21.4622 - 125.44358	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3F^o$	4 - 4		188
45	450	961.901	35.8037 - 139.76448	$3d^6 - 3d^5(a^2F)4p$	$a^1D - y^1D^o$	2 - 2		188
	70	962.108	21.6999 - 125.63798	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3F^o$	3 - 3		188
44	300	962.655	34.8124 - 138.69181	$3d^6 - 3d^5(a^2D)4p$	$a^1S - z^1P^o$	0 - 1		188
	50	963.172	30.7258 - 134.5494	$3d^6 - 3d^5(a^2D)4p$	$a^3D - x^3P^o$	1 - 1	P	188
	100	963.246	21.8572 - 125.67283	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3F^o$	2 - 2	P	188
	200	963.880	21.2085 - 124.95488	$3d^6 - 3d^5(a^4D)4p$	$a^3P - y^3D^o$	0 - 1		188
	70	965.717	30.7162 - 134.26542	$3d^6 - 3d^5(a^2D)4p$	$a^3D - x^3P^o$	2 - 2		188
	400	967.197	21.4622 - 124.85404	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	4 - 3		188
23	250	968.955	21.6999 - 124.90392	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	3 - 2		188
	150	969.423	21.6999 - 124.85404	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	3 - 3		188
23	200	969.954	21.8572 - 124.95488	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	2 - 1		188
	150	970.381	119.69764 - 222.75023	$3d^5(a^4P)4p - 3d^5(a^4G)5d$	$z^3P^o - h^5F$	2 - 3	Q	188
	150	970.435	21.8572 - 124.90392	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	2 - 2		188
	200	971.929	35.8037 - 138.69181	$3d^6 - 3d^5(a^2D)4p$	$a^1D - z^1P^o$	2 - 1		188
	250	973.505	42.8969 - 145.61839	$3d^6 - 3d^5(b^2F)4p$	$a^1F - x^1D^o$	3 - 2		188
	150	977.790	57.2217 - 159.4930	$3d^6 - 3d^5(b^2D)4p$	$b^1G - v^1F^o$	4 - 3		188
	300	979.032	42.8969 - 145.03861	$3d^6 - 3d^5(a^2G)4p$	$a^1F - x^1F^o$	3 - 3		188
	150	979.704	42.8969 - 144.96850	$3d^6 - 3d^5(b^2F)4p$	$a^1F - t^3F^o$	3 - 4		188
	70	980.416	21.6999 - 123.69718	$3d^6 - 3d^5(a^4D)4p$	$a^3F - x^5P^o$	3 - 2		188
	70	981.084	30.8578 - 132.78536	$3d^6 - 3d^5(a^2D)4p$	$a^3D - x^3F^o$	3 - 4		188
13	650	981.373	66.52295 - 168.42101	$3d^5(a^4P)4s - 3d^5(a^6S)5p$	$a^3P - w^3P^o$	2 - 2		188
	150	983.510	30.8864 - 132.56471	$3d^6 - 3d^5(a^2I)4p$	$a^1G - y^3H^o$	4 - 5		188
13	400	983.860	20.3008 - 121.94129	$3d^6 - 3d^5(a^4G)4p$	$a^3H - z^3G^o$	5 - 4	P	188
	250	983.909	30.3562 - 131.99158	$3d^6 - 3d^5(a^2I)4p$	$a^1I - z^1K^o$	6 - 7	P	188
13	550	985.824	20.4819 - 121.91974	$3d^6 - 3d^5(a^4G)4p$	$a^3H - z^3G^o$	4 - 3		188
	250	986.514	21.4622 - 122.82955	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	4 - 3		188
	300	986.637	30.3562 - 131.71079	$3d^6 - 3d^5(a^2I)4p$	$a^1I - z^1H^o$	6 - 5		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
22	150	988.148	21.6999 - 122.89884	$3d^6 - 3d^5(a^4P)4p$	$a^3F - z^3D^o$	3 - 2		188
22	250	989.467	21.8572 - 122.92137	$3d^6 - 3d^5(a^4P)4p$	$a^3F - z^3D^o$	2 - 1		188
	250	990.235	21.8572 - 122.84303	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	2 - 1		188
	400	990.800	21.6999 - 122.62834	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	3 - 2		188
22	600	991.232	21.4622 - 122.34661	$3d^6 - 3d^5(a^4P)4p$	$a^3F - z^3D^o$	4 - 3		188
42	400	991.829	30.8864 - 131.71079	$3d^6 - 3d^5(a^2I)4p$	$a^1G - z^1H^o$	4 - 5		188
	150	992.337	21.8572 - 122.62834	$3d^6 - 3d^5(a^4D)4p$	$a^3F - y^3D^o$	2 - 2		188
29	450	993.080	24.9409 - 125.63798	$3d^6 - 3d^5(a^4D)4p$	$a^3G - y^3F^o$	4 - 3		188
9	200	994.257	19.4048 - 119.98226	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3P^o$	2 - 1		188
29	400	994.724	25.1424 - 125.67283	$3d^6 - 3d^5(a^4D)4p$	$a^3G - y^3F^o$	3 - 2		188
21	400	995.150	21.4622 - 121.94962	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3G^o$	4 - 5		188
21	150	995.223	21.4622 - 121.94129	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3G^o$	4 - 4		188
9	450	997.081	19.4048 - 119.69764	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3P^o$	2 - 2		188
21	400	997.599	21.6999 - 121.94129	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3G^o$	3 - 4		188
21	70	997.794	21.6999 - 121.91974	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3G^o$	3 - 3		188
21	300	999.376	21.8572 - 121.91974	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3G^o$	2 - 3		188
	150	1005.106	82.33392 - 181.82567	$3d^5(a^6S)4p - 3d^5(a^4G)5s$	$z^7P^o - f^5G$	3 - 4		188
	150	1006.341	30.8864 - 130.25627	$3d^6 - 3d^5(a^2I)4p$	$a^1G - z^3I^o$	4 - 5		188
9	200	1007.113	20.6884 - 119.98226	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3P^o$	1 - 1		188
9	250	1010.005	20.6884 - 119.69764	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3P^o$	1 - 2		188
9	200	1012.411	21.2085 - 119.98226	$3d^6 - 3d^5(a^4P)4p$	$a^3P - z^3P^o$	0 - 1		188
12	600	1017.254	20.0511 - 118.35501	$3d^6 - 3d^5(a^4G)4p$	$a^3H - z^3H^o$	6 - 6		188
12	550	1017.745	20.3008 - 118.55725	$3d^6 - 3d^5(a^4G)4p$	$a^3H - z^3H^o$	5 - 5		188
12	550	1018.286	20.4819 - 118.68625	$3d^6 - 3d^5(a^4G)4p$	$a^3H - z^3H^o$	4 - 4		188
41	400	1019.789	30.8578 - 128.91751	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3P^o$	3 - 2		188
	150	1020.022	49.5769 - 147.61465	$3d^6 - 3d^5(b^2F)4p$	$b^3P - u^3D^o$	1 - 2		188
41	250	1021.561	30.7162 - 128.60565	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3P^o$	2 - 1		188
41	200	1024.108	30.7258 - 128.37153	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3P^o$	1 - 0		188
28	400	1026.790	24.5588 - 121.94962	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3G^o$	5 - 5		188
	150	1029.551	50.2761 - 147.40614	$3d^6 - 3d^5(b^2F)4p$	$b^3F - u^3G^o$	4 - 5		188
28	150	1030.844	24.9409 - 121.94962	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3G^o$	4 - 5		188
28	400	1030.924	24.9409 - 121.94129	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3G^o$	4 - 4		188
20	550	1032.123	21.4622 - 118.35024	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3F^o$	4 - 4		188
	150	1032.337	42.8969 - 139.76448	$3d^6 - 3d^5(a^2F)4p$	$a^1F - y^1D^o$	3 - 2	P	188
	100	1032.352	50.2952 - 147.16136	$3d^6 - 3d^5(b^2F)4p$	$b^3F - u^3G^o$	3 - 4	P	188
28	70	1033.079	25.1424 - 121.94129	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3G^o$	3 - 4		188
20	150	1033.225	21.4622 - 118.24652	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3F^o$	4 - 3		188
28	300	1033.298	25.1424 - 121.91974	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3G^o$	3 - 3		188
	150	1034.054	50.1849 - 146.8910	$3d^6 - 3d^5(b^2F)4p$	$b^3F - u^3G^o$	2 - 3		188
20	150	1034.654	21.6999 - 118.35024	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3F^o$	3 - 4		188
20	400	1035.768	21.6999 - 118.24652	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3F^o$	3 - 3		188
20	150	1036.659	21.6999 - 118.16356	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3F^o$	3 - 2		188
20	70	1037.462	21.8572 - 118.24652	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3F^o$	2 - 3		188
20	400	1038.355	21.8572 - 118.16356	$3d^6 - 3d^5(a^4G)4p$	$a^3F - z^3F^o$	2 - 2		188
	250	1060.258	50.1849 - 144.50174	$3d^6 - 3d^5(b^2F)4p$	$b^3F - u^3F^o$	2 - 2		188
	250	1060.723	50.2952 - 144.57053	$3d^6 - 3d^5(b^2F)4p$	$b^3F - u^3F^o$	3 - 3		188
	250	1061.127	30.7162 - 124.95488	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3D^o$	2 - 1		188
40	300	1061.245	30.7258 - 124.95488	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3D^o$	1 - 1		188
40	400	1061.708	30.7162 - 124.90392	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3D^o$	2 - 2		188
40	250	1061.827	30.7258 - 124.90392	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3D^o$	1 - 2		188
40	200	1062.272	30.7162 - 124.85404	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3D^o$	2 - 3		188
	250	1063.188	50.2761 - 144.33221	$3d^6 - 3d^5(b^2F)4p$	$b^3F - x^1G^o$	4 - 4		188
40	200	1063.309	30.8578 - 124.90392	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3D^o$	3 - 2		188
40	550	1063.872	30.8578 - 124.85404	$3d^6 - 3d^5(a^4D)4p$	$a^3D - y^3D^o$	3 - 3		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
27	70	1064.611	50.1849 - 144.11664	$3d^6 - 3d^5(a^2G)4p$	$b^3F - v^3G^\circ$	2 - 3		188
	350	1066.143	24.5588 - 118.35501	$3d^6 - 3d^5(a^2G)4p$	$a^3G - z^3H^\circ$	5 - 6		188
26	300	1066.181	34.8124 - 128.60565	$3d^6 - 3d^5(a^4D)4p$	$a^1S - y^3P^\circ$	0 - 1		188
27	300	1068.190	24.9409 - 118.55725	$3d^6 - 3d^5(a^2G)4p$	$a^3G - z^3H^\circ$	4 - 5		188
	200	1068.299	50.2761 - 143.88374	$3d^6 - 3d^5(a^2G)4p$	$b^3F - v^3G^\circ$	4 - 5		188
27	300	1069.019	25.1424 - 118.68625	$3d^6 - 3d^5(a^2G)4p$	$a^3G - z^3H^\circ$	3 - 4		188
	250	1070.284	57.2217 - 150.6549	$3d^6 - 3d^5(b^2F)4p$	$b^1G - w^1F^\circ$	4 - 3		188
26	200	1070.556	24.9409 - 118.35024	$3d^6 - 3d^5(a^2G)4p$	$a^3G - z^3F^\circ$	4 - 4		188
	300	1071.746	24.9409 - 118.24652	$3d^6 - 3d^5(a^2G)4p$	$a^3G - z^3F^\circ$	4 - 3		188
26	250	1072.217	40.99987 - 134.26542	$3d^5(a^6S)4s - 3d^5(a^4D)4p$	$a^2S - x^3P^\circ$	2 - 2		188
	70	1074.061	25.1424 - 118.24652	$3d^6 - 3d^5(a^2G)4p$	$a^3G - z^3F^\circ$	3 - 3		188
26	250	1075.024	25.1424 - 118.16356	$3d^6 - 3d^5(a^2G)4p$	$a^3G - z^3F^\circ$	3 - 2		188
2	1076.556	117.52191 - 210.41132	$3d^5(a^4P)4p - 3d^5(a^6S)6d$	$z^3D^\circ - ^7D$	4 - 5	Q	292	
	250	1082.838	50.1849 - 142.53507	$3d^6 - 3d^5(a^2F)4p$	$b^3F - u^3F^\circ$	2 - 2		188
150	1083.176	49.148 - 141.46945	$3d^6 - 3d^5(a^2F)4p$	$b^3P - v^3D^\circ$	0 - 1		188	
	300	1086.748	50.2952 - 142.31290	$3d^6 - 3d^5(a^2F)4p$	$b^3F - u^3F^\circ$	3 - 3		188
70	1088.224	49.5769 - 141.46945	$3d^6 - 3d^5(a^2F)4p$	$b^3P - v^3D^\circ$	1 - 1		188	
	200	1089.061	49.5769 - 141.39904	$3d^6 - 3d^5(a^2F)4p$	$b^3P - v^3D^\circ$	1 - 2		188
250	1089.416	57.2217 - 149.01336	$3d^6 - 3d^5(a^2H)4p$	$b^1G - w^1G^\circ$	4 - 4		188	
	250	1089.671	50.2761 - 142.0470	$3d^6 - 3d^5(a^2F)4p$	$b^3F - u^3F^\circ$	4 - 4		188
150	1093.332	42.8969 - 134.36040	$3d^6 - 3d^5(a^2F)4p$	$a^1F - z^1G^\circ$	3 - 4		188	
	300	1095.476	50.1849 - 141.46945	$3d^6 - 3d^5(a^2F)4p$	$b^3F - v^3D^\circ$	2 - 1		188
200	1096.606	50.2761 - 141.46653	$3d^6 - 3d^5(a^2F)4p$	$b^3F - v^3D^\circ$	4 - 3		188	
	70	1097.649	50.2952 - 141.39904	$3d^6 - 3d^5(a^2F)4p$	$b^3F - v^3D^\circ$	3 - 2		188
2	1097.782	66.59168 - 157.6843	$3d^5(a^4P)4s - 3d^5(b^2D)4p$	$a^2P - s^3F^\circ$	1 - 2	Q	292	
	300	1098.247	50.4123 - 141.46653	$3d^6 - 3d^5(a^2F)4p$	$b^3P - v^3D^\circ$	2 - 3		188
150	1099.061	50.4123 - 141.39904	$3d^6 - 3d^5(a^2F)4p$	$b^3P - v^3D^\circ$	2 - 2		188	
	600	1122.526	0.0 - 89.08479	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	4 - 3		188
1	600	1124.883	0.4362 - 89.33459	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	3 - 2		188
	400	1126.728	0.7389 - 89.49144	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	2 - 1		188
1	550	1128.050	0.4362 - 89.08479	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	3 - 3		188
	450	1128.723	0.7389 - 89.33459	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	2 - 2		188
1	450	1129.190	0.9324 - 89.49144	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	1 - 1		188
	300	1130.404	1.0273 - 89.49144	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	0 - 1		188
1	450	1131.194	0.9324 - 89.33459	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	1 - 2		188
	200	1131.914	0.7389 - 89.08479	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - z^2P^\circ$	2 - 3		188
39	200	1141.272	57.2217 - 144.84324	$3d^6 - 3d^5(a^2H)4p$	$b^1G - x^1H^\circ$	4 - 5		188
	250	1142.464	30.7162 - 118.24652	$3d^6 - 3d^5(a^2G)4p$	$a^3D - z^3F^\circ$	2 - 3		188
39	300	1142.955	30.8578 - 118.35024	$3d^6 - 3d^5(a^2G)4p$	$a^3D - z^3F^\circ$	3 - 4		188
	70	1143.545	30.7162 - 118.16356	$3d^6 - 3d^5(a^2G)4p$	$a^3D - z^3F^\circ$	2 - 2		188
39	200	1143.671	30.7258 - 118.16356	$3d^6 - 3d^5(a^2G)4p$	$a^3D - z^3F^\circ$	1 - 2		188
	2	1325.61	57.2217 - 132.65917	$3d^6 - 3d^5(a^2I)4p$	$b^1G - y^3H^\circ$	4 - 4	Q	816
70	1382.857	63.42517 - 135.73947	$3d^5(a^4G)4s - 3d^5(a^2I)4p$	$a^5G - z^1I^\circ$	6 - 6		188	
	70	1394.024	50.1849 - 121.91974	$3d^6 - 3d^5(a^2G)4p$	$b^3F - z^3G^\circ$	2 - 3		188
200	1395.213	50.2761 - 121.94962	$3d^6 - 3d^5(a^2G)4p$	$b^3F - z^3G^\circ$	4 - 5		188	
	20	1395.382	50.2761 - 121.94129	$3d^6 - 3d^5(a^2G)4p$	$b^3F - z^3G^\circ$	4 - 4		188
150	1395.750	50.2952 - 121.94129	$3d^6 - 3d^5(a^2G)4p$	$b^3F - z^3G^\circ$	3 - 4		188	
	50	1465.291	113.58420 - 181.83002	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^5G$	2 - 3	P	288
150	1465.320	113.58420 - 181.82866	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^5G$	2 - 2	P	288	
	150	1465.746	113.60537 - 181.83002	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^5G$	3 - 3	P	288
50	1465.775	113.60537 - 181.82866	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^5G$	3 - 2	P	288	
	20	1465.839	113.60537 - 181.82567	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^5G$	3 - 4	P	288
250	1466.484	113.63534 - 181.82567	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^5G$	4 - 4	P	288	
	250	1467.746	113.67701 - 181.80870	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^5G$	5 - 5	P	288

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1468.524	113.67701 - 181.77259	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^6G$	5 - 6	P	288
	150	1468.986	50.2761 - 118.35024	$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3F^\circ$	4 - 4		188
	400	1469.876	113.73962 - 181.77259	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^\circ - f^6G$	6 - 6	P	288
	20	1471.051	50.1849 - 118.16356	$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3F^\circ$	2 - 2		188
	70	1471.638	50.2952 - 118.24652	$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3F^\circ$	3 - 3		188
	150	1481.169	69.69573 - 137.20973	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$b^5D - x^5D^\circ$	4 - 4		188
	20	1484.241	70.72875 - 138.10312	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$b^3G - x^3G^\circ$	4 - 4		188
	70	1484.546	70.69403 - 138.05459	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$b^3G - x^3G^\circ$	5 - 5		188
85	450	1486.254	82.00173 - 149.28500	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^7P^\circ - e^5S$	2 - 3	P	288
85	600	1493.626	82.33392 - 149.28500	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^7P^\circ - e^5S$	3 - 3	P	288
	70	1495.213	114.94855 - 181.82866	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^\circ - f^6G$	3 - 2	P	288
	70	1498.821	115.11092 - 181.83002	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^\circ - f^6G$	4 - 3	P	288
	150	1502.951	115.28991 - 181.82567	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^\circ - f^6G$	5 - 4	P	288
	150	1504.002	69.69573 - 136.18517	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$b^5D - x^5F^\circ$	4 - 5		188
85	650	1505.152	82.84659 - 149.28500	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^7P^\circ - e^5S$	4 - 3	P	288
	150	1507.512	115.47425 - 181.80870	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^\circ - f^6G$	6 - 5	P	288
	150	1511.138	113.58420 - 179.75949	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	2 - 2	P	288
	200	1511.594	113.60537 - 179.76072	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	3 - 3	P	288
	50	1511.622	113.60537 - 179.75949	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	3 - 2	P	288
	50	1511.656	113.60537 - 179.75798	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	3 - 4	P	288
	150	1512.165	115.64223 - 181.77259	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^\circ - f^6G$	7 - 6	P	288
	20	1512.279	113.63534 - 179.76072	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	4 - 3	P	288
	150	1512.341	113.63534 - 179.75798	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	4 - 4	P	288
	50	1512.364	116.36476 - 182.48640	$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5D^\circ - f^6F$	0 - 1	P	288
	20	1512.844	116.38007 - 182.48072	$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5D^\circ - f^6F$	1 - 2	P	288
	150	1512.888	113.58420 - 179.68294	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5F$	2 - 1	P	288
	50	1513.511	113.60537 - 179.67689	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5F$	3 - 2	P	288
	250	1513.520	113.67701 - 179.74817	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	5 - 5	P	288
	150	1514.552	113.63534 - 179.66148	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5F$	4 - 3	P	288
	20	1514.571	116.41939 - 182.44470	$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5D^\circ - f^6F$	2 - 3	P	288
	20	1514.955	113.73962 - 179.74817	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	6 - 5	P	288
	300	1515.480	113.73962 - 179.72531	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5G$	6 - 6	P	288
	200	1516.214	113.67701 - 179.63077	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5F$	5 - 4	P	288
	20	1516.594	116.47544 - 182.41265	$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5F^\circ - f^6F$	3 - 4	P	288
	20	1516.785	135.99062 - 201.91953	$3d^5(a^4F)4p - 3d^5(a^4F)5s$	$x^5F^\circ - g^5F$	4 - 4	P	288
	20	1517.777	120.82617 - 186.71202	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^\circ - e^5D$	2 - 1	P	288
	300	1518.829	113.73962 - 179.57983	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5F$	6 - 5	P	288
	20	1521.902	136.18517 - 201.89244	$3d^5(a^4F)4p - 3d^5(a^4F)5s$	$x^5F^\circ - g^5F$	5 - 5	P	288
	300	1524.520	113.58420 - 179.17862	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5H$	2 - 3	P	288
	300	1524.649	113.60537 - 179.19422	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5H$	3 - 4	P	288
	70	1524.797	116.89822 - 182.48072	$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5S^\circ - f^6F$	2 - 2	P	288
	350	1525.036	113.63534 - 179.20757	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5H$	4 - 5	P	288
	50	1525.051	120.69710 - 186.26869	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^\circ - g^5G$	1 - 2	P	288
	70	1525.346	113.63534 - 179.19422	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5H$	4 - 4	P	288
	150	1525.635	116.89822 - 182.44470	$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5S^\circ - f^6F$	2 - 3	P	288
	400	1525.798	113.67701 - 179.21647	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5H$	5 - 6	P	288
	150	1526.024	121.46882 - 186.99860	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^\circ - e^5D$	5 - 4	P	288
	400	1527.141	113.73962 - 179.22145	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5H$	6 - 7	P	288
	50	1527.248	120.82617 - 186.30344	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^\circ - g^5G$	2 - 3	P	288
	150	1527.257	113.73962 - 179.21647	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^\circ - e^5H$	6 - 6	P	288
	70	1527.745	116.31663 - 181.77259	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5F^\circ - f^6G$	5 - 6	P	288
	20	1528.864	134.97622 - 200.38428	$3d^5(a^4D)4p - 3d^5(a^4F)4d$	$x^5D^\circ - h^5G$	3 - 3	P	288
	200	1529.750	121.00878 - 186.37894	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^\circ - g^5G$	3 - 4	P	288
	150	1530.216	116.47544 - 181.82567	$3d^5(a^4P)4p - 3d^5(a^4G)5s$	$z^5F^\circ - f^6G$	3 - 4	P	288

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
84	20	1530.426	116.46741 - 181.80870	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5F^o - f^5G$	4 - 5	P	288
	400	1531.294	82.00173 - 147.30597	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	2 - 3	P	288
84	550	1531.640	82.00173 - 147.29121	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	2 - 2	P	288
84	400	1531.862	122.82955 - 188.10958	$3d^5(a^4D)4p - 3d^5(a^4D)5s$	$y^5D^o - f^5D$	3 - 3	P	288
	50	1531.864	82.00173 - 147.28169	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	2 - 1	P	288
84	250	1533.450	121.24167 - 186.45409	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^o - g^5G$	4 - 5	P	288
	250	1535.427	121.46882 - 186.59730	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^o - g^5G$	5 - 6	P	288
84	150	1536.433	135.23974 - 200.32556	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - h^5G$	4 - 4	P	288
	70	1536.596	135.31642 - 200.39533	$3d^5(a^2F)4p - 3d^5(a^2F)4d$	$y^3G^o - h^3G$	5 - 5	P	288
84	150	1536.658	118.35501 - 183.43128	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^3H^o - e^3G$	6 - 5	P	288
	70	1536.824	122.94415 - 188.01340	$3d^5(a^4D)4p - 3d^5(a^4D)5s$	$y^5D^o - f^5D$	4 - 4	P	288
84	650	1538.628	82.33392 - 147.32685	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	3 - 4	P	288
84	550	1539.123	82.33392 - 147.30597	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	3 - 3	P	288
84	300	1539.474	82.33392 - 147.29121	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	3 - 2	P	288
84	450	1540.164	114.94855 - 179.87671	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	3 - 4	P	288
	20	1540.340	135.73531 - 200.65602	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - h^5G$	5 - 6	P	288
84	70	1540.439	135.73947 - 200.65602	$3d^5(a^2I)4p - 3d^5(a^2F)4d$	$z^1I^o - h^3G$	6 - 6	P	288
	150	1540.834	118.55725 - 183.45715	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^3H^o - e^3G$	5 - 4	P	288
84	300	1541.831	117.52191 - 182.37986	$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^3D^o - f^3F$	4 - 5	P	288
	70	1542.614	124.85404 - 189.67907	$3d^5(a^4D)4p - 3d^5(a^4D)5s$	$y^3D^o - e^3D$	3 - 3	P	288
84	150	1542.949	114.94855 - 179.75949	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5G$	3 - 2	P	288
	400	1543.623	115.11092 - 179.89356	$3d^5(a^4F)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	4 - 5	P	288
84	200	1544.068	134.93784 - 199.70182	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	2 - 3	P	288
	250	1544.232	117.06856 - 181.82567	$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5D^o - f^5G$	3 - 4	P	288
84	200	1545.405	135.09684 - 199.80481	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	3 - 4	P	288
	250	1546.104	135.70557 - 200.38428	$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$w^3D^o - h^3G$	3 - 3	P	288
84	20	1546.551	135.73531 - 200.39533	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - h^5G$	5 - 5	P	288
	250	1546.918	135.23974 - 199.88439	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	4 - 5	P	288
84	20	1547.509	135.70557 - 200.32556	$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$w^3D^o - h^3G$	3 - 4	P	288
	550	1547.637	115.28991 - 179.90456	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	5 - 6	P	288
84	300	1548.237	135.31642 - 199.90603	$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$y^3G^o - f^3H$	5 - 6	P	288
	800	1550.193	82.84659 - 147.35470	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	4 - 5	P	288
84	300	1550.459	118.35501 - 182.85205	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3H^o - e^3I$	6 - 7	P	288
	550	1550.862	82.84659 - 147.32685	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	4 - 4	P	288
84	150	1551.089	136.18517 - 200.65602	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$x^3F^o - h^3G$	5 - 6	P	288
	150	1551.156	115.28991 - 179.75798	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5G$	5 - 4	P	288
84	250	1551.365	82.84659 - 147.30597	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	4 - 3	P	288
	550	1552.064	115.47425 - 179.90456	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	6 - 7	P	288
84	20	1552.682	135.99062 - 200.39533	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$x^3F^o - h^3G$	4 - 5	P	288
	20	1555.154	135.58208 - 199.88439	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	6 - 5	P	288
84	200	1555.851	118.55725 - 182.83076	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3H^o - e^3I$	5 - 6	P	288
	300	1556.076	135.73947 - 200.00370	$3d^5(a^2I)4p - 3d^5(a^4F)4d$	$z^1I^o - f^3H$	6 - 7	P	288
84	70	1556.410	135.55441 - 199.80481	$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$y^3G^o - f^3H$	4 - 4	P	288
	550	1556.498	115.64223 - 179.88903	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	7 - 8	P	288
84	70	1556.772	125.44358 - 189.67907	$3d^5(a^4D)4p - 3d^5(a^4D)5s$	$y^5F^o - e^5D$	4 - 3	P	288
	50	1556.903	114.94855 - 179.17862	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	3 - 3	P	288
84	100	1556.929	118.16356 - 182.39255	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3F^o - e^3F$	2 - 2	P	288
	150	1557.581	136.23584 - 200.43794	$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$x^3F^o - h^3G$	1 - 2	P	288
84	20	1558.308	118.24652 - 182.41870	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3F^o - e^3F$	3 - 4	P	288
	150	1558.545	118.24652 - 182.40891	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3F^o - e^3F$	3 - 3	P	288
84	150	1559.468	118.68625 - 182.81066	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3H^o - e^3I$	4 - 5	P	288
	150	1560.469	115.11092 - 179.19422	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	4 - 4	P	288
84	50	1560.474	115.64223 - 179.72531	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5G$	7 - 6	P	288
	50	1560.830	118.35024 - 182.41870	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3F^o - e^3F$	4 - 4	P	288

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	1560.849	115.11092 - 179.17862	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	4 - 3	P	288
	10	1561.172	122.94415 - 186.99860	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5D^\circ - e^5D$	4 - 4	P	288
	10	1561.197	122.82955 - 186.88298	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5D^\circ - e^5D$	3 - 3	P	288
	20	1564.295	115.28991 - 179.21647	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	5 - 6	P	288
	150	1564.513	115.28991 - 179.20757	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	5 - 5	P	288
	200	1565.118	122.89884 - 186.79178	$3d^5(a^4P)4p - 3d^5(a^4D)4d$	$z^3D^\circ - e^5D$	2 - 2	P	288
	70	1567.628	122.92137 - 186.71202	$3d^5(a^4P)4p - 3d^5(a^4D)4d$	$z^3D^\circ - e^5D$	1 - 1	P	288
		1568.696	115.47425 - 179.22145	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	6 - 7	P	288
	200	1568.819	115.47425 - 179.21647	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	6 - 6	P	288
	20	1569.038	115.47425 - 179.20757	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	6 - 5	P	288
	50	1569.059	118.68625 - 182.41870	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3H^\circ - e^3F$	4 - 4	P	288
	70	1571.237	136.79382 - 200.43794	$3d^5(a^2F)4p - 3d^5(a^2F)4d$	$w^3D^\circ - h^5G$	2 - 2	P	288
	200	1572.798	125.44358 - 189.02453	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^3F^\circ - f^3G$	4 - 5	P	288
	300	1572.841	115.64223 - 179.22145	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	7 - 7	P	288
	20	1572.964	115.64223 - 179.21647	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^\circ - e^5H$	7 - 6	P	288
	200	1577.071	116.31663 - 179.72531	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5G$	5 - 6	P	288
	150	1577.938	125.63798 - 189.01184	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^3F^\circ - f^3G$	3 - 4	P	288
	150	1578.748	116.41939 - 179.76072	$3d^5(a^4P)4p - 3d^5(a^4G)4d$	$z^5D^\circ - e^5G$	2 - 3	P	288
	150	1580.215	116.47544 - 179.75798	$3d^5(a^4P)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5G$	3 - 4	P	288
	150	1580.259	116.46741 - 179.74817	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5G$	4 - 5	P	288
	150	1580.698	116.31663 - 179.57983	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5F$	5 - 5	P	288
	70	1581.072	123.75039 - 186.99860	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$x^5P^\circ - e^5D$	3 - 4	P	288
	20	1582.427	116.46741 - 179.66148	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5F$	4 - 3	P	288
	20	1582.634	123.69718 - 186.88298	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$x^5P^\circ - e^5D$	2 - 3	P	288
	200	1583.196	116.46741 - 179.63077	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5F$	4 - 4	P	288
	20	1583.968	123.75039 - 186.88298	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$x^5P^\circ - e^5D$	3 - 3	P	288
		1584.922	123.69718 - 186.79178	$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$x^5P^\circ - e^5D$	2 - 2	P	288
	150	1591.801	116.93757 - 179.75949	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5G$	1 - 2	P	288
	70	1592.720	116.97505 - 179.76072	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5G$	2 - 3	P	288
	70	1592.898	116.89822 - 179.67689	$3d^5(a^4P)4p - 3d^5(a^4G)4d$	$z^5S^\circ - e^5F$	2 - 2	P	288
	70	1593.743	116.93757 - 179.68294	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5F$	1 - 1	P	288
	70	1593.897	116.93757 - 179.67689	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5F$	1 - 2	P	288
	20	1594.850	116.97505 - 179.67689	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^\circ - e^5F$	2 - 2	P	288
	20	1595.166	117.06856 - 179.75798	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5D^\circ - e^5G$	3 - 4	P	288
119	400	1595.586	89.08479 - 151.75767	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^5P^\circ - e^5S$	3 - 2	P	288
	70	1597.625	117.06856 - 179.66148	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5D^\circ - e^5F$	3 - 3	P	288
118	650	1601.204	89.08479 - 151.53780	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^5P^\circ - e^5D$	3 - 4	P	288
118	400	1601.298	89.08479 - 151.53413	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^5P^\circ - e^5D$	3 - 3	P	288
119	300	1601.970	89.33451 - 151.75767	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^5P^\circ - e^5S$	2 - 2	P	288
119	200	1606.006	89.49139 - 151.75767	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^5P^\circ - e^5S$	1 - 2	P	288
118	600	1607.727	89.33451 - 151.53413	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^5P^\circ - e^5D$	2 - 3	P	288
118	450	1611.726	89.49139 - 151.53668	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^5P^\circ - e^5D$	1 - 1	P	288
118	450	1611.772	89.49139 - 151.53490	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^5P^\circ - e^5D$	1 - 2	P	288
	70	1614.611	70.72501 - 132.65917	$3d^5(a^4G)4s - 3d^5(a^2I)4p$	$b^3G - y^3H^\circ$	3 - 4		188
	70	1617.171	70.72875 - 132.56471	$3d^5(a^4G)4s - 3d^5(a^2I)4p$	$b^3G - y^3H^\circ$	4 - 5		188
	150	1624.206	70.69403 - 132.26266	$3d^5(a^4G)4s - 3d^5(a^2I)4p$	$b^3G - y^3H^\circ$	5 - 6		188
	200	1628.304	83.42961 - 144.84324	$3d^5(a^2I)4s - 3d^5(a^2H)4p$	$b^1I - x^1H^\circ$	6 - 5		188
	150	1656.831	79.84012 - 140.19633	$3d^5(a^2I)4s - 3d^5(a^2H)4p$	$a^3I - y^3I^\circ$	7 - 7		188
	150	1695.036	30.08884 - 89.08479	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$a^7S - z^5P^\circ$	3 - 3		188
	250	1709.892	88.92307 - 147.40614	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$b^3H - u^3G^\circ$	6 - 5		188
	200	1710.374	88.69467 - 147.16136	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$b^3H - u^3G^\circ$	5 - 4		188
	150	1717.414	88.66387 - 146.8910	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$b^3H - u^3G^\circ$	4 - 3		188
	250	1722.837	63.42517 - 121.46882	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$a^5G - y^5F^\circ$	6 - 5		188
	250	1730.842	63.46639 - 121.24167	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$a^5G - y^5F^\circ$	5 - 4		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	1738.468	63.48678 - 121.00878	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$a^5G - y^5F^o$	4 - 3		188
	20	1739.201	89.90785 - 147.40614	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$c^3G - u^3G^o$	5 - 5		188
	200	1744.233	63.49400 - 120.82617	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$a^5G - y^5F^o$	3 - 2		188
	250	1745.638	66.46464 - 123.75039	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - x^5P^o$	3 - 3		188
	70	1747.260	66.46464 - 123.69718	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - x^5P^o$	3 - 2		188
	150	1748.177	63.49456 - 120.69710	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$a^5G - y^5F^o$	2 - 1		188
	70	1749.052	66.52295 - 123.69718	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - x^5P^o$	2 - 2		188
	20	1753.455	66.52295 - 123.55295	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - x^5P^o$	2 - 1		188
	200	1770.247	92.52391 - 149.01336	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$a^3H - w^1G^o$	5 - 4		188
	400	1770.554	66.46464 - 122.94415	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - y^5D^o$	3 - 4		188
	150	1771.975	66.46464 - 122.89884	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^3D^o$	3 - 2		188
	70	1773.098	66.52295 - 122.92137	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^3D^o$	2 - 1		188
	70	1775.267	66.59168 - 122.92137	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^3D^o$	1 - 1		188
	20	1775.566	66.52295 - 122.84303	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - y^5D^o$	2 - 1	P	188
	400	1775.983	66.52295 - 122.82955	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - y^5D^o$	2 - 3		188
	70	1777.737	66.59168 - 122.84303	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^5P - y^5D^o$	1 - 1		188
	20	1791.345	66.52295 - 122.34661	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^3D^o$	2 - 3		188
	70	1793.785	69.69573 - 125.44358	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^3F^o$	4 - 4		188
	20	1797.769	93.38875 - 149.01336	$3d^5(b^2F)4s - 3d^5(a^2H)4p$	$e^3F - w^1G^o$	4 - 4		188
	200	1801.766	93.51264 - 149.01336	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^1G - w^1G^o$	4 - 4		188
	70	1803.330	88.66387 - 144.11664	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$b^3H - v^3G^o$	4 - 3		188
	150	1805.337	88.69467 - 144.08597	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$b^3H - v^3G^o$	5 - 4		188
	20	1808.203	84.15955 - 139.46336	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$c^3F - w^3G^o$	4 - 5		188
	200	1811.924	73.72764 - 128.91751	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$c^3P - y^3P^o$	2 - 2		188
	150	1812.974	69.69573 - 124.85404	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^3D^o$	4 - 3		188
	150	1819.480	88.92307 - 143.88374	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$b^3H - v^3G^o$	6 - 5		188
	70	1819.718	84.67187 - 139.62517	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$c^3F - w^3G^o$	3 - 4		188
	70	1820.496	63.42517 - 118.35501	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^3H^o$	6 - 6		188
	20	1821.865	63.46639 - 118.35501	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^3H^o$	5 - 6		188
	70	1824.659	89.69752 - 144.50174	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$c^3G - t^3F^o$	3 - 2		188
	70	1826.156	63.48678 - 118.24652	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^3F^o$	4 - 3		188
	20	1826.267	73.84910 - 128.60565	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$c^3P - y^3P^o$	1 - 1		188
	70	1828.857	89.90785 - 144.58683	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - y^1H^o$	5 - 5		188
	150	1829.172	63.49400 - 118.16356	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^3F^o$	3 - 2		188
117	200	1830.623	88.69467 - 143.32085	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - w^3H^o$	5 - 6		188
	70	1834.096	73.84910 - 128.37153	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$c^3P - y^3P^o$	1 - 0		188
	70	1837.422	89.90785 - 144.33221	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$c^3G - x^1G^o$	5 - 4		188
	250	1837.588	89.69752 - 144.11664	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3G^o$	3 - 3		188
117	450	1838.309	88.92307 - 143.32085	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - w^3H^o$	6 - 6		188
	70	1838.621	89.69752 - 144.08597	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3G^o$	3 - 4		188
	70	1838.698	82.41094 - 136.79705	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$c^3D - w^3F^o$	2 - 3		188
97	200	1841.387	83.23786 - 137.54460	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	3 - 2		188
	300	1841.536	89.78359 - 144.08597	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3G^o$	4 - 4		188
	20	1841.96	83.23786 - 137.52792	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$a^3F - x^3H^o$	3 - 4	Q	645
97	300	1842.927	83.16148 - 137.42300	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	4 - 3		188
	250	1843.409	93.38875 - 147.63595	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - u^3D^o$	4 - 3		188
117	150	1843.502	88.66387 - 142.90848	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - w^3H^o$	4 - 5		188
	200	1843.999	82.38287 - 136.61278	$3d^5(a^4D)4s - 3d^5(a^2F)4p$	$c^3D - w^3F^o$	3 - 4		188
	300	1844.263	93.39245 - 147.61465	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - u^3D^o$	3 - 2		188
117	400	1844.547	88.69467 - 142.90848	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - w^3H^o$	5 - 5		188
97	200	1844.942	83.35888 - 137.5611	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	2 - 1		188
117	300	1845.304	88.66387 - 142.85559	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - w^3H^o$	4 - 4		188
97	450	1845.521	83.23786 - 137.42300	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	3 - 3		188
	70	1845.749	70.72501 - 124.90392	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$b^3G - y^3D^o$	3 - 2		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	1846.943	93.41293 - 147.55645	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - u^3D^o$	2 - 1		188
	70	1847.348	105.90623 - 160.0379	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - v^3P^o$	2 - 2		188
	150	1847.637	93.51264 - 147.63595	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$c^1G - u^3D^o$	4 - 3		188
	150	1848.130	105.92916 - 160.0379	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - v^3P^o$	3 - 2		188
	5	1848.231	66.59168 - 120.69710	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$a^3P - y^3F^o$	1 - 1	Q	488
	20	1848.428	89.78359 - 143.88374	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3G^o$	4 - 5		188
	70	1848.492	90.47253 - 144.57053	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$d^3F - t^3F^o$	4 - 3		188
	70	1848.883	90.48394 - 144.57053	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$d^3F - t^3F^o$	3 - 3		188
	70	1849.172	90.42368 - 144.50174	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$d^3F - t^3F^o$	2 - 2		188
97	450	1849.407	83.13823 - 137.20973	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	5 - 4		188
97	70	1849.648	83.35888 - 137.42300	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	2 - 3		188
53	300	1849.960	63.46639 - 117.52191	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^3G - z^3D^o$	5 - 4		188
97	300	1850.200	83.16148 - 137.20973	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	4 - 4		188
53	70	1850.650	63.48678 - 117.52191	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^3G - z^3D^o$	4 - 4		188
	400	1851.261	93.38875 - 147.40614	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - u^3G^o$	4 - 5		188
	70	1852.366	88.92307 - 142.90848	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - w^3H^o$	6 - 5		188
	400	1852.677	89.90785 - 143.88374	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3G^o$	5 - 5		188
97	150	1852.812	83.23786 - 137.20973	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	3 - 4		188
97	200	1854.384	83.64698 - 137.5732	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	1 - 0		188
63	600	1854.826	69.83683 - 123.75039	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - x^3P^o$	3 - 3		188
63	300	1854.975	69.78819 - 123.69718	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - x^3P^o$	1 - 2		188
	200	1855.510	93.51264 - 147.40614	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$c^1G - u^3G^o$	4 - 5		188
63	450	1856.690	69.83776 - 123.69718	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - x^3P^o$	2 - 2		188
63	300	1858.542	69.74740 - 123.55295	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - x^3P^o$	0 - 1		188
	300	1859.813	93.39245 - 147.16136	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - u^3G^o$	3 - 4		188
63	200	1859.955	69.78819 - 123.55295	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - x^3P^o$	1 - 1		188
63	200	1861.665	69.83776 - 123.55295	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - x^3P^o$	2 - 1		188
	150	1862.446	90.42368 - 144.11664	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3G^o$	2 - 3		188
62	250	1863.317	69.78819 - 123.45592	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3D^o$	1 - 0		188
	70	1864.534	90.48394 - 144.11664	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3G^o$	3 - 3		188
	450	1865.202	97.04138 - 150.6549	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$c^1F - w^1F^o$	3 - 3		188
154	150	1865.445	86.84711 - 140.45310	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$b^1D - y^1F^o$	2 - 3		188
	150	1865.606	90.48394 - 144.08597	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3G^o$	3 - 4		188
53	600	1866.305	63.48678 - 117.06856	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^3G - z^3D^o$	4 - 3		188
53	300	1866.554	63.49400 - 117.06856	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^3G - z^3D^o$	3 - 3		188
	150	1866.900	87.90187 - 141.46653	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$b^1F - v^3D^o$	3 - 3		188
52	650	1869.828	63.49400 - 116.97505	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^3G - z^3F^o$	3 - 2		188
	250	1869.925	93.41293 - 146.8910	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - u^3G^o$	2 - 3		188
52	600	1871.152	63.49456 - 116.93757	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^3G - z^3F^o$	2 - 1		188
	150	1871.319	83.35888 - 136.79705	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	2 - 3		188
	20	1871.435	83.35888 - 136.7938	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^3F - w^3D^o$	2 - 2	P	188
	400	1872.214	89.90785 - 143.32085	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	5 - 6		188
	250	1872.515	63.49400 - 116.89822	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^3G - z^3S^o$	3 - 2		188
	150	1873.534	83.23786 - 136.61278	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	3 - 4		188
62	800	1877.989	69.69573 - 122.94415	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3D^o$	4 - 4		188
	150	1878.550	66.46464 - 119.69764	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^3P - z^3P^o$	3 - 2		188
	200	1880.620	69.74740 - 122.92137	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$b^3D - z^3D^o$	0 - 1		188
	250	1880.704	82.38287 - 135.55441	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$c^3D - y^3G^o$	3 - 4		188
	300	1881.178	89.69752 - 142.85559	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	3 - 4		188
	200	1881.578	83.64698 - 136.7938	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^3F - w^3D^o$	1 - 2		188
62	650	1882.047	69.69573 - 122.82955	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3D^o$	4 - 3		188
	300	1882.357	89.78359 - 142.90848	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	4 - 5		188
62	250	1882.979	69.83683 - 122.94415	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3D^o$	3 - 4		188
	150	1883.185	87.90187 - 141.00299	$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$b^1F - v^3F^o$	3 - 4		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
62	70	1883.394	69.74740 - 122.84303	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	0 - 1		188
	200	1883.816	69.83776 - 122.92137	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$b^5D - z^5D^o$	2 - 1		188
	150	1884.233	89.78359 - 142.85559	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	4 - 4	P	188
	550	1884.596	69.83683 - 122.89884	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$b^5D - z^5D^o$	3 - 2		188
96	600	1885.125	83.13823 - 136.18517	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	5 - 5		188
96	300	1885.947	83.16148 - 136.18517	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	4 - 5		188
52	300	1886.607	69.83776 - 122.84303	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	2 - 1		188
	800	1886.757	63.46639 - 116.46741	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	5 - 4		188
62	70	1887.085	69.83776 - 122.82955	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	2 - 3		188
52	550	1887.197	63.48678 - 116.47544	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5F^o$	4 - 3		188
52	550	1887.471	63.49456 - 116.47544	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5F^o$	2 - 3		188
52	250	1887.734	63.49400 - 116.46741	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	3 - 4		188
53	150	1888.260	114.33995 - 167.2989	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - t^3G^o$	4 - 5		188
	300	1889.451	63.49400 - 116.41939	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5D^o$	3 - 2		188
	250	1889.735	86.84711 - 139.76448	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$b^1D - y^1D^o$	2 - 2		188
52	900	1890.669	63.42517 - 116.31663	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	6 - 5		188
53	150	1890.893	63.49456 - 116.38007	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5D^o$	2 - 1		188
96	250	1891.070	83.23786 - 136.11794	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	3 - 2		188
96	200	1891.186	83.35888 - 136.23584	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	2 - 1		188
	70	1891.339	84.67187 - 137.54460	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - x^3D^o$	3 - 2		188
	300	1891.516	82.41094 - 135.2790	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3D^o$	2 - 2		188
	200	1891.909	82.38287 - 135.23974	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$c^3D - y^5G^o$	3 - 4		188
96	300	1892.073	83.13823 - 135.99062	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	5 - 4		188
52	300	1892.140	63.46639 - 116.31663	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	5 - 5		188
96	300	1892.247	83.16148 - 136.00874	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	4 - 3		188
	70	1892.339	88.69467 - 141.53955	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - y^1I^o$	5 - 6		188
	70	1892.488	69.78819 - 122.62834	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	1 - 2		188
	70	1892.598	89.69752 - 142.53507	$3d^5(a^2G)4s - 3d^5(a^2F)4p$	$c^3G - u^3F^o$	3 - 2		188
96	300	1892.890	83.16148 - 135.99062	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	4 - 4		188
200	1893.113	105.90623 - 158.7293	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - t^3D^o$	2 - 3		188	
83	700	1893.981	79.86042 - 132.65917	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - y^3H^o$	5 - 4		188
	300	1894.252	69.83683 - 122.62834	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	3 - 2		188
	200	1894.509	82.49488 - 135.2790	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3D^o$	1 - 2		188
96	250	1894.983	83.23786 - 136.00874	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	3 - 3		188
34	1000	1895.456	30.08884 - 82.84659	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$a^7S - z^7P^o$	3 - 4		188
96		1895.635	83.23786 - 135.99062	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	3 - 4		188
83	70	1895.912	114.33995 - 167.0850	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - t^3G^o$	4 - 3		188
	250	1896.333	114.35192 - 167.0850	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - t^3G^o$	3 - 3		188
	250	1896.734	82.49488 - 135.2171	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3D^o$	1 - 1		188
83	600	1896.803	79.84474 - 132.56471	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - y^3H^o$	6 - 5		188
250	1897.028	82.38287 - 135.09684	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$c^3D - y^5G^o$	3 - 3		188	
83	200	1897.379	79.86042 - 132.56471	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - y^3H^o$	5 - 5		188
96	400	1898.870	73.72764 - 126.39057	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$c^3P - z^3S^o$	2 - 1		188
	300	1899.318	69.69573 - 122.34661	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$b^5D - z^5D^o$	4 - 3		188
	300	1899.931	105.92916 - 158.5627	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - s^3F^o$	3 - 4		188
	70	1900.575	89.69752 - 142.31290	$3d^5(a^2G)4s - 3d^5(a^2F)4p$	$c^3G - u^3F^o$	3 - 3		188
	600	1901.096	83.13823 - 135.73947	$3d^5(a^4F)4s - 3d^5(a^2I)4p$	$a^5F - z^1I^o$	5 - 6		188
	300	1901.379	82.38287 - 134.97622	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3D^o$	3 - 3		188
96	200	1901.540	83.64698 - 136.23584	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	1 - 1		188
	300	1902.076	83.16148 - 135.73531	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^o$	4 - 5		188
	400	1902.402	82.41094 - 134.97622	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3D^o$	2 - 3		188
	300	1902.902	87.90187 - 140.45310	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$b^1F - y^1F^o$	3 - 3		188
	70	1903.159	83.16148 - 135.7057	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^5F - w^3D^o$	4 - 3		188
	200	1903.257	73.84910 - 126.39057	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$c^3P - z^3S^o$	1 - 1		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
96	70	1903.706	89.78359 - 142.31290	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$c^3G - u^3F^\circ$	4 - 3		188
	70	1903.983	105.89535 - 158.4168	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - t^3D^\circ$	1 - 2		188
	150	1904.257	109.57084 - 162.0848	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$c^1D - w^1D^\circ$	2 - 2		188
	250	1904.402	69.83683 - 122.34661	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$b^3D - z^3D^\circ$	3 - 3		188
	70	1905.214	105.92916 - 158.4168	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - t^3D^\circ$	3 - 2		188
108	400	1905.818	83.64698 - 136.11794	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^\circ$	1 - 2		188
	400	1906.457	84.15955 - 136.61278	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^\circ$	4 - 4		188
83	400	1906.814	83.13823 - 135.58208	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^\circ$	5 - 6		188
	650	1907.577	79.84012 - 132.26266	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - y^3H^\circ$	7 - 6		188
83	250	1907.741	79.84474 - 132.26266	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - y^3H^\circ$	6 - 6		188
	150	1909.782	105.89535 - 158.2573	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - t^3D^\circ$	1 - 1		188
57	150	1909.846	117.95032 - 170.3106	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^1G - u^1F^\circ$	4 - 3		188
	70	1910.172	105.90623 - 158.2573	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - t^3D^\circ$	2 - 1		188
135	400	1910.401	66.52295 - 118.86787	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^\circ$	2 - 1		188
	450	1911.338	92.52391 - 144.84324	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$a^3H - x^3H^\circ$	5 - 5		188
57	100	1911.685	83.42961 - 135.73947	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$b^3I - z^3I^\circ$	6 - 6	P	188
	50	1911.742	88.69467 - 141.00299	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$b^3H - v^3F^\circ$	5 - 4	P	188
57	250	1912.920	66.59168 - 118.86787	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^\circ$	1 - 1		188
	70	1913.386	89.78359 - 142.0470	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$c^3G - u^3F^\circ$	4 - 4		188
34	250	1913.622	66.46464 - 118.72160	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^\circ$	3 - 2		188
	1000	1914.056	30.08884 - 82.33392	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$a^7S - z^7P^\circ$	3 - 3		188
57	750	1915.083	63.42517 - 115.64223	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^\circ$	6 - 7		188
	150	1915.750	66.52295 - 118.72160	$3d^5(a^2P)4s - 3d^5(a^2P)4p$	$a^3P - y^3P^\circ$	2 - 2		188
94	300	1916.507	83.13823 - 135.31642	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^5F - y^5G^\circ$	5 - 5		188
	150	1917.087	84.36992 - 136.53245	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^\circ$	2 - 2		188
94	250	1917.250	114.33995 - 166.498	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - r^3F^\circ$	4 - 3		188
	550	1917.351	83.16148 - 135.31642	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^5F - y^5G^\circ$	4 - 5		188
101	600	1917.453	83.42961 - 135.58208	$3d^5(a^2I)4s - 3d^5(a^2F)4p$	$b^3I - y^3G^\circ$	6 - 6		188
	150	1917.665	79.84474 - 131.99158	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3K^\circ$	6 - 7		188
57	400	1917.960	89.90785 - 142.0470	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$c^3G - u^3F^\circ$	5 - 4		188
	450	1918.284	66.59168 - 118.72160	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^\circ$	1 - 2		188
108	450	1918.459	84.67187 - 136.79705	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^\circ$	3 - 3	P	188
	200	1918.966	90.42368 - 142.53507	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - u^3F^\circ$	2 - 2		188
107	250	1919.572	84.36992 - 136.4649	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$c^3F - w^3D^\circ$	2 - 1		188
	250	1920.186	83.16148 - 135.23974	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^\circ$	4 - 4		188
95	150	1920.260	105.90623 - 157.9820	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - s^3F^\circ$	2 - 3		188
	150	1920.752	92.52391 - 144.58683	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$a^3H - y^3H^\circ$	5 - 5		188
51	150	1921.132	105.92916 - 157.9820	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - s^3F^\circ$	3 - 3		188
	70	1921.990	88.66387 - 140.69336	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$b^3H - v^3F^\circ$	4 - 3		188
95	70	1922.132	84.15955 - 136.18517	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$c^3F - x^3F^\circ$	4 - 5		188
	1000	1922.789	63.46639 - 115.47425	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^\circ$	5 - 6		188
57	450	1923.003	83.23786 - 135.23974	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^\circ$	3 - 4		188
	450	1923.877	66.46464 - 118.44292	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^\circ$	3 - 3		188
79	250	1924.119	97.04138 - 149.01336	$3d^5(b^2F)4s - 3d^5(a^2H)4p$	$c^1F - w^1G^\circ$	3 - 4		188
	400	1924.532	76.95679 - 128.91751	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3P^\circ$	3 - 2		188
57	250	1925.271	84.67187 - 136.61278	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^\circ$	3 - 4		188
	200	1925.855	87.90187 - 139.82717	$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$b^3F - y^3G^\circ$	3 - 4		188
34	250	1926.036	83.35888 - 135.2790	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$a^5F - x^5D^\circ$	2 - 2	P	188
	250	1926.041	66.52295 - 118.44292	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^\circ$	2 - 3	P	188
34	1000	1926.304	30.08884 - 82.00173	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$a^7S - z^7P^\circ$	3 - 2		188
	200	1926.898	114.32535 - 166.2222	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - r^3F^\circ$	5 - 4		188
57	300	1927.436	82.38287 - 134.26542	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3P^\circ$	3 - 2		188
	150	1927.679						188
34	250	1928.178	87.90187 - 139.76448	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$b^3F - y^3D^\circ$	3 - 2		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
95	100	1928.247	84.67187 - 136.53245	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^o$	3 - 2	P	188
	200	1928.306	83.23786 - 135.09684	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - y^3G^o$	3 - 3	P	188
	250	1928.642	79.86042 - 131.71079	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3H^o$	5 - 5		188
	250	1928.837	86.84711 - 138.69181	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$b^3D - z^3P^o$	2 - 1		188
	70	1928.991	90.47253 - 142.31290	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - u^3F^o$	4 - 3		188
	250	1929.413	90.48394 - 142.31290	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - u^3F^o$	3 - 3		188
51	70	1929.632	63.46639 - 115.28991	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	5 - 5		188
	79	1929.941	77.10243 - 128.91751	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3P^o$	2 - 2		188
51	150	1930.184	92.52391 - 144.33221	$3d^5(a^4H)4s - 3d^5(b^2F)4p$	$a^1H - x^1G^o$	5 - 4		188
	1000	1930.387	63.48678 - 115.28991	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	4 - 5		188
	150	1930.917	105.89535 - 157.6843	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - s^3F^o$	1 - 2		188
	70	1931.309	105.90623 - 157.6843	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - s^3F^o$	2 - 2		188
61	950	1931.507	69.69573 - 121.46882	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^o$	4 - 5		188
95	300	1932.818	83.35888 - 135.09684	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - y^3G^o$	2 - 3		188
	250	1936.806	89.90785 - 141.53955	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - y^3I^o$	5 - 6		188
	200	1937.077	63.48678 - 115.11092	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	4 - 4		188
51	950	1937.345	63.49400 - 115.11092	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	3 - 4		188
	250	1937.996	114.33995 - 165.9396	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - v^3H^o$	4 - 5		188
95	250	1938.775	83.35888 - 134.93784	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - y^3G^o$	2 - 2		188
	650	1938.901	84.15955 - 135.73531	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - y^3G^o$	4 - 5		188
	70	1939.107	83.64698 - 135.2171	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$a^3F - x^3D^o$	1 - 1		188
61	550	1940.018	69.69573 - 121.24167	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^o$	4 - 4		188
79	150	1940.604	77.07530 - 128.60565	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3P^o$	1 - 1	P	188
	250	1940.769	93.51264 - 145.03861	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^1G - x^1F^o$	4 - 3		188
79	200	1941.633	77.10243 - 128.60565	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3P^o$	2 - 1		188
51	950	1943.481	63.49456 - 114.94855	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	2 - 3		188
	150	1943.715	30.8864 - 82.33392	$3d^5 - 3d^5(a^6S)4p$	$a^1G - z^1P^o$	4 - 3	Q	188
	800	1945.342	69.83683 - 121.24167	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^o$	3 - 4		188
106	150	1945.724	84.15955 - 135.55441	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - y^3G^o$	4 - 4		188
	20	1946.321	114.33995 - 165.7191	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - v^3H^o$	4 - 4		188
	200	1946.769	114.35192 - 165.7191	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - v^3H^o$	3 - 4		188
	200	1948.280	117.95032 - 169.2776	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^1G - v^1G^o$	4 - 4		188
79	150	1949.462	77.07530 - 128.37153	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^3P^o$	1 - 0		188
95	200	1949.666	83.64698 - 134.93784	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^3F - y^3G^o$	1 - 2		188
116	650	1950.334	88.92307 - 140.19633	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - y^3I^o$	6 - 7		188
68	800	1951.007	70.69403 - 121.94962	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	5 - 5		188
68	200	1951.318	70.69403 - 121.94129	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	5 - 4		188
	100	1952.329	70.72875 - 121.94962	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	4 - 5	P	188
68	50	1952.385	89.78359 - 141.00299	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3F^o$	4 - 4	P	188
68	200	1952.514	70.72501 - 121.94129	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	3 - 4		188
68	700	1952.648	70.72875 - 121.94129	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	4 - 4		188
	250	1953.202	93.38875 - 144.58683	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$e^3F - y^3H^o$	4 - 5		188
68	900	1953.322	70.72501 - 121.91974	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	3 - 3		188
68	650	1953.488	70.72875 - 121.91974	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	4 - 3		188
	70	1953.821	93.38875 - 144.57053	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - t^3F^o$	4 - 3		188
	250	1953.968	93.39245 - 144.57053	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - t^3F^o$	3 - 3		188
61	650	1954.223	69.83776 - 121.00878	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^o$	2 - 3		188
	250	1954.769	84.15955 - 135.31642	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - y^3G^o$	4 - 5		188
116	550	1954.975	88.69467 - 139.84618	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - y^3I^o$	5 - 6		188
	20	1955.943	73.72764 - 124.85404	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$c^3P - y^3D^o$	2 - 3		188
	200	1957.137	89.90785 - 141.00299	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3F^o$	5 - 4		188
	150	1957.375	93.41293 - 144.50174	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - t^3F^o$	2 - 2		188
147	400	1957.938	93.51264 - 144.58683	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^1G - y^1H^o$	4 - 5		188
55	700	1958.583	66.46464 - 117.52191	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5D^o$	3 - 4		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
61	300	1958.732	89.69752 - 140.75098	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3F^\circ$	3 - 2		188	
	200	1959.026	90.42368 - 141.46945	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^\circ$	2 - 1		188	
	550	1959.324	69.78819 - 120.82617	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^\circ$	1 - 2		188	
82	900	1960.318	79.84012 - 130.85225	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3K^\circ$	7 - 8		188	
61	300	1961.010	90.47253 - 141.46653	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^\circ$	4 - 3		188	
	400	1961.230	69.83776 - 120.82617	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^\circ$	2 - 2		188	
61	70	1961.456	90.48394 - 141.46653	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^\circ$	3 - 3		188	
	70	1961.724	90.42368 - 141.39904	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^\circ$	2 - 2		188	
	300	1962.717	69.74740 - 120.69710	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^\circ$	0 - 1		188	
	250	1962.958	93.38875 - 144.33221	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$e^3F - x^1G^\circ$	4 - 4		188	
	70	1963.209	84.15955 - 135.09684	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$c^3F - y^3G^\circ$	4 - 3		188	
	70	1963.461	88.69467 - 139.62517	$3d^5(a^4H)4s - 3d^5(a^4F)4p$	$b^3H - w^3G^\circ$	5 - 4		188	
81	200	1963.991	79.84012 - 130.75684	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3I^\circ$	7 - 6	P	188	
	100	1964.054	90.48394 - 141.39904	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^\circ$	3 - 2	P	188	
81	550	1964.169	79.84474 - 130.75684	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3I^\circ$	6 - 6		188	
61	450	1964.260	89.78359 - 140.69336	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3F^\circ$	4 - 3		188	
81	550	1964.776	79.86042 - 130.75684	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3I^\circ$	5 - 6		188	
106	550	1965.309	84.67187 - 135.55441	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - y^3G^\circ$	3 - 4		188	
61	200	1966.074	98.66268 - 149.52563	$3d^5(a^4S)4s - 3d^5(a^2S)4p$	$a^3S - w^3P^\circ$	1 - 2		188	
	150	1966.201	69.83776 - 120.69710	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^\circ$	2 - 1		188	
	550	1966.740	88.66387 - 139.50944	$3d^5(a^4H)4s - 3d^5(a^4H)4p$	$b^3H - y^3I^\circ$	4 - 5		188	
	250	1967.352	117.95032 - 168.7801	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^1G - w^1H^\circ$	4 - 5		188	
	150	1968.625	92.52391 - 143.32085	$3d^5(a^4H)4s - 3d^5(a^2H)4p$	$a^1H - w^3H^\circ$	5 - 6		188	
	150	1972.245	93.41293 - 144.11664	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$e^3F - v^3G^\circ$	2 - 3		188	
55	150	1972.638	93.39245 - 144.08597	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$e^3F - v^3G^\circ$	3 - 4		188	
	20	1973.578	89.78359 - 140.45310	$3d^5(a^2G)4s - 3d^5(a^2F)4p$	$c^3G - y^3F^\circ$	4 - 3		188	
	550	1976.126	66.46464 - 117.06856	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^5P - z^5D^\circ$	3 - 3		188	
	250	1978.417	66.52295 - 117.06856	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^5P - z^5D^\circ$	2 - 3		188	
	150	1978.626	88.92307 - 139.46336	$3d^5(a^4H)4s - 3d^5(a^4F)4p$	$b^3H - w^3G^\circ$	6 - 5		188	
	70	1979.002	90.47253 - 141.00299	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3F^\circ$	4 - 4		188	
54	150	1980.392	93.38875 - 143.88374	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$e^3F - v^3G^\circ$	4 - 5		188	
	400	1982.076	66.52295 - 116.97505	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^5P - z^5F^\circ$	2 - 2		188	
	550	1982.805	66.46464 - 116.89822	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5S^\circ$	3 - 2		188	
	20	1983.144	84.67187 - 135.09684	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$c^3F - y^3G^\circ$	3 - 3	P	188	
81		1983.6	0.0 - 50.4123	$3d^6 - 3d^6$	$ga^5D - b^3P$	4 - 2	F,P	375,487	
	150	1983.676	79.84474 - 130.25627	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3I^\circ$	6 - 5		188	
86	450	1984.027	82.38287 - 132.78536	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3F^\circ$	3 - 4		188	
81	600	1984.288	79.86042 - 130.25627	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3I^\circ$	5 - 5		188	
56	200	1985.105	66.52295 - 116.89822	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5S^\circ$	2 - 2		188	
	70	1987.006	90.42368 - 140.75098	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3F^\circ$	2 - 2		188	
50	1000	1987.503	63.42517 - 113.73962	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	6 - 6		188	
56	200	1987.810	66.59168 - 116.89822	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5S^\circ$	1 - 2		188	
50		1989.0	0.0 - 50.2761	$3d^6 - 3d^6$	$ga^5D - b^3F$	4 - 4	F,P	375,487	
	450	1989.975	63.42517 - 113.67701	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	6 - 5		188	
	950	1991.613	63.46639 - 113.67701	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	5 - 5		188	
	82	600	1992.017	79.84012 - 130.04056	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3K^\circ$	7 - 7		188
	82	600	1992.196	79.84474 - 130.04056	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3K^\circ$	6 - 7		188
	50	70	1992.427	63.48678 - 113.67701	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	4 - 5		188
	106	400	1992.858	84.36992 - 134.54900	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - y^3G^\circ$	2 - 3		188
		450	1993.262	63.46639 - 113.63534	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	5 - 4		188
		900	1994.073	63.48678 - 113.63534	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	4 - 4		188
		50	70	1994.366	63.49400 - 113.63534	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	3 - 4	
450		1995.266	63.48678 - 113.60537	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	4 - 3		188	
50		800	1995.563	63.49400 - 113.60537	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	3 - 3		188

FE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
50	800	1996.420	63.49456 - 113.58420	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^\circ$	2 - 2		188
	70	1999.100	73.72764 - 123.75039	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$c^3P - x^3P^\circ$	2 - 3		188
54	600	1999.588	66.46464 - 116.47544	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^3P - z^3F^\circ$	3 - 3		188
54	200	1999.893	66.46464 - 116.46741	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^3P - z^3F^\circ$	3 - 4		188

IRON IV (Fe^{3+}), $Z = 26$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 ({}^6S_{5/2})$ (23 electrons)
Ionization Potential [442 000] cm^{-1} ; [54.8] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
	4	446.569	35.2538 - 259.18382	$3d^5 - 3d^4(b^3F)4p$	$a^4P - {}^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	80	458.172	32.2455 - 250.50229	$3d^5 - 3d^4(b^3F)4p$	$a^4G - {}^4F^\circ$	$\frac{11}{2} - \frac{11}{2}$		958	
	1	458.307	0.0 - 218.19566	$3d^5 - 3d^4(a^3F)4p$	$ga^6S - {}^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	30	458.746	32.2928 - 250.27906	$3d^5 - 3d^4(b^3F)4p$	$a^4G - {}^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	30	458.935	32.3012 - 250.19507	$3d^5 - 3d^4(b^3F)4p$	$a^4G - {}^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	50	458.949	32.3057 - 250.19507	$3d^5 - 3d^4(b^3F)4p$	$a^4G - {}^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
		12	460.999	47.0905 - 264.01154	$3d^5 - 3d^4(b^1G)4p$	$a^2I - {}^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
12		461.492	35.2538 - 251.94403	$3d^5 - 3d^4(b^3P)4p$	$a^4P - {}^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
1		467.343	51.3942 - 265.36948	$3d^5 - 3d^4(b^1G)4p$	$a^2F - {}^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
12		469.085	38.7794 - 251.95894	$3d^5 - 3d^4(b^3P)4p$	$a^4D - {}^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
30		469.749	38.7794 - 251.65834	$3d^5 - 3d^4(b^3P)4p$	$a^4D - {}^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
1		471.118	38.8967 - 251.15694	$3d^5 - 3d^4(b^3P)4p$	$a^4D - {}^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
		4	471.524	38.9351 - 251.01402	$3d^5 - 3d^4(b^3P)4p$	$a^4D - {}^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	471.800	38.9382 - 250.89105	$3d^5 - 3d^4(b^3P)4p$	$a^4D - {}^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	12	481.592	56.3688 - 264.01154	$3d^5 - 3d^4(b^1G)4p$	$a^2H - {}^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958	
	80	481.905	56.3688 - 263.87691	$3d^5 - 3d^4(b^1G)4p$	$a^2H - {}^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		958	
	1	482.241	57.7212 - 265.08477	$3d^5 - 3d^4(b^1G)4p$	$a^2G - {}^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	50	483.238	56.0583 - 262.99501	$3d^5 - 3d^4(b^1G)4p$	$a^2H - {}^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
		1	483.967	74.1331 - 280.75837	$3d^5 - 3d^4(b^1D)4p$	$b^2D - {}^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4		484.261	56.0583 - 262.55777	$3d^5 - 3d^4(b^1G)4p$	$a^2H - {}^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
1		484.990	56.3688 - 262.55777	$3d^5 - 3d^4(b^1G)4p$	$a^2H - {}^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958	
1		485.509	52.6207 - 258.59192	$3d^5 - 3d^4(b^3F)4p$	$a^4F - {}^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
1		487.383	61.1565 - 266.33524	$3d^5 - 3d^4(b^3F)4p$	$b^2F - {}^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
4		489.409	49.5415 - 253.86843	$3d^5 - 3d^4(b^3P)4p$	$a^2D - {}^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
		4	491.832	38.9382 - 242.25925	$3d^5 - 3d^4(a^1D)4p$	$a^4D - {}^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
		30	492.152	82.8949 - 286.08472	$3d^5 - 3d^4(b^1D)4p$	$b^2G - {}^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
		50	492.653	56.0583 - 259.03972	$3d^5 - 3d^4(b^3F)4p$	$a^2H - {}^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
		1	493.529	61.2544 - 263.87691	$3d^5 - 3d^4(b^1G)4p$	$b^2F - {}^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
		110	494.567	56.3688 - 258.56602	$3d^5 - 3d^4(b^3F)4p$	$a^2H - {}^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
		30	494.669	82.8973 - 285.05277	$3d^5 - 3d^4(b^1D)4p$	$b^2G - {}^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
		4	495.447	61.1565 - 262.99501	$3d^5 - 3d^4(b^1G)4p$	$b^2F - {}^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	495.953	57.4080 - 259.03972	$3d^5 - 3d^4(b^3F)4p$	$a^2G - {}^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	50	496.171	52.6207 - 254.16484	$3d^5 - 3d^4(b^3F)4p$	$a^4F - {}^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		958	
	4	496.724	57.7212 - 259.03972	$3d^5 - 3d^4(b^3F)4p$	$a^2G - {}^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	1	496.766	52.6207 - 253.92359	$3d^5 - 3d^4(b^3F)4p$	$a^4F - {}^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
	12	497.184	52.6954 - 253.82743	$3d^5 - 3d^4(b^3F)4p$	$a^4F - {}^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
		4	497.810	52.6954 - 253.57565	$3d^5 - 3d^4(b^3P)4p$	$a^4F - {}^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
		1	497.896	57.7212 - 258.56602	$3d^5 - 3d^4(b^3F)4p$	$a^2G - {}^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
		1	499.880	52.8371 - 252.88448	$3d^5 - 3d^4(b^3F)4p$	$a^4F - {}^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
		4	500.558	52.1667 - 251.94403	$3d^5 - 3d^4(b^3P)4p$	$a^2F - {}^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
150		501.849	52.6954 - 251.95894	$3d^5 - 3d^4(b^3P)4p$	$a^4F - {}^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	
30		502.142	52.8371 - 251.98420	$3d^5 - 3d^4(b^3P)4p$	$a^4F - {}^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958	

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	502.246	52.8380 - 251.94403	$3d^5 - 3d^4(b^3P)4p$	$a^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	300	502.421	52.6207 - 251.65834	$3d^5 - 3d^4(b^3P)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	80	504.240	52.6954 - 251.01402	$3d^5 - 3d^4(b^3P)4p$	$a^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	12	504.919	52.8380 - 250.89105	$3d^5 - 3d^4(b^3P)4p$	$a^4F - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	504.982	50.0514 - 248.07797	$3d^5 - 3d^4(a^1F)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	375	505.354	52.6207 - 250.50229	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		958
	4	505.545	52.6954 - 250.50229	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	200	506.117	52.6954 - 250.27906	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	4	506.482	52.8380 - 250.27906	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	375	506.694	52.8380 - 250.19507	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	80	506.976	32.2455 - 229.49474	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^o$	$\frac{11}{2} - \frac{9}{2}$		958
	30	507.631	32.2928 - 229.28802	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		958
	50	508.240	32.3057 - 229.06258	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	12	508.749	32.3012 - 228.86261	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	1	509.681	57.7212 - 253.92359	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		958
	12	511.424	57.7212 - 253.25437	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		958
	1	511.570	57.4080 - 252.88448	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^4G^o$	$\frac{7}{2} - \frac{5}{2}$		958
	1	516.253	35.3333 - 229.03702	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	4	517.099	0.0 - 193.38617	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	4	517.234	35.2538 - 228.58967	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	1	517.447	35.3333 - 228.58967	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	4	517.642	35.4066 - 228.58967	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		958
	30	518.908	61.1565 - 253.86843	$3d^5 - 3d^4(b^3P)4p$	$b^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	150	519.035	35.2538 - 227.91905	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	519.141	32.2455 - 224.87085	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		958
	80	519.221	0.0 - 192.59528	$3d^5 - 3d^4(a^5D)4p$	$ga^6S - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	519.247	35.3333 - 227.91905	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	50	519.962	61.2544 - 253.57565	$3d^5 - 3d^4(b^3P)4p$	$b^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	4	521.570	35.2538 - 226.98358	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	50	521.665	0.0 - 191.69411	$3d^5 - 3d^4(a^5D)4p$	$ga^6S - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	4	521.782	35.3333 - 226.98358	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	4	522.000	51.3942 - 242.96562	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	1	522.810	74.0966 - 265.36948	$3d^5 - 3d^4(b^1G)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		958
	12	523.694	74.1331 - 265.08477	$3d^5 - 3d^4(b^1G)4p$	$b^2D - ^2F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	524.344	38.7794 - 229.49474	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	30	525.339	38.9351 - 229.28802	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	900	525.689	0.0 - 190.22687	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	50	525.930	38.8967 - 229.03702	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	12	525.976	38.9382 - 229.06258	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		958
	30	526.045	38.9382 - 229.03702	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	700	526.293	0.0 - 190.00828	$3d^5 - 3d^4(a^5D)4p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	4	526.411	38.8967 - 228.86261	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		958
	4	526.517	38.9351 - 228.86261	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	300	526.567	32.2455 - 222.15499	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		958
	520	526.634	0.0 - 189.88511	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	527.096	32.3012 - 222.02009	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	527.193	56.0583 - 245.74229	$3d^5 - 3d^4(a^1F)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		958
	200	527.276	38.9351 - 228.58967	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	4	527.977	32.2455 - 221.64749	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		958
	50	528.056	56.3688 - 245.74229	$3d^5 - 3d^4(a^1F)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		958
	80	528.109	32.2928 - 221.64749	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	110	528.710	38.7794 - 227.91905	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		958
	30	528.951	32.2928 - 221.34606	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		958
	4	528.987	32.3057 - 221.34606	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	529.057	32.3057 - 221.32054	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	30	529.117	32.2455 - 221.23921	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	50	529.287	32.3057 - 221.23921	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	12	529.328	32.3012 - 221.21929	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	80	529.469	32.2928 - 221.16102	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	4	529.493	32.2455 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	12	529.628	32.2928 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	80	529.665	32.3057 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	30	529.936	56.0583 - 244.75925	$3d^5 - 3d^4(a^1F)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	250	530.562	38.7794 - 227.25880	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	300	530.907	32.3012 - 220.65804	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^2H^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	30	531.475	32.3057 - 220.46133	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2H^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	300	531.777	38.9351 - 226.98358	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	150	531.854	57.7212 - 245.74229	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	4	531.927	38.8967 - 226.89210	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	200	532.043	38.9382 - 226.89210	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	4	532.157	38.9382 - 226.85193	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	4	532.209	32.3012 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	12	532.649	49.5415 - 237.28309	$3d^5 - 3d^4(a^1D)4p$	$a^2D - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	1	532.828	51.3942 - 239.07140	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	12	533.598	32.2928 - 219.70053	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	12	533.628	32.2455 - 219.64076	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	80	533.757	57.4080 - 244.75925	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	1	533.945	32.3057 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	1	534.421	51.3942 - 238.51284	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	12	534.652	57.7212 - 244.75925	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	1	534.988	61.1565 - 248.07797	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	4	535.028	52.1667 - 239.07140	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	12	535.142	50.0514 - 236.91879	$3d^5 - 3d^4(a^1D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	50	535.359	32.3012 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	300	535.551	47.0786 - 233.80212	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	250	536.006	32.3057 - 218.87121	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	1	536.339	52.6207 - 239.07140	$3d^5 - 3d^4(a^1D)4p$	$a^4F - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	600	536.609	32.2455 - 218.60103	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	300	536.735	32.3012 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	700	537.103	32.2928 - 218.47836	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	200	537.133	32.3057 - 218.47836	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	520	537.261	32.2455 - 218.37512	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	12	537.396	32.2928 - 218.37512	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	50	537.655	32.2455 - 218.23851	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	600	537.792	32.2928 - 218.23851	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	520	537.941	32.3057 - 218.19566	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	150	538.021	32.2928 - 218.15977	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	250	538.057	32.3057 - 218.15977	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	12	538.222	38.7794 - 224.57643	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	300	538.441	32.3012 - 218.02381	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	538.450	32.3057 - 218.02381	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	200	538.968	32.3057 - 217.84529	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	4	539.127	74.0966 - 259.58164	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	80	539.388	35.2538 - 220.64922	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	4	539.681	38.9351 - 224.23060	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	4	539.829	57.7212 - 242.96562	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	12	539.938	57.4080 - 242.61460	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	110	540.058	32.3012 - 217.46619	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	540.230	35.2538 - 220.36044	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	540.462	35.3333 - 220.36044	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	80	540.675	35.4066 - 220.36044	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	540.703	35.2538 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	540.743	49.5415 - 234.47200	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	540.896	74.1331 - 259.01148	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	540.939	35.3333 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	541.266	52.1667 - 236.91879	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	4	541.342	35.3333 - 220.05933	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	541.557	35.4066 - 220.05933	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	4	541.751	52.6954 - 237.28309	$3d^5 - 3d^4(a^1D)4p$	$a^4F - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	541.789	35.2538 - 219.82661	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	200	542.028	35.3333 - 219.82661	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	150	542.163	35.2538 - 219.70053	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	4	542.240	35.4066 - 219.82661	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	542.483	35.2538 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	110	542.720	35.3333 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	110	542.756	49.5415 - 233.78672	$3d^5 - 3d^4(a^1S)4p$	$a^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	80	542.770	49.5415 - 233.78086	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	543.078	32.2928 - 216.42844	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	543.116	32.3057 - 216.42844	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	1	543.245	52.8380 - 236.91879	$3d^5 - 3d^4(a^1D)4p$	$a^4F - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	543.315	50.0514 - 234.10672	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		958
	4	543.635	38.9351 - 222.88023	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	543.691	35.4066 - 219.33390	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	80	543.845	50.0514 - 233.92712	$3d^5 - 3d^4(a^1S)4p$	$a^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	543.956	35.2538 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	1	544.056	32.3057 - 216.11169	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	300	544.196	32.2455 - 216.00272	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	544.257	50.0514 - 233.78672	$3d^5 - 3d^4(a^1S)4p$	$a^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	544.336	32.2928 - 216.00272	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	544.409	35.4066 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	4	544.609	35.2538 - 218.87121	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	4	544.658	61.1565 - 244.75925	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	544.768	32.2455 - 215.80891	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	544.911	32.2928 - 215.80891	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	545.377	35.2538 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	545.602	35.3333 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	545.829	35.4066 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$		958
	80	546.031	32.2455 - 215.38523	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	80	546.135	47.0905 - 230.19502	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2K^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	546.167	32.2928 - 215.38523	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	300	546.216	51.3942 - 234.47200	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	546.408	56.0583 - 239.07140	$3d^5 - 3d^4(a^1D)4p$	$a^2H - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	546.622	35.2538 - 218.19566	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4F^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	546.715	32.2455 - 215.15569	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^o$	$\frac{1}{2} - \frac{3}{2}$		958
	4	546.857	32.2928 - 215.15569	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^o$	$\frac{1}{2} - \frac{3}{2}$		958
	50	546.897	32.3057 - 215.15569	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^o$	$\frac{1}{2} - \frac{3}{2}$		958
	80	546.995	52.1667 - 234.98435	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	547.136	35.2538 - 218.02381	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	547.222	32.2928 - 215.03381	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	30	547.254	32.3057 - 215.03381	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	547.373	35.3333 - 218.02381	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	12	547.673	35.2538 - 217.84529	$3d^5 - 3d^4(a^3H)4p$	$a^4P - ^4G^o$	$\frac{1}{2} - \frac{3}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	110	547.744	38.7794 - 221.34606	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	12	547.818	38.7794 - 221.32054	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	80	547.887	32.3012 - 214.82174	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	30	547.901	32.3057 - 214.82174	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	50	548.029	82.8973 - 265.36948	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	250	548.066	38.7794 - 221.23921	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	150	548.211	38.9351 - 221.34606	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	4	548.265	47.0786 - 229.47283	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2K^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	250	548.298	38.9382 - 221.32054	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	150	548.474	38.8967 - 221.21929	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	110	548.605	38.9382 - 221.21929	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	548.627	35.3333 - 217.60771	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2S^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	12	548.763	47.0786 - 229.30661	$3d^5 - 3d^4(a^1G)4p$	$a^2I - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	300	548.801	47.0905 - 229.30661	$3d^5 - 3d^4(a^1G)4p$	$a^2I - ^2H^\circ$	$\frac{13}{2} - \frac{11}{2}$		958
	80	548.878	82.8949 - 265.08477	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	4	549.012	52.8380 - 234.98435	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	1	549.628	52.1667 - 234.10672	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	50	549.843	38.7794 - 220.64922	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	4	550.030	61.1565 - 242.96562	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	110	550.122	35.2538 - 217.03189	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	375	550.315	47.0786 - 228.79386	$3d^5 - 3d^4(a^1G)4p$	$a^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	4	550.464	57.4080 - 239.07140	$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	30	550.584	35.4066 - 217.03189	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	12	550.617	52.1667 - 233.78086	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	4	550.728	108.2421 - 289.81877	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	150	551.094	61.1565 - 242.61460	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	1	551.188	38.9351 - 220.36044	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	200	551.421	57.7212 - 239.07140	$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	80	551.689	38.9382 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	300	551.766	47.0786 - 228.31503	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	12	551.993	38.8967 - 220.05933	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	4	552.050	32.3012 - 213.44505	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	50	552.106	47.0786 - 228.20433	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	520	552.142	47.0905 - 228.20433	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^\circ$	$\frac{13}{2} - \frac{11}{2}$		958
	200	552.168	57.4080 - 238.51284	$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	50	552.543	82.8949 - 263.87691	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	4	552.705	38.8967 - 219.82661	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	375	552.739	32.2455 - 213.16259	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	80	552.827	38.9382 - 219.82661	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	553.063	38.7794 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	30	553.201	38.9351 - 219.70053	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	50	553.549	38.9382 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	12	553.590	100.1180 - 280.75837	$3d^5 - 3d^4(b^1D)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	553.935	35.3333 - 215.86050	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	12	554.114	32.2455 - 212.71437	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	4	554.161	35.4066 - 215.86050	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	300	554.257	32.2928 - 212.71437	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	80	554.292	51.3942 - 231.80400	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	12	554.335	38.9382 - 219.33390	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	50	555.254	82.8973 - 262.99501	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	1	555.306	32.2928 - 212.37404	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	250	555.345	32.3057 - 212.37404	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	300	555.658	35.2538 - 215.22067	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	4	555.938	57.4080 - 237.28309	$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	556.065	32.3012 - 212.13579	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$\frac{5}{2} - \frac{7}{2}$		958
	4	556.199	74.1331 - 253.92359	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		958
	12	556.260	74.0966 - 253.86843	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	1	556.374	74.1331 - 253.86843	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	4	556.551	38.9351 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4S^o$	$\frac{5}{2} - \frac{5}{2}$		958
	30	556.601	82.8973 - 262.55777	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		958
	12	556.797	49.5415 - 229.13890	$3d^5 - 3d^4(a^1G)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		958
	30	557.281	74.1331 - 253.57565	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		958
	12	557.360	38.7794 - 218.19566	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		958
	12	557.700	52.1667 - 231.47332	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		958
	12	557.853	38.9382 - 218.19566	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		958
	80	557.895	38.7794 - 218.02381	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{7}{2} - \frac{7}{2}$		958
	1	558.280	74.1331 - 253.25437	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		958
	50	558.383	50.0514 - 229.13890	$3d^5 - 3d^4(a^1G)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		958
	110	558.457	35.2538 - 214.31721	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	80	558.708	35.3333 - 214.31721	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	4	558.943	38.9382 - 217.84529	$3d^5 - 3d^4(a^3H)4p$	$a^4D - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		958
	12	558.984	50.0514 - 228.94659	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		958
	1	559.433	74.1331 - 252.88448	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		958
	4	559.558	38.8967 - 217.60771	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2S^o$	$\frac{5}{2} - \frac{5}{2}$		958
	50	559.742	49.5415 - 228.19367	$3d^5 - 3d^4(a^1G)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		958
	4	561.192	35.2538 - 213.44505	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		958
	1	561.373	38.8967 - 217.03189	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		958
	50	561.447	35.3333 - 213.44505	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	80	561.494	38.9351 - 217.03189	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	30	561.678	35.4066 - 213.44505	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
	1	562.294	108.2421 - 286.08472	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		958
	1	562.348	74.1331 - 251.95894	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^4P^o$	$\frac{5}{2} - \frac{7}{2}$		958
	12	562.492	47.0905 - 224.87085	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		958
	150	562.607	56.0583 - 233.80212	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		958
	4	563.443	35.3333 - 212.81266	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	4	563.589	56.3688 - 233.80212	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		958
	30	563.679	35.4066 - 212.81266	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
	30	564.141	52.1667 - 229.42891	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	564.285	56.0583 - 233.27284	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	200	565.062	52.1667 - 229.13890	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		958
	30	565.220	38.9382 - 215.86050	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	250	565.280	56.3688 - 233.27284	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		958
	80	565.374	52.6207 - 229.49474	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		958
	200	565.612	51.3942 - 228.19367	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		958
	50	566.034	47.0786 - 223.74582	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		958
	30	566.274	52.6954 - 229.28802	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		958
	30	566.406	47.0786 - 223.62959	$3d^5 - 3d^4(a^3F)4p$	$a^2I - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		958
	12	566.699	47.0905 - 223.55014	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		958
	80	566.912	57.4080 - 233.80212	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		958
	12	566.994	52.6954 - 229.06258	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	30	567.211	52.8380 - 229.13890	$3d^5 - 3d^4(a^1G)4p$	$a^4F - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		958
	50	567.323	51.3942 - 227.66025	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	4	567.457	52.8380 - 229.06258	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		958
	12	567.500	51.3942 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	80	567.718	82.8973 - 259.03972	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	4	567.769	61.1565 - 237.28309	$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		958
	50	567.919	57.7212 - 233.80212	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		958
	12	567.987	57.7212 - 233.78086	$3d^5 - 3d^4(a^3D)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	568.091	61.2544 - 237.28309	$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	110	568.951	61.1565 - 236.91879	$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	110	569.246	82.8949 - 258.56602	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		958
	50	569.634	57.7212 - 233.27284	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	200	569.672	66.7201 - 242.25925	$3d^5 - 3d^4(a^1D)4p$	$a^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	200	570.010	56.3688 - 231.80400	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		958
	200	570.075	56.0583 - 231.47332	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		958
	30	571.215	47.0905 - 222.15499	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		958
	4	572.189	52.8380 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		958
	80	572.613	52.6207 - 227.25880	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	300	572.878	47.0905 - 221.64749	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		958
	4	573.050	49.5415 - 224.04602	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		958
	30	573.759	52.6954 - 226.98358	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	12	574.232	52.8380 - 226.98358	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	110	574.441	57.7212 - 231.80400	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		958
	200	574.480	47.0905 - 221.16102	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{13}{2}$	P	958
	50	574.497	57.4080 - 231.47332	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	958
	12	574.533	52.8380 - 226.89210	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	80	574.626	47.0786 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^o$	$\frac{11}{2} - \frac{9}{2}$		958
	4	574.770	74.0966 - 248.07797	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	1	575.185	49.5415 - 223.39862	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2G^o$	$\frac{5}{2} - \frac{3}{2}$		958
	80	575.281	61.1565 - 234.98435	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	4	575.534	57.7212 - 231.47332	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		958
	12	576.609	50.0514 - 223.47896	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		958
	300	576.758	47.0786 - 220.46133	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		958
	80	576.903	49.5415 - 222.88023	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	80	577.308	61.2544 - 234.47200	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	4	577.336						958
	30	577.687	56.3688 - 229.47283	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2K^o$	$\frac{11}{2} - \frac{13}{2}$		958
	12	578.199	61.1565 - 234.10672	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	110	578.243	56.3688 - 229.30661	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		958
	4	578.511	74.1331 - 246.99080	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	12	578.604	50.0514 - 222.88023	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	50	578.921	56.0583 - 228.79386	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		958
	250	579.543	47.0905 - 219.64076	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		958
	12	579.624	61.2544 - 233.78086	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		958
	300	579.758	47.0786 - 219.56446	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		958
	50	579.783	49.5415 - 222.02009	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	4	579.956	56.3688 - 228.79386	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		958
	50	580.211	51.3942 - 223.74582	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		958
	12	580.531	56.0583 - 228.31503	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2I^o$	$\frac{9}{2} - \frac{11}{2}$		958
	250	580.551	52.6207 - 224.87085	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		958
	4	580.595	51.3942 - 223.62959	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	1	581.112	51.3942 - 223.47896	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	1	581.176	52.1667 - 224.23060	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		958
	80	581.502	50.0514 - 222.02009	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	30	581.543	52.6207 - 224.57643	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		958
	150	581.798	52.6954 - 224.57643	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	50	581.950	56.3688 - 228.20433	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2I^o$	$\frac{11}{2} - \frac{13}{2}$		958
	1	582.142	49.5415 - 221.32054	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		958
	4	582.306	57.4080 - 229.13890	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	1	582.480	49.5415 - 221.21929	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	1	582.567	57.4080 - 229.06258	$3d^5 - 3d^4(a^3D)4p$	$a^2G - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	12	582.742	56.0583 - 227.66025	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	582.972	52.6954 - 224.23060	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	150	583.138	51.3942 - 222.88023	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	583.342	52.6207 - 224.04602	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	110	583.458	52.8380 - 224.23060	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	12	583.799	56.3688 - 227.66025	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	50	583.869	82.8973 - 254.16913	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	80	584.002	52.1667 - 223.39862	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	110	584.083	52.8371 - 224.04596	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	50	584.222	50.0514 - 221.21929	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	12	584.366	52.6207 - 223.74582	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	110	584.428	49.5415 - 220.64922	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	584.542	57.7212 - 228.79386	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	30	584.623	52.6954 - 223.74582	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	80	584.698	82.8949 - 253.92359	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	150	585.036	52.6207 - 223.55014	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	80	585.416	49.5415 - 220.36044	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	50	585.777	52.1667 - 222.88023	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	585.976	49.5415 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	1	586.018	52.8371 - 223.47896	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	1	586.184	57.7212 - 228.31503	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	12	586.337	61.2544 - 231.80400	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	30	586.604	57.7212 - 228.19367	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	80	586.993	82.8949 - 253.25437	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	12	587.140	61.1565 - 231.47332	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	4	587.364	57.4080 - 227.66025	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	150	587.556	57.4080 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	30	587.686	49.5415 - 219.70053	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	80	587.734	50.0514 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	588.088	52.8380 - 222.88023	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	588.208	50.0514 - 220.05933	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	588.280	82.8973 - 252.88448	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	110	588.447	57.7212 - 227.66025	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	1	588.639	57.7212 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	110	588.745	52.1667 - 222.02009	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	589.795	49.5415 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	80	589.833	50.0514 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	110	590.566	49.5415 - 218.87121	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	30	590.733	50.0514 - 219.33390	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	110	590.828	51.3942 - 220.64922	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	30	591.076	52.8380 - 222.02009	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	591.180	52.1667 - 221.32054	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	50	591.465	49.5415 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	591.529	52.1667 - 221.21929	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	4	591.574	50.0514 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	1	592.300	74.1331 - 242.96562	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	4	592.371	56.0583 - 224.87085	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	1	592.699	47.0905 - 215.80891	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	80	592.942	52.6954 - 221.34606	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	80	593.053	52.6207 - 221.23921	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	4	593.255	50.0514 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	593.315	52.6954 - 221.23921	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	50	593.409	56.0583 - 224.57643	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	110	593.533	52.8380 - 221.32054	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	4	593.792	52.6954 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	593.888	52.8371 - 221.21929	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	110	594.162	49.5415 - 217.84529	$3d^5 - 3d^4(a^3H)4p$	$a^2D - ^4G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	594.502	56.3688 - 224.57643	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	4	594.543	51.3942 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	30	594.626	56.0583 - 224.23060	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	594.664	74.0966 - 242.25925	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2P^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	594.795	74.1331 - 242.25925	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2P^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	1	594.968	47.0786 - 215.15569	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^4I^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	30	595.133	52.1667 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	110	595.289	61.1565 - 229.13890	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	4	595.644	61.2544 - 229.13890	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	4	595.906	52.8380 - 220.64922	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	80	596.349	56.0583 - 223.74582	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	1	596.446	52.1667 - 219.82661	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	596.764	56.0583 - 223.62959	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	596.815	50.0514 - 217.60771	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2S^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	30	596.893	52.1667 - 219.70053	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	597.010	52.6954 - 220.19725	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	597.288	52.1667 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	110	597.321	50.0514 - 217.46619	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	200	597.456	56.3688 - 223.74582	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	80	597.535	35.2538 - 202.60833	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	200	597.589	56.0583 - 223.39862	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	110	597.871	56.3688 - 223.62959	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	598.062	66.7201 - 233.92712	$3d^5 - 3d^4(a^1S)4p$	$a^2S - ^2P^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	80	598.156	56.3688 - 223.55014	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	30	598.198	57.4080 - 224.57643	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	598.267	57.7212 - 224.87085	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	150	598.532	35.2538 - 202.32853	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	30	598.669	61.1565 - 228.19367	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	110	598.825	35.3333 - 202.32853	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	30	599.020	61.2544 - 228.19367	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	1	599.075	52.1667 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	599.180	52.6954 - 219.59084	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	4	599.324	57.7212 - 224.57643	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	599.407	35.2538 - 202.08522	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	1	599.441	57.4080 - 224.23060	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	599.692	35.3333 - 202.08522	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	30	599.958	35.4066 - 202.08522	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	600.105	57.4080 - 224.04602	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	600.290	35.3333 - 201.91938	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	80	600.348	49.5415 - 216.11169	$3d^5 - 3d^4(a^3H)4p$	$a^2D - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	600.557	35.4066 - 201.91938	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	600.610	52.8371 - 219.33390	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2P^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	600.788	61.1565 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	110	600.944	61.2544 - 227.66025	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	1	601.141	61.2544 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	150	601.237	57.7212 - 224.04602	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	12	601.493	52.8380 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	50	601.609	57.4080 - 223.62959	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	4	601.651	100.1260 - 266.33524	$3d^5 - 3d^4(b^3F)4p$	$a^2P - ^2D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	1	601.773	52.6954 - 218.87121	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2D^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	150	602.155	57.4080 - 223.47896	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958
	80	602.295	52.1667 - 218.19566	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4F^{\circ}$	$\frac{1}{2}, \frac{3}{2}, \frac{5}{2}, \frac{7}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	602.319	57.7212 - 223.74582	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	110	602.444	57.4080 - 223.39862	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	110	602.481	52.6207 - 218.60103	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	50	602.744	57.7212 - 223.62959	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	80	603.033	57.7212 - 223.55014	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	80	603.199	52.6954 - 218.47836	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	50	603.301	52.6207 - 218.37512	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	50	603.582	57.7212 - 223.39862	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	80	604.072	52.6954 - 218.23851	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	12	604.255	49.5415 - 215.03381	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	30	604.750	52.8380 - 218.19566	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	50	604.885	52.8380 - 218.15977	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	150	605.038	56.3688 - 221.64749	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	1	605.138	100.1180 - 265.36948	$3d^5 - 3d^4(b^1G)4p$	$a^2P - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	30	605.382	52.8380 - 218.02381	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	12	605.682	56.0583 - 221.16102	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	30	605.890	56.0583 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	110	605.934	51.3942 - 216.42844	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	4	606.031	52.8371 - 217.84529	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	30	606.290	74.1331 - 239.07140	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	12	606.534	56.3688 - 221.23921	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	110	606.824	56.3688 - 221.16102	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	1	607.036	56.3688 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	12	607.100	51.3942 - 216.11169	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	1	607.427	52.8371 - 217.46619	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	600	607.533	56.0583 - 220.65804	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	80	607.702	32.2928 - 196.84682	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	12	608.213	74.0966 - 238.51284	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	80	608.264	56.0583 - 220.46133	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	520	608.805	32.2928 - 196.54959	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	80	608.851	32.3057 - 196.54959	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	300	609.648	32.3057 - 196.33463	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	50	609.963	52.1667 - 216.11169	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	4	610.082	57.4080 - 221.32054	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	250	610.181	32.3012 - 196.18688	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	200	610.393	38.7794 - 202.60833	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	1	610.471	52.6207 - 216.42844	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	30	610.644	51.3942 - 215.15569	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^4I^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	30	610.886	57.4080 - 221.10417	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	80	610.972	38.9351 - 202.60833	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	50	611.436	38.7794 - 202.32853	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	110	611.599	56.0583 - 219.56446	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	50	611.846	57.7212 - 221.16102	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	150	612.024	38.9351 - 202.32853	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	80	612.060	52.6207 - 216.00272	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	110	612.477	56.3688 - 219.64076	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	1	612.555	57.4080 - 220.65804	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	80	612.790	38.8967 - 202.08522	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	150	612.937	38.9382 - 202.08522	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	50	613.299	57.4080 - 220.46133	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	30	613.409	38.8967 - 201.91938	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	50	613.570	38.9382 - 201.91938	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		958
	4	613.765	57.7212 - 220.64922	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	4	613.913	61.1565 - 224.04596	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	633.159	108.2421 - 266.18109	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	12	633.220	108.2583 - 266.18109	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	30	633.456	35.4066 - 193.27127	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	50	633.768	35.3333 - 193.12034	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	30	633.832	38.7794 - 196.54959	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	4	634.059	35.4066 - 193.12034	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	50	634.452	38.9351 - 196.54959	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	1	635.092	61.1565 - 218.61388	$3d^5 - 3d^4(a^3P)4p$	$b^2F - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	12	635.184	57.7212 - 215.15569	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^4I^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	80	635.332	38.9382 - 196.33463	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	150	635.560	35.2538 - 192.59528	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	635.766	38.8967 - 196.18688	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	50	635.881	35.3333 - 192.59528	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	635.933	38.9382 - 196.18688	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	12	636.428	108.2421 - 265.36948	$3d^5 - 3d^4(b^1G)4p$	$c^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	12	636.493	108.2583 - 265.36948	$3d^5 - 3d^4(b^1G)4p$	$c^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	80	636.928	61.1565 - 218.15977	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	50	637.581	108.2421 - 265.08477	$3d^5 - 3d^4(b^1G)4p$	$c^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	1	638.522	32.2928 - 188.90455	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	150	639.223	35.2538 - 191.69411	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	12	639.547	35.3333 - 191.69411	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	50	639.846	35.4066 - 191.69411	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	80	642.312	35.3333 - 191.02118	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	642.609	82.8973 - 238.51284	$3d^5 - 3d^4(a^3D)4p$	$b^2G - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	4	643.931	74.1331 - 229.42891	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	150	644.435	61.2544 - 216.42844	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	644.985	74.0966 - 229.13890	$3d^5 - 3d^4(a^3G)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	645.121	38.7794 - 193.78919	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{3}{2} - \frac{9}{2}$		958
	80	645.349	61.1565 - 216.11169	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	110	646.120	38.7794 - 193.54925	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{3}{2} - \frac{9}{2}$		958
	30	646.185	35.2538 - 190.00828	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	12	646.702	35.2538 - 189.88511	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	50	646.771	38.9351 - 193.54925	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{3}{2} - \frac{9}{2}$		958
	1	647.340	35.4066 - 189.88511	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	12	647.777	38.8967 - 193.27127	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{3}{2} - \frac{9}{2}$		958
	80	647.939	38.9382 - 193.27127	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{3}{2} - \frac{9}{2}$		958
	12	648.408	38.8967 - 193.12034	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{3}{2} - \frac{9}{2}$		958
	4	648.581	38.9382 - 193.12034	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{3}{2} - \frac{9}{2}$		958
	30	648.799	61.2544 - 215.38523	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	12	649.766	61.2544 - 215.15569	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^4I^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	12	649.869	61.1565 - 215.03381	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	110	650.129	38.7794 - 192.59528	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	650.409	100.1180 - 253.86843	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	650.439	100.1260 - 253.86843	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	80	650.785	38.9351 - 192.59528	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	651.589	74.1331 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$b^2D - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	651.644	100.1180 - 253.57565	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	4	654.460	38.8967 - 191.69411	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	200	654.629	38.9351 - 191.69411	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	1	655.555	49.5415 - 202.08522	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	1	655.860	35.4066 - 187.87881	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6F^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	50	657.357	38.8967 - 191.02118	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	12	657.538	38.9382 - 191.02118	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	1	657.749	50.0514 - 202.08522	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	12	658.467	50.0514 - 201.91938	$3d^5 - 3d^4(a^5D)4p$	$a^2D - ^4D^\circ$	2 - 1		958
	4	658.582	100.1180 - 251.95894	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^4P^\circ$	1 - 1		958
	12	660.836	108.2583 - 259.58164	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2P^\circ$	1 - 1		958
	12	661.250	38.7794 - 190.00828	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6P^\circ$	2 - 2		958
	50	661.337	82.8973 - 234.10672	$3d^5 - 3d^4(a^5D)4p$	$b^2G - ^2F^\circ$	1 - 1		958
	1	662.475	38.9351 - 189.88511	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6P^\circ$	2 - 2		958
	1	662.538	51.3942 - 202.32853	$3d^5 - 3d^4(a^5D)4p$	$a^2F - ^4D^\circ$	2 - 2		958
	50	662.672	82.8973 - 233.80212	$3d^5 - 3d^4(a^1I)4p$	$b^2G - ^2H^\circ$	1 - 1		958
	50	662.754	82.8949 - 233.78086	$3d^5 - 3d^4(a^5D)4p$	$b^2G - ^2F^\circ$	2 - 2		958
	30	663.264	108.2421 - 259.01148	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2P^\circ$	1 - 1		958
	1	663.334	108.2583 - 259.01148	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2P^\circ$	1 - 1		958
	80	664.992	82.8949 - 233.27284	$3d^5 - 3d^4(a^1I)4p$	$b^2G - ^2H^\circ$	2 - 2		958
	12	665.945	52.1667 - 202.32853	$3d^5 - 3d^4(a^5D)4p$	$a^2F - ^4D^\circ$	2 - 2		958
	1	666.236	74.1331 - 224.23060	$3d^5 - 3d^4(a^3G)4p$	$b^2D - ^4G^\circ$	2 - 2		958
	250	666.722	52.6207 - 202.60833	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^\circ$	1 - 1		958
	4	666.894	74.0966 - 224.04596	$3d^5 - 3d^4(a^3G)4p$	$b^2D - ^4G^\circ$	2 - 2		958
	200	667.054	52.6954 - 202.60833	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^\circ$	2 - 2		958
	1	667.689	52.8380 - 202.60833	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^\circ$	2 - 2		958
	250	668.301	52.6954 - 202.32853	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^\circ$	2 - 2		958
	50	668.938	52.8380 - 202.32853	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^\circ$	1 - 1		958
	50	669.423	74.0966 - 223.47896	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2F^\circ$	2 - 2		958
	1	669.585	74.1331 - 223.47896	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2F^\circ$	2 - 2		958
	1	669.948	74.1331 - 223.39862	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2G^\circ$	2 - 2		958
	200	670.028	52.8380 - 202.08522	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^\circ$	2 - 2		958
	110	670.768	52.8371 - 201.91938	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^\circ$	2 - 2		958
	12	671.549	82.8949 - 231.80400	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2G^\circ$	2 - 2		958
	1	672.279	74.1331 - 222.88023	$3d^5 - 3d^4(a^3P)4p$	$b^2D - ^2D^\circ$	1 - 1		958
	30	673.056	82.8973 - 231.47332	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2G^\circ$	2 - 2		958
	4	683.003	82.8949 - 229.30661	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2H^\circ$	1 - 1		958
	1	684.293	50.0514 - 196.18688	$3d^5 - 3d^4(a^5D)4p$	$a^2D - ^4F^\circ$	2 - 2		958
	4	685.350	108.2583 - 254.16913	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2F^\circ$	2 - 2		958
	30	685.415	82.8973 - 228.79386	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2H^\circ$	2 - 2		958
	4	686.430	108.2421 - 253.92359	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2F^\circ$	2 - 2		958
	1	686.764	108.2583 - 253.86843	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2D^\circ$	2 - 2		958
	1	688.072	108.2421 - 253.57565	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2D^\circ$	2 - 2		958
	4	688.245	82.8973 - 228.19367	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2F^\circ$	2 - 2		958
	4	689.597	108.2421 - 253.25437	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^4G^\circ$	2 - 2		958
	1	689.678	74.0966 - 219.09167	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2D^\circ$	2 - 2		958
	1	690.190	57.7212 - 202.60833	$3d^5 - 3d^4(a^5D)4p$	$a^2G - ^4D^\circ$	2 - 2		958
	80	690.772	82.8949 - 227.66025	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2G^\circ$	2 - 2		958
	12	690.903	74.1331 - 218.87121	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2D^\circ$	2 - 2		958
	50	691.051	82.8973 - 227.60473	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2G^\circ$	2 - 2		958
	4	691.437	108.2583 - 252.88448	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^4G^\circ$	2 - 2		958
	1	692.602	52.1667 - 196.54959	$3d^5 - 3d^4(a^5D)4p$	$a^2F - ^4F^\circ$	2 - 2		958
	200	693.356	52.6207 - 196.84682	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^\circ$	1 - 1		958
	12	693.635	52.1667 - 196.33463	$3d^5 - 3d^4(a^5D)4p$	$a^2F - ^4F^\circ$	2 - 2		958
	30	693.713	52.6954 - 196.84682	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^\circ$	2 - 2		958
	4	694.343	52.1667 - 196.18688	$3d^5 - 3d^4(a^5D)4p$	$a^2F - ^4F^\circ$	2 - 2		958
	30	694.786	52.6207 - 196.54959	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^\circ$	2 - 2		958
	110	695.150	52.6954 - 196.54959	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^\circ$	2 - 2		958
	50	695.837	52.8380 - 196.54959	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^\circ$	2 - 2		958
	30	696.188	52.6954 - 196.33463	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^\circ$	2 - 2		958
	110	696.880	52.8380 - 196.33463	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^\circ$	2 - 2		958
	4	697.499	74.0966 - 217.46619	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^4F^\circ$	2 - 2		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
80	697.598	52.8371 - 196.18688		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	708.373	52.6207 - 193.78919		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	709.980	82.8973 - 223.74582		$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	710.566	82.8949 - 223.62959		$3d^5 - 3d^4(a^3F)4p$	$b^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
1	711.737	82.8973 - 223.39862		$3d^5 - 3d^4(a^3F)4p$	$b^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	720.711	82.8949 - 221.64749		$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^4H^\circ$	$\frac{3}{2} - \frac{11}{2}$		958
12	723.243	82.8949 - 221.16102		$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		958
4	723.553	82.8973 - 221.10417		$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^4H^\circ$	$\frac{3}{2} - \frac{11}{2}$		958
4	726.935	82.8973 - 220.46133		$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		958
4	728.337	82.8973 - 220.19725		$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2F^\circ$	$\frac{3}{2} - \frac{11}{2}$		958
4	729.048	100.1180 - 237.28309		$3d^5 - 3d^4(a^1D)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	738.857	82.8949 - 218.23851		$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		958
4	744.305	100.1180 - 234.47200		$3d^5 - 3d^4(a^3D)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
1	747.331	100.1180 - 233.92712		$3d^5 - 3d^4(a^3S)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
30	748.873	82.8949 - 216.42844		$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
1	750.670	82.8973 - 216.11169		$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	754.784	82.8973 - 215.38523		$3d^5 - 3d^4(a^3F)4p$	$b^2G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	789.107	108.2583 - 234.98435		$3d^5 - 3d^4(a^3D)4p$	$c^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
30	1247.823	138.33883 - 218.47836		$3d^4(a^3D)4s - 3d^4(a^3F)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
80	1253.807	138.84403 - 218.60103		$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
1	1308.238	162.07442 - 238.51284		$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
1	1320.800	161.57159 - 237.28309		$3d^4(a^3P)4s - 3d^4(a^1D)4p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	1328.842	167.71250 - 242.96562		$3d^4(a^1G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
30	1329.868	162.08781 - 237.28309		$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	1336.099	162.07442 - 236.91879		$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	1357.247	165.39258 - 239.07140		$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
1	1370.08	35.2538 - 108.2421		$3d^5 - 3d^5$	$a^4P - c^2D$		F,P	958
30	1371.561	162.07442 - 234.98435		$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
80	1381.523	162.08781 - 234.47200		$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
80	1394.829	162.08781 - 233.78086		$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	1396.252	171.34533 - 242.96562		$3d^4(a^3D)4s - 3d^4(a^3F)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	1401.366	167.71250 - 239.07140		$3d^4(a^1G)4s - 3d^4(a^1D)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	1405.708	171.47639 - 242.61460		$3d^4(a^3D)4s - 3d^4(a^3F)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	1407.774	156.22488 - 227.25880		$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	1408.227	177.06672 - 248.07797		$3d^4(a^1D)4s - 3d^4(a^3F)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	1410.156	171.34533 - 242.25925		$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
50	1411.237	156.12377 - 226.98358		$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
30	1412.778	171.47639 - 242.25925		$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
200	1414.255	183.15961 - 253.86843		$3d^4(a^3F)4s - 3d^4(b^3P)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
50	1420.224	183.16449 - 253.57565		$3d^4(a^3F)4s - 3d^4(b^3P)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
4	1421.305	154.51267 - 224.87085		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
4	1421.986	158.73869 - 229.06258		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
150	1422.131	195.86415 - 266.18109		$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
50	1422.927	159.01039 - 229.28802		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
80	1423.145	159.22790 - 229.49474		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
12	1423.475	154.32596 - 224.57643		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
375	1425.480	159.34288 - 229.49474		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
450	1425.728	154.73129 - 224.87085		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
200	1426.040	158.73869 - 228.86261		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
200	1426.234	196.22071 - 266.33524		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
300	1427.268	154.51267 - 224.57643		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
250	1427.346	159.22790 - 229.28802		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
250	1427.511	159.01039 - 229.06258		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
250	1427.553	196.13119 - 266.18109		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
30	1427.657	154.18585 - 224.23060	154.18585 - 224.23060	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		958
80	1428.884	177.00597 - 246.99080	177.00597 - 246.99080	$3d^4(a^1D)4s - 3d^4(a^1F)4p$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		958
200	1430.517	154.32596 - 224.23060	154.32596 - 224.23060	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		958
520	1431.432	154.18585 - 224.04596	154.18585 - 224.04596	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		958
80	1434.314	154.32596 - 224.04602	154.32596 - 224.04602	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1434.387	162.08781 - 231.80400	162.08781 - 231.80400	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		958
80	1439.688	196.87562 - 266.33524	196.87562 - 266.33524	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		958
110	1440.946	162.07442 - 231.47332	162.07442 - 231.47332	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		958
30	1444.294	196.13119 - 265.36948	196.13119 - 265.36948	$3d^4(b^3F)4s - 3d^4(b^1G)4p$	$^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
200	1444.403	154.51267 - 223.74582	154.51267 - 223.74582	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1446.000	164.95050 - 234.10672	164.95050 - 234.10672	$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$^2G - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
30	1446.154	196.22071 - 265.36948	196.22071 - 265.36948	$3d^4(b^3F)4s - 3d^4(b^1G)4p$	$^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
50	1447.742	154.32596 - 223.39862	154.32596 - 223.39862	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		958
30	1449.028	189.97501 - 258.98664	189.97501 - 258.98664	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
12	1450.252	196.13119 - 265.08477	196.13119 - 265.08477	$3d^4(b^3F)4s - 3d^4(b^1G)4p$	$^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1452.393	164.95050 - 233.80212	164.95050 - 233.80212	$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$^2G - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1452.478	190.40645 - 259.25434	190.40645 - 259.25434	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
300	1453.089	154.73129 - 223.55014	154.73129 - 223.55014	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		958
80	1453.962	190.40645 - 259.18382	190.40645 - 259.18382	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
250	1454.585	190.43547 - 259.18382	190.43547 - 259.18382	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
30	1455.712	160.77860 - 229.47283	160.77860 - 229.47283	$3d^4(a^3H)4s - 3d^4(a^1D)4p$	$^2H - ^2K^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1456.751	156.22488 - 224.87085	156.22488 - 224.87085	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		958
300	1457.369	189.97501 - 258.59192	189.97501 - 258.59192	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
250	1458.524	190.42414 - 258.98664	190.42414 - 258.98664	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
110	1458.763	190.43547 - 258.98664	190.43547 - 258.98664	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
250	1459.257	160.77860 - 229.30661	160.77860 - 229.30661	$3d^4(a^3H)4s - 3d^4(a^1G)4p$	$^2H - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		958
200	1460.229	160.31164 - 228.79386	160.31164 - 228.79386	$3d^4(a^3H)4s - 3d^4(a^1G)4p$	$^2H - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1460.859	156.12377 - 224.57643	156.12377 - 224.57643	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		958
200	1462.240	165.39258 - 233.78086	165.39258 - 233.78086	$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$^2G - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
12	1463.751	159.34288 - 227.66025	159.34288 - 227.66025	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		958
300	1464.694	190.31834 - 258.59192	190.31834 - 258.59192	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
200	1466.820	190.81179 - 258.98664	190.81179 - 258.98664	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
110	1466.966	190.42414 - 258.59192	190.42414 - 258.59192	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
12	1467.501	128.19154 - 196.33463	128.19154 - 196.33463	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
80	1470.421	128.54185 - 196.54959	128.54185 - 196.54959	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		958
110	1470.514	160.31164 - 228.31503	160.31164 - 228.31503	$3d^4(a^3H)4s - 3d^4(a^1D)4p$	$^2H - ^2I^o$	$\frac{1}{2} - \frac{1}{2}$		958
50	1472.395	191.33782 - 259.25434	191.33782 - 259.25434	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
450	1473.201	128.96767 - 196.84682	128.96767 - 196.84682	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		958
80	1473.926	191.33782 - 259.18382	191.33782 - 259.18382	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1480.863	189.97501 - 257.50326	189.97501 - 257.50326	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{1}{2}$		958
12	1481.017	156.22488 - 223.74582	156.22488 - 223.74582	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		958
375	1483.145	154.73129 - 222.15499	154.73129 - 222.15499	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^o$	$\frac{1}{2} - \frac{1}{2}$		958
110	1486.040	160.31164 - 227.60473	160.31164 - 227.60473	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		958
1	1488.810	171.34533 - 238.51284	171.34533 - 238.51284	$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
450	1489.534	154.51267 - 221.64749	154.51267 - 221.64749	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^o$	$\frac{1}{2} - \frac{1}{2}$		958
250	1491.095	162.07442 - 229.13890	162.07442 - 229.13890	$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		958
250	1493.026	222.84058 - 289.81877	222.84058 - 289.81877	$3d^4(b^1D)4s - 3d^4(b^1D)4p$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		958
30	1493.270	222.85168 - 289.81877	222.85168 - 289.81877	$3d^4(b^1D)4s - 3d^4(b^1D)4p$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		958
150	1494.467	154.32596 - 221.23921	154.32596 - 221.23921	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		958
450	1495.185	160.77860 - 227.66025	160.77860 - 227.66025	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		958
250	1497.492	154.32596 - 221.10417	154.32596 - 221.10417	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^o$	$\frac{1}{2} - \frac{1}{2}$		958
200	1499.439	190.81179 - 257.50326	190.81179 - 257.50326	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{1}{2}$		958
200	1500.412	154.51267 - 221.16102	154.51267 - 221.16102	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		958
50	1501.688	154.51267 - 221.10417	154.51267 - 221.10417	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^o$	$\frac{1}{2} - \frac{1}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
110	1502.652	222.85168 - 289.40072		$3d^4(b^1D)4s - 3d^4(b^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
250	1503.243	164.95050 - 231.47332		$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
50	1504.118	195.86415 - 262.34836		$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^2P - ^2S^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
300	1504.379	154.18585 - 220.65804		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
200	1505.766	165.39258 - 231.80400		$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
80	1505.848	153.65174 - 220.05933		$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
50	1508.049	167.79592 - 234.10672		$3d^4(a^1G)4s - 3d^4(a^3D)4p$	$^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
110	1508.856	154.18585 - 220.46133		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
50	1511.365	191.33782 - 257.50326		$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4S^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
80	1512.728	162.08781 - 228.19367		$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
150	1513.587	167.71250 - 233.78086		$3d^4(a^1G)4s - 3d^4(a^3D)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
30	1515.012	167.79592 - 233.80212		$3d^4(a^1G)4s - 3d^4(a^1I)4p$	$^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
250	1516.081	177.00597 - 242.96562		$3d^4(a^1D)4s - 3d^4(a^1F)4p$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
250	1516.577	171.34533 - 237.28309		$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
200	1517.780	154.47485 - 220.36044		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
375	1523.921	127.92912 - 193.54925		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
50	1524.368	155.74487 - 221.34606		$3d^4(a^3P)4s - 3d^4(a^3G)4p$	$^4P - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
375	1526.066	159.34288 - 224.87085		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
520	1526.598	127.76615 - 193.27127		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
150	1528.067	171.47639 - 236.91879		$3d^4(a^3D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
80	1528.529	156.22488 - 221.64749		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
150	1530.040	128.19154 - 193.54925		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
150	1530.125	127.76615 - 193.12034		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
520	1530.256	159.22790 - 224.57643		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
375	1531.220	158.73869 - 224.04596		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
200	1531.474	156.04932 - 221.34606		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
150	1532.069	156.04932 - 221.32054		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
250	1532.485	177.00597 - 242.25925		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
600	1532.634	128.54185 - 193.78919		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
520	1532.907	168.56643 - 233.80212		$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
375	1533.265	159.01039 - 224.23060		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
200	1533.576	156.01229 - 221.21929		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
700	1533.863	128.19154 - 193.38617		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
520	1533.952	127.92912 - 193.12034		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
150	1535.723	154.47485 - 219.59084		$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
600	1536.584	128.19154 - 193.27127		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
200	1538.120	156.22488 - 221.23921		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
450	1538.289	128.54185 - 193.54925		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
375	1540.393	183.15961 - 248.07797		$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
250	1540.731	155.74487 - 220.64922		$3d^4(a^3P)4s - 3d^4(a^3G)4p$	$^4P - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
520	1542.157	128.54185 - 193.38617		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
600	1542.696	128.96767 - 193.78919		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
300	1544.489	168.52637 - 233.27284		$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2H^\circ$	$\frac{13}{2} - \frac{11}{2}$		958
80	1544.636	158.73869 - 223.47896		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
150	1545.438	168.56643 - 233.27284		$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
450	1546.400	127.92912 - 192.59528		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
250	1549.959	159.22790 - 223.74582		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
150	1551.535	155.74487 - 220.19725		$3d^4(a^3P)4s - 3d^4(a^3G)4p$	$^4P - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
300	1552.211	156.22488 - 220.64922		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
450	1552.353	128.96767 - 193.38617		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
450	1552.709	128.19154 - 192.59528		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
200	1553.172	137.70081 - 202.08522		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
300	1553.296	137.94929 - 202.32853		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
200	1554.667	159.22790 - 223.55014		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	1554.934	156.04932 - 220.36044	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	250	1555.950	138.33883 - 202.60833	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		958
	300	1556.069	160.31164 - 224.57643	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		958
	30	1556.306	170.72949 - 234.98435	$3d^4(a^1S)4s - 3d^4(a^3D)4p$	$^2S - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	300	1557.184	137.70081 - 201.91938	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		958
	300	1557.450	159.34288 - 223.55014	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		958
	200	1558.668	201.21222 - 265.36948	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	30	1558.909	156.04932 - 220.19725	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		958
	375	1559.191	137.94929 - 202.08522	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	375	1560.272	167.71250 - 231.80400	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		958
	375	1561.193	128.54185 - 192.59528	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		958
	375	1561.355	156.01229 - 220.05933	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	375	1562.259	154.18585 - 218.19566	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	450	1562.458	165.49310 - 229.49474	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	375	1562.753	138.33883 - 202.32853	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		958
	150	1563.133	154.18585 - 218.15977	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	200	1563.229	137.94929 - 201.91938	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	375	1563.579	155.74487 - 219.70053	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		958
	300	1564.263	127.76615 - 191.69411	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	100	1564.602	165.39258 - 229.30661	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$	P	958
	150	1564.638	154.32596 - 218.23851	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$	P	958
	300	1564.780	201.17805 - 265.08477	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		958
	250	1565.867	154.51267 - 218.37512	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		958
	520	1566.256	190.31834 - 254.16484	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		958
	200	1566.464	154.18585 - 218.02381	$3d^4(a^3H)4s - 3d^4(a^3P)4p$	$^4H - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		958
	300	1566.572	154.32596 - 218.15977	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		958
	250	1566.747	183.16449 - 246.99080	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	30	1567.046	156.01229 - 219.82661	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	375	1567.955	156.04932 - 219.82661	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	600	1568.274	138.84403 - 202.60833	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		958
	375	1568.711	138.33883 - 202.08522	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	375	1569.221	154.51267 - 218.23851	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{11}{2} - \frac{9}{2}$		958
	80	1569.427	195.86415 - 259.58164	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	450	1570.178	165.60096 - 229.28802	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		958
	450	1570.418	167.79592 - 231.47332	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	450	1571.245	154.73129 - 218.37512	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		958
	150	1573.770	156.04932 - 219.59084	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		958
	250	1574.602	171.47639 - 234.98435	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	200	1574.736	128.19154 - 191.69411	$3d^4(a^3D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	200	1575.105	190.43547 - 253.92359	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		958
	300	1575.190	138.84403 - 202.32853	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		958
	250	1575.409	156.22488 - 219.70053	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		958
	250	1575.613	156.12377 - 219.59084	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	200	1576.442	160.31164 - 223.74582	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		958
	4	1576.845	165.72094 - 229.13890	$3d^4(a^3D)4s - 3d^4(a^1G)4p$	$^4D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		958
	450	1577.205	190.42414 - 253.82743	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	450	1577.758	153.65174 - 217.03189	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		958
	250	1578.023	154.47485 - 217.84529	$3d^4(a^3P)4s - 3d^4(a^3H)4p$	$^4P - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		958
	110	1578.611	155.74487 - 219.09167	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	375	1578.743	165.72094 - 229.06258	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		958
	200	1579.236	156.01229 - 219.33390	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	375	1579.368	165.72094 - 229.03702	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	200	1580.904	127.76615 - 191.02118	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		958
	250	1581.174	222.84058 - 286.08472	$3d^4(b^1D)4s - 3d^4(b^1D)4p$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	1581.471	165.80447 - 229.03702	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	150	1582.330	170.72949 - 233.92712	$3d^4(a^1S)4s - 3d^4(a^1S)4p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	12	1583.049	190.40645 - 253.57565	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	150	1583.600	195.86415 - 259.01148	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	200	1583.741	165.72094 - 228.86261	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	250	1583.960	154.47485 - 217.60771	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^2S^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	200	1584.117	171.34533 - 234.47200	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	375	1584.969	127.92912 - 191.02118	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	300	1585.116	160.31164 - 223.39862	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	375	1585.841	165.80447 - 228.86261	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	300	1587.594	165.60096 - 228.58967	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	250	1588.127	160.77860 - 223.74582	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	450	1590.616	155.74487 - 218.61388	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	150	1590.863	156.01229 - 218.87121	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	375	1591.062	160.77860 - 223.62959	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	520	1591.509	201.17805 - 264.01154	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	300	1591.802	156.04932 - 218.87121	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	300	1591.878	190.43547 - 253.25437	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	520	1592.048	159.34288 - 222.15499	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	200	1592.333	165.39258 - 228.19367	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	150	1592.724	165.80447 - 228.58967	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	300	1593.089	160.77860 - 223.55014	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	12	1593.276	190.81179 - 253.57565	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	30	1593.343	171.34533 - 234.10672	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	30	1594.744	196.87562 - 259.58164	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	200	1594.921	201.17805 - 263.87691	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	300	1595.800	201.21222 - 263.87691	$3d^4(b^3F)4s - 3d^4(b^1G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	375	1596.065	164.95050 - 227.60473	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	450	1596.668	171.47639 - 234.10672	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	250	1597.397	156.01229 - 218.61388	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	30	1597.907	158.73869 - 221.32054	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	520	1598.012	183.16449 - 245.74229	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	150	1598.350	156.04932 - 218.61388	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	200	1598.543	154.47485 - 217.03189	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	250	1600.294	162.08781 - 224.57643	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	450	1600.503	158.73869 - 221.21929	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	520	1600.580	156.12377 - 218.60103	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1601.503	171.34533 - 233.78672	$3d^4(a^3D)4s - 3d^4(a^1S)4p$	$^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	520	1601.670	196.13119 - 258.56602	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2G^\circ$	$\frac{2}{2} - \frac{9}{2}$		958
	250	1601.826	156.04932 - 218.47836	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	375	1601.900	165.49310 - 227.91905	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	450	1602.078	159.22790 - 221.64749	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	520	1603.181	156.22488 - 218.60103	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	520	1603.730	156.12377 - 218.47836	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	375	1604.669	165.60096 - 227.91905	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	520	1604.885	159.01039 - 221.32054	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	150	1605.018	159.34288 - 221.64749	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	520	1605.678	155.74487 - 218.02381	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	700	1605.970	165.39258 - 227.66025	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	200	1606.333	156.22488 - 218.47836	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	520	1606.980	159.01039 - 221.23921	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	50	1607.402	165.39258 - 227.60473	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{2}{2} - \frac{7}{2}$		958
	150	1608.855	162.07442 - 224.23060	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4G^\circ$	$\frac{4}{2} - \frac{7}{2}$		958
	375	1609.003	156.22488 - 218.37512	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	900	1609.100	154.73129 - 216.87783	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{15}{2}$		958
	600	1609.832	159.22790 - 221.34606	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	375	1609.928	156.12377 - 218.23851	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	375	1610.041	156.04932 - 218.15977	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	250	1610.300	155.74487 - 217.84529	$3d^4(a^3P)4s - 3d^4(a^3H)4p$	$^4P - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	520	1610.472	159.01039 - 221.10417	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	200	1610.850	127.92912 - 190.00828	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	12	1611.037	156.12377 - 218.19566	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	520	1611.202	177.00597 - 239.07140	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	150	1611.988	128.19154 - 190.22687	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	375	1612.550	156.22488 - 218.23851	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	200	1612.599	159.22790 - 221.23921	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	375	1612.798	160.01588 - 222.02009	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	110	1613.326	189.97501 - 251.95894	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	520	1613.643	162.07442 - 224.04596	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	600	1613.991	162.08781 - 224.04602	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$	P	958
	100	1614.049	127.92912 - 189.88511	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{5}{2}$	P	958
	520	1614.645	159.22790 - 221.16102	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	520	1615.005	158.73869 - 220.65804	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	110	1615.103	154.51267 - 216.42844	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	450	1615.609	159.34288 - 221.23921	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	150	1616.130	159.22790 - 221.10417	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	800	1616.682	154.51267 - 216.36780	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	150	1617.269	156.01229 - 217.84529	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	600	1617.682	128.19154 - 190.00828	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	150	1618.225	156.04932 - 217.84529	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	300	1618.571	201.21222 - 262.99501	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	600	1619.025	165.49310 - 227.25880	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	300	1619.141	159.34288 - 221.10417	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	450	1620.912	128.19154 - 189.88511	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	520	1621.155	128.54185 - 190.22687	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	300	1621.362	154.32596 - 216.00272	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	600	1621.570	168.52637 - 230.19502	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2K^\circ$	$\frac{13}{2} - \frac{15}{2}$		958
	375	1621.854	162.08781 - 223.74582	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1622.126	159.01039 - 220.65804	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	520	1623.385	183.15961 - 244.75925	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	520	1623.532	167.71250 - 229.30661	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	50	1623.964	190.40645 - 251.98420	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	375	1624.918	162.08781 - 223.62959	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	12	1625.025	190.40645 - 251.94403	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	50	1625.098	190.42414 - 251.95894	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	80	1625.395	190.43547 - 251.95894	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	80	1625.788	190.43547 - 251.94403	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	375	1626.270	154.51267 - 216.00272	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	700	1626.470	154.32596 - 215.80891	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	600	1626.903	128.54185 - 190.00828	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	200	1627.237	156.01229 - 217.46619	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	110	1627.319	159.01039 - 220.46133	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	300	1627.451	177.06672 - 238.51284	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	80	1628.217	156.04932 - 217.46619	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	520	1628.535	162.07442 - 223.47896	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	80	1628.898	162.08781 - 223.47896	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	250	1629.045	154.47485 - 215.86050	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	375	1629.294	160.77860 - 222.15499	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^\circ$	$\frac{11}{2} - \frac{13}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	375	1630.110	201.21222 - 262.55777	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	520	1630.183	167.79592 - 229.13890	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	50	1630.266	190.31834 - 251.65834	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	300	1630.363	160.31164 - 221.64749	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	375	1630.679	162.07442 - 223.39862	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	900	1631.077	128.96767 - 190.27685	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		958
	50	1631.421	154.51267 - 215.80891	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	250	1631.558	165.60096 - 226.89210	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	200	1631.664	155.74487 - 217.03189	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	450	1632.079	154.73129 - 216.00272	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	50	1632.209	167.79592 - 229.06258	$3d^4(a^1G)4s - 3d^4(a^3D)4p$	$^2G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	600	1632.404	128.96767 - 190.22687	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6P^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	300	1633.065	190.42414 - 251.65834	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	520	1634.006	154.18585 - 215.38523	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	300	1634.758	165.72094 - 226.89210	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	375	1635.396	190.81179 - 251.95894	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	250	1635.797	190.81179 - 251.94403	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	150	1636.992	165.80447 - 226.89210	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	250	1637.262	154.73129 - 215.80891	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	450	1638.070	165.80447 - 226.85193	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	450	1638.296	189.97501 - 251.01402	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	600	1639.404	167.79592 - 228.79386	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	800	1640.039	128.54185 - 189.51588	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	600	1640.165	154.18585 - 215.15569	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	300	1640.782	168.52637 - 229.47283	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2K^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	30	1641.292	160.31164 - 221.23921	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	300	1641.600	189.97501 - 250.89105	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	700	1641.866	168.56643 - 229.47283	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2K^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	375	1642.786	154.51267 - 215.38523	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	450	1642.880	160.77860 - 221.64749	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	375	1644.944	162.08781 - 222.88023	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	700	1647.093	128.19154 - 188.90455	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	375	1647.241	154.32596 - 215.03381	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	150	1648.902	191.33782 - 251.98420	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	250	1648.993	154.51267 - 215.15569	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	250	1649.189	154.18585 - 214.82174	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	200	1649.996	191.33782 - 251.94403	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	150	1650.091	167.71250 - 228.31503	$3d^4(a^1G)4s - 3d^4(a^1I)4p$	$^2G - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	80	1650.749	190.43547 - 251.01402	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	700	1651.578	128.96767 - 189.51588	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	700	1652.901	127.92912 - 188.42878	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	520	1653.406	167.71250 - 228.19367	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	80	1653.643	159.22790 - 219.70053	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	200	1654.291	161.57159 - 222.02009	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	520	1656.106	160.77860 - 221.16102	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	700	1656.649	128.54185 - 188.90455	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	300	1657.133	190.81179 - 251.15694	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	200	1657.370	159.22790 - 219.56446	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	150	1657.667	160.77860 - 221.10417	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	450	1657.824	127.76615 - 188.08605	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	375	1658.247	156.12377 - 216.42844	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	450	1658.433	159.34288 - 219.64076	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	375	1659.012	177.00597 - 237.28309	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	600	1660.101	128.19154 - 188.42878	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	1661.037	156.22488 – 216.42844	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	450	1661.573	190.31834 – 250.50229	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	520	1662.319	127.92912 – 188.08605	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	520	1662.520	160.31164 – 220.46133	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	520	1663.542	127.76615 – 187.87881	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	200	1664.471	190.81179 – 250.89105	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	200	1664.928	156.04932 – 216.11169	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	110	1667.000	156.12377 – 216.11169	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	150	1667.752	190.31834 – 250.27906	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	520	1668.089	127.92912 – 187.87881	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{1}{2}$		958
	4	1668.181	162.07442 – 222.02009	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	200	1668.426	128.96767 – 188.90455	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	12	1669.093	177.00597 – 236.91879	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	450	1669.606	128.19154 – 188.08605	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	375	1669.816	128.54185 – 188.42878	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	150	1670.711	190.42414 – 250.27906	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	50	1670.782	177.06672 – 236.91879	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	600	1671.041	190.40645 – 250.24939	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	150	1671.990	167.79592 – 227.60473	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	300	1672.211	183.16449 – 242.96562	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	250	1672.427	153.65174 – 213.44505	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	80	1672.561	168.52637 – 228.31503	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{13}{2} - \frac{11}{2}$		958
	450	1672.858	156.22488 – 216.00272	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	150	1673.059	190.42414 – 250.19507	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	150	1673.365	190.43547 – 250.19507	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	520	1673.683	168.56643 – 228.31503	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	50	1675.535	160.77860 – 220.46133	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	600	1675.661	168.52637 – 228.20433	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{13}{2} - \frac{13}{2}$		958
	450	1676.784	168.56643 – 228.20433	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		958
	450	1677.124	164.95050 – 224.57643	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	110	1681.285	165.39258 – 224.87085	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	520	1681.356	155.74487 – 215.22067	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	30	1681.573	159.01039 – 218.47836	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	450	1681.948	183.15961 – 242.61460	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	30	1682.082	183.16449 – 242.61460	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	12	1684.263	159.22790 – 218.60103	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	30	1685.829	160.01588 – 219.33390	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	80	1686.770	158.73869 – 218.02381	$3d^4(a^3G)4s - 3d^4(a^3P)4p$	$^4G - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	300	1687.439	156.12377 – 215.38523	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1687.534	159.34288 – 218.60103	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	700	1687.689	160.31164 – 219.56446	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	150	1689.612	159.01039 – 218.19566	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	375	1690.304	153.65174 – 212.81266	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	300	1690.628	159.01039 – 218.15977	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	12	1691.871	158.73869 – 217.84529	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	50	1692.172	164.95050 – 224.04602	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	250	1693.988	159.34288 – 218.37512	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	110	1694.611	159.22790 – 218.23851	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	300	1695.035	156.22488 – 215.22067	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	375	1695.357	156.04932 – 215.03381	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	300	1695.770	154.47485 – 213.44505	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	200	1696.904	156.22488 – 215.15569	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4I^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	375	1697.501	156.12377 – 215.03381	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	700	1698.878	160.77860 – 219.64076	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	1699.664	159.01039 - 217.84529	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	450	1700.405	156.01229 - 214.82174	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	375	1700.815	164.95050 - 223.74582	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^\circ$	$\frac{2}{2} - \frac{9}{2}$		958
	300	1701.011	161.57159 - 220.36044	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	150	1701.084	160.77860 - 219.56446	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	375	1701.483	156.04932 - 214.82174	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	3	1703.09	49.5415 - 108.2583	$3d^5 - 3d^5$	$a^2D - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F, P	958
	1	1703.56	49.5415 - 108.2421	$3d^5 - 3d^5$	$a^2D - c^2D$	$\frac{5}{2} - \frac{5}{2}$	F, P	958
	375	1703.592	170.72949 - 229.42891	$3d^4(a^1S)4s - 3d^4(a^1D)4p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	375	1704.186	164.95050 - 223.62959	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^\circ$	$\frac{2}{2} - \frac{9}{2}$		958
	450	1704.932	165.39258 - 224.04602	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	50	1706.066						958
	200	1706.542	160.01588 - 218.61388	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4S^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
		1706.641	222.85168 - 281.44630	$3d^4(b^1D)4s - 3d^4(b^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	958
	80	1706.965	162.07442 - 220.65804	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4H^\circ$	$\frac{5}{2} - \frac{7}{2}$		958
	375	1707.284	155.74487 - 214.31721	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	375	1707.606	162.08781 - 220.64922	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		958
	375	1708.579	164.95050 - 223.47896	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{2}{2} - \frac{5}{2}$		958
	520	1709.808	137.70081 - 196.18688	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	700	1711.410	154.73129 - 213.16259	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^\circ$	$\frac{13}{2} - \frac{13}{2}$		958
	600	1712.757	137.94929 - 196.33463	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	110	1714.156	154.47485 - 212.81266	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	80	1716.215	156.04932 - 214.31721	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	450	1717.109	137.94929 - 196.18688	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	200	1717.709	170.72949 - 228.94659	$3d^4(a^1S)4s - 3d^4(a^3D)4p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	600	1717.899	138.33883 - 196.54959	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		958
	600	1718.155	154.51267 - 212.71437	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		958
	450	1718.417	156.12377 - 214.31721	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	600	1719.464	165.39258 - 223.55014	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		958
	150	1720.492	162.07442 - 220.19725	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		958
	375	1721.660	171.34533 - 229.42891	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	600	1722.710	154.32596 - 212.37404	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		958
	30	1723.010	196.13119 - 254.16913	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		958
	150	1723.568	161.57159 - 219.59084	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^2P - ^4D^\circ$	$\frac{2}{2} - \frac{3}{2}$		958
	600	1724.057	138.84403 - 196.84682	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		958
	450	1724.265	138.33883 - 196.33463	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	375	1724.644	154.73129 - 212.71437	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^\circ$	$\frac{13}{2} - \frac{11}{2}$		958
	800	1725.629	154.18585 - 212.13579	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	375	1726.584	222.84058 - 280.75837	$3d^4(b^1D)4s - 3d^4(b^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	250	1728.265	154.51267 - 212.37404	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	150	1729.430	160.77860 - 218.60103	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		958
	250	1729.809	154.32596 - 212.13579	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		958
	375	1730.324	196.13119 - 253.92359	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	300	1731.235	161.57159 - 219.33390	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^\circ$	$\frac{2}{2} - \frac{1}{2}$		958
	250	1732.756	195.86415 - 253.57565	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		958
	375	1732.932	138.84403 - 196.54959	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	110	1733.095	155.74487 - 213.44505	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		958
	110	1734.677	196.22071 - 253.86843	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^2F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		958
	250	1735.728	162.08781 - 219.70053	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		958
	300	1736.356	160.01588 - 217.60771	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2S^\circ$	$\frac{1}{2} - \frac{1}{2}$		958
	80	1738.637	162.07442 - 219.59084	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		958
	200	1740.153	177.00597 - 234.47200	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{2}{2} - \frac{3}{2}$		958
	50	1740.634	160.01588 - 217.46619	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^2P - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		958
	110	1740.816	196.13119 - 253.57565	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^2F - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1741.171	156.01229 - 213.44505	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	300	1741.611	159.01039 - 216.42844	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1742.289	156.04932 - 213.44505	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		958
	110	1742.984	158.73869 - 216.11169	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	80	1745.209	161.57159 - 218.87121	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		958
	30	1748.233	159.22790 - 216.42844	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	300	1750.602	196.13119 - 253.25437	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	300	1751.755	159.34288 - 216.42844	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1753.082	161.57159 - 218.61388	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$		958
	4	1753.351	196.22071 - 253.25437	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		958
	200	1753.619	159.34288 - 216.36780	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4I^o$	$\frac{7}{2} - \frac{11}{2}$		958
	200	1753.857	162.07442 - 219.09167	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	110	1754.602	196.87562 - 253.86843	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		958
	80	1757.972	159.22790 - 216.11169	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	2	1758.58	51.3942 - 108.2583	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{7}{2} - \frac{3}{2}$	F,P	958
	30	1758.695	177.06672 - 233.92712	$3d^4(a^3D)4s - 3d^4(a^3S)4p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		958
	22	1759.08	51.3942 - 108.2421	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{7}{2} - \frac{3}{2}$	F,P	958
	110	1760.552	156.01229 - 212.81266	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		958
	30	1760.658	162.07442 - 218.87121	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		958
	520	1761.085	162.08781 - 218.87121	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	200	1764.795	196.22071 - 252.88448	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		958
	450	1764.920	159.34288 - 216.00272	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{7}{2} - \frac{11}{2}$		958
	450	1767.355	159.22790 - 215.80891	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4I^o$	$\frac{9}{2} - \frac{11}{2}$		958
	250	1768.681	162.07442 - 218.61388	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^4S^o$	$\frac{5}{2} - \frac{1}{2}$		958
	110	1774.794	168.52637 - 224.87085	$3d^4(a^3I)4s - 3d^4(a^3G)4p$	$^2I - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		958
	50	1776.349	158.73869 - 215.03381	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		958
	300	1780.708	159.22790 - 215.38523	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	110	1781.090	159.01039 - 215.15569	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4I^o$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1782.264	162.08781 - 218.19566	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		958
	11	1782.80	52.1667 - 108.2583	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{7}{2} - \frac{3}{2}$	F,P	958
	12	1782.944	156.04932 - 212.13579	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4H^o$	$\frac{5}{2} - \frac{7}{2}$		958
	375	1783.066	158.73869 - 214.82174	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	3	1783.31	52.1667 - 108.2421	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{5}{2} - \frac{5}{2}$	F,P	958
	250	1784.647	167.71250 - 223.74582	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{3}{2}$		958
	375	1784.967	159.01039 - 215.03381	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	4	1785.394	168.56643 - 224.57643	$3d^4(a^3I)4s - 3d^4(a^3G)4p$	$^2I - ^4G^o$	$\frac{11}{2} - \frac{9}{2}$		958
	1	1787.758	162.08781 - 218.02381	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		958
	1	1788.361	167.71250 - 223.62959	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		958
	200	1788.685	183.16449 - 239.07140	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		958
	150	1790.681	160.01588 - 215.86050	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		958
	1	1790.911	167.71250 - 223.55014	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	1	1791.751	159.01039 - 214.82174	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	520	1792.102	160.31164 - 216.11169	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		958
	375	1793.127	165.39258 - 221.16102	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	300	1793.477	162.08781 - 217.84529	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^2F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	250	1793.876	165.60096 - 221.34606	$3d^4(a^3D)4s - 3d^4(a^3G)4p$	$^4D - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$		958
	1	1794.695	165.60096 - 221.32054	$3d^4(a^3D)4s - 3d^4(a^3G)4p$	$^4D - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$		958
	520	1796.932	160.77860 - 216.42844	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		958
	200	1798.457	167.79592 - 223.39862	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	250	1798.563	137.94929 - 193.54925	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	50	1799.514	137.70081 - 193.27127	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	1	1800.29	52.6954 - 108.2421	$3d^5 - 3d^5$	$a^4F - c^2D$	$\frac{7}{2} - \frac{3}{2}$	F,P	958
	300	1801.444	164.95050 - 220.46133	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{3}{2}$		958
	1	1804.39	52.8380 - 108.2583	$3d^5 - 3d^5$	$a^4F - c^2D$	$\frac{7}{2} - \frac{3}{2}$	F,P	958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	250	1804.416	137.70081 - 193.12034	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{1}{2} - \frac{1}{2}$		958
	110	1804.570	165.80447 - 221.21929	$3d^4(a^3D)4s - 3d^4(a^3G)4p$	$^4D - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		958
	450	1805.319	162.07442 - 217.46619	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	110	1806.577	183.15961 - 238.51284	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^2F - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		958
	375	1807.597	137.94929 - 193.27127	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	110	1808.087	159.01039 - 214.31721	$3d^4(a^3G)4s - 3d^4(a^3P)4p$	$^4G - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	375	1809.734	165.39258 - 220.64922	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		958
	300	1810.055	164.95050 - 220.19725	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		958
	375	1811.247	138.33883 - 193.54925	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	4	1812.267	168.56643 - 223.74582	$3d^4(a^3I)4s - 3d^4(a^3G)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		958
	200	1812.544	137.94929 - 193.12034	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{3}{2} - \frac{3}{2}$		958
	200	1816.094	168.56643 - 223.62959	$3d^4(a^3I)4s - 3d^4(a^3F)4p$	$^2I - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		958
	50	1816.620	138.33883 - 193.38617	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	250	1817.391	168.52637 - 223.55014	$3d^4(a^3I)4s - 3d^4(a^3G)4p$	$^2I - ^2H^o$	$\frac{13}{2} - \frac{11}{2}$		958
	300	1819.994	138.84403 - 193.78919	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	450	1820.417	138.33883 - 193.27127	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{5}{2} - \frac{3}{2}$		958
	80	1823.348	160.31164 - 215.15569	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4I^o$	$\frac{7}{2} - \frac{5}{2}$		958
	250	1827.417	160.31164 - 215.03381	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		958
	520	1827.982	138.84403 - 193.54925	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	250	1830.149	164.95050 - 219.59084	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		958
	4	1831.629	165.60096 - 220.19725	$3d^4(a^3D)4s - 3d^4(a^3G)4p$	$^4D - ^2F^o$	$\frac{5}{2} - \frac{3}{2}$		958
	250	1839.009	160.77860 - 215.15569	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4I^o$	$\frac{11}{2} - \frac{9}{2}$		958
	450	1840.240	162.08781 - 216.42844	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1843.102	138.33883 - 192.59528	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		958
	300	1850.578	162.07442 - 216.11169	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^2F - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		958
	80	1852.085	137.70081 - 191.69411	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		958
	80	1854.084	167.71250 - 221.64749	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	375	1858.057	159.34288 - 213.16259	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		958
	450	1860.422	138.84403 - 192.59528	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		958
	375	1860.645	137.94929 - 191.69411	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		958
	450	1869.635	159.22790 - 212.71437	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	300	1870.964	167.71250 - 221.16102	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		958
	300	1872.761	158.73869 - 212.13579	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^o$	$\frac{5}{2} - \frac{7}{2}$		958
	300	1873.938	159.01039 - 212.37404	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^o$	$\frac{7}{2} - \frac{9}{2}$		958
	450	1874.226	138.33883 - 191.69411	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		958
	300	1875.457	137.70081 - 191.02118	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		958
	12	1875.884	167.79592 - 221.10417	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4H^o$	$\frac{7}{2} - \frac{9}{2}$		958
	150	1876.259	162.08781 - 215.38523	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		958
	300	1884.234	137.94929 - 191.02118	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		958
	150	1884.381	162.08781 - 215.15569	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^2F - ^4I^o$	$\frac{7}{2} - \frac{9}{2}$		958
	80	1889.050	167.71250 - 220.64922	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		958
	250	1895.896	201.17805 - 253.92359	$3d^4(b^3G)4s - 3d^4(b^3F)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		958
	110	1898.772	167.79592 - 220.46133	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		958
	30	1908.980	160.77860 - 213.16259	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		958
	50	1953.038	196.87562 - 248.07797	$3d^4(b^3P)4s - 3d^4(a^3F)4p$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		958
	110	1954.615	164.95050 - 216.11169	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		958
	110	1956.400	168.52637 - 219.64076	$3d^4(a^3I)4s - 3d^4(a^3H)4p$	$^2I - ^2I^o$	$\frac{13}{2} - \frac{13}{2}$		958
	80	1960.860	168.56643 - 219.56446	$3d^4(a^3I)4s - 3d^4(a^3H)4p$	$^2I - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		958
	1	1974.36	32.2455 - 82.8949	$3d^5 - 3d^5$	$a^4G - b^2G$	$\frac{11}{2} - \frac{9}{2}$	F,P	958
	110	1975.647	183.16449 - 233.78086	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^2F - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		958
	1	1976.44	32.3012 - 82.8973	$3d^5 - 3d^5$	$a^4G - b^2G$	$\frac{5}{2} - \frac{7}{2}$		958
	2	1976.89	49.5415 - 100.1260	$3d^5 - 3d^5$	$a^2D - a^2P$	$\frac{5}{2} - \frac{1}{2}$		958
	7	1977.20	49.5415 - 100.1180	$3d^5 - 3d^5$	$a^2D - a^2P$	$\frac{3}{2} - \frac{3}{2}$		958
	3	1997.02	50.0514 - 100.1260	$3d^5 - 3d^5$	$a^2D - a^2P$	$\frac{3}{2} - \frac{1}{2}$		958

FE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1997.34	50.0514 - 100.1180	$3d^2 - 3d^3$	$a^2D - a^2P$	$\frac{3}{2} - \frac{3}{2}$	F,P	958

IRON V (Fe^{4+}), $Z = 26$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 (^5D_0)$ (22 electrons)
Ionization Potential [605 000] cm^{-1} ; [75.0] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	302.543	.8031 - 331.3338	$3d^4 - 3d^3(b^2D)4p$	$ga^5D - ^3F^o$	3 - 2		229
	5	305.313	0.0000 - 327.5338	$3d^4 - 3d^3(b^2D)4p$	$ga^5D - ^3D^o$	0 - 1		229
	15	321.321	24.0554 - 335.2678	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3P^o$	0 - 1		229
	2	322.275	24.9729 - 335.2678	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3P^o$	1 - 1		229
	1	323.835	26.4683 - 335.2678	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3P^o$	2 - 1		229
	15	324.634	26.4683 - 334.5091	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3P^o$	2 - 2		229
	5	325.027	26.8423 - 334.5091	$3d^4 - 3d^3(b^2D)4p$	$a^3F - ^3P^o$	3 - 2		229
	5	326.658	29.8171 - 335.9474	$3d^4 - 3d^3(b^2D)4p$	$a^3G - ^1F^o$	3 - 3		229
	3	327.029	1.2828 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$ga^3D - ^3G^o$	4 - 5		229
	5	327.823	26.9740 - 332.0173	$3d^4 - 3d^3(b^2D)4p$	$a^3F - ^3F^o$	4 - 4		229
	40	329.514	24.0554 - 327.5338	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3D^o$	0 - 1		229
	40	330.434	24.9729 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3D^o$	1 - 2		229
	2	330.512	24.9729 - 327.5338	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3D^o$	1 - 1		229
	125	331.579	30.4301 - 332.0173	$3d^4 - 3d^3(b^2D)4p$	$a^3G - ^3F^o$	5 - 4		229
	80	331.656	29.8171 - 331.3338	$3d^4 - 3d^3(b^2D)4p$	$a^3G - ^3F^o$	3 - 2		229
	80	331.723	26.4683 - 327.9244	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3D^o$	2 - 3		229
	30	331.874	1.2828 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$ga^3D - ^3F^o$	4 - 4		229
	100	331.986	30.1470 - 331.3670	$3d^4 - 3d^3(b^2D)4p$	$a^3G - ^3F^o$	4 - 3		229
	1	332.074	26.4683 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$a^3P - ^3D^o$	2 - 2		229
	10	332.135	26.8423 - 327.9244	$3d^4 - 3d^3(b^2D)4p$	$a^3F - ^3D^o$	3 - 3		229
	150	332.280	26.9740 - 327.9244	$3d^4 - 3d^3(b^2D)4p$	$a^3F - ^3D^o$	4 - 3		229
	50	332.476	26.7607 - 327.5338	$3d^4 - 3d^3(b^2D)4p$	$a^3F - ^3D^o$	2 - 1	P	229
	100	332.488	26.8423 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$a^3F - ^3D^o$	3 - 2	P	229
	5	333.297	29.8171 - 329.8486	$3d^4 - 3d^3(b^2D)4p$	$a^3G - ^1D^o$	3 - 2		229
	100	334.045	36.5863 - 335.9474	$3d^4 - 3d^3(b^2D)4p$	$a^1G - ^1F^o$	4 - 3		229
	25	334.763	36.9254 - 335.6427	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3P^o$	1 - 0		229
	70	334.997	36.7585 - 335.2678	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3F^o$	2 - 1		229
	25	335.185	36.9254 - 335.2678	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3P^o$	1 - 1		229
	125	335.709	36.6301 - 334.5091	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3P^o$	3 - 2		229
	25	335.853	36.7585 - 334.5091	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3P^o$	2 - 2		229
	2	339.235	36.5863 - 331.3670	$3d^4 - 3d^3(b^2D)4p$	$a^1G - ^3F^o$	4 - 3		229
	5	339.871	.4173 - 294.6440	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3S^o$	2 - 1		229
	2	341.192	36.7585 - 329.8486	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^1D^o$	2 - 2		229
	30	343.295	36.6301 - 327.9244	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3D^o$	3 - 3		229
	1	343.446	36.7585 - 327.9244	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3D^o$	2 - 3		229
	20	343.824	36.7585 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3D^o$	2 - 2		229
	5	344.022	36.9254 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3D^o$	1 - 2		229
	5	344.106	36.9254 - 327.5338	$3d^4 - 3d^3(b^2D)4p$	$a^3D - ^3D^o$	1 - 1		229
	100	345.236	46.2912 - 335.9474	$3d^4 - 3d^3(b^2D)4p$	$a^1D - ^1F^o$	2 - 3		229
	15	348.772	.1421 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3D^o$	1 - 2		229
	1	351.349	24.0554 - 308.6715	$3d^4 - 3d^3(a^2F)4p$	$a^3P - ^3D^o$	0 - 1		229
	200	353.087	52.7327 - 335.9474	$3d^4 - 3d^3(b^2D)4p$	$a^1F - ^1F^o$	3 - 3		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	354.679	0.0000 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$ga^3D - ^3P^o$	0 - 1		229
	100	354.813	25.2259 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	5 - 5		229
	100	354.999	24.9325 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	4 - 4		229
	250	355.196	25.5285 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	6 - 5		229
	200	355.370	25.2259 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	5 - 4		229
	10	355.411	29.8171 - 311.1809	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^1G^o$	3 - 4		229
	15	355.466	26.8423 - 308.1650	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3D^o$	3 - 2		229
	150	355.542	24.9325 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	4 - 3		229
	200	357.029	26.9740 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	4 - 5		229
	200	357.425	26.8423 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	3 - 4		229
	150	357.870	26.7607 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	2 - 3		229
	5	357.970	26.8423 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	3 - 3		229
	5	358.892	52.7327 - 331.3670	$3d^4 - 3d^3(b^2D)4p$	$a^1F - ^3F^o$	3 - 3		229
	50	359.227	.4173 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$ga^3D - ^3G^o$	2 - 3		229
	30	359.937	29.8171 - 307.6444	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^1D^o$	3 - 2		229
	50	360.434	24.9325 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3F^o$	4 - 3		229
	80	360.521	25.2259 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3F^o$	5 - 4		229
	150	360.658	.8031 - 278.0758	$3d^4 - 3d^3(a^2P)4p$	$ga^3D - ^3D^o$	3 - 4		229
	30	360.827	30.1470 - 307.2887	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3D^o$	4 - 3		229
	40	360.857	52.7327 - 329.8486	$3d^4 - 3d^3(b^2D)4p$	$a^1F - ^1D^o$	3 - 2		229
	300	361.281	1.2828 - 278.0758	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	4 - 4		229
	150	361.470	.4173 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	2 - 3		229
	200	361.486	30.4301 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	5 - 5		229
	50	361.512	.1421 - 276.7592	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	1 - 2		229
	150	361.694	30.1470 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	4 - 4		229
	150	361.823	29.8171 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	3 - 3		229
	100	361.863	.4173 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	2 - 1		229
	50	361.935	.1421 - 276.4349	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	1 - 0		229
	100	361.972	.8031 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	3 - 3		229
	150	362.064	30.4301 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	5 - 4		229
	150	362.256	30.1470 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	4 - 3		229
	200	362.376	.8031 - 276.7592	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	3 - 2		229
	200	362.601	1.2828 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	4 - 3		229
	40	362.631	26.8423 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	3 - 4		229
	200	362.806	26.9740 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	4 - 4		229
	50	362.821	26.7607 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	2 - 3		229
	200	362.930	26.8423 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	3 - 3		229
	20	363.102	26.9740 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	4 - 3		229
	150	363.332	.1421 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	1 - 2		229
	70	363.444	0.0000 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	0 - 1		229
	50	363.630	.1421 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	1 - 1		229
	100	363.693	.4173 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	2 - 2	P	229
	100	363.699	36.5863 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$a^1G - ^1F^o$	4 - 3	P	229
	50	363.760	36.6301 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^1F^o$	3 - 3		229
	20	363.999	.4173 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	2 - 1		229
	80	364.148	.1421 - 274.7533	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3D^o$	1 - 0		229
	50	364.170	36.5863 - 311.1809	$3d^4 - 3d^3(a^2F)4p$	$a^1G - ^1G^o$	4 - 4		229
	150	364.202	.8031 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	3 - 2		229
	200	364.280	.4173 - 274.9303	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	2 - 3		229
	250	364.795	.8031 - 274.9303	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	3 - 3		229
	200	364.974	.1421 - 274.1361	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	1 - 2		229
	250	365.338	.4173 - 274.1361	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	2 - 2		229
	300	365.434	1.2828 - 274.9303	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	4 - 3		229
	250	365.632	.1421 - 273.6431	$3d^4 - 3d^3(a^4P)4p$	$ga^3D - ^3P^o$	1 - 1		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	354.679	0.0000 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$ga^5D - ^3P^o$	0 - 1		229
	100	354.813	25.2259 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	5 - 5		229
	100	354.999	24.9325 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	4 - 4		229
	250	355.196	25.5285 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	6 - 5		229
	200	355.370	25.2259 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	5 - 4		229
	10	355.411	29.8171 - 311.1809	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^1G^o$	3 - 4		229
	15	355.466	26.8423 - 308.1650	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3D^o$	3 - 2		229
	150	355.542	24.9325 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^o$	4 - 3		229
	200	357.029	26.9740 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	4 - 5		229
	200	357.425	26.8423 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	3 - 4		229
	150	357.870	26.7607 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	2 - 3		229
	5	357.970	26.8423 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^o$	3 - 3		229
	5	358.892	52.7327 - 331.3670	$3d^4 - 3d^3(b^2D)4p$	$a^1F - ^3F^o$	3 - 3		229
	50	359.227	.4173 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$ga^5D - ^3G^o$	2 - 3		229
	30	359.937	29.8171 - 307.6444	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^1D^o$	3 - 2		229
	50	360.434	24.9325 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3F^o$	4 - 3		229
	80	360.521	25.2259 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3F^o$	5 - 4		229
	150	360.658	.8031 - 278.0758	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	3 - 4		229
	30	360.827	30.1470 - 307.2887	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3D^o$	4 - 3		229
	40	360.857	52.7327 - 329.8486	$3d^4 - 3d^3(b^2D)4p$	$a^1F - ^1D^o$	3 - 2		229
	300	361.281	1.2828 - 278.0758	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	4 - 4		229
	150	361.470	.4173 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	2 - 3		229
	200	361.486	30.4301 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	5 - 5		229
	50	361.512	.1421 - 276.7592	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	1 - 2		229
	150	361.694	30.1470 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	4 - 4		229
	150	361.823	29.8171 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	3 - 3		229
	100	361.863	.4173 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	2 - 1		229
	50	361.935	.1421 - 276.4349	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	1 - 0		229
	100	361.972	.8031 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	3 - 3		229
	150	362.064	30.4301 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	5 - 4		229
	150	362.256	30.1470 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^o$	4 - 3		229
	200	362.376	.8031 - 276.7592	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	3 - 2		229
	200	362.601	1.2828 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	4 - 3		229
	40	362.631	26.8423 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	3 - 4		229
	200	362.806	26.9740 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	4 - 4		229
	50	362.821	26.7607 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	2 - 3		229
	200	362.930	26.8423 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	3 - 3		229
	20	363.102	26.9740 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^o$	4 - 3		229
	150	363.332	.1421 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	1 - 2		229
	70	363.444	0.0000 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	0 - 1		229
	50	363.630	.1421 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	1 - 1		229
	100	363.693	.4173 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	2 - 2	P	229
	100	363.699	36.5863 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$a^1G - ^1F^o$	4 - 3	P	229
	50	363.760	36.6301 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^1F^o$	3 - 3		229
	20	363.999	.4173 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	2 - 1		229
	80	364.148	.1421 - 274.7533	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^o$	1 - 0		229
	50	364.170	36.5863 - 311.1809	$3d^4 - 3d^3(a^2F)4p$	$a^1G - ^1G^o$	4 - 4		229
	150	364.202	.8031 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	3 - 2		229
	200	364.280	.4173 - 274.9303	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^o$	2 - 3		229
	250	364.795	.8031 - 274.9303	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	3 - 3		229
	200	364.974	.1421 - 274.1361	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	1 - 2		229
	250	365.338	.4173 - 274.1361	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^o$	2 - 2		229
	300	365.434	1.2828 - 274.9303	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	4 - 3		229
	250	365.632	.1421 - 273.6431	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^3P^o$	1 - 1		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	376.741	24.9729 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3P^o$	1 - 2		229
	200	376.837	36.9254 - 302.2927	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^3F^o$	1 - 2		229
	150	376.952	62.3211 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3D^o$	2 - 2		229
	50	377.006	46.2912 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$a^1D - ^1F^o$	2 - 3	P	229
	200	377.016	62.3644 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3D^o$	3 - 2	P	229
	250	377.054	62.3211 - 327.5338	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3D^o$	2 - 1		229
	40	377.386	24.9325 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^3H - ^3D^o$	4 - 3		229
	1	377.800	62.9142 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$b^3P - ^3D^o$	1 - 2		229
	200	377.829	71.2803 - 335.9474	$3d^4 - 3d^3(b^2D)4p$	$b^1G - ^1F^o$	4 - 3		229
	125	377.909	24.0554 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	0 - 1		229
	200	377.970	25.5285 - 290.0991	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	6 - 5		229
	200	378.191	24.9729 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	1 - 2		229
	70	378.327	25.2259 - 289.5459	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^1G^o$	5 - 4		229
	150	378.419	26.9740 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^1F^o$	4 - 3		229
	5	378.622	26.4683 - 290.5837	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3P^o$	2 - 1		229
	80	378.875	26.4683 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3P^o$	2 - 2		229
	200	379.032	1.2828 - 265.1126	$3d^4 - 3d^3(a^4F)4p$	$ga^4D - ^3G^o$	4 - 5		229
	150	379.223	24.9729 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	1 - 1		229
	250	379.300	25.5285 - 289.1719	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	6 - 7		229
	5	379.414	26.8423 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3P^o$	3 - 2		229
	300	379.586	26.4683 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	2 - 3		229
	30	380.009	26.7607 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	2 - 3		229
	100	380.131	26.8423 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	3 - 3		229
	200	380.313	25.2259 - 288.1672	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	5 - 6	P	229
	100	380.316	26.9740 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	4 - 3	P	229
	250	380.340	26.4683 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	2 - 2		229
	250	380.667	29.8171 - 292.5132	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	3 - 3		229
	150	380.752	25.5285 - 288.1672	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	6 - 6		229
	150	380.764	26.7607 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	2 - 2		229
	125	380.786	29.8171 - 292.4307	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	3 - 4		229
	250	380.883	26.8423 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	3 - 2		229
	200	380.940	24.9325 - 287.4405	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	4 - 5		229
	100	381.104	25.2259 - 287.6202	$3d^4 - 3d^3(a^2D)4p$	$a^3H - ^3F^o$	5 - 4		229
	150	381.147	30.1470 - 292.5132	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	4 - 3		229
	300	381.266	30.1470 - 292.4307	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	4 - 4		229
	250	381.366	25.2259 - 287.4405	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	5 - 5		229
	150	381.475	30.1470 - 292.2876	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	4 - 5		229
	200	381.680	30.4301 - 292.4307	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	5 - 4		229
	5	381.771	30.4301 - 292.3659	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^1I^o$	5 - 6		229
	250	381.812	26.7607 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	2 - 1		229
	250	381.887	30.4301 - 292.2876	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	5 - 5		229
	20	382.411	24.9325 - 286.4313	$3d^4 - 3d^3(a^2P)4p$	$a^3H - ^3D^o$	4 - 3		229
	200	382.536	29.8171 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^1F^o$	3 - 3		229
	250	382.624	46.2912 - 307.6444	$3d^4 - 3d^3(a^2F)4p$	$a^1D - ^1D^o$	2 - 2		229
	200	382.827	24.9729 - 286.1877	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3S^o$	1 - 1		229
	150	383.159	24.9729 - 285.9617	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^1P^o$	1 - 1		229
	200	383.491	.4173 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$ga^4D - ^3D^o$	2 - 3		229
	40	383.817	24.9325 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$a^3H - ^3D^o$	4 - 3		229
	150	384.033	26.4683 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^3D^o$	2 - 2		229
	200	384.058	.8031 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$ga^4D - ^3D^o$	3 - 3		229
	250	384.219	26.8423 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3F^o$	3 - 3		229
	250	384.416	26.9740 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3F^o$	4 - 3		229
	200	384.479	26.7607 - 286.8553	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	2 - 1		229
	200	384.585	26.8423 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	3 - 2		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	384.622	.4173 - 260.4114	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	2 - 2		229
	200	384.659	25.2259 - 285.1961	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	5 - 6		229
	150	384.707	24.9729 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3D^o$	1 - 2		229
	150	384.768	1.2828 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	4 - 3		229
	150	384.825	24.9325 - 284.7908	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	4 - 5	P	229
	100	384.833	.1421 - 259.9952	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	1 - 1	P	229
	300	384.958	1.2828 - 261.0519	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	4 - 5		229
	300	384.972	24.9325 - 284.6903	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	4 - 4		229
	200	385.031	26.4683 - 286.1877	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3S^o$	2 - 1	P	229
	100	385.033	.8031 - 260.5210	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	3 - 4	P	229
	300	385.108	25.5285 - 285.1961	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	6 - 6		229
	100	385.196	.8031 - 260.4114	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	3 - 2		229
	100	385.226	26.8423 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	3 - 3		229
	300	385.251	29.8171 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3D^o$	3 - 2		229
	300	385.262	25.2259 - 284.7908	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	5 - 5		229
	300	385.300	.4173 - 259.9547	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	2 - 3		229
	200	385.420	26.9740 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	4 - 3		229
	100	385.507	26.7607 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3F^o$	2 - 2		229
	70	385.637	26.8423 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3F^o$	3 - 2		229
	30	385.712	25.5285 - 284.7908	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	6 - 5		229
	100	385.746	1.2828 - 260.5210	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	4 - 4	P	229
	200	385.752	.1421 - 259.3761	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	1 - 2	P	229
	300	385.875	.8031 - 259.9547	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	3 - 3		229
	150	385.928	30.4301 - 289.5459	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^1G^o$	5 - 4		229
	100	386.093	26.4683 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3D^o$	2 - 3		229
	100	386.162	.4173 - 259.3761	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	2 - 2	P	229
	250	386.163	36.7585 - 295.7164	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^1D^o$	2 - 2	P	229
	250	386.261	0.0000 - 258.8915	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	0 - 1		229
	200	386.389	52.7327 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^1F^o$	3 - 3		229
	150	386.428	24.9729 - 283.7540	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3D^o$	1 - 1		229
	200	386.476	.1421 - 258.8915	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	1 - 1		229
	250	386.528	24.9729 - 283.6863	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3P^o$	1 - 2		229
	250	386.590	1.2828 - 259.9547	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	4 - 3		229
	200	386.652	26.8423 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	3 - 3		229
	300	386.739	.8031 - 259.3761	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	3 - 2		229
	300	386.785	.8031 - 259.3448	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	3 - 4		229
	300	386.847	26.9740 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	4 - 3		229
	300	386.878	.1421 - 258.6195	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	1 - 0		229
	350	386.885	.4173 - 258.8915	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	2 - 1		229
	100	386.924	52.7327 - 311.1809	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^1G^o$	3 - 4		229
	400	387.202	.4173 - 258.6800	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	2 - 3		229
	200	387.371	26.7607 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	2 - 2		229
	100	387.493	26.8423 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	3 - 2	P	229
	300	387.504	1.2828 - 259.3448	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	4 - 4	P	229
	300	387.618	.1421 - 258.1285	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	1 - 2		229
	100	387.689	24.9325 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1H^o$	4 - 5		229
	200	387.763	24.0554 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3P^o$	0 - 1	P	229
	200	387.769	36.7585 - 294.6440	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3S^o$	2 - 1	P	229
	400	387.781	.8031 - 258.6800	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	3 - 3		229
	20	387.895	29.8171 - 287.6202	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	3 - 4		229
	300	387.984	0.0000 - 257.7423	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	0 - 1		229
	150	388.030	.4173 - 258.1285	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	2 - 2		229
	100	388.129	25.2259 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1H^o$	5 - 5	P	229
	100	388.140	24.9325 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1F^o$	4 - 3	P	229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	388.199	.1421 - 257.7423	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	1 - 1		229
	200	388.390	30.1470 - 287.6202	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	4 - 4		229
	250	388.504	1.2828 - 258.6800	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	4 - 3		229
	200	388.586	25.5285 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1H^o$	6 - 5		229
	300	388.613	.8031 - 258.1285	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	3 - 2		229
	150	388.661	30.1470 - 287.4405	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3I^o$	4 - 5		229
	200	388.709	24.9729 - 282.2345	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3P^o$	1 - 0		229
	200	388.775	26.4683 - 283.6863	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3P^o$	2 - 2		229
	300	388.817	30.4301 - 287.6202	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	5 - 4		229
	200	388.947	24.9325 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1G^o$	4 - 4		229
	250	389.035	29.8171 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$a^3G - ^3D^o$	3 - 2		229
	200	389.115	26.7607 - 283.7540	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	2 - 1		229
	200	389.146	24.9729 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3P^o$	1 - 1		229
	200	389.161	30.1470 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	4 - 3		229
	7	389.339	26.8423 - 283.6863	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3P^o$	3 - 2		229
	200	389.390	25.2259 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1G^o$	5 - 4		229
	70	389.642	71.2803 - 327.9244	$3d^4 - 3d^3(b^2D)4p$	$b^1G - ^3D^o$	4 - 3		229
	80	389.689	29.8171 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$a^3G - ^3D^o$	3 - 3		229
	150	390.107	39.6334 - 295.9732	$3d^4 - 3d^3(a^2P)4p$	$a^1S - ^1P^o$	0 - 1	P	229
	150	390.110	29.8171 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	3 - 2	P	229
	300	390.191	30.1470 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$a^3G - ^3D^o$	4 - 3		229
	5	390.621	46.2912 - 302.2927	$3d^4 - 3d^3(a^2F)4p$	$a^1D - ^3F^o$	2 - 2		229
	200	390.692	26.4683 - 282.4235	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^1D^o$	2 - 2		229
	200	390.735	36.5863 - 292.5132	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^3G^o$	4 - 3		229
	300	390.777	24.9325 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3F^o$	4 - 3		229
	200	390.845	1.2828 - 257.1380	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5G^o$	4 - 5		229
	200	390.861	36.5863 - 292.4307	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^3G^o$	4 - 4		229
	150	390.913	26.7607 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1F^o$	2 - 3		229
	40	390.985	26.8423 - 282.6048	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^5S^o$	3 - 2		229
	200	391.038	26.8423 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1F^o$	3 - 3		229
	200	391.141	26.7607 - 282.4235	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^1D^o$	2 - 2		229
	150	391.239	26.9740 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1F^o$	4 - 3		229
	150	391.424	26.4683 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3P^o$	2 - 1		229
	250	391.489	24.9325 - 280.3672	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3F^o$	4 - 4		229
	50	391.580	.8031 - 256.1779	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5G^o$	3 - 4		229
	250	391.650	30.1470 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$a^3G - ^3D^o$	4 - 3		229
	5	391.856	26.8423 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1G^o$	3 - 4		229
	300	391.938	25.2259 - 280.3672	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3F^o$	5 - 4		229
	30	392.010	29.8171 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$a^3G - ^3D^o$	3 - 2		229
	300	392.058	26.9740 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1G^o$	4 - 4		229
	40	392.137	39.6334 - 294.6440	$3d^4 - 3d^3(a^4P)4p$	$a^1S - ^3S^o$	0 - 1		229
	5	392.183	.4173 - 255.3992	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5G^o$	2 - 3		229
	250	392.290	52.7327 - 307.6444	$3d^4 - 3d^3(a^2F)4p$	$a^1F - ^1D^o$	3 - 2		229
	250	392.352	29.8171 - 284.6903	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3H^o$	3 - 4		229
	300	392.381	37.5117 - 292.3659	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^1I^o$	6 - 6		229
	300	392.503	37.5117 - 292.2876	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^3G^o$	6 - 5		229
	300	392.514	30.4301 - 285.1961	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3H^o$	5 - 6		229
	300	392.702	30.1470 - 284.7908	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3H^o$	4 - 5		229
	100	392.770	36.6301 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^1F^o$	3 - 3		229
	300	392.910	25.5285 - 280.0396	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3G^o$	6 - 5		229
	5	392.967	36.7585 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^1F^o$	2 - 3		229
	150	393.142	30.4301 - 284.7908	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3H^o$	5 - 5		229
	300	393.271	25.2259 - 279.5026	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3G^o$	5 - 4		229
	50	393.589	26.7607 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^o$	2 - 3		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	393.717	26.8423 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^\circ$	3 - 3		229
	300	393.731	36.9254 - 290.9034	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^\circ$	1 - 0		229
	300	393.913	24.9325 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3G^\circ$	4 - 3		229
	300	393.970	36.7585 - 290.5837	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^\circ$	2 - 1		229
	150	394.044	26.7607 - 280.5397	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^\circ$	2 - 2	P	229
	150	394.046	36.6301 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^\circ$	3 - 2	P	229
	200	394.170	26.8423 - 280.5397	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^\circ$	3 - 2		229
	200	394.232	36.9254 - 290.5837	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^\circ$	1 - 1		229
	200	394.242	36.7585 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^\circ$	2 - 2		229
	50	394.505	36.9254 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^\circ$	1 - 2		229
	7	394.535	52.7327 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$a^1F - ^3G^\circ$	3 - 3		229
	100	394.593	25.2259 - 278.6507	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^\circ$	5 - 6		229
	300	394.643	26.9740 - 280.3672	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^\circ$	4 - 4		229
	200	394.747	36.5863 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^1G - ^3D^\circ$	4 - 3		229
	200	394.814	36.6301 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3D^\circ$	3 - 3		229
	20	395.064	25.5285 - 278.6507	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^\circ$	6 - 6		229
	300	395.153	26.9740 - 280.0396	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	4 - 5		229
	250	395.318	36.5863 - 289.5459	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^1G^\circ$	4 - 4		229
	150	395.588	29.8171 - 282.6048	$3d^4 - 3d^3(a^4P)4p$	$a^3G - ^5S^\circ$	3 - 2		229
	80	395.633	36.6301 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3D^\circ$	3 - 2		229
	50	395.687	30.1470 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^1H^\circ$	4 - 5		229
	100	395.709	24.0554 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^3P^\circ$	0 - 1		229
	300	395.788	26.8423 - 279.5026	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	3 - 4		229
	250	395.833	36.7585 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3D^\circ$	2 - 2		229
	150	395.874	29.8171 - 282.4235	$3d^4 - 3d^3(a^2P)4p$	$a^3G - ^1D^\circ$	3 - 2		229
	400	395.903	37.5117 - 290.0991	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^1H^\circ$	6 - 5		229
	200	395.994	26.9740 - 279.5026	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	4 - 4		229
	40	396.094	36.9254 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3D^\circ$	1 - 2		229
	50	396.131	30.4301 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^1H^\circ$	5 - 5		229
	150	396.258	24.9325 - 277.2927	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^\circ$	4 - 5		229
	100	396.480	29.8171 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^1G^\circ$	3 - 4		229
	250	396.773	26.7607 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	2 - 3		229
	200	396.901	26.8423 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	3 - 3		229
	70	396.965	36.7585 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3D^\circ$	2 - 1		229
	10	396.996	30.1470 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^1G^\circ$	4 - 4		229
	70	397.161	24.9729 - 276.7592	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^5D^\circ$	1 - 2		229
	250	397.196	25.5285 - 277.2927	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^\circ$	6 - 5		229
	150	397.226	36.9254 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3D^\circ$	1 - 1		229
	100	397.674	24.9729 - 276.4349	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^3P^\circ$	1 - 0		229
	250	398.082	25.2259 - 276.4297	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^\circ$	5 - 4		229
	200	398.382	29.8171 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3F^\circ$	3 - 3		229
	200	398.421	36.6301 - 287.6202	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^\circ$	3 - 4		229
	40	398.483	39.6334 - 290.5837	$3d^4 - 3d^3(a^2D)4p$	$a^1S - ^3P^\circ$	0 - 1		229
	150	398.636	36.5863 - 287.4405	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^3I^\circ$	4 - 5		229
	50	398.907	30.1470 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3F^\circ$	4 - 3		229
	70	398.954	37.5117 - 288.1672	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^3I^\circ$	6 - 6		229
	5	399.041	26.4683 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^5D^\circ$	2 - 3		229
	100	399.164	36.5863 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$a^1G - ^3F^\circ$	4 - 3		229
	150	399.233	36.6301 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^\circ$	3 - 3		229
	100	399.439	36.7585 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^\circ$	2 - 3		229
	150	399.491	26.9740 - 277.2927	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3H^\circ$	4 - 5		229
	120	399.526	26.4683 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^3P^\circ$	2 - 1		229
	250	399.628	36.6301 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^\circ$	3 - 2		229
	250	399.647	30.1470 - 280.3672	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3F^\circ$	4 - 4		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	399.725	24.9729 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^5D^\circ$	1 - 1		229
	300	399.839	36.7585 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^\circ$	2 - 2		229
	300	400.112	37.5117 - 287.4405	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^3I^\circ$	6 - 5		229
	20	400.173	30.1470 - 280.0396	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	4 - 5		229
	250	400.318	36.6301 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^\circ$	3 - 3		229
	20	400.350	24.9729 - 274.7533	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^3D^\circ$	1 - 0		229
	300	400.510	46.2912 - 295.9732	$3d^4 - 3d^3(a^2P)4p$	$a^1D - ^1P^\circ$	2 - 1		229
	300	400.523	36.7585 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^\circ$	2 - 3		229
	10	400.569	52.7327 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$a^1F - ^3F^\circ$	3 - 3		229
	300	400.627	30.4301 - 280.0396	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	5 - 5		229
	200	400.662	26.8423 - 276.4297	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3H^\circ$	3 - 4		229
	150	400.761	36.6301 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^\circ$	3 - 2		229
	250	400.920	46.2912 - 295.7164	$3d^4 - 3d^3(a^2D)4p$	$a^1D - ^1D^\circ$	2 - 2		229
	150	400.968	36.7585 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^\circ$	2 - 2		229
	300	401.035	30.1470 - 279.5026	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	4 - 4		229
	250	401.237	36.9254 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^\circ$	1 - 2		229
	200	401.548	39.6334 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$a^1S - ^3D^\circ$	0 - 1		229
	300	401.644	29.8171 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	3 - 3		229
	10	401.700	62.2381 - 311.1809	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^1G^\circ$	4 - 4		229
	150	401.759	26.4683 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^3P^\circ$	2 - 2		229
	300	401.859	36.6301 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^\circ$	3 - 3		229
	70	402.127	26.4683 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^5D^\circ$	2 - 1		229
	200	402.202	93.8323 - 342.4622	$3d^4 - 3d^3(b^2D)4p$	$b^1D - ^1P^\circ$	2 - 1		229
	10	402.364	26.8423 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3P^\circ$	3 - 2		229
	150	402.651	46.2912 - 294.6440	$3d^4 - 3d^3(a^4P)4p$	$a^1D - ^3S^\circ$	2 - 1		229
	150	402.770	36.6301 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^\circ$	3 - 2		229
	300	402.869	30.4301 - 278.6507	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^\circ$	5 - 6		229
	250	402.978	36.7585 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^\circ$	2 - 2		229
	300	403.057	36.5863 - 284.6903	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^3H^\circ$	4 - 4		229
	20	403.249	36.9254 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^\circ$	1 - 2		229
	40	403.739	37.5117 - 285.1961	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^3H^\circ$	6 - 6		229
	5	403.766	26.4683 - 274.1361	$3d^4 - 3d^3(a^4P)4p$	$a^3P - ^5P^\circ$	2 - 2		229
	5	403.803	30.4301 - 278.0758	$3d^4 - 3d^3(a^4P)4p$	$a^3G - ^3D^\circ$	5 - 4		229
	1	404.402	37.5117 - 284.7908	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^3H^\circ$	6 - 5		229
	150	404.496	39.6334 - 286.8553	$3d^4 - 3d^3(a^4P)4p$	$a^1S - ^3D^\circ$	0 - 1		229
	400	404.620	30.1470 - 277.2927	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^\circ$	4 - 5		229
	100	404.867	36.7585 - 283.7540	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^\circ$	2 - 1		229
	200	404.977	36.7585 - 283.6863	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3P^\circ$	2 - 2		229
	100	405.085	30.4301 - 277.2927	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^\circ$	5 - 5		229
	150	405.140	36.9254 - 283.7540	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^\circ$	1 - 1		229
	400	405.495	29.8171 - 276.4297	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^\circ$	3 - 4		229
	80	405.590	39.6334 - 286.1877	$3d^4 - 3d^3(a^2P)4p$	$a^1S - ^3S^\circ$	0 - 1		229
	150	405.927	62.3211 - 308.6715	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3D^\circ$	2 - 1		229
	250	405.962	39.6334 - 285.9617	$3d^4 - 3d^3(a^2D)4p$	$a^1S - ^1P^\circ$	0 - 1		229
	150	405.990	61.8544 - 308.1650	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3D^\circ$	2 - 2		229
	200	406.033	36.5863 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^1H^\circ$	4 - 5	P	229
	50	406.038	30.1470 - 276.4297	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^\circ$	4 - 4	P	229
	1	406.136	46.2912 - 292.5132	$3d^4 - 3d^3(a^2H)4p$	$a^1D - ^3G^\circ$	2 - 3		229
	200	406.529	36.5863 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^1F^\circ$	4 - 3		229
	200	406.759	36.7585 - 282.6048	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3S^\circ$	2 - 2		229
	50	406.814	36.7585 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^1F^\circ$	2 - 3		229
	250	406.834	62.3644 - 308.1650	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3D^\circ$	3 - 2		229
	200	406.905	62.9142 - 308.6715	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3D^\circ$	1 - 1		229
	50	407.035	36.9254 - 282.6048	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3S^\circ$	1 - 2		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	407.059	36.7585 - 282.4235	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^1D^o$	2 - 2		229
	40	407.335	36.9254 - 282.4235	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^1D^o$	1 - 2		229
	800	407.415	36.5863 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^1G^o$	4 - 4		229
	600	407.438	61.8544 - 307.2887	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3D^o$	2 - 3		229
	400	407.486	36.6301 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^1G^o$	3 - 4		229
	200	407.565	37.5117 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$a^1I - ^1H^o$	6 - 5		229
	10	407.648	36.9254 - 282.2345	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3P^o$	1 - 0		229
	10	407.699	62.3644 - 307.6444	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^1D^o$	3 - 2		229
	500	407.746	62.9142 - 308.1650	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3D^o$	1 - 2		229
	5	407.854	36.7585 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3P^o$	2 - 1		229
	250	408.079	62.2381 - 307.2887	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^1D^o$	4 - 3		229
	1	408.131	36.9254 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3P^o$	1 - 1		229
	10	408.261	46.2912 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$a^1D - ^1F^o$	2 - 3		229
	10	408.288	62.3644 - 307.2887	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3D^o$	3 - 3		229
	250	408.453	62.2381 - 307.0644	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	4 - 5		229
	1	408.613	62.9142 - 307.6444	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^1D^o$	1 - 2		229
	60	409.190	62.2381 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	4 - 4		229
	10	409.265	61.8544 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3G^o$	2 - 3		229
	150	409.400	62.3644 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	3 - 4		229
	50	409.419	36.5863 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^3F^o$	4 - 3		229
	40	409.496	36.6301 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	3 - 3		229
	50	409.638	39.6334 - 283.7540	$3d^4 - 3d^3(a^2P)4p$	$a^1S - ^3D^o$	0 - 1		229
	400	409.712	36.7585 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	2 - 3		229
	200	410.049	62.3211 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	2 - 3		229
	70	410.121	62.3644 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	3 - 3		229
	400	410.204	36.7585 - 280.5397	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	2 - 2		229
	250	410.278	36.6301 - 280.3672	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	3 - 4		229
	250	410.483	36.9254 - 280.5397	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	1 - 2		229
	600	411.549	52.7327 - 295.7164	$3d^4 - 3d^3(a^2D)4p$	$a^1F - ^1D^o$	3 - 2		229
	10	411.665	36.5863 - 279.5026	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^3G^o$	4 - 4		229
	100	411.739	36.6301 - 279.5026	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3G^o$	3 - 4		229
	20	412.577	46.2912 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$a^1D - ^3D^o$	2 - 1		229
	50	412.693	39.6334 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$a^1S - ^3P^o$	0 - 1		229
	30	413.025	93.8323 - 335.9474	$3d^4 - 3d^3(b^2D)4p$	$b^1D - ^1F^o$	2 - 3		229
	50	413.162	36.7585 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3G^o$	2 - 3		229
	125	414.787	26.8423 - 267.9286	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	3 - 4		229
	300	415.013	26.9740 - 267.9286	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	4 - 4		229
	30	415.689	46.2912 - 286.8553	$3d^4 - 3d^3(a^4P)4p$	$a^1D - ^3D^o$	2 - 1		229
	10	415.763	61.8544 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3F^o$	2 - 3		229
	150	415.834	26.7607 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	2 - 3		229
	5	415.906	36.6301 - 277.0685	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^o$	3 - 3		229
	150	415.977	26.8423 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	3 - 3		229
	150	416.037	62.2381 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	4 - 4		229
	50	416.205	26.9740 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	4 - 3	P	229
	150	416.218	71.2803 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$b^1G - ^1F^o$	4 - 3	P	229
	50	416.253	62.3644 - 302.6025	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	3 - 4		229
	200	416.444	36.6301 - 276.7592	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^o$	3 - 2		229
	60	416.568	62.3211 - 302.3771	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	2 - 3		229
	300	416.655	36.7585 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3P^o$	2 - 1		229
	125	416.717	62.3211 - 302.2927	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	2 - 2		229
	100	416.839	71.2803 - 311.1809	$3d^4 - 3d^3(a^2F)4p$	$b^1G - ^1G^o$	4 - 4	P	229
	200	416.846	46.2912 - 286.1877	$3d^4 - 3d^3(a^2P)4p$	$a^1D - ^3S^o$	2 - 1	P	229
	100	416.864	25.2259 - 265.1126	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^o$	5 - 5		229
	250	416.925	26.7607 - 266.6128	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	2 - 2		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	416.944	36.9254 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3P^\circ$	1 - 1		229
	200	417.064	26.8423 - 266.6128	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	3 - 2		229
	5	417.194	52.7327 - 292.4307	$3d^4 - 3d^3(a^2H)4p$	$a^1F - ^1G^\circ$	3 - 4		229
	200	417.241	46.2912 - 285.9617	$3d^4 - 3d^3(a^2D)4p$	$a^1D - ^1P^\circ$	2 - 1		229
	700	417.391	25.5285 - 265.1126	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	6 - 5		229
	40	417.520	36.9254 - 276.4349	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3P^\circ$	1 - 0	P	229
	40	417.534	24.9325 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	4 - 4	P	229
	700	418.045	25.2259 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	5 - 4		229
	500	418.472	24.9325 - 263.8986	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	4 - 3		229
	250	418.862	36.6301 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3P^\circ$	3 - 2		229
	80	419.082	36.7585 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3P^\circ$	2 - 2		229
	150	419.291	52.7327 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$a^1F - ^1F^\circ$	3 - 3		229
	150	419.487	36.7585 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^\circ$	2 - 1		229
	40	419.782	36.9254 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^\circ$	1 - 1		229
	200	419.924	26.9740 - 265.1126	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	4 - 5		229
	100	420.475	36.9254 - 274.7533	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^\circ$	1 - 0		229
	300	420.559	30.1470 - 267.9286	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	4 - 4		229
	200	420.892	26.8423 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	3 - 4		229
	700	421.055	30.4301 - 267.9286	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	5 - 4		229
	200	421.124	26.9740 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	4 - 4		229
	250	421.188	29.8171 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	3 - 3		229
	70	421.240	46.2912 - 283.6863	$3d^4 - 3d^3(a^2P)4p$	$a^1D - ^3P^\circ$	2 - 2		229
	30	421.622	52.7327 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$a^1F - ^3D^\circ$	3 - 3		229
	200	421.697	26.7607 - 263.8986	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	2 - 3		229
	500	421.777	30.1470 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	4 - 3		229
	150	421.842	26.8423 - 263.8986	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	3 - 3		229
	300	422.277	52.7327 - 289.5459	$3d^4 - 3d^3(a^2H)4p$	$a^1F - ^1G^\circ$	3 - 4		229
	500	422.306	29.8171 - 266.6128	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	3 - 2		229
	90	423.168	46.2912 - 282.6048	$3d^4 - 3d^3(a^4P)4p$	$a^1D - ^3S^\circ$	2 - 2		229
	300	423.229	46.2912 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$a^1D - ^1F^\circ$	2 - 3		229
	10	423.286	24.9325 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3D^\circ$	4 - 3		229
	70	423.494	46.2912 - 282.4235	$3d^4 - 3d^3(a^2P)4p$	$a^1D - ^1D^\circ$	2 - 2		229
	100	423.700	93.8323 - 329.8486	$3d^4 - 3d^3(b^2D)4p$	$b^1D - ^1D^\circ$	2 - 2	P	229
	150	423.714	71.2803 - 307.2887	$3d^4 - 3d^3(a^2F)4p$	$b^1G - ^3D^\circ$	4 - 3	P	229
	150	423.835	24.0554 - 259.9952	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	0 - 1		229
	20	424.354	46.2912 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$a^1D - ^3P^\circ$	2 - 1		229
	100	424.587	25.5285 - 261.0519	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^5F^\circ$	6 - 5		229
	200	424.741	24.9729 - 260.4114	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	1 - 2		229
	40	424.914	71.2803 - 306.6228	$3d^4 - 3d^3(a^2F)4p$	$b^1G - ^3G^\circ$	4 - 4		229
	70	425.000	25.2259 - 260.5210	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^5F^\circ$	5 - 4		229
	150	425.491	24.9729 - 259.9952	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	1 - 1		229
	125	425.595	30.1470 - 265.1126	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	4 - 5		229
	1	425.689	71.2803 - 306.1939	$3d^4 - 3d^3(a^2F)4p$	$b^1G - ^3G^\circ$	4 - 3		229
	50	425.840	24.0554 - 258.8915	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	0 - 1	Q	047
	500	426.056	26.4683 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 3		229
	500	426.108	30.4301 - 265.1126	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	5 - 5		229
	100	426.229	29.8171 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	3 - 4		229
	70	426.364	46.2912 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$a^1D - ^3F^\circ$	2 - 3		229
	80	426.614	24.9729 - 259.3761	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5F^\circ$	1 - 2		229
	5	426.663	52.7327 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$a^1F - ^3F^\circ$	3 - 3		229
	150	426.740	26.8423 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	3 - 3		229
	300	426.829	30.1470 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	4 - 4		229
	350	426.974	26.9740 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	4 - 3		229
	10	427.115	52.7327 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$a^1F - ^3D^\circ$	3 - 2		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	427.135	61.8544 - 295.9732	$3d^4 - 3d^3(a^2P)4p$	$b^3P - ^1P^\circ$	2 - 1		229
	250	427.201	29.8171 - 263.8986	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	3 - 3		229
	30	427.343	30.4301 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	5 - 4		229
	200	427.453	26.4683 - 260.4114	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 2		229
	1	427.498	24.9729 - 258.8915	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5D^\circ$	1 - 1		229
	710	427.772	93.8323 - 327.6054	$3d^4 - 3d^3(b^2D)4p$	$b^1D - ^3D^\circ$	2 - 2		432
	30	427.804	30.1470 - 263.8986	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	4 - 3		229
	150	427.924	24.0554 - 257.7423	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5F^\circ$	0 - 1		229
	70	427.987	26.7607 - 260.4114	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	2 - 2		229
	30	428.138	26.8423 - 260.4114	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	3 - 2		229
	1	428.218	26.4683 - 259.9952	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 1		229
	70	428.290	26.4683 - 259.9547	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5F^\circ$	2 - 3		229
	5	428.540	62.3644 - 295.7164	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^1D^\circ$	3 - 2		229
	200	428.752	26.7607 - 259.9952	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	2 - 1		229
	150	428.898	24.9729 - 258.1285	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5D^\circ$	1 - 2		229
	40	429.077	62.9142 - 295.9732	$3d^4 - 3d^3(a^2P)4p$	$b^3P - ^1P^\circ$	1 - 1		229
	5	429.223	26.9740 - 259.9547	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^5F^\circ$	4 - 3		229
	5	429.353	26.4683 - 259.3761	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5F^\circ$	2 - 2		229
	150	429.573	61.8544 - 294.6440	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3S^\circ$	2 - 1		229
	125	429.609	24.9729 - 257.7423	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5F^\circ$	1 - 1		229
	50	430.042	26.8423 - 259.3761	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^5F^\circ$	3 - 2		229
	70	430.103	46.2912 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$a^1D - ^3G^\circ$	2 - 3		229
	150	430.640	26.4683 - 258.6800	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5D^\circ$	2 - 3		229
	1	430.792	26.7607 - 258.8915	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^5D^\circ$	2 - 1		229
	2	431.116	52.7327 - 284.6903	$3d^4 - 3d^3(a^2H)4p$	$a^1F - ^3H^\circ$	3 - 4		229
	150	431.538	62.9142 - 294.6440	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3S^\circ$	1 - 1		229
	125	431.580	26.9740 - 258.6800	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^5D^\circ$	4 - 3		229
	100	431.666	26.4683 - 258.1285	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5D^\circ$	2 - 2		229
	5	431.759	25.5285 - 257.1380	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^5G^\circ$	6 - 5		229
	125	432.341	36.6301 - 267.9286	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3F^\circ$	3 - 4		229
	100	432.363	26.8423 - 258.1285	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^5D^\circ$	3 - 2		229
	125	432.483	63.4200 - 294.6440	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3S^\circ$	0 - 1		229
	150	432.935	26.7607 - 257.7423	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^5F^\circ$	2 - 1		229
	5	432.988	52.7327 - 283.6863	$3d^4 - 3d^3(a^2P)4p$	$a^1F - ^3P^\circ$	3 - 2		229
	70	433.610	30.4301 - 261.0519	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^5F^\circ$	5 - 5		229
	30	433.629	36.6301 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3F^\circ$	3 - 3		229
	150	433.872	36.7585 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3F^\circ$	2 - 3		229
	300	434.418	62.3211 - 292.5132	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^\circ$	2 - 3		229
	70	434.499	62.3644 - 292.5132	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^\circ$	3 - 3		229
	200	434.658	62.3644 - 292.4307	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^\circ$	3 - 4		229
	250	434.686	62.2381 - 292.2876	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^\circ$	4 - 5		229
	125	435.374	36.9254 - 266.6128	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3F^\circ$	1 - 2		229
	1	435.623	29.8171 - 259.3761	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^5F^\circ$	3 - 2		229
	20	436.697	62.2381 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^1F^\circ$	4 - 3		229
	30	436.851	62.3211 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^1F^\circ$	2 - 3		229
	100	437.200	61.8544 - 290.5837	$3d^4 - 3d^3(a^2D)4p$	$b^3P - ^3P^\circ$	2 - 1		229
	150	437.538	61.8544 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$b^3P - ^3P^\circ$	2 - 2		229
	3	438.516	62.3644 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3P^\circ$	3 - 2		229
	50	438.618	62.9142 - 290.9034	$3d^4 - 3d^3(a^2D)4p$	$b^3P - ^3P^\circ$	1 - 0		229
	80	438.865	62.2381 - 290.0991	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^1H^\circ$	4 - 5		229
	300	439.225	62.2381 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^\circ$	4 - 3		229
	5	439.469	62.3644 - 289.9130	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^\circ$	3 - 3		229
	70	439.574	62.9142 - 290.4077	$3d^4 - 3d^3(a^2D)4p$	$b^3P - ^3P^\circ$	1 - 2		229
	20	440.213	63.4200 - 290.5837	$3d^4 - 3d^3(a^2D)4p$	$b^3P - ^3P^\circ$	0 - 1		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	440.400	62.3211 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^{\circ}$	2 - 2		229
	250	440.479	62.3644 - 289.3897	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^{\circ}$	3 - 2		229
	200	441.799	62.3211 - 288.6698	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^{\circ}$	2 - 1		229
	5	443.690	62.2381 - 287.6202	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3F^{\circ}$	4 - 4		229
	300	444.701	62.2381 - 287.1096	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3F^{\circ}$	4 - 3		229
	150	445.334	36.6301 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3D^{\circ}$	3 - 3		229
	200	445.368	62.3211 - 286.8553	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3D^{\circ}$	2 - 1		229
	300	445.438	62.3644 - 286.8627	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3D^{\circ}$	3 - 2		229
	5	445.588	36.7585 - 261.1796	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3D^{\circ}$	2 - 3		229
	300	446.042	62.2381 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3D^{\circ}$	4 - 3		229
	80	446.295	62.3644 - 286.4313	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3D^{\circ}$	3 - 3		229
	40	446.762	62.3211 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3F^{\circ}$	2 - 2		229
	150	446.846	62.3644 - 286.1549	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3F^{\circ}$	3 - 2		229
	80	447.119	36.7585 - 260.4114	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3D^{\circ}$	2 - 2		229
	5	447.781	36.6301 - 259.9547	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^5F^{\circ}$	3 - 3		229
	250	447.959	62.2381 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$b^3F - ^3D^{\circ}$	4 - 3		229
	5	448.212	62.3644 - 285.4740	$3d^4 - 3d^3(a^2P)4p$	$b^3F - ^3D^{\circ}$	3 - 3		229
	20	448.286	36.9254 - 259.9952	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3D^{\circ}$	1 - 1		229
	100	449.347	62.3644 - 284.9112	$3d^4 - 3d^3(a^2P)4p$	$b^3F - ^3D^{\circ}$	3 - 2		229
	30	450.350	36.6301 - 258.6800	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^5D^{\circ}$	3 - 3		229
	60	450.795	61.8544 - 283.6863	$3d^4 - 3d^3(a^2P)4p$	$b^3P - ^3P^{\circ}$	2 - 2		229
	50	451.734	36.7585 - 258.1285	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^5D^{\circ}$	2 - 2		229
	200	451.810	121.1302 - 342.4622	$3d^4 - 3d^3(b^2D)4p$	$b^1S - ^1P^{\circ}$	0 - 1		229
	60	452.474	71.2803 - 292.2876	$3d^4 - 3d^3(a^2H)4p$	$b^1G - ^3G^{\circ}$	4 - 5		229
	10	452.864	36.9254 - 257.7423	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^5F^{\circ}$	1 - 1		229
	5	454.360	61.8544 - 281.9449	$3d^4 - 3d^3(a^2P)4p$	$b^3P - ^3P^{\circ}$	2 - 1		229
	70	454.648	71.2803 - 291.2314	$3d^4 - 3d^3(a^2D)4p$	$b^1G - ^1F^{\circ}$	4 - 3		229
	70	455.220	62.3644 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$b^3F - ^1G^{\circ}$	3 - 4		229
	250	457.001	71.2803 - 290.0991	$3d^4 - 3d^3(a^2H)4p$	$b^1G - ^1H^{\circ}$	4 - 5		229
	5	457.736	62.3644 - 280.8322	$3d^4 - 3d^3(a^2G)4p$	$b^3F - ^3F^{\circ}$	3 - 3		229
	300	458.158	71.2803 - 289.5459	$3d^4 - 3d^3(a^2H)4p$	$b^1G - ^1G^{\circ}$	4 - 4		229
	20	458.251	62.3211 - 280.5397	$3d^4 - 3d^3(a^2G)4p$	$b^3F - ^3F^{\circ}$	2 - 2		229
	20	459.135	62.2381 - 280.0396	$3d^4 - 3d^3(a^2G)4p$	$b^3F - ^3G^{\circ}$	4 - 5		229
	150	459.338	93.8323 - 311.5387	$3d^4 - 3d^3(a^2F)4p$	$b^1D - ^1F^{\circ}$	2 - 3		229
	50	465.309	61.8544 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3P^{\circ}$	2 - 1		229
	70	465.319	61.8544 - 276.7592	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^5D^{\circ}$	2 - 2		229
	150	467.701	93.8323 - 307.6444	$3d^4 - 3d^3(a^2F)4p$	$b^1D - ^1D^{\circ}$	2 - 2		229
	200	468.339	61.8544 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3P^{\circ}$	2 - 2		229
	70	468.577	71.2803 - 284.6903	$3d^4 - 3d^3(a^2H)4p$	$b^1G - ^3H^{\circ}$	4 - 4		229
	10	468.717	63.4200 - 276.7659	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3P^{\circ}$	0 - 1		229
	40	468.839	61.8544 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^5D^{\circ}$	2 - 1		229
	30	469.464	62.3644 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3P^{\circ}$	3 - 2		229
	50	470.678	62.9142 - 275.3743	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3P^{\circ}$	1 - 2		229
	20	471.178	62.9142 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^5D^{\circ}$	1 - 1		229
	10	472.059	62.9142 - 274.7533	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^5D^{\circ}$	1 - 0		229
	5	472.309	63.4200 - 275.1466	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^5D^{\circ}$	0 - 1		229
	100	472.608	71.2803 - 282.8719	$3d^4 - 3d^3(a^2G)4p$	$b^1G - ^1H^{\circ}$	4 - 5		229
	2	474.481	71.2803 - 282.0381	$3d^4 - 3d^3(a^2G)4p$	$b^1G - ^1G^{\circ}$	4 - 4		229
	100	481.899	71.2803 - 278.7942	$3d^4 - 3d^3(a^2G)4p$	$b^1G - ^3G^{\circ}$	4 - 3		229
	300	486.168	62.2381 - 267.9286	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^{\circ}$	4 - 4		229
	5	486.464	62.3644 - 267.9286	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^{\circ}$	3 - 4		229
	10	487.796	62.2381 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^{\circ}$	4 - 3		229
	2	487.996	62.3211 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^{\circ}$	2 - 3		229
	250	488.100	62.3644 - 267.2401	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^{\circ}$	3 - 3		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
150	489.498		62.3211 - 266.6128	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^\circ$	2 - 2		229
5	489.600		62.3644 - 266.6128	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^\circ$	3 - 2		229
10	492.913		62.2381 - 265.1126	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3G^\circ$	4 - 5		229
100	494.566		62.2381 - 264.4342	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3G^\circ$	4 - 4		229
2	494.705		93.8323 - 295.9732	$3d^4 - 3d^3(a^2P)4p$	$b^1D - ^1P^\circ$	2 - 1		229
1	529.832		93.8323 - 282.5716	$3d^4 - 3d^3(a^2G)4p$	$b^1D - ^1F^\circ$	2 - 3		229
	1039.96		24.9729 - 121.1302	$3d^4 - 3d^4$	$a^3P - b^1S$	1 - 0	F,P	229
	1056.39		26.4683 - 121.1302	$3d^4 - 3d^4$	$a^3P - b^1S$	2 - 0	F,P	375
5	1062.976		233.8489 - 327.9244	$3d^3(a^2F)4s - 3d^3(b^2D)4p$	$^3F - ^3D^\circ$	3 - 3		229
1	1101.921		216.5381 - 307.2887	$3d^3(a^2D)4s - 3d^3(a^2F)4p$	$^3D - ^3D^\circ$	3 - 3		229
40	1111.830		217.1225 - 307.0644	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$^3H - ^3G^\circ$	6 - 5		229
40	1112.651		221.3052 - 311.1809	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$^3H - ^3G^\circ$	5 - 4		229
30	1114.054		216.8604 - 306.6228	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$^3H - ^3G^\circ$	5 - 4		229
30	1118.384		216.7791 - 306.1939	$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$^3H - ^3G^\circ$	4 - 3		229
1	1122.734		213.5341 - 302.6025	$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$^3G - ^3F^\circ$	4 - 4		229
20	1123.865		195.9330 - 284.9112	$3d^3(a^2F)4s - 3d^3(a^2P)4p$	$^3F - ^3D^\circ$	3 - 2		229
10	1149.118		220.6210 - 307.6444	$3d^3(a^2D)4s - 3d^3(a^2F)4p$	$^1D - ^1D^\circ$	2 - 2		229
	1185.23		36.7585 - 121.1302	$3d^4 - 3d^4$	$a^3D - b^1S$	2 - 0	F,P	229
	1187.6		36.9254 - 121.1302	$3d^4 - 3d^4$	$a^3D - b^1S$	1 - 0	F,P	375,229
60	1195.103		208.8382 - 292.5132	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3G^\circ$	3 - 3		229
50	1198.593		212.5421 - 295.9732	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^1P^\circ$	0 - 1		229
30	1200.183		209.1101 - 292.4307	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3G^\circ$	4 - 4		229
10	1207.115		209.5239 - 292.3659	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^1I^\circ$	5 - 6		229
40	1208.257		209.5239 - 292.2876	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3G^\circ$	5 - 5		229
20	1214.711		213.6492 - 295.9732	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^1P^\circ$	2 - 1		229
50	1217.993		212.5421 - 294.6440	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3S^\circ$	0 - 1		229
10	1224.417		220.6210 - 302.2927	$3d^3(a^2D)4s - 3d^3(a^2F)4p$	$^1D - ^3F^\circ$	2 - 2		229
20	1228.126		204.7299 - 286.1549	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^5P - ^3F^\circ$	1 - 2		229
150	1234.648		213.6492 - 294.6440	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3S^\circ$	2 - 1		229
20	1237.221		195.9330 - 276.7592	$3d^3(a^2F)4s - 3d^3(a^2P)4p$	$^3F - ^3D^\circ$	3 - 2		229
20	1249.496		214.6114 - 294.6440	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3S^\circ$	1 - 1		229
200	1250.736		262.5093 - 342.4622	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^1D - ^1P^\circ$	2 - 1		229
10	1257.531		187.7190 - 267.2401	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^5F - ^3F^\circ$	4 - 3		229
2	1258.564		187.1575 - 266.6128	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	3 - 2		229
20	1259.759		216.5927 - 295.9732	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^1P^\circ$	2 - 1		229
10	1263.844		216.5927 - 295.7164	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^1D^\circ$	2 - 2		229
20	1266.524		204.7299 - 283.6863	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^5P - ^3P^\circ$	1 - 2		229
20	1269.784		213.5341 - 292.2876	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^1G - ^3G^\circ$	4 - 5		229
30	1270.470		204.9754 - 283.6863	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	2 - 2		229
30	1276.647		209.1101 - 287.4405	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3I^\circ$	4 - 5		229
50	1279.591		205.5364 - 283.6863	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^5P - ^3P^\circ$	3 - 2		229
100	1280.471		209.5239 - 287.6202	$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$^3G - ^3F^\circ$	5 - 4		229
50	1280.650		212.8181 - 290.9034	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3P^\circ$	1 - 0		229
50	1281.367		212.5421 - 290.5837	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3P^\circ$	0 - 1		229
20	1281.652		208.8382 - 286.8627	$3d^3(a^2G)4s - 3d^3(a^2P)4p$	$^3G - ^3D^\circ$	3 - 2		229
70	1282.058		209.1101 - 287.1096	$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$^3G - ^3F^\circ$	4 - 3		229
20	1283.613		233.6336 - 311.5387	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^1F^\circ$	4 - 3		229
80	1284.109		204.7299 - 282.6048	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^5P - ^3S^\circ$	1 - 2		229
70	1285.918		212.8181 - 290.5837	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3P^\circ$	1 - 1		229
125	1287.101		204.7299 - 282.4235	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^5P - ^1D^\circ$	1 - 2		229
125	1288.169		204.9754 - 282.6048	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3S^\circ$	2 - 2		229
2	1288.720		204.9754 - 282.5716	$3d^3(a^2P)4s - 3d^3(a^2G)4p$	$^5P - ^1F^\circ$	2 - 2		229
20	1289.533		233.6336 - 311.1809	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^1G^\circ$	4 - 4		229
125	1291.191		204.9754 - 282.4235	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^1D^\circ$	2 - 2		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1293.125	233.8489 - 311.1809	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^1G^\circ$	3 - 4		229
	100	1293.305	209.1101 - 286.4313	$3d^3(a^2G)4s - 3d^3(a^4P)4p$	$^3G - ^3D^\circ$	4 - 3		229
	100	1293.377	208.8382 - 286.1549	$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$^3G - ^3F^\circ$	3 - 2		229
	250	1297.547	205.5364 - 282.6048	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^5S^\circ$	3 - 2		229
	200	1300.608	205.5364 - 282.4235	$3d^3(a^4P)4s - 3d^3(a^2P)4p$	$^3P - ^1D^\circ$	3 - 2		229
	150	1300.846	258.7695 - 335.6427	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^\circ$	1 - 0		229
	10	1303.081	187.1575 - 263.8986	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3G^\circ$	3 - 3		229
	150	1303.489	188.3953 - 265.1126	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3G^\circ$	5 - 5		229
	200	1304.816	258.6285 - 335.2678	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^\circ$	2 - 1		229
	100	1305.971	212.8181 - 289.3897	$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$^3P - ^3D^\circ$	1 - 2		229
	150	1306.080	213.5341 - 290.0991	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^1G - ^1H^\circ$	4 - 5		229
	100	1307.219	258.7695 - 335.2678	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^\circ$	1 - 1		229
	200	1307.424	219.4869 - 295.9732	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^1P^\circ$	1 - 1		229
	70	1309.521	209.1101 - 285.4740	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3G - ^3D^\circ$	4 - 3		229
	2	1310.751	214.6114 - 290.9034	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3P^\circ$	1 - 0		229
	150	1311.239	213.6492 - 289.9130	$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$^3P - ^3D^\circ$	2 - 3		229
	150	1311.828	219.4869 - 295.7164	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^1P - ^1D^\circ$	1 - 2		229
	80	1313.585	212.5421 - 288.6698	$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$^3P - ^3D^\circ$	0 - 1		229
	200	1314.529	208.8382 - 284.9112	$3d^3(a^2G)4s - 3d^3(a^2P)4p$	$^3G - ^3D^\circ$	3 - 2		229
	400	1317.862	258.6285 - 334.5091	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^\circ$	2 - 2		229
	300	1318.354	208.8382 - 284.6903	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3H^\circ$	3 - 4		229
	100	1320.312	258.7695 - 334.5091	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^\circ$	1 - 2		229
	300	1320.410	216.7791 - 292.5132	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^\circ$	4 - 3		229
	300	1321.341	209.1101 - 284.7908	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3H^\circ$	4 - 5		229
	300	1321.490	209.5239 - 285.1961	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3H^\circ$	5 - 6		229
	100	1321.850	216.7791 - 292.4307	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^\circ$	4 - 4		229
	10	1323.097	209.1101 - 284.6903	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^3G - ^3H^\circ$	4 - 4		229
	400	1323.269	216.8604 - 292.4307	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^\circ$	5 - 4		229
	80	1324.403	216.8604 - 292.3659	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^1I^\circ$	5 - 6		229
	125	1325.781	216.8604 - 292.2876	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^\circ$	5 - 5		229
	125	1327.101	220.6210 - 295.9732	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^1D - ^1P^\circ$	2 - 1		229
	50	1329.025	217.1225 - 292.3659	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^1I^\circ$	6 - 6		229
	400	1330.401	217.1225 - 292.2876	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^\circ$	6 - 5		229
	150	1331.185	215.7826 - 290.9034	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3P^\circ$	1 - 0		229
	150	1331.640	220.6210 - 295.7164	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^1D^\circ$	2 - 2		229
	2	1332.968	213.6492 - 288.6698	$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$^3P - ^3D^\circ$	2 - 1		229
	80	1336.039	208.8382 - 283.6863	$3d^3(a^2G)4s - 3d^3(a^2P)4p$	$^3G - ^3P^\circ$	3 - 2		229
		1336.20	46.2912 - 121.1302	$3d^4 - 3d^4$	$a^1D - b^1S$	2 - 0	F,P	229
	70	1337.287	214.6114 - 289.3897	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3D^\circ$	1 - 2		229
	150	1338.808	216.5381 - 291.2314	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^1F^\circ$	3 - 3		229
	200	1339.691	234.0274 - 308.6715	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^\circ$	2 - 1		229
	100	1343.121	186.7255 - 261.1796	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	2 - 3		229
	300	1345.611	233.8489 - 308.1650	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^\circ$	3 - 2		229
	70	1348.838	234.0274 - 308.1650	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^\circ$	2 - 2		229
	125	1350.535	212.8181 - 286.8627	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^\circ$	1 - 2		229
	50	1350.677	212.8181 - 286.8553	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^\circ$	1 - 1		229
	10	1350.948	187.1575 - 261.1796	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	3 - 3		229
	100	1351.755	186.4336 - 260.4114	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	1 - 2		229
	150	1354.847	237.7296 - 311.5387	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^1F - ^1F^\circ$	3 - 3		229
	100	1355.624	208.8382 - 282.6048	$3d^3(a^2G)4s - 3d^3(a^4P)4p$	$^3G - ^5S^\circ$	3 - 2		229
	70	1356.232	208.8382 - 282.5716	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^1F^\circ$	3 - 3		229
	100	1357.114	186.7255 - 260.4114	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	2 - 2		229
	200	1357.675	233.6336 - 307.2887	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^\circ$	4 - 3		229
	50	1357.857	212.5421 - 286.1877	$3d^3(a^4P)4s - 3d^3(a^2P)4p$	$^3P - ^3S^\circ$	0 - 1		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
50	1358.386	234.0274 - 307.6444		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^1D^\circ$	2 - 2		229
125	1358.567	215.7826 - 289.3897		$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^\circ$	1 - 2		229
400	1359.006	258.4341 - 332.0173		$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3F^\circ$	3 - 4		229
150	1359.406	186.4336 - 259.9952		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	1 - 1		229
300	1361.279	187.7190 - 261.1796		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^5F - ^3D^\circ$	4 - 3		229
300	1361.447	237.7296 - 311.1809		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^1F - ^1G^\circ$	3 - 4		229
200	1361.692	262.5093 - 335.9474		$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^1D - ^1F^\circ$	2 - 3		229
600	1361.825	233.6336 - 307.0644		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3G^\circ$	4 - 5		229
250	1362.864	216.5381 - 289.9130		$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^\circ$	3 - 3		229
300	1363.077	187.1575 - 260.5210		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	3 - 4		229
100	1363.376	209.5239 - 282.8719		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^1H^\circ$	5 - 5		229
300	1363.642	187.7190 - 261.0519		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	4 - 5		229
200	1364.824	186.7255 - 259.9952		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	2 - 1		229
250	1364.984	234.0274 - 307.2887		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^\circ$	2 - 3		229
250	1365.115	187.1575 - 260.4114		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	3 - 2		229
300	1365.571	186.7255 - 259.9547		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	2 - 3		229
100	1365.876	213.6492 - 286.8627		$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^\circ$	2 - 2		229
50	1367.183	212.8181 - 285.9617		$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^1P^\circ$	1 - 1		229
125	1370.303	217.1225 - 290.0991		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^1H^\circ$	6 - 5		229
250	1370.947	186.4336 - 259.3761		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	1 - 2		229
50	1371.217	209.1101 - 282.0381		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^1G^\circ$	4 - 4		229
150	1371.987	215.7826 - 288.6698		$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^\circ$	1 - 1		229
70	1372.651	216.5381 - 289.3897		$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^\circ$	3 - 2		229
700	1373.587	187.7190 - 260.5210		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	4 - 4		229
600	1373.674	187.1575 - 259.9547		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	3 - 3		229
250	1373.967	213.6492 - 286.4313		$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^\circ$	2 - 3		229
300	1374.116	233.8489 - 306.6228		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3G^\circ$	3 - 4		229
30	1374.261	216.7791 - 289.5459		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^1G^\circ$	4 - 4		229
250	1374.789	258.6285 - 331.3670		$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3F^\circ$	2 - 3		229
80	1375.784	216.8604 - 289.5459		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^1G^\circ$	5 - 4		229
500	1376.337	188.3953 - 261.0519		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	5 - 5		229
300	1376.455	186.7255 - 259.3761		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	2 - 2		229
60	1377.723	214.5258 - 287.1096		$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3F^\circ$	2 - 3		229
250	1378.092	258.7695 - 331.3338		$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3F^\circ$	1 - 2		229
500	1378.560	205.5364 - 278.0758		$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5D^\circ$	3 - 4		229
20	1379.206	213.6492 - 286.1549		$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3F^\circ$	2 - 2		229
250	1380.112	186.4336 - 258.8915		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^\circ$	1 - 1		229
20	1382.270	233.8489 - 306.1939		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3G^\circ$	3 - 3		432
60	1382.414	214.5258 - 286.8627		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	2 - 2		229
40	1382.560	214.5258 - 286.8553		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	2 - 1		229
80	1384.055	214.6114 - 286.8627		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	1 - 2		229
80	1384.201	214.6114 - 286.8553		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	1 - 1		229
80	1384.688	187.1575 - 259.3761		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	3 - 2		229
200	1385.313	186.4336 - 258.6195		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^\circ$	1 - 0		229
300	1385.685	234.0274 - 306.1939		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3G^\circ$	2 - 3		229
10	1386.467	188.3953 - 260.5210		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^\circ$	5 - 4		229
200	1387.092	204.9754 - 277.0685		$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5D^\circ$	2 - 3		229
800	1387.938	217.1225 - 289.1719		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3I^\circ$	6 - 7		229
10	1388.040	195.1963 - 267.2401		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^\circ$	2 - 3		229
200	1388.195	204.7299 - 276.7659		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^5P - ^3P^\circ$	1 - 1		229
250	1388.328	204.7299 - 276.7592		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^5P - ^3D^\circ$	1 - 2		229
200	1389.000	208.8382 - 280.8322		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3F^\circ$	3 - 3		229
25	1389.762	186.7255 - 258.6800		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^\circ$	2 - 3		229
80	1390.713	214.5258 - 286.4313		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	2 - 3		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	70	1390.972	220.6210 - 292.5132	$3d^3(a^2D)4s - 3d^3(a^2H)4p$	$^1D - ^3G^\circ$	2 - 3		229
	100	1392.269	213.6492 - 285.4740	$3d^3(a^4P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	2 - 3		229
	50	1392.941	204.9754 - 276.7659	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^3P^\circ$	2 - 1		229
	200	1393.073	204.9754 - 276.7592	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^\circ$	2 - 2		229
	250	1394.272	209.1101 - 280.8322	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3F^\circ$	4 - 3		229
	50	1394.599	204.7299 - 276.4349	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^3P^\circ$	1 - 0		229
	250	1394.665	208.8382 - 280.5397	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3F^\circ$	3 - 2		229
	80	1395.442	214.5258 - 286.1877	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3S^\circ$	2 - 1		229
	150	1397.106	214.6114 - 286.1877	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3S^\circ$	1 - 1		229
	100	1397.753	214.6114 - 286.1549	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^3F^\circ$	1 - 2		229
	400	1397.972	205.5364 - 277.0685	$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^5P - ^3D^\circ$	3 - 3		229
	2	1398.166	187.1575 - 258.6800	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	3 - 3		229
	600	1400.243	195.1963 - 266.6128	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^\circ$	2 - 2		229
	50	1401.535	214.6114 - 285.9617	$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^3P - ^1P^\circ$	1 - 1		229
	800	1402.388	195.9330 - 267.2401	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^\circ$	3 - 3		229
	200	1403.370	213.5341 - 284.7908	$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$^1G - ^3H^\circ$	4 - 5		229
	10	1404.048	205.5364 - 276.7592	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^3D^\circ$	3 - 2		229
	100	1404.260	212.5421 - 283.7540	$3d^3(a^4P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	0 - 1		229
	400	1406.669	196.8386 - 267.9286	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^\circ$	4 - 4		229
	500	1406.824	216.5381 - 287.6202	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3F^\circ$	3 - 4		229
	100	1407.007	215.7826 - 286.8553	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3D^\circ$	1 - 1		229
	400	1407.246	221.3052 - 292.3659	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^1I^\circ$	5 - 6		229
	150	1407.568	217.1225 - 288.1672	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3I^\circ$	6 - 6		229
	250	1408.117	186.7255 - 257.7423	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3F^\circ$	2 - 1		229
	150	1408.801	221.3052 - 292.2876	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^3G^\circ$	5 - 5		229
	300	1409.026	187.1575 - 258.1285	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^\circ$	3 - 2		229
	300	1409.220	187.7190 - 258.6800	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^\circ$	4 - 3		229
	600	1409.451	188.3953 - 259.3448	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^\circ$	5 - 4		229
	80	1409.723	212.8181 - 283.7540	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	1 - 1		229
	150	1409.846	209.1101 - 280.0396	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^\circ$	4 - 5		229
	80	1411.069	212.8181 - 283.6863	$3d^3(a^4P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 2		229
	200	1411.566	209.5239 - 280.3672	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3F^\circ$	5 - 4		229
	200	1414.832	195.9330 - 266.6128	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^\circ$	3 - 2		229
	200	1415.146	208.8382 - 279.5026	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^\circ$	3 - 4		229
	400	1415.196	216.7791 - 287.4405	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3I^\circ$	4 - 5		229
	200	1416.216	220.6210 - 291.2314	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^1F^\circ$	2 - 3		229
	40	1416.832	216.8604 - 287.4405	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3I^\circ$	5 - 5		229
	100	1417.001	216.5381 - 287.1096	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3F^\circ$	3 - 3		229
	300	1418.123	209.5239 - 280.0396	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^\circ$	5 - 5		229
	200	1420.124	204.7299 - 275.1466	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5D^\circ$	1 - 1		229
	470	1420.419	196.8386 - 267.2401	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^\circ$	4 - 3		432
	600	1420.465	204.9754 - 275.3743	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^3P^\circ$	2 - 2		229
	200	1420.602	209.1101 - 279.5026	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^\circ$	4 - 4		229
	100	1420.749	214.5258 - 284.9112	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	2 - 2		229
	150	1421.016	215.7826 - 286.1549	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3F^\circ$	1 - 2		229
	25	1421.981	216.5381 - 286.8627	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3D^\circ$	3 - 2		229
	200	1422.481	214.6114 - 284.9112	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	1 - 2		229
	50	1423.082	216.5927 - 286.8627	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3D^\circ$	2 - 2		229
	50	1423.233	216.5927 - 286.8553	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3D^\circ$	2 - 1		229
	150	1425.088	204.9754 - 275.1466	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5D^\circ$	2 - 1		229
	10	1426.432	213.6492 - 283.7540	$3d^3(a^4P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	2 - 1		229
	100	1427.815	213.6492 - 283.6863	$3d^3(a^4P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	2 - 2		229
	125	1428.090	204.7299 - 274.7533	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5D^\circ$	1 - 0		229
	150	1429.004	209.5239 - 279.5026	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^\circ$	5 - 4		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	1429.330	220.6210 - 290.5837	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^3P^\circ$	2 - 1		229
	250	1429.472	208.8382 - 278.7942	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^\circ$	3 - 3		229
	150	1430.309	237.7296 - 307.6444	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^1F - ^1D^\circ$	3 - 2		229
	800	1430.573	188.3953 - 258.2974	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	5 - 6		229
	150	1430.751	216.5381 - 286.4313	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^3D^\circ$	3 - 3		229
	100	1431.891	205.5364 - 275.3743	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	3 - 2		229
	100	1432.936	220.6210 - 290.4077	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^3P^\circ$	2 - 2		229
		1433.1	24.0554 - 93.8323	$3d^4 - 3d^4$	$a^3P - b^1D$	0 - 2	F,P	375,229
	150	1435.046	209.1101 - 278.7942	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^\circ$	4 - 3		229
	70	1437.561	216.5927 - 286.1549	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3F^\circ$	2 - 2		229
	200	1439.052	258.4341 - 327.9244	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^\circ$	3 - 3		229
	800	1440.528	187.7190 - 257.1380	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	4 - 5		229
	300	1440.792	204.7299 - 274.1361	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	1 - 2		229
	250	1441.049	205.5364 - 274.9303	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	3 - 3		229
	400	1442.221	213.5341 - 282.8719	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^1H^\circ$	4 - 5		229
	100	1443.163	220.6210 - 289.9130	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^3D^\circ$	2 - 3		229
	200	1445.686	258.4341 - 327.6054	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^\circ$	3 - 2		229
	150	1445.910	204.9754 - 274.1361	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	2 - 2		229
	80	1446.285	214.6114 - 283.7540	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	1 - 1		229
	800	1446.618	209.5239 - 278.6507	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^\circ$	5 - 6		229
	100	1447.709	214.6114 - 283.6863	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 2		229
	250	1448.494	213.5341 - 282.5716	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^1F^\circ$	4 - 3		229
	700	1448.846	187.1575 - 256.1779	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	3 - 4		229
	100	1449.757	258.6285 - 327.6054	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^\circ$	2 - 2		229
	400	1449.928	233.6336 - 302.6025	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	4 - 4		229
	100	1451.103	204.7299 - 273.6431	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	1 - 1		229
	80	1451.264	258.6285 - 327.5338	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^\circ$	2 - 1		229
		1451.38	24.9325 - 93.8323	$3d^4 - 3d^4$	$a^3H - b^1D$	4 - 2	F,P	229
		1452.2	24.9729 - 93.8323	$3d^4 - 3d^4$	$a^3P - b^1D$	1 - 2	F,P	375,229
	10	1452.252						229
	70	1452.967	262.5093 - 331.3338	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^1D - ^3F^\circ$	2 - 2		229
	250	1453.618	221.3052 - 290.0991	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^1H^\circ$	5 - 5		229
	100	1454.243	258.7695 - 327.5338	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^\circ$	1 - 1		229
	2	1454.471	233.8489 - 302.6025	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	3 - 4		229
	200	1454.701	188.3953 - 257.1380	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	5 - 5		229
	300	1455.559	195.1963 - 263.8986	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	2 - 3		229
	50	1455.707	216.7791 - 285.4740	$3d^3(a^2H)4s - 3d^3(a^2P)4p$	$^3H - ^3D^\circ$	4 - 3		229
	700	1456.161	186.7255 - 255.3992	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	2 - 3		229
	150	1456.285	204.9754 - 273.6431	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	2 - 1		229
	250	1457.727	205.5364 - 274.1361	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	3 - 2		229
	250	1459.254	233.8489 - 302.3771	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	3 - 3		229
	150	1459.763	213.5341 - 282.0381	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^1G^\circ$	4 - 4		229
	500	1459.831	195.9330 - 264.4342	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	3 - 4		229
	400	1460.726	187.7190 - 256.1779	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	4 - 4		229
	125	1461.050	233.8489 - 302.2927	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	3 - 2		229
	100	1462.563	216.5381 - 284.9112	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^3D^\circ$	3 - 2		229
	500	1462.631	186.4336 - 254.8033	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	1 - 2		229
	30	1463.067	234.0274 - 302.3771	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	2 - 3		229
	70	1463.364	216.8604 - 285.1961	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	5 - 6	P	432
	40	1464.224	213.6492 - 281.9449	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	2 - 1		229
	700	1464.683	196.8386 - 265.1126	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	4 - 5		229
	200	1464.876	234.0274 - 302.2927	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	2 - 2		229
	100	1465.380	187.1575 - 255.3992	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^\circ$	3 - 3	P	229
	400	1465.401	221.3052 - 289.5459	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^1G^\circ$	5 - 4	P	229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
400	1466.649	209.1101 - 277.2927		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^o$	4 - 5		229
150	1468.870	214.5258 - 282.6048		$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^3P - ^5S^o$	2 - 2		229
150	1468.911	186.7255 - 254.8033		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	2 - 2		229
500	1469.000	217.1225 - 285.1961		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^o$	6 - 6		229
100	1469.599	214.5258 - 282.5716		$3d^3(a^2P)4s - 3d^3(a^2G)4p$	$^3P - ^1F^o$	2 - 3		229
70	1471.205	215.7826 - 283.7540		$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^3D^o$	1 - 1		229
80	1471.331	195.9330 - 263.8986		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^o$	3 - 3		229
250	1472.098	216.8604 - 284.7908		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^o$	5 - 5		229
250	1472.512	216.7791 - 284.6903		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^o$	4 - 4		229
100	1472.805	214.5258 - 282.4235		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^1D^o$	2 - 2		229
100	1474.275	216.8604 - 284.6903		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^o$	5 - 4		229
70	1475.302	188.3953 - 256.1779		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	5 - 4		229
300	1475.604	209.5239 - 277.2927		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^o$	5 - 5		229
80	1477.536	187.7190 - 255.3992		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	4 - 3		229
100	1477.798	217.1225 - 284.7908		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^o$	6 - 5		229
70	1478.288	187.1575 - 254.8033		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	3 - 2		229
200	1478.785	214.6114 - 282.2345		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^o$	1 - 0		229
20	1479.388	196.8386 - 264.4342		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^o$	4 - 4		229
500	1479.471	208.8382 - 276.4297		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^o$	3 - 4		229
200	1483.259	214.5258 - 281.9449		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^o$	2 - 1		229
80	1484.209	219.4869 - 286.8627		$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^1P - ^3D^o$	1 - 2		229
10	1484.372	219.4869 - 286.8553		$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^1P - ^3D^o$	1 - 1		229
	1484.47	26.4683 - 93.8323		$3d^4 - 3d^4$	$a^3P - b^1D$	2 - 2	F,P	229
150	1485.017	262.5093 - 329.8486		$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^1D - ^1D^o$	2 - 2		229
150	1485.450	209.1101 - 276.4297		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^o$	4 - 4		229
80	1485.927	213.5341 - 280.8322		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^3F^o$	4 - 3		229
150	1489.237	216.5381 - 283.6863		$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^3P^o$	3 - 2		229
5	1490.454	216.5927 - 283.6863		$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^3P^o$	2 - 2		229
	1490.9	26.7607 - 93.8323		$3d^4 - 3d^4$	$a^3F - b^1D$	2 - 2	F,P	375,229
	1492.8	26.8423 - 93.8323		$3d^4 - 3d^4$	$a^3F - b^1D$	3 - 2	F,P	375,229
40	1494.639	209.5239 - 276.4297		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^o$	5 - 4		229
80	1495.616	221.3052 - 288.1672		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^3I^o$	5 - 6		229
	1495.70	26.9740 - 93.8323		$3d^4 - 3d^4$	$a^3F - b^1D$	4 - 2	F,P	229
250	1496.266	213.5341 - 280.3672		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^3F^o$	4 - 4		229
10	1499.233	219.4869 - 286.1877		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^3S^o$	1 - 1		229
40	1500.581	215.7826 - 282.4235		$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^1D^o$	1 - 2		229
60	1504.329	219.4869 - 285.9617		$3d^3(a^2P)4s - 3d^3(a^2D)4p$	$^1P - ^1P^o$	1 - 1		229
20	1504.848	215.7826 - 282.2345		$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^3P^o$	1 - 0		229
70	1508.153	214.5258 - 280.8322		$3d^3(a^2P)4s - 3d^3(a^2G)4p$	$^3P - ^3F^o$	2 - 3		229
70	1509.792	220.6210 - 286.8553		$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^1D - ^3D^o$	2 - 1		229
60	1511.429	215.7826 - 281.9449		$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^3D - ^3P^o$	1 - 1		229
70	1514.834	214.5258 - 280.5397		$3d^3(a^2P)4s - 3d^3(a^2G)4p$	$^3P - ^3F^o$	2 - 2		229
40	1514.881	216.8604 - 282.8719		$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^1H^o$	5 - 5		229
10	1515.533	195.1963 - 261.1796		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^o$	2 - 3		229
100	1516.804	214.6114 - 280.5397		$3d^3(a^2P)4s - 3d^3(a^2G)4p$	$^3P - ^3F^o$	1 - 2		229
50	1519.519	220.6210 - 286.4313		$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^1D - ^3D^o$	2 - 3		229
70	1525.165	220.6210 - 286.1877		$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^1D - ^3S^o$	2 - 1		229
80	1528.490	219.4869 - 284.9112		$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^3D^o$	1 - 2		229
150	1530.439	220.6210 - 285.9617		$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^1P^o$	2 - 1		229
80	1532.330	213.5341 - 278.7942		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^3G^o$	4 - 3		229
740	1532.647	195.9330 - 261.1796		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^o$	3 - 3	P	432
630	1533.387	195.1963 - 260.4114		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^o$	2 - 2	P	432
2	1535.034	213.6492 - 278.7942		$3d^3(a^4P)4s - 3d^3(a^2G)4p$	$^3P - ^3G^o$	2 - 3		229
200	1543.234	195.1963 - 259.9952		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^o$	2 - 1		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
760	1550.907		195.9330 - 260.4114	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	3 - 2	P	432
300	1554.219		196.8386 - 261.1796	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	4 - 3		229
100	1555.442		220.6210 - 284.9112	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^1D - ^3D^\circ$	2 - 2		229
100	1557.051		212.5421 - 276.7659	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	0 - 1		229
100	1557.311		196.8386 - 261.0519	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5F^\circ$	4 - 5		229
50	1557.645		219.4869 - 283.6863	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^3P^\circ$	1 - 2		229
70	1558.114		195.1963 - 259.3761	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5F^\circ$	2 - 2		229
10	1561.978		195.9330 - 259.9547	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5F^\circ$	3 - 3		229
	1562.1		29.8171 - 93.8323	$3d^4 - 3d^4$	$a^3G - b^1D$	3 - 2	F,P	375,229
100	1563.778		212.8181 - 276.7659	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 1		229
80	1563.934		212.8181 - 276.7592	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^5D^\circ$	1 - 2		229
60	1568.407		213.5341 - 277.2927	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^3H^\circ$	4 - 5		229
50	1569.985		195.1963 - 258.8915	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5D^\circ$	2 - 1		229
	1570.22		30.1470 - 93.8323	$3d^4 - 3d^4$	$a^3G - b^1D$	4 - 2	F,P	229
125	1571.910		212.8181 - 276.4349	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 0		229
100	1576.212		195.9330 - 259.3761	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5F^\circ$	3 - 2		229
	1580.3		.1421 - 63.4200	$3d^4 - 3d^4$	$ga^5D - b^3P$	1 - 0	F,P	375,229
30	1582.802		216.8604 - 280.0396	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3G^\circ$	5 - 5		229
80	1583.958		220.6210 - 283.7540	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^1D - ^3D^\circ$	2 - 1		229
125	1584.337		219.4869 - 282.6048	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^5S^\circ$	1 - 2	P	229
125	1584.367		213.6492 - 276.7659	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	2 - 1	P	229
150	1584.530		213.6492 - 276.7592	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^\circ$	2 - 2		229
60	1585.655		220.6210 - 283.6863	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^1D - ^3P^\circ$	2 - 2		229
	1587.2		.4173 - 63.4200	$3d^4 - 3d^4$	$ga^5D - b^3P$	2 - 0	F,P	375,229
100	1588.199		216.5381 - 279.5026	$3d^3(a^2D)4s - 3d^3(a^2G)4p$	$^3D - ^3G^\circ$	3 - 4		229
100	1588.906		219.4869 - 282.4235	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^1D^\circ$	1 - 2		229
80	1589.013		195.1963 - 258.1285	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	2 - 2		229
70	1589.390		217.1225 - 280.0396	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3G^\circ$	6 - 5		229
	1589.47		0.0000 - 62.9142	$3d^4 - 3d^4$	$ga^5D - b^3P$	0 - 1	F,P	229
10	1589.941		213.5341 - 276.4297	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^3H^\circ$	4 - 4		229
	1593.1		.1421 - 62.9142	$3d^4 - 3d^4$	$ga^5D - b^3P$	1 - 1	F,P	375,229
100	1593.708		195.9330 - 258.6800	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	3 - 3		229
40	1596.365		216.8604 - 279.5026	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3G^\circ$	5 - 4		229
100	1598.556		212.8181 - 275.3743	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 2		229
100	1598.824		195.1963 - 257.7423	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5F^\circ$	2 - 1		229
10	1599.842		196.8386 - 259.3448	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5D^\circ$	4 - 4		229
	1600.08		.4173 - 62.9142	$3d^4 - 3d^4$	$ga^5D - b^3P$	2 - 1	F,P	229
60	1602.766		205.5364 - 267.9286	$3d^3(a^2P)4s - 3d^3(a^4F)4p$	$^5P - ^3F^\circ$	3 - 4		229
	1604.6		0.0000 - 62.3211	$3d^4 - 3d^4$	$ga^5D - b^3F$	0 - 2	F,P	375,229
50	1606.675		214.5258 - 276.7659	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	2 - 1		229
	1607.1		.1421 - 62.3644	$3d^4 - 3d^4$	$ga^5D - b^3F$	1 - 3	F,P	375,229
150	1607.830		195.9330 - 258.1285	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^5D^\circ$	3 - 2		229
	1608.26		.1421 - 62.3211	$3d^4 - 3d^4$	$ga^5D - b^3F$	1 - 2	F,P	229
	1610.0		.8031 - 62.9142	$3d^4 - 3d^4$	$ga^5D - b^3P$	3 - 1	F,P	375,229
100	1614.186		220.6210 - 282.5716	$3d^3(a^2D)4s - 3d^3(a^2G)4p$	$^1D - ^1F^\circ$	2 - 3		229
	1614.28		.4173 - 62.3644	$3d^4 - 3d^4$	$ga^5D - b^3F$	2 - 3	F,P	229
	1615.41		.4173 - 62.3211	$3d^4 - 3d^4$	$ga^5D - b^3F$	2 - 2	F,P	229
100	1617.039		196.8386 - 258.6800	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	4 - 3		229
	1617.6		.4173 - 62.2381	$3d^4 - 3d^4$	$ga^5D - b^3F$	2 - 4	F,P	375,229
70	1618.057		220.6210 - 282.4235	$3d^3(a^2D)4s - 3d^3(a^2P)4p$	$^1D - ^1D^\circ$	2 - 2		229
30	1618.383		216.8604 - 278.6507	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3H^\circ$	5 - 6		229
150	1620.087		213.6492 - 275.3743	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	2 - 2		229
	1620.42		.1421 - 61.8544	$3d^4 - 3d^4$	$ga^5D - b^3P$	1 - 2	F,P	229
200	1624.251		221.3052 - 282.8719	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^1H - ^1H^\circ$	5 - 5		229

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
250		1624.40	.8031 - 62.3644	$3d^4 - 3d^4$	$ga^3D - b^3F$	3 - 3	F,P	229
		1625.264	217.1225 - 278.6507	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3H^*$	6 - 6		229
		1625.54	.8031 - 62.3211	$3d^4 - 3d^4$	$ga^3D - b^3F$	3 - 2	F,P	229
100		1626.077	213.6492 - 275.1466	$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^*$	2 - 1		229
		1627.7	.4173 - 61.8544	$3d^4 - 3d^4$	$ga^3D - b^3P$	2 - 2	F,P	375,229
		1627.74	.8031 - 62.2381	$3d^4 - 3d^4$	$ga^3D - b^3F$	3 - 4	F,P	229
1		1630.841	212.8181 - 274.1361	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^*$	1 - 2		229
		1637.15	1.2828 - 62.3644	$3d^4 - 3d^4$	$ga^3D - b^3F$	4 - 3	F,P	229
		1638.0	.8031 - 61.8544	$3d^4 - 3d^4$	$ga^3D - b^3P$	3 - 2	F,P	375,229
10		1639.794	215.7826 - 276.7659	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3P^*$	1 - 1		229
		1640.55	1.2828 - 62.2381	$3d^4 - 3d^4$	$ga^3D - b^3F$	4 - 4	F,P	229
		1643.427	214.5258 - 275.3743	$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^*$	2 - 2		229
50	1645.742	214.6114 - 275.3743	$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^*$	1 - 2		229	
10		1648.743	215.7826 - 276.4349	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3P^*$	1 - 0		229
		1650.9	1.2828 - 61.8544	$3d^4 - 3d^4$	$ga^3D - b^3P$	4 - 2	F,P	375,229
15	1651.927	214.6114 - 275.1466	$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^*$	1 - 1		229	
15	1652.531	216.7791 - 277.2927	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3H^*$	4 - 5		229	
70	1653.257	213.6492 - 274.1361	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^*$	2 - 2		229	
150	1654.744	216.8604 - 277.2927	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3H^*$	5 - 5		229	
40	1659.897	195.9330 - 256.1779	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^*$	3 - 4		229	
50	1660.551	216.5381 - 276.7592	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3D^*$	3 - 2		229	
30	1661.048	195.1963 - 255.3992	$3d^3(a^2F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^*$	2 - 3		229	
1	1661.959	217.1225 - 277.2927	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3H^*$	6 - 5		229	
10	1662.742	214.6114 - 274.7533	$3d^3(a^2P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^*$	1 - 0		229	
200	1668.926	220.6210 - 280.5397	$3d^3(a^2D)4s - 3d^3(a^2G)4p$	$^1D - ^3F^*$	2 - 2		229	
150	1676.441	216.7791 - 276.4297	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3H^*$	4 - 4		229	
2		1678.726	216.8604 - 276.4297	$3d^3(a^2H)4s - 3d^3(a^2G)4p$	$^3H - ^3H^*$	5 - 4		229
		1687.0	61.8544 - 121.1302	$3d^4 - 3d^4$	$b^3P - b^1S$	2 - 0	F,P	375,229
70	1699.636	216.5381 - 275.3743	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3P^*$	3 - 2		229	
100	1704.923	233.6336 - 292.2876	$3d^3(a^2F)4s - 3d^3(a^2H)4p$	$^3F - ^3G^*$	4 - 5		229	
150	1709.809	234.0274 - 292.5132	$3d^3(a^2F)4s - 3d^3(a^2H)4p$	$^3F - ^3G^*$	2 - 3		229	
60	1713.694	215.7826 - 274.1361	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3P^*$	1 - 2		229	
50		1714.157	216.5927 - 274.9303	$3d^3(a^2D)4s - 3d^3(a^4P)4p$	$^3D - ^3P^*$	2 - 3		229
		1717.74	62.9142 - 121.1302	$3d^4 - 3d^4$	$b^3P - b^1S$	1 - 0	F,P	229
	1720.282	209.1101 - 267.2401	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3F^*$	4 - 3	P	375	
	1730.864	208.8382 - 266.6128	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3F^*$	3 - 2	P	375	
	1746.85	36.5863 - 93.8323	$3d^4 - 3d^4$	$a^1G - b^1D$	4 - 2	F,P	229	
	1748.18	36.6301 - 93.8323	$3d^4 - 3d^4$	$a^3D - b^1D$	3 - 2	F,P	229	
	1752.12	36.7585 - 93.8323	$3d^4 - 3d^4$	$a^3D - b^1D$	2 - 2	F,P	229	
	1757.26	36.9254 - 93.8323	$3d^4 - 3d^4$	$a^3D - b^1D$	1 - 2	F,P	229	
	1776.849	233.6336 - 289.9130	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3D^*$	4 - 3	P	375	
	1785.635	209.1101 - 265.1126	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3G^*$	4 - 5	P	375	
	1798.691	208.8382 - 264.4342	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3G^*$	3 - 4	P	375	
	1798.927	209.5239 - 265.1126	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3G^*$	5 - 5	P	375	
	1800.478	233.8489 - 289.3897	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3D^*$	3 - 2	P	375	
	1807.530	209.1101 - 264.4342	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3G^*$	4 - 4	P	375	
	1816.187	208.8382 - 263.8986	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3G^*$	3 - 3	P	375	
	1821.152	209.5239 - 264.4342	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3G^*$	5 - 4	P	375	
	1825.200	209.1101 - 263.8986	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3G^*$	4 - 3	P	375	
	1830.081	234.0274 - 288.6698	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3D^*$	2 - 1	P	375	
	1845.06	39.6334 - 93.8323	$3d^4 - 3d^4$	$a^1S - b^1D$	0 - 2	F,P	229	
	1852.311	233.6336 - 287.6202	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3F^*$	4 - 4	P	375	
	1858.446	205.5364 - 259.3448	$3d^3(a^2P)4s - 3d^3(a^4F)4p$	$^3P - ^3D^*$	3 - 4	P	375	
	1859.728	233.8489 - 287.6202	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3F^*$	3 - 4	P	375	

FE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1862.038	204.9754 - 258.6800	$3d^3(a^2F)4s - 3d^3(a^4F)4p$	$^3P - ^3D^\circ$	2 - 3	P	375
		1869.096	237.7296 - 291.2314	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^1F - ^1F^\circ$	3 - 3	P	375
		1869.998	233.6336 - 287.1096	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3F^\circ$	4 - 3	P	375
		1872.708	204.7299 - 258.1285	$3d^3(a^2F)4s - 3d^3(a^4F)4p$	$^3P - ^3D^\circ$	1 - 2	P	375
		1877.557	233.8489 - 287.1096	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3F^\circ$	3 - 3	P	375
		1883.871	234.0274 - 287.1096	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3F^\circ$	2 - 3	P	375
		1886.301	233.8489 - 286.8627	$3d^3(a^2F)4s - 3d^3(a^4P)4p$	$^3F - ^3D^\circ$	3 - 2	P	375
		1892.939	234.0274 - 286.8553	$3d^3(a^2F)4s - 3d^3(a^4P)4p$	$^3F - ^3D^\circ$	2 - 1	P	375
		1894.022	233.6336 - 286.4313	$3d^3(a^2F)4s - 3d^3(a^4P)4p$	$^3F - ^3D^\circ$	4 - 3	P	375
		1911.827	233.8489 - 286.1549	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3F^\circ$	3 - 2	P	375
		1918.373	234.0274 - 286.1549	$3d^3(a^2F)4s - 3d^3(a^2D)4p$	$^3F - ^3F^\circ$	2 - 2	P	375
		1928.997	233.6336 - 285.4740	$3d^3(a^2F)4s - 3d^3(a^2P)4p$	$^3F - ^3D^\circ$	4 - 3	P	375
		1945.885	216.5381 - 267.9286	$3d^3(a^2D)4s - 3d^3(a^4F)4p$	$^3D - ^3F^\circ$	3 - 4	P	375
		1958.392	233.8489 - 284.9112	$3d^3(a^2F)4s - 3d^3(a^4P)4p$	$^3F - ^3D^\circ$	3 - 2	P	375
		1960.896	209.5239 - 260.5210	$3d^3(a^2G)4s - 3d^3(a^4F)4p$	$^3G - ^3F^\circ$	5 - 4	P	375
		1974.435	216.5927 - 267.2401	$3d^3(a^2D)4s - 3d^3(a^4F)4p$	$^3D - ^3F^\circ$	2 - 3	P	375
		1998.281	258.6285 - 308.6715	$3d^3(b^2D)4s - 3d^3(a^2F)4p$	$^3D - ^3D^\circ$	2 - 1	P	375

IRON VI (Fe^{5+}), $Z = 26$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3(^4F_{3/2})$ (21 electrons)
Ionization Potential [799 000] cm^{-1} ; [99.1] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
2	255.461	18.9420 - 410.3895	$3d^3 - 3d^2(^1S)4p$	$a^4P - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
20	260.289	26.2149 - 410.3895	$3d^3 - 3d^2(^1S)4p$	$a^2P - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	856	
200	261.786	26.2149 - 408.2074	$3d^3 - 3d^2(^1S)4p$	$a^2P - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
250	261.846	28.4843 - 410.3895	$3d^3 - 3d^2(^1S)4p$	$a^2D - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
150	261.944	28.6279 - 410.3895	$3d^3 - 3d^2(^1S)4p$	$a^2D - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
50	261.977	26.4955 - 408.2074	$3d^3 - 3d^2(^1S)4p$	$a^2P - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
100	263.449	28.6279 - 408.2074	$3d^3 - 3d^2(^1S)4p$	$a^2D - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
2	269.879	0.0000 - 370.5381	$3d^3 - 3d^2(^3P)4p$	$ga^4F - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
	273.60	0.0000 - 365.4940	$3d^3 - 3d^2(^3P)4p$	$ga^4F - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	437	
10	274.494	1.1883 - 365.4940	$3d^3 - 3d^2(^3P)4p$	$ga^4F - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
80	276.173	.5113 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
50	276.352	0.0000 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
40	276.427	.5113 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
150	276.690	1.1883 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
50	276.742	.5113 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
250	276.945	1.1883 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
50	277.232	0.0000 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
800	277.570	2.0006 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
300	277.626	.5113 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
300	277.947	0.0000 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
800	278.150	1.1883 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
300	278.244	0.0000 - 359.3959	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
500	278.343	.5113 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$ga^4F - y^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		228	
300	278.474	0.0000 - 359.0993	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
100	278.787	1.1883 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
300	278.970	20.6164 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$a^2G - x^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
250	279.421	2.0006 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
20	279.466	.5113 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
100	279.997	1.1883 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$ga^4F - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	
300	280.397	21.3150 - 377.9518	$3d^3 - 3d^2(^1G)4p$	$a^2G - x^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		228	

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	281.572	.5113 - 355.6571	$3d^3 - 3d^2(^3P)4p$	$ga^4F - z^4S^o$	$\frac{5}{2} - \frac{3}{2}$		228
	150	283.396	26.2149 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$a^2P - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$		228
	300	283.776	21.3150 - 373.7061	$3d^3 - 3d^2(^1G)4p$	$a^2G - z^2H^o$	$\frac{9}{2} - \frac{11}{2}$		228
	50	284.385	18.9420 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$a^4P - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	250	284.513	20.6164 - 372.0956	$3d^3 - 3d^2(^1G)4p$	$a^2G - z^2H^o$	$\frac{7}{2} - \frac{9}{2}$		228
	10	284.928	19.6108 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$a^4P - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	5	285.079	21.3150 - 372.0956	$3d^3 - 3d^2(^1G)4p$	$a^2G - z^2H^o$	$\frac{9}{2} - \frac{9}{2}$		228
	5	285.231	28.4843 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$a^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$		228
	150	285.349	28.6279 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$a^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$		228
	5	285.746	20.6164 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$a^2G - x^2D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	250	286.150	28.4843 - 377.9518	$3d^3 - 3d^2(^1G)4p$	$a^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$		228
	100	286.347	28.7243 - 377.9518	$3d^3 - 3d^2(^1G)4p$	$a^2H - x^2F^o$	$\frac{9}{2} - \frac{7}{2}$		228
	70	286.674	1.1883 - 350.0178	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2G^o$	$\frac{7}{2} - \frac{9}{2}$		228
	10	286.986	.5113 - 348.9621	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2G^o$	$\frac{5}{2} - \frac{7}{2}$		228
	250	287.182	26.2149 - 374.4256	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^o$	$\frac{1}{2} - \frac{3}{2}$		228
	100	287.343	2.0006 - 350.0178	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2G^o$	$\frac{9}{2} - \frac{9}{2}$		228
	150	287.415	26.4955 - 374.4256	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^o$	$\frac{1}{2} - \frac{3}{2}$		228
	300	287.461	26.2149 - 374.0883	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	40	287.545	1.1883 - 348.9621	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		228
	200	287.694	26.4955 - 374.0883	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	500	288.557	18.9420 - 365.4940	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		228
	400	289.066	28.4843 - 374.4256	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	100	289.096	0.0000 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$		228
	800	289.115	19.6108 - 365.4940	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		228
	300	289.187	28.6279 - 374.4256	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^2P^o$	$\frac{1}{2} - \frac{3}{2}$		228
	250	289.307	18.7383 - 364.3929	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		228
	200	289.469	28.6279 - 374.0883	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$	P	228
	200	289.478	18.9420 - 364.3929	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P	228
	400	289.524	.5113 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	200	289.682	18.7383 - 363.9457	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	700	289.853	18.9420 - 363.9457	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	100	289.871	28.7243 - 373.7061	$3d^3 - 3d^2(^1G)4p$	$a^2H - z^2H^o$	$\frac{9}{2} - \frac{11}{2}$		228
	30	289.959	20.6164 - 365.4940	$3d^3 - 3d^2(^3P)4p$	$a^2G - z^4P^o$	$\frac{7}{2} - \frac{5}{2}$		228
	800	290.040	19.6108 - 364.3929	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		228
	600	290.092	1.1883 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	300	290.147	0.0000 - 344.6526	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	P	228
	400	290.149	20.6164 - 365.2666	$3d^3 - 3d^2(^1G)4p$	$a^2G - y^2G^o$	$\frac{7}{2} - \frac{9}{2}$	P	228
	900	290.273	29.2029 - 373.7061	$3d^3 - 3d^2(^1G)4p$	$a^2H - z^2H^o$	$\frac{11}{2} - \frac{11}{2}$		228
	700	290.309	20.6164 - 365.0770	$3d^3 - 3d^2(^1G)4p$	$a^2G - y^2G^o$	$\frac{7}{2} - \frac{7}{2}$		228
	200	290.390	26.2149 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$a^2P - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	300	290.500	1.1883 - 345.4226	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$		228
	800	290.579	.5113 - 344.6526	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	125	290.661	26.4955 - 370.5381	$3d^3 - 3d^2(^3P)4p$	$a^2P - x^2D^o$	$\frac{1}{2} - \frac{3}{2}$		228
	400	290.739	21.3150 - 365.2666	$3d^3 - 3d^2(^1G)4p$	$a^2G - y^2G^o$	$\frac{9}{2} - \frac{9}{2}$		228
	200	290.900	.5113 - 344.2733	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	80	290.985	18.9420 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	700	291.020	0.0000 - 343.6193	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	800	291.187	2.0006 - 345.4226	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^o$	$\frac{9}{2} - \frac{7}{2}$		228
	800	291.229	28.7243 - 372.0956	$3d^3 - 3d^2(^1G)4p$	$a^2H - z^2H^o$	$\frac{9}{2} - \frac{9}{2}$		228
	100	291.365	0.0000 - 343.2109	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	291.444	18.7383 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$		228
	900	291.473	1.1883 - 344.2733	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	300	291.552	19.6108 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	60	291.617	18.9420 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	250	291.635	29.2029 - 372.0956	$3d^3 - 3d^2(^1G)4p$	$a^2H - z^2H^o$	$\frac{11}{2} - \frac{9}{2}$		228
	800	291.801	.5113 - 343.2109	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	600	291.835	19.6108 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	70	291.909	0.0000 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	292.039	1.1883 - 343.6082	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	50	292.185	19.6108 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	30	292.314	28.4843 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$a^2D - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	60	292.346	.5113 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$	P	228
	20	292.352	28.4843 - 370.5381	$3d^3 - 3d^2(^3P)4p$	$a^2D - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$	P	228
	200	292.409	20.6164 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$a^2G - y^2D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	100	292.437	28.6279 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$a^2D - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	292.599	18.9420 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	100	292.693	20.6164 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$a^2G - y^4D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	800	292.733	2.0006 - 343.6082	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	293.043	1.1883 - 342.4344	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	150	293.171	18.7383 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	293.217	18.7383 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	293.293	21.3150 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$a^2G - y^4D^o$	$\frac{9}{2} - \frac{7}{2}$		228
	300	293.380	.5113 - 341.3653	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	293.391	18.9420 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	800	293.488	2.0006 - 342.7306	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		228
	200	293.549	18.7383 - 359.3959	$3d^3 - 3d^2(^3P)4p$	$a^4P - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	900	293.742	2.0006 - 342.4344	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{9}{2} - \frac{7}{2}$		228
	100	293.806	18.7383 - 359.0993	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	700	293.820	0.0000 - 340.3440	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{1}{2}$		228
	300	293.881	19.6108 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	800	293.965	1.1883 - 341.3653	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	300	294.039	20.6164 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$a^2G - y^4D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	900	294.262	.5113 - 340.3440	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	800	294.337	1.1883 - 340.9350	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{7}{2} - \frac{5}{2}$		228
	700	294.516	0.0000 - 339.5398	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{1}{2}$		228
	100	294.645	18.9420 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	294.668	2.0006 - 341.3653	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{9}{2} - \frac{7}{2}$		228
	500	294.751	20.6164 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$a^2G - y^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	250	294.850	1.1883 - 340.3440	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	294.960	.5113 - 339.5398	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	700	295.015	.5113 - 339.4770	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{5}{2} - \frac{3}{2}$		228
	700	295.042	2.0006 - 340.9350	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		228
	150	295.147	18.9420 - 357.7552	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	30	295.224	19.6108 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	500	295.262	71.7076 - 410.3895	$3d^3 - 3d^2(^1S)4p$	$b^2D - x^2P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	800	295.360	21.3150 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$a^2G - y^2F^o$	$\frac{9}{2} - \frac{7}{2}$		228
	150	295.560	72.0489 - 410.3895	$3d^3 - 3d^2(^1S)4p$	$b^2D - x^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	200	295.606	1.1883 - 339.4770	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{7}{2} - \frac{5}{2}$		228
	500	295.634	0.0000 - 338.2564	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{1}{2}$		228
	80	295.702	26.2149 - 364.3929	$3d^3 - 3d^2(^3P)4p$	$a^2P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	200	295.732	19.6108 - 357.7552	$3d^3 - 3d^2(^1D)4p$	$a^4P - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	80	295.947	26.4955 - 364.3929	$3d^3 - 3d^2(^3P)4p$	$a^2P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	70	296.077	.5113 - 338.2564	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{5}{2} - \frac{3}{2}$		388
	900	296.106	20.6164 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$a^2G - y^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	200	296.317	2.0006 - 339.4770	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		228
	80	296.676	1.1883 - 338.2564	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^o$	$\frac{7}{2} - \frac{5}{2}$		228
	200	296.725	28.4843 - 365.4940	$3d^3 - 3d^2(^3P)4p$	$a^2D - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	400	296.807	18.7383 - 355.6571	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^o$	$\frac{1}{2} - \frac{1}{2}$		228

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	70	296.851	28.6279 - 365.4940	$3d^3 - 3d^2(^3P)4p$	$a^2D - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		228
	500	296.988	18.9420 - 355.6571	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	297.139	28.7243 - 365.2666	$3d^3 - 3d^2(^1G)4p$	$a^2H - y^2G^o$	$\frac{9}{2} - \frac{9}{2}$		228
	250	297.275	26.2149 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	800	297.307	28.7243 - 365.0770	$3d^3 - 3d^2(^1G)4p$	$a^2H - y^2G^o$	$\frac{9}{2} - \frac{9}{2}$		228
	300	297.479	72.0489 - 408.2074	$3d^3 - 3d^2(^1S)4p$	$b^2D - x^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	800	297.561	29.2029 - 365.2666	$3d^3 - 3d^2(^1G)4p$	$a^2H - y^2G^o$	$\frac{11}{2} - \frac{9}{2}$		228
	500	297.579	19.6108 - 355.6571	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^o$	$\frac{5}{2} - \frac{3}{2}$		228
	100	297.828	28.6279 - 364.3929	$3d^3 - 3d^2(^3P)4p$	$a^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	297.934	26.2149 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	298.184	26.4955 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$		228
	150	298.224	28.6279 - 363.9457	$3d^3 - 3d^2(^3P)4p$	$a^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	10	298.960	26.2149 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	400	299.295	28.4843 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	100	299.593	28.4843 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	100	299.803	26.2149 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		046
	300	299.963	28.4843 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	100	300.043	26.4955 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^4D^o$	$\frac{1}{2} - \frac{5}{2}$		228
	400	300.092	28.6279 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	10	300.136	26.2149 - 359.3959	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	30	300.240	18.7383 - 351.8058	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$		228
	200	300.390	26.4955 - 359.3959	$3d^3 - 3d^2(^3P)4p$	$a^2P - y^4D^o$	$\frac{1}{2} - \frac{1}{2}$		228
	100	300.423	18.9420 - 351.8058	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^2S^o$	$\frac{3}{2} - \frac{3}{2}$	P	228
	50	300.426	46.2173 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^o$	$\frac{7}{2} - \frac{5}{2}$	P	228
	300	300.657	26.4955 - 359.0993	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	500	300.776	46.6037 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228
	200	301.002	28.4843 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	100	301.095	26.2149 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	800	301.445	46.2173 - 377.9518	$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^o$	$\frac{7}{2} - \frac{7}{2}$		228
	800	301.622	26.2149 - 357.7552	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	301.750	28.4843 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2F^o$	$\frac{5}{2} - \frac{7}{2}$		228
	100	301.796	46.6037 - 377.9518	$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^o$	$\frac{5}{2} - \frac{7}{2}$		228
	100	301.844	28.4843 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	250	301.878	26.4955 - 357.7552	$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2P^o$	$\frac{1}{2} - \frac{3}{2}$		228
	100	301.969	28.7243 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$a^2H - y^2F^o$	$\frac{9}{2} - \frac{7}{2}$	P	228
	50	301.975	28.6279 - 359.7813	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P	228
	250	302.327	28.6279 - 359.3959	$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	300	302.598	28.6279 - 359.0993	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	303.167	28.4843 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228
	150	303.299	28.6279 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	303.543	26.2149 - 355.6571	$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	303.580	20.6164 - 350.0178	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{7}{2} - \frac{9}{2}$		228
	20	303.833	28.6279 - 357.7552	$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	800	304.227	21.3150 - 350.0178	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{9}{2} - \frac{9}{2}$		228
	800	304.558	20.6164 - 348.9621	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		228
	100	305.043	46.6037 - 374.4256	$3d^3 - 3d^2(^3P)4p$	$a^2F - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	305.206	21.3150 - 348.9621	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^o$	$\frac{9}{2} - \frac{7}{2}$		228
	100	305.837	18.9420 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		046
	200	306.470	19.6108 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	300	306.829	18.7383 - 344.6526	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$		228
	70	306.862	46.2173 - 372.0956	$3d^3 - 3d^2(^1G)4p$	$a^2F - z^2H^o$	$\frac{7}{2} - \frac{9}{2}$		228
	500	306.926	19.6108 - 345.4226	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$		228
	250	307.021	18.9420 - 344.6526	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	307.134	26.2149 - 351.8058	$3d^3 - 3d^2(^3P)4p$	$a^2P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		228

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	307.380	18.9420 - 344.2733	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	250	307.398	26.4955 - 351.8058	$3d^3 - 3d^2(^1P)4p$	$a^2P - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$		228
	200	307.415	20.6164 - 345.9071	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^2D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	70	307.653	19.6108 - 344.6526	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		228
	250	307.805	18.7383 - 343.6193	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$		228
	40	307.875	20.6164 - 345.4226	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$		228
	100	307.999	18.9420 - 343.6193	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	300	308.012	19.6108 - 344.2733	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	308.191	18.7383 - 343.2109	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	900	308.296	46.2173 - 370.5796	$3d^3 - 3d^2(^1P)4p$	$a^2F - x^2D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	300	308.385	18.9420 - 343.2109	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$		228
	700	308.539	21.3150 - 345.4226	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$		228
	700	308.644	19.6108 - 343.6082	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^2F^o$	$\frac{5}{2} - \frac{7}{2}$		228
	100	308.666	46.6037 - 370.5796	$3d^3 - 3d^2(^1P)4p$	$a^2F - x^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	800	308.704	46.6037 - 370.5381	$3d^3 - 3d^2(^1P)4p$	$a^2F - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	308.969	20.6164 - 344.2733	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	200	308.995	18.9420 - 342.5715	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	80	309.022	19.6108 - 343.2109	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	309.426	28.6279 - 351.8058	$3d^3 - 3d^2(^1P)4p$	$a^2D - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		228
	50	309.604	20.6164 - 343.6082	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$		228
	200	309.635	19.6108 - 342.5715	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	700	310.276	21.3150 - 343.6082	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	700	310.602	20.6164 - 342.5715	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	10	310.736	20.6164 - 342.4344	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	100	310.796	19.6108 - 341.3653	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4F^o$	$\frac{5}{2} - \frac{7}{2}$		228
	100	311.137	18.9420 - 340.3440	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	311.241	28.7243 - 350.0178	$3d^3 - 3d^2(^1F)4p$	$a^2H - z^2G^o$	$\frac{5}{2} - \frac{3}{2}$		228
	50	311.410	21.3150 - 342.4344	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4F^o$	$\frac{10}{2} - \frac{10}{2}$		228
	900	311.706	29.2029 - 350.0178	$3d^3 - 3d^2(^1F)4p$	$a^2H - z^2G^o$	$\frac{11}{2} - \frac{9}{2}$		228
	80	311.786	19.6108 - 340.3440	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	70	311.918	18.9420 - 339.5398	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	800	312.268	28.7243 - 348.9621	$3d^3 - 3d^2(^1F)4p$	$a^2H - z^2G^o$	$\frac{7}{2} - \frac{5}{2}$		228
	10	312.769	20.6164 - 340.3440	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	300	312.801	26.2149 - 345.9071	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	312.872	21.3150 - 340.9350	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		228
	80	313.170	18.9420 - 338.2564	$3d^3 - 3d^2(^1F)4p$	$a^4P - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	313.207	46.2173 - 365.4940	$3d^3 - 3d^2(^1P)4p$	$a^2F - z^4P^o$	$\frac{7}{2} - \frac{5}{2}$		228
	500	313.432	46.2173 - 365.2666	$3d^3 - 3d^2(^1G)4p$	$a^2F - y^2G^o$	$\frac{7}{2} - \frac{10}{2}$		228
	20	313.587	46.6037 - 365.4940	$3d^3 - 3d^2(^1P)4p$	$a^2F - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	313.999	46.6037 - 365.0770	$3d^3 - 3d^2(^1G)4p$	$a^2F - y^2G^o$	$\frac{5}{2} - \frac{7}{2}$		228
	300	314.033	26.2149 - 344.6526	$3d^3 - 3d^2(^1F)4p$	$a^2P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	500	314.310	26.4955 - 344.6526	$3d^3 - 3d^2(^1F)4p$	$a^2P - z^2D^o$	$\frac{1}{2} - \frac{1}{2}$		228
	150	314.408	26.2149 - 344.2733	$3d^3 - 3d^2(^1F)4p$	$a^2P - z^4D^o$	$\frac{1}{2} - \frac{5}{2}$		228
	20	314.675	46.6037 - 364.3929	$3d^3 - 3d^2(^1P)4p$	$a^2F - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	314.824	20.6164 - 338.2564	$3d^3 - 3d^2(^1F)4p$	$a^2G - z^4G^o$	$\frac{7}{2} - \frac{3}{2}$		228
	500	315.038	28.4843 - 345.9071	$3d^3 - 3d^2(^1F)4p$	$a^2D - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	700	315.182	28.6279 - 345.9071	$3d^3 - 3d^2(^1F)4p$	$a^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	315.462	26.2149 - 343.2109	$3d^3 - 3d^2(^1F)4p$	$a^2P - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	300	315.521	28.4843 - 345.4226	$3d^3 - 3d^2(^1F)4p$	$a^2D - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$		228
	250	315.742	26.4955 - 343.2109	$3d^3 - 3d^2(^1F)4p$	$a^2P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$		228
	200	316.071	46.2173 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2D^o$	$\frac{7}{2} - \frac{5}{2}$		228
	300	316.100	26.2149 - 342.5715	$3d^3 - 3d^2(^1F)4p$	$a^2P - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	150	316.289	28.4843 - 344.6526	$3d^3 - 3d^2(^1F)4p$	$a^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	50	316.404	46.2173 - 362.2700	$3d^3 - 3d^2(^1P)4p$	$a^2F - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		228

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
200	316.433	316.433	28.6279 - 344.6526	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
20	316.669	316.669	28.4843 - 344.2733	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
300	316.813	316.813	28.6279 - 344.2733	$3d^3 - 3d^2(^3F)4p$	$a^4D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
200	317.205	317.205	46.6037 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
500	317.337	317.337	28.4843 - 343.6082	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
70	317.737	317.737	28.4843 - 343.2109	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
150	317.883	317.883	28.6279 - 343.2109	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
70	318.342	318.342	26.2149 - 340.3440	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
300	318.384	318.384	28.4843 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
80	318.530	318.530	28.6279 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
250	318.811	318.811	46.2173 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
100	319.159	319.159	26.2149 - 339.5398	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
100	319.254	319.254	29.2029 - 342.4344	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^4F^o$	$\frac{11}{2} - \frac{9}{2}$		228
80	319.445	319.445	26.4955 - 339.5398	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$		228
30	319.856	319.856	28.7243 - 341.3653	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
5	320.395	320.395	46.2173 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
100	320.472	320.472	26.2149 - 338.2564	$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
100	320.658	320.658	28.4843 - 340.3440	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
250	320.791	320.791	28.6279 - 340.3440	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
20	321.389	321.389	46.6037 - 357.7552	$3d^3 - 3d^2(^1D)4p$	$a^2F - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$		228
100	321.552	321.552	28.4843 - 339.4770	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
50	321.635	321.635	28.6279 - 339.5398	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
30	321.798	321.798	28.7243 - 339.4770	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
100	322.969	322.969	28.6279 - 338.2564	$3d^3 - 3d^2(^3F)4p$	$a^2D - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
200	325.342	325.342	71.7076 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$b^2D - x^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228
500	325.704	325.704	72.0489 - 379.0776	$3d^3 - 3d^2(^1G)4p$	$b^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$		228
500	326.538	326.538	71.7076 - 377.9518	$3d^3 - 3d^2(^1G)4p$	$b^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$		228
500	330.341	330.341	71.7076 - 374.4256	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$		228
200	330.714	330.714	72.0489 - 374.4256	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$		228
300	331.084	331.084	72.0489 - 374.0883	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
70	333.678	333.678	46.2173 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2D^o$	$\frac{7}{2} - \frac{5}{2}$		228
40	334.108	334.108	46.6037 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
200	334.219	334.219	46.2173 - 345.4226	$3d^3 - 3d^2(^3F)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$		228
300	334.593	334.593	71.7076 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$b^2D - x^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
150	334.639	334.639	71.7076 - 370.5381	$3d^3 - 3d^2(^3P)4p$	$b^2D - x^2D^o$	$\frac{5}{2} - \frac{1}{2}$		228
250	334.974	334.974	72.0489 - 370.5796	$3d^3 - 3d^2(^3P)4p$	$b^2D - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
300	335.021	335.021	72.0489 - 370.5381	$3d^3 - 3d^2(^3P)4p$	$b^2D - x^2D^o$	$\frac{3}{2} - \frac{1}{2}$		228
5	335.514	335.514	46.6037 - 344.6526	$3d^3 - 3d^2(^3F)4p$	$a^4F - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		228
150	335.945	335.945	46.6037 - 344.2733	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		228
250	336.258	336.258	46.2173 - 343.6082	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$		228
5	336.696	336.696	46.6037 - 343.6082	$3d^3 - 3d^2(^3F)4p$	$a^4F - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228
10	337.434	337.434	46.2173 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
200	337.875	337.875	46.6037 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228
50	340.994	340.994	46.2173 - 339.4770	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^4G^o$	$\frac{7}{2} - \frac{7}{2}$		228
2	341.368	341.368	46.6037 - 339.5398	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$		228
60	342.871	342.871	46.6037 - 338.2564	$3d^3 - 3d^2(^3F)4p$	$a^2F - z^4G^o$	$\frac{5}{2} - \frac{5}{2}$		228
80	343.766	343.766	71.7076 - 362.6029	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
60	344.161	344.161	71.7076 - 362.2700	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^4D^o$	$\frac{5}{2} - \frac{7}{2}$		228
100	345.054	345.054	72.0489 - 361.8582	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
5	346.021	346.021	71.7076 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^4D^o$	$\frac{5}{2} - \frac{5}{2}$		228
10	346.430	346.430	72.0489 - 360.7071	$3d^3 - 3d^2(^3P)4p$	$b^2D - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		228
150	347.010	347.010	71.7076 - 359.8840	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2F^o$	$\frac{5}{2} - \frac{7}{2}$		228
50	348.886	348.886	71.7076 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228
60	349.303	349.303	72.0489 - 358.3346	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	349.592	71.7076 - 357.7552	$3d^3 - 3d^2(^1D)4p$	$b^2D - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	100	364.696	71.7076 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	40	365.152	72.0489 - 345.9071	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	80	366.833	72.0489 - 344.6526	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	100	367.777	71.7076 - 343.6082	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	40	368.780	72.0489 - 343.2109	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	50	369.187	71.7076 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	50	369.652	72.0489 - 342.5715	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	150	372.72	72.0489 - 340.3440	$3d^3 - 3d^2(^3F)4p$	$b^2D - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$	Q	730
	10	1018.835	264.1183 - 362.2700	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^4F - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	40	1024.898	263.1359 - 360.7071	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^4F - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	10	1026.560	262.3684 - 359.7813	$3d^2(^3F)4s - 3d^2(^3P)4p$	$b^4F - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	5	1042.352	269.1402 - 365.0770	$3d^2(^3F)4s - 3d^2(^1G)4p$	$b^2F - y^2G^o$	$\frac{5}{2} - \frac{3}{2}$		228
	10	1057.153	270.6726 - 365.2666	$3d^2(^3F)4s - 3d^2(^1G)4p$	$b^2F - y^2G^o$	$\frac{5}{2} - \frac{3}{2}$		228
	5	1078.541	269.1402 - 361.8582	$3d^2(^3F)4s - 3d^2(^1D)4p$	$b^2F - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	50	1115.094	280.9015 - 370.5796	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	20	1120.934	270.6726 - 359.8840	$3d^2(^3F)4s - 3d^2(^1D)4p$	$b^2F - y^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	1152.770	292.3301 - 379.0776	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - x^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	50	1160.504	287.9192 - 374.0883	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	250	1165.672	288.6383 - 374.4256	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	500	1167.699	292.3130 - 377.9518	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$		228
	40	1167.923	292.3301 - 377.9518	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$		228
	50	1170.279	288.6383 - 374.0883	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	100	1182.140	280.9015 - 365.4940	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	1186.580	281.2178 - 365.4940	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	1189.550	261.8414 - 345.9071	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	80	1197.728	280.9015 - 364.3929	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	30	1202.281	281.2178 - 364.3929	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	500	1206.032	281.4770 - 364.3929	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		228
	60	1207.566	261.8414 - 344.6526	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	250	1208.151	263.1359 - 345.9071	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	80	1208.781	281.2178 - 363.9457	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	200	1210.379	287.9192 - 370.5381	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	400	1211.503	282.9519 - 365.4940	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$	P	228
	150	1212.577	281.4770 - 363.9457	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	80	1214.212	282.0350 - 364.3929	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	400	1215.296	262.3684 - 344.6526	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	400	1220.388	288.6383 - 370.5796	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	1220.841	282.0350 - 363.9457	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	200	1220.926	262.3684 - 344.2733	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	100	1221.002	288.6383 - 370.5381	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	1222.824	261.8414 - 343.6193	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	400	1223.969	280.9015 - 362.6029	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	300	1227.882	282.9519 - 364.3929	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	500	1228.604	292.3130 - 373.7061	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - z^2H^o$	$\frac{3}{2} - \frac{11}{2}$		228
	200	1228.725	281.2178 - 362.6029	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	250	1228.961	261.8414 - 343.2109	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	400	1229.948	264.1183 - 345.4226	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	150	1230.926	262.3684 - 343.6082	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	300	1232.479	263.1359 - 344.2733	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	200	1236.967	262.3684 - 343.2109	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	150	1238.698	261.8414 - 342.5715	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	250	1240.067	281.2178 - 361.8582	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	50	1241.192	282.0350 - 362.6029	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2D^o$	$\frac{3}{2} - \frac{5}{2}$		228

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	1242.664	263.1359 - 343.6082	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$		228
	30	1244.068	281.4770 - 361.8582	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	1246.833	262.3684 - 342.5715	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$		228
	200	1252.769	282.0350 - 361.8582	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	P	228
	500	1252.789	269.1402 - 348.9621	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	228
	200	1253.054	280.9015 - 360.7071	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - y^4D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	400	1253.676	292.3301 - 372.0956	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - z^2H^o$	$\frac{7}{2} - \frac{9}{2}$		228
	200	1255.476	282.9519 - 362.6029	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	100	1258.022	264.1183 - 343.6082	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	228
	200	1258.031	281.2178 - 360.7071	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	228
	200	1258.879	263.1359 - 342.5715	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	700	1260.314	270.6726 - 350.0178	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2G^o$	$\frac{7}{2} - \frac{3}{2}$		228
	600	1260.741	282.9519 - 362.2700	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{5}{2} - \frac{7}{2}$		228
	500	1261.060	263.1359 - 342.4344	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	400	1265.874	262.3684 - 341.3653	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	500	1266.103	280.9015 - 359.8840	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2F^o$	$\frac{5}{2} - \frac{7}{2}$		228
	10	1267.748	280.9015 - 359.7813	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	250	1271.095	282.0350 - 360.7071	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	800	1272.065	264.1183 - 342.7306	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{11}{2}$		228
	200	1272.859	281.2178 - 359.7813	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	1273.837	261.8414 - 340.3440	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		228
	700	1276.876	264.1183 - 342.4344	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	250	1277.077	281.4770 - 359.7813	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	1277.316	270.6726 - 348.9621	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		228
	600	1278.291	263.1359 - 341.3653	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$		228
	100	1279.129	281.2178 - 359.3959	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	500	1282.452	262.3684 - 340.3440	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	1283.388	281.4770 - 359.3959	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{1}{2} - \frac{1}{2}$		228
	150	1283.998	281.2178 - 359.0993	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		228
	700	1285.366	263.1359 - 340.9350	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{7}{2} - \frac{3}{2}$		228
	200	1286.092	282.9519 - 360.7071	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	200	1286.235	282.0350 - 359.7813	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	1287.030	261.8414 - 339.5398	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	200	1288.294	281.4770 - 359.0993	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	200	1291.436	280.9015 - 358.3346	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	1292.638	282.0350 - 359.3959	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	600	1294.545	264.1183 - 341.3653	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{7}{2}$		228
	400	1295.201	263.1359 - 340.3440	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	300	1295.813	262.3684 - 339.5398	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4F^o$	$\frac{5}{2} - \frac{1}{2}$		228
	300	1296.738	281.2178 - 358.3346	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	600	1296.871	262.3684 - 339.4770	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$		228
	100	1299.844	282.9519 - 359.8840	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2F^o$	$\frac{5}{2} - \frac{7}{2}$		228
	200	1301.172	280.9015 - 357.7552	$3d^2(^1D)4s - 3d^2(^1D)4p$	$c^2D - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	150	1301.584	282.9519 - 359.7813	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	600	1301.796	264.1183 - 340.9350	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
	5	1302.646	269.1402 - 345.9071	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$		228
	500	1308.645	261.8414 - 338.2564	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{5}{2}$		228
	600	1309.911	263.1359 - 339.4770	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{7}{2} - \frac{7}{2}$		228
	150	1310.621	282.0350 - 358.3346	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2F^o$	$\frac{3}{2} - \frac{5}{2}$		228
	60	1310.917	269.1402 - 345.4226	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	40	1310.986	281.4770 - 357.7552	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2P^o$	$\frac{1}{2} - \frac{3}{2}$		228
	20	1315.339	287.9192 - 363.9457	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		228
	400	1317.736	262.3684 - 338.2564	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
	10	1320.058	288.6383 - 364.3929	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		228

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	60	1320.649	282.0350 - 357.7552	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	1324.283	269.1402 - 344.6526	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	70	1326.988	264.1183 - 339.4770	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
	500	1329.172	270.6726 - 345.9071	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	300	1330.968	269.1402 - 344.2733	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	250	1331.184	263.1359 - 338.2564	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		228
	250	1336.843	282.9519 - 357.7552	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^4P - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$		228
	250	1337.695	280.9015 - 355.6571	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		228
	400	1337.788	270.6726 - 345.4226	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	1342.859	269.1402 - 343.6082	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		228
	150	1343.380	281.2178 - 355.6571	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	1348.074	281.4770 - 355.6571	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4S^o$	$\frac{1}{2} - \frac{3}{2}$		228
	300	1350.072	269.1402 - 343.2109	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$		228
	40	1352.000	288.6383 - 362.6029	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^2P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	20	1352.478	287.9192 - 361.8582	$3d^2(^3P)4s - 3d^2(^1D)4p$	$b^2P - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$		228
	150	1358.280	282.0350 - 355.6571	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		228
	80	1358.679	270.6726 - 344.2733	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		228
	600	1361.819	269.1402 - 342.5715	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$		228
	500	1370.728	292.3130 - 365.2666	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	1371.056	292.3301 - 365.2666	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - y^2G^o$	$\frac{2}{2} - \frac{3}{2}$	P	228
	300	1371.073	270.6726 - 343.6082	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	228
	300	1374.627	292.3301 - 365.0770	$3d^2(^1G)4s - 3d^2(^1G)4p$	$b^2G - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$		228
	100	1375.412	282.9519 - 355.6571	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^4S^o$	$\frac{5}{2} - \frac{3}{2}$		228
		1387.95	0.0000 - 72.0489	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	228
	60	1390.840	270.6726 - 342.5715	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	60	1391.548	287.9192 - 359.7813	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$		228
	20	1393.499	270.6726 - 342.4344	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
		1394.55	0.0000 - 71.7076	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	228
		1397.87	.5113 - 72.0489	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	228
	50	1404.420	269.1402 - 340.3440	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		228
		1404.57	.5113 - 71.7076	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{5}{2} - \frac{5}{2}$	F,P	228
		1411.22	1.1883 - 72.0489	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	228
	20	1413.281	288.6383 - 359.3959	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		228
	40	1414.578	270.6726 - 341.3653	$3d^2(^3F)4s - 3d^2(^3F)4p$	$b^2F - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		228
	5	1416.678	281.2178 - 351.8058	$3d^2(^1D)4s - 3d^2(^3P)4p$	$c^2D - z^2S^o$	$\frac{3}{2} - \frac{3}{2}$		228
		1418.05	1.1883 - 71.7076	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	228
	60	1433.272	282.0350 - 351.8058	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^4P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		228
		1434.58	2.0006 - 71.7076	$3d^3 - 3d^3$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{5}{2}$	F,P	228
	150	1565.263	287.9192 - 351.8058	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$		228
	200	1583.089	288.6383 - 351.8058	$3d^2(^3P)4s - 3d^2(^3P)4p$	$b^2P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		228
		1732.958	292.3130 - 350.0178	$3d^2(^1G)4s - 3d^2(^3F)4p$	$b^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	375
		1733.472	292.3301 - 350.0178	$3d^2(^1G)4s - 3d^2(^3F)4p$	$b^2G - z^2G^o$	$\frac{2}{2} - \frac{2}{2}$	P	375
		1746.151	288.6383 - 345.9071	$3d^2(^3P)4s - 3d^2(^3F)4p$	$b^2P - z^2D^o$	$\frac{3}{2} - \frac{5}{2}$	P	375
		1762.630	287.9192 - 344.6526	$3d^2(^3P)4s - 3d^2(^3F)4p$	$b^2P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	P	375
		1765.253	292.3130 - 348.9621	$3d^2(^1G)4s - 3d^2(^3F)4p$	$b^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	375
		1765.786	292.3301 - 348.9621	$3d^2(^1G)4s - 3d^2(^3F)4p$	$b^2G - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$	P	375
		1875.80	18.7383 - 72.0489	$3d^3 - 3d^3$	$a^4P - b^2D$	$\frac{1}{2} - \frac{3}{2}$	F,P	228
		1882.99	18.9420 - 72.0489	$3d^3 - 3d^3$	$a^4P - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	228
		1887.89	18.7383 - 71.7076	$3d^3 - 3d^3$	$a^4P - b^2D$	$\frac{1}{2} - \frac{5}{2}$	F,P	228
		1895.17	18.9420 - 71.7076	$3d^3 - 3d^3$	$a^4P - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	228
		1907.01	19.6108 - 72.0489	$3d^3 - 3d^3$	$a^4P - b^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	228
		1919.50	19.6108 - 71.7076	$3d^3 - 3d^3$	$a^4P - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	228
		1944.30	20.6164 - 72.0489	$3d^3 - 3d^3$	$a^2G - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	228
		1949.500	292.3130 - 343.6082	$3d^2(^1G)4s - 3d^2(^3F)4p$	$b^2G - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	P	375

FE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1957.28	20.6164 – 71.7076	$3d^3 - 3d^3$	$a^2G - b^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	228
		1984.42	21.3150 – 71.7076	$3d^3 - 3d^3$	$a^2G - b^2D$	$\frac{9}{2} - \frac{5}{2}$	F,P	228
		1990.390	292.3301 – 342.5715	$3d^2(^1G)4s - 3d^2(^3F)4p$	$b^2G - z^2F^o$	$\frac{7}{2} - \frac{3}{2}$	P	375

IRON VII (Fe^{6+}), Z = 26
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2(^3F_2)$ (20 electrons)
Ionization Potential 1 008 000 cm^{-1} ; 125.0 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	104.838	1.0515 – 954.904	$3p^6 3d^2 - 3p^6 3d10f$	$g^3F - ^3G^o$	3 - 4		1103
	1	104.972	2.3315 – 954.966	$3p^6 3d^2 - 3p^6 3d10f$	$g^3F - ^3G^o$	4 - 5		1103
	1	106.285	1.0515 – 941.918	$3p^6 3d^2 - 3p^6 3d9f$	$g^3F - ^3G^o$	3 - 4		1103
	1	106.418	2.3315 – 942.022	$3p^6 3d^2 - 3p^6 3d9f$	$g^3F - ^3G^o$	4 - 5		1103
	1	107.947	28.9273 – 955.307	$3p^6 3d^2 - 3p^6 3d10f$	$^1G - ^1H^o$	4 - 5		1103
	10	108.381	1.0515 – 923.716	$3p^6 3d^2 - 3p^6 3d8f$	$g^3F - ^3G^o$	3 - 4		1103
	1	108.495	0.0 – 921.694	$3p^6 3d^2 - 3p^6 3d8f$	$g^3F - ^3F^o$	2 - 3		1103
	25	108.519	2.3315 – 923.838	$3p^6 3d^2 - 3p^6 3d8f$	$g^3F - ^3G^o$	4 - 5		1103
	4	108.533	2.3315 – 923.716	$3p^6 3d^2 - 3p^6 3d8f$	$g^3F - ^3G^o$	4 - 4		1103
	10	108.584	2.3315 – 923.282	$3p^6 3d^2 - 3p^6 3d8f$	$g^3F - ^3F^o$	4 - 4		1103
	4	108.620	1.0515 – 921.694	$3p^6 3d^2 - 3p^6 3d8f$	$g^3F - ^3F^o$	3 - 3		1103
	4	109.463	28.9273 – 942.477	$3p^6 3d^2 - 3p^6 3d9f$	$^1G - ^1H^o$	4 - 5		1103
	1	109.742	17.4755 – 928.684	$3p^6 3d^2 - 3p^5(3d^2 4s(^4P))$	$^1D - ^3P^o$	2 - 2		1103
	1	110.103	20.4301 – 928.684	$3p^6 3d^2 - 3p^5(3d^2 4s(^4P))$	$^3P - ^3P^o$	1 - 2		1103
	1	110.205	21.2786 – 928.684	$3p^6 3d^2 - 3p^5(3d^2 4s(^4P))$	$^3P - ^3P^o$	2 - 2		1103
	1	110.593	17.4755 – 921.694	$3p^6 3d^2 - 3p^6 3d8f$	$^1D - ^3F^o$	2 - 3		1103
	25	111.604	1.0515 – 897.077	$3p^6 3d^2 - 3p^6 3d7f$	$g^3F - ^3G^o$	3 - 4		1103
	10	111.638	0.0 – 895.744	$3p^6 3d^2 - 3p^6 3d7f$	$g^3F - ^3G^o$	2 - 3		1103
	1	111.663	28.9273 – 924.479	$3p^6 3d^2 - 3p^6 3d8f$	$^1G - ^1H^o$	4 - 5		1103
	1	111.691	1.0515 – 896.382	$3p^6 3d^2 - 3p^6 3d7f$	$g^3F - ^3F^o$	3 - 4		1103
	40	111.742	2.3315 – 897.254	$3p^6 3d^2 - 3p^6 3d7f$	$g^3F - ^3G^o$	4 - 5		1103
	4	111.767	1.0515 – 895.744	$3p^6 3d^2 - 3p^6 3d7f$	$g^3F - ^3G^o$	3 - 3		1103
	1	111.812	28.9273 – 923.282	$3p^6 3d^2 - 3p^6 3d8f$	$^1G - ^3F^o$	4 - 4		1103
	10	111.849	2.3315 – 896.382	$3p^6 3d^2 - 3p^6 3d7f$	$g^3F - ^3F^o$	4 - 4		1103
	4	112.012	28.9273 – 921.694	$3p^6 3d^2 - 3p^6 3d8f$	$^1G - ^3F^o$	4 - 3		1103
	4	112.030	2.3315 – 894.944	$3p^6 3d^2 - 3p^6 3d7f$	$g^3F - ^3F^o$	4 - 3		1103
	10	113.861	17.4755 – 895.744	$3p^6 3d^2 - 3p^6 3d7f$	$^1D - ^3G^o$	2 - 3		1103
	25	113.964	17.4755 – 894.944	$3p^6 3d^2 - 3p^6 3d7f$	$^1D - ^3F^o$	2 - 3		1103
	4	114.356	21.2786 – 895.744	$3p^6 3d^2 - 3p^6 3d7f$	$^3P - ^3G^o$	2 - 3		1103
	1	114.490	21.2786 – 894.718	$3p^6 3d^2 - 3p^6 3d7f$	$^3P - ^3F^o$	2 - 2		1103
	40	115.033	28.9273 – 898.243	$3p^6 3d^2 - 3p^6 3d7f$	$^1G - ^1H^o$	4 - 5		1103
	1	115.164	28.9273 – 897.254	$3p^6 3d^2 - 3p^6 3d7f$	$^1G - ^3G^o$	4 - 5		1103
	4	115.281	28.9273 – 896.382	$3p^6 3d^2 - 3p^6 3d7f$	$^1G - ^3F^o$	4 - 4		1103
	4	115.472	28.9273 – 894.944	$3p^6 3d^2 - 3p^6 3d7f$	$^1G - ^3F^o$	4 - 3		1103
	4	116.715	0.0 – 856.797	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^1F^o$	2 - 3		1103
	25	116.809	0.0 – 856.109	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^3D^o$	2 - 3		1103
	1	116.836	0.0 – 855.903	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^3D^o$	2 - 2		1103
	1	116.853	1.0515 – 856.811	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^3P^o$	3 - 2		1103
	4	116.882	2.3315 – 857.881	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^1H^o$	4 - 5		1103
	4	116.951	1.0515 – 856.109	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^3D^o$	3 - 3		1103
	40	116.970	1.0515 – 855.969	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^3G^o$	3 - 4		1103
	40	116.993	0.0 – 854.760	$3p^6 3d^2 - 3p^6 3d6f$	$g^3F - ^3G^o$	2 - 3		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	117.034	2.3315 - 856.797	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^1 F^\circ$	4 - 3		1103
	60	117.104	2.3315 - 856.260	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 G^\circ$	4 - 5		1103
	25	117.135	1.0515 - 854.767	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 F^\circ$	3 - 4		1103
	10	117.144	2.3315 - 855.969	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 G^\circ$	4 - 4		1103
	10	117.174	0.0 - 853.433	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 F^\circ$	2 - 2		1103
	10	117.281	1.0515 - 853.697	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 F^\circ$	3 - 3		1103
	10	117.310	2.3315 - 854.767	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 F^\circ$	4 - 4		1103
	10	117.335	1.0515 - 853.307	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^1 G^\circ$	3 - 4		1103
	1	117.432	1.0515 - 852.601	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 H^\circ$	3 - 4		1103
	1	117.459	2.3315 - 853.697	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 F^\circ$	4 - 3		1103
	4	117.512	2.3315 - 853.307	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^1 G^\circ$	4 - 4		1103
	1	117.610	2.3315 - 852.601	$3p^6 3d^2 - 3p^6 3d6f$	$g^3 F - ^3 H^\circ$	4 - 4		1103
	25	119.144	17.4755 - 856.797	$3p^6 3d^2 - 3p^6 3d6f$	$^1 D - ^1 F^\circ$	2 - 3		1103
	25	119.240	17.4755 - 856.109	$3p^6 3d^2 - 3p^6 3d6f$	$^1 D - ^3 D^\circ$	2 - 3		1103
	10	119.273	17.4755 - 855.903	$3p^6 3d^2 - 3p^6 3d6f$	$^1 D - ^3 D^\circ$	2 - 2		1103
	10	119.422	17.4755 - 854.838	$3p^6 3d^2 - 3p^6 3d6f$	$^1 D - ^1 D^\circ$	2 - 2		1103
	10	119.435	17.4755 - 854.760	$3p^6 3d^2 - 3p^6 3d6f$	$^1 D - ^3 G^\circ$	2 - 3		1103
	1	119.482	20.0403 - 856.975	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 P^\circ$	0 - 1		1103
	4	119.524	20.4301 - 857.082	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 P^\circ$	1 - 0		1103
	4	119.541	20.4301 - 856.975	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 P^\circ$	1 - 1		1103
	1	119.561	20.4301 - 856.811	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 P^\circ$	1 - 2		1103
	1	119.587	17.4755 - 853.697	$3p^6 3d^2 - 3p^6 3d6f$	$^1 D - ^3 F^\circ$	2 - 3		1103
	4	119.623	17.4755 - 853.433	$3p^6 3d^2 - 3p^6 3d6f$	$^1 D - ^3 F^\circ$	2 - 2		1103
	60	119.686	21.2786 - 856.811	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 P^\circ$	2 - 2		1103
	4	119.692	20.4301 - 855.903	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 D^\circ$	1 - 2		1103
	25	119.715	20.0403 - 855.346	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 D^\circ$	0 - 1		1103
	25	119.785	21.2786 - 856.109	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 D^\circ$	2 - 3		1103
	4	119.813	21.2786 - 855.903	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 D^\circ$	2 - 2		1103
	25	119.846	20.4301 - 854.838	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^1 D^\circ$	1 - 2		1103
	1	119.896	21.2786 - 855.346	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 D^\circ$	2 - 1		1103
	1	119.978	21.2786 - 854.760	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 G^\circ$	2 - 3		1103
	4	120.030	0.0 - 833.128	$3p^6 3d^2 - 3p^2(3d^2 4s^2 G)$	$g^3 F - ^3 G^\circ$	2 - 3		1103
	4	120.131	21.2786 - 853.697	$3p^6 3d^2 - 3p^6 3d6f$	$^3 P - ^3 F^\circ$	2 - 3		1103
	4	120.181	1.0515 - 833.128	$3p^6 3d^2 - 3p^2(3d^2 4s^2 G)$	$g^3 F - ^3 G^\circ$	3 - 3		1103
	10	120.214	1.0515 - 832.893	$3p^6 3d^2 - 3p^2(3d^2 4s^2 G)$	$g^3 F - ^3 G^\circ$	3 - 4		1103
	25	120.401	2.3315 - 832.889	$3p^6 3d^2 - 3p^2(3d^2 4s^2 G)$	$g^3 F - ^3 G^\circ$	4 - 5		1103
	120	120.636	28.9273 - 857.881	$3p^6 3d^2 - 3p^6 3d6f$	$^1 G - ^1 H^\circ$	4 - 5		1103
	1	120.789	28.9273 - 856.797	$3p^6 3d^2 - 3p^6 3d6f$	$^1 G - ^1 F^\circ$	4 - 3		1103
	4	120.872	28.9273 - 856.260	$3p^6 3d^2 - 3p^6 3d6f$	$^1 G - ^3 G^\circ$	4 - 5		1103
	1	120.915	28.9273 - 855.969	$3p^6 3d^2 - 3p^6 3d6f$	$^1 G - ^3 G^\circ$	4 - 4		1103
	25	121.090	28.9273 - 854.767	$3p^6 3d^2 - 3p^6 3d6f$	$^1 G - ^3 F^\circ$	4 - 4		1103
	4	121.183	2.3315 - 827.533	$3p^6 3d^2 - 3p^2(3d^2 4s^4 P)$	$g^3 F - ^3 D^\circ$	4 - 3		1103
	25	121.304	28.9273 - 853.307	$3p^6 3d^2 - 3p^6 3d6f$	$^1 G - ^1 G^\circ$	4 - 4		1103
	1	121.331	0.0 - 824.184	$3p^6 3d^2 - 3p^2(3d^2 4s^4 P)$	$g^3 F - ^3 D^\circ$	2 - 2		1103
	4	121.408	28.9273 - 852.601	$3p^6 3d^2 - 3p^6 3d6f$	$^1 G - ^3 H^\circ$	4 - 4		1103
	4	121.490	1.0515 - 824.184	$3p^6 3d^2 - 3p^2(3d^2 4s^4 P)$	$g^3 F - ^3 D^\circ$	3 - 2		1103
	1	121.555	0.0 - 822.689	$3p^6 3d^2 - 3p^2(3d^2 4s^4 P)$	$g^3 F - ^3 D^\circ$	2 - 1		1103
	1	121.952	17.4755 - 837.472	$3p^6 3d^2 - 3p^2(3d^2 4s^2 P)$	$^1 D - ^3 S^\circ$	2 - 1		1103
	4	122.335	20.0403 - 837.472	$3p^6 3d^2 - 3p^2(3d^2 4s^2 P)$	$^3 P - ^3 S^\circ$	0 - 1		1103
	4	122.370	0.0 - 817.195	$3p^6 3d^2 - 3p^2(3d^2 4s^2 P)$	$g^3 F - ^3 D^\circ$	2 - 1		1103
	4	122.392	20.4301 - 837.472	$3p^6 3d^2 - 3p^2(3d^2 4s^2 P)$	$^3 P - ^3 S^\circ$	1 - 1		1103
	10	122.520	21.2786 - 837.472	$3p^6 3d^2 - 3p^2(3d^2 4s^2 P)$	$^3 P - ^3 S^\circ$	2 - 1		1103
	10	123.029	1.0515 - 813.877	$3p^6 3d^2 - 3p^2(3d^2 4s^2 P)$	$g^3 F - ^3 D^\circ$	3 - 2		1103
	10	123.130	17.4755 - 829.626	$3p^6 3d^2 - 3p^2(3d^2 4s^2 P)$	$^1 D - ^1 D^\circ$	2 - 2		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	123.496	2.3315 - 812.086	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$g^3 F - ^3 D^o$	4 - 3		1103
	1	123.667	17.4755 - 826.106	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^1 D - ^3 S^o$	2 - 1		1103
	4	123.709	21.2786 - 829.626	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3 P - ^1 D^o$	2 - 2		1103
	1	123.822	0.0 - 807.627	$3p^6 3d^2 - 3p^5(3d^2 4s^2 D)$	$g^3 F - ^1 F^o$	2 - 3		1103
	40	124.030	21.2786 - 827.533	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 D^o$	2 - 3		1103
	1	124.058	20.0403 - 826.106	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 S^o$	0 - 1		1103
	4	124.120	20.4301 - 826.106	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 S^o$	1 - 1		1103
	4	124.250	21.2786 - 826.106	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 S^o$	2 - 1		1103
	10	124.384	28.9273 - 832.889	$3p^6 3d^2 - 3p^5(3d^2 4s^2 G)$	$^1 G - ^3 G^o$	4 - 5		1103
	10	124.415	20.4301 - 824.184	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 D^o$	1 - 2		1103
	4	124.425	2.3315 - 806.033	$3p^6 3d^2 - 3p^5(3d^2 4s^2 G)$	$g^3 F - ^1 H^o$	4 - 5		1103
	10	124.547	21.2786 - 824.184	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 D^o$	2 - 2		1103
	4	124.586	20.0403 - 822.689	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 D^o$	0 - 1		1103
	4	124.648	20.4301 - 822.689	$3p^6 3d^2 - 3p^5(3d^2 4s^4 P)$	$^3 P - ^3 D^o$	1 - 1		1103
	10	124.779	1.0515 - 802.462	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3 F - ^1 G^o$	3 - 4		1103
	10	124.979	2.3315 - 802.462	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3 F - ^1 G^o$	4 - 4		1103
	60	125.266	2.3315 - 800.633	$3p^6 3d^2 - 3p^5(3d^2 4s^4 F)$	$g^3 F - ^3 G^o$	4 - 5		1103
	25	125.431	0.0 - 797.257	$3p^6 3d^2 - 3p^5(3d^2 4s^2 D)$	$g^3 F - ^3 F^o$	2 - 3		1103
	25	125.447	20.0403 - 817.195	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3 P - ^3 D^o$	0 - 1		1103
	10	125.508	20.4301 - 817.195	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3 P - ^3 D^o$	1 - 1		1103
	60	125.524	1.0515 - 797.712	$3p^6 3d^2 - 3p^5(3d^2 4s^4 F)$	$g^3 F - ^3 G^o$	3 - 4		1103
	4	125.565	17.4755 - 813.877	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^1 D - ^3 D^o$	2 - 2		1103
	4	125.596	1.0515 - 797.257	$3p^6 3d^2 - 3p^5(3d^2 4s^2 D)$	$g^3 F - ^3 F^o$	3 - 3		1103
	1	125.640	21.2786 - 817.195	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3 P - ^3 D^o$	2 - 1		1103
	4	125.798	2.3315 - 797.257	$3p^6 3d^2 - 3p^5(3d^2 4s^2 D)$	$g^3 F - ^3 F^o$	4 - 3		1103
	1	125.846	17.4755 - 812.086	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^1 D - ^3 D^o$	2 - 3		1103
	10	125.922	0.0 - 794.149	$3p^6 3d^2 - 3p^5(3d^2 4s^4 F)$	$g^3 F - ^3 G^o$	2 - 3		1103
	40	126.032	20.4301 - 813.877	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3 P - ^3 D^o$	1 - 2		1103
	1	126.088	1.0515 - 794.149	$3p^6 3d^2 - 3p^5(3d^2 4s^4 F)$	$g^3 F - ^3 G^o$	3 - 3		1103
	10	126.166	21.2786 - 813.877	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3 P - ^3 D^o$	2 - 2		1103
	40	126.453	21.2786 - 812.086	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3 P - ^3 D^o$	2 - 3		1103
	60	126.559	17.4755 - 807.627	$3p^6 3d^2 - 3p^5(3d^2 4s^2 D)$	$^1 D - ^1 F^o$	2 - 3		1103
	4	126.705	0.0 - 789.215	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^1 F^o$	2 - 3		1103
	1	126.743	0.0 - 788.995	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 P^o$	2 - 2		1103
	4	126.768	2.3315 - 791.168	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^1 H^o$	4 - 5		1103
	40	126.855	0.0 - 788.303	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 D^o$	2 - 3		1103
	1	126.875	1.0515 - 789.215	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^1 F^o$	3 - 3		1103
	1	126.898	0.0 - 788.030	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 D^o$	2 - 2		1103
	10	126.913	0.0 - 787.945	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 D^o$	2 - 1		1103
	60	127.026	1.0515 - 788.303	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 D^o$	3 - 3		1103
	4	127.069	1.0515 - 788.030	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 D^o$	3 - 2		1103
	150	127.118	1.0515 - 787.737	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 G^o$	3 - 4		1103
	4	127.169	21.2786 - 807.627	$3p^6 3d^2 - 3p^5(3d^2 4s^2 D)$	$^3 P - ^1 F^o$	2 - 3		1103
	10	127.230	2.3315 - 788.303	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 D^o$	4 - 3		1103
	200	127.258	2.3315 - 788.146	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 G^o$	4 - 5		1103
	10	127.278	1.0515 - 786.732	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 G^o$	3 - 3		1103
	90	127.324	2.3315 - 787.737	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 G^o$	4 - 4		1103
	120	127.388	0.0 - 785.012	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 F^o$	2 - 3		1103
	90	127.429	1.0515 - 785.809	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 F^o$	3 - 4		1103
	150	127.559	1.0515 - 785.012	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 F^o$	3 - 3		1103
	10	127.604	1.0515 - 784.733	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 F^o$	3 - 2		1103
	200	127.636	2.3315 - 785.809	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 F^o$	4 - 4		1103
	90	127.645	1.0515 - 784.477	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 H^o$	3 - 4		1103
	90	127.694	0.0 - 783.119	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3 F - ^3 F^o$	2 - 3		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	4	127.763	2.3315 - 785.012	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 F^o$	4 - 3		1103
	4	127.852	2.3315 - 784.477	$3p^6 3d^2 - 3p^6 3d 5f$	$g^3 F - ^3 H^o$	4 - 4		1103
	90	127.867	1.0515 - 783.119	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$g^3 F - ^3 F^o$	3 - 3		1103
	150	128.147	2.3315 - 782.690	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$g^3 F - ^3 F^o$	4 - 4		1103
	10	128.240	17.4755 - 797.257	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 D))$	$^1 D - ^3 F^o$	2 - 3		1103
	25	128.368	0.0 - 779.009	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 D))$	$g^3 F - ^1 D^o$	2 - 2		1103
	1	128.417	28.9273 - 807.627	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 D))$	$^1 G - ^1 F^o$	4 - 3		1103
	4	128.449	1.0515 - 779.575	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 G))$	$g^3 F - ^3 F^o$	3 - 4		1103
	1	128.538	1.0515 - 779.009	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 D))$	$g^3 F - ^1 D^o$	3 - 2		1103
	40	128.638	1.0515 - 778.420	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 G))$	$g^3 F - ^3 F^o$	3 - 3		1103
	40	128.659	2.3315 - 779.575	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 G))$	$g^3 F - ^3 F^o$	4 - 4		1103
	120	128.682	28.9273 - 806.033	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 G))$	$^1 G - ^1 H^o$	4 - 5		1103
	90	128.753	17.4755 - 794.149	$3p^6 3d^2 - 3p^5(3d^2 4s(^4 F))$	$^1 D - ^3 G^o$	2 - 3		1103
	10	128.852	2.3315 - 778.420	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 G))$	$g^3 F - ^3 F^o$	4 - 3		1103
	4	129.278	28.9273 - 802.462	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$^1 G - ^1 G^o$	4 - 4		1103
	90	129.330	17.4755 - 790.708	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^1 P^o$	2 - 1		1103
	90	129.579	17.4755 - 789.215	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^1 F^o$	2 - 3		1103
	60	129.730	17.4755 - 788.303	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^3 D^o$	2 - 3		1103
	10	129.777	17.4755 - 788.030	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^3 D^o$	2 - 2		1103
	1	129.789	17.4755 - 787.945	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^3 D^o$	2 - 1		1103
	1	129.822	20.4301 - 790.708	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^1 P^o$	1 - 1		1103
	120	129.872	0.0 - 769.991	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$g^3 F - ^3 G^o$	2 - 3		1103
	150	129.980	17.4755 - 786.830	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^1 D^o$	2 - 2		1103
	10	129.996	17.4755 - 786.732	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^3 G^o$	2 - 3		1103
	40	130.017	20.0403 - 789.172	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 P^o$	0 - 1		1103
	40	130.050	1.0515 - 769.991	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$g^3 F - ^3 G^o$	3 - 3		1103
	25	130.112	20.4301 - 788.995	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 P^o$	1 - 2		1103
	60	130.221	20.0403 - 787.945	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 D^o$	0 - 1		1103
	60	130.226	21.2786 - 789.172	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 P^o$	2 - 1		1103
	250	130.248	1.0515 - 768.813	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$g^3 F - ^3 G^o$	3 - 4		1103
	60	130.257	21.2786 - 788.995	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 P^o$	2 - 2		1103
	40	130.277	20.4301 - 788.030	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 D^o$	1 - 2		1103
	10	130.336	17.4755 - 784.733	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 D - ^3 F^o$	2 - 2		1103
	90	130.374	21.2786 - 788.303	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 D^o$	2 - 3		1103
	10	130.419	21.2786 - 788.030	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 D^o$	2 - 2		1103
	25	130.467	2.3315 - 768.813	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$g^3 F - ^3 G^o$	4 - 4		1103
	10	130.481	20.4301 - 786.830	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^1 D^o$	1 - 2		1103
	1	130.608	17.4755 - 783.119	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$^1 D - ^3 F^o$	2 - 3		1103
	1	130.623	21.2786 - 786.830	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^1 D^o$	2 - 2		1103
	300	130.779	2.3315 - 766.991	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$g^3 F - ^3 G^o$	4 - 5		1103
	4	130.838	20.4301 - 784.733	$3p^6 3d^2 - 3p^6 3d 5f$	$^3 P - ^3 F^o$	1 - 2		1103
	250	131.193	28.9273 - 791.168	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 G - ^1 H^o$	4 - 5		1103
	120	131.318	17.4755 - 779.009	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 D))$	$^1 D - ^1 D^o$	2 - 2		1103
	25	131.531	28.9273 - 789.215	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 G - ^1 F^o$	4 - 3		1103
	10	131.713	28.9273 - 788.146	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 G - ^3 G^o$	4 - 5		1103
	1	131.782	28.9273 - 787.737	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 G - ^3 G^o$	4 - 4		1103
	40	132.120	28.9273 - 785.809	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 G - ^3 F^o$	4 - 4		1103
	25	132.355	28.9273 - 784.477	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 G - ^3 H^o$	4 - 4		1103
	150	132.407	28.9273 - 784.174	$3p^6 3d^2 - 3p^6 3d 5f$	$^1 G - ^1 G^o$	4 - 4		1103
	25	132.593	28.9273 - 783.119	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$^1 G - ^3 F^o$	4 - 3		1103
	10	132.667	28.9273 - 782.690	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 F))$	$^1 G - ^3 F^o$	4 - 4		1103
	25	132.792	20.4301 - 773.488	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 P))$	$^3 P - ^3 P^o$	1 - 0		1103
	25	133.055	20.0403 - 771.612	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 P))$	$^3 P - ^3 P^o$	0 - 1		1103
	25	133.123	20.4301 - 771.612	$3p^6 3d^2 - 3p^5(3d^2 4s(^2 P))$	$^3 P - ^3 P^o$	1 - 1		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	25	133.165	17.4755 - 768.425	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^1D - ^3P^o$	2 - 2		1103
	25	133.274	21.2786 - 771.612	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3P - ^3P^o$	2 - 1		1103
	1	133.424	28.9273 - 778.420	$3p^6 3d^2 - 3p^5(3d^2 4s^2 G)$	$^1G - ^3F^o$	4 - 3		1103
	25	133.670	1.0515 - 749.166	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3F - ^3D^o$	3 - 3		1103
	40	133.691	20.4301 - 768.425	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3P - ^3P^o$	1 - 2		1103
	90	133.842	21.2786 - 768.425	$3p^6 3d^2 - 3p^5(3d^2 4s^2 P)$	$^3P - ^3P^o$	2 - 2		1103
	25	133.874	0.0 - 746.965	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3F - ^3D^o$	2 - 2		1103
	90	133.899	2.3315 - 749.166	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3F - ^3D^o$	4 - 3		1103
	60	134.063	1.0515 - 746.965	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3F - ^3D^o$	3 - 2		1103
	40	134.128	0.0 - 745.556	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$g^3F - ^3D^o$	2 - 1		1103
	10	134.940	28.9273 - 769.991	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^1G - ^3G^o$	4 - 3		1103
	1	135.488	28.9273 - 766.991	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^1G - ^3G^o$	4 - 5		1103
	10	136.671	17.4755 - 749.166	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^1D - ^3D^o$	2 - 3		1103
	90	137.384	21.2786 - 749.166	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^3P - ^3D^o$	2 - 3		1103
	40	137.640	20.4301 - 746.965	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^3P - ^3D^o$	1 - 2		1103
	4	137.802	21.2786 - 746.965	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^3P - ^3D^o$	2 - 2		1103
	10	137.833	20.0403 - 745.556	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^3P - ^3D^o$	0 - 1		1103
	4	137.907	20.4301 - 745.556	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^3P - ^3D^o$	1 - 1		1103
	60	138.191	67.0783 - 790.708	$3p^6 3d^2 - 3p^6 3d 5f$	$^1S - ^1P^o$	0 - 1		1103
	1	138.841	28.9273 - 749.166	$3p^6 3d^2 - 3p^5(3d^2 4s^2 F)$	$^1G - ^3D^o$	4 - 3		1103
	4	150.186	0.0 - 665.832	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3D^o$	2 - 1		1103
	10	150.282	0.0 - 665.417	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^1F^o$	2 - 3		1103
	4	150.403	1.0515 - 665.923	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3D^o$	3 - 2		1103
	25	150.521	1.0515 - 665.417	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^1F^o$	3 - 3		1103
	25	150.530	2.3315 - 666.651	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3D^o$	4 - 3		1103
	90	150.807	0.0 - 663.097	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^o$	2 - 3		1103
	90	150.852	1.0515 - 663.950	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^o$	3 - 4		1103
	150	151.023	2.3315 - 664.482	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^o$	4 - 5		1103
	10	151.046	1.0515 - 663.097	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^o$	3 - 3		1103
	40	151.145	2.3315 - 663.950	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^o$	4 - 4		1103
	50	151.268						209
	40	151.432	0.0 - 660.358	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3F^o$	2 - 3		1103
	25	151.488	1.0515 - 661.169	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3F^o$	3 - 4		1103
	60	151.512	0.0 - 660.015	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3F^o$	2 - 2		1103
	90	151.675	1.0515 - 660.358	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3F^o$	3 - 3		1103
	4	151.754	1.0515 - 660.015	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3F^o$	3 - 2		1103
	120	151.782	2.3315 - 661.169	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3F^o$	4 - 4		1103
	4	151.971	2.3315 - 660.358	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3F^o$	4 - 3		1103
	40	152.072	2.3315 - 659.917	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^1G^o$	4 - 4		1103
	50	152.906						209
	1	153.663	17.4755 - 668.253	$3p^6 3d^2 - 3p^6 3d 4f$	$^1D - ^3P^o$	2 - 1		1103
	1	153.747	17.4755 - 667.899	$3p^6 3d^2 - 3p^6 3d 4f$	$^1D - ^3P^o$	2 - 2		1103
	25	154.042	17.4755 - 666.651	$3p^6 3d^2 - 3p^6 3d 4f$	$^1D - ^3D^o$	2 - 3		1103
	1	154.216	17.4755 - 665.923	$3p^6 3d^2 - 3p^6 3d 4f$	$^1D - ^3D^o$	2 - 2		1103
	4	154.271	20.0403 - 668.253	$3p^6 3d^2 - 3p^6 3d 4f$	$^3P - ^3P^o$	0 - 1		1103
	10	154.307	20.4301 - 668.489	$3p^6 3d^2 - 3p^6 3d 4f$	$^3P - ^3P^o$	1 - 0		1103
	120	154.335	17.4755 - 665.417	$3p^6 3d^2 - 3p^6 3d 4f$	$^1D - ^1F^o$	2 - 3		1103
	25	154.363	20.4301 - 668.253	$3p^6 3d^2 - 3p^6 3d 4f$	$^3P - ^3P^o$	1 - 1		1103
	1	154.447	20.4301 - 667.899	$3p^6 3d^2 - 3p^6 3d 4f$	$^3P - ^3P^o$	1 - 2		1103
	25	154.565	21.2786 - 668.253	$3p^6 3d^2 - 3p^6 3d 4f$	$^3P - ^3P^o$	2 - 1		1103
	90	154.650	21.2786 - 667.899	$3p^6 3d^2 - 3p^6 3d 4f$	$^3P - ^3P^o$	2 - 2		1103
	90	154.705	17.4755 - 663.871	$3p^6 3d^2 - 3p^6 3d 4f$	$^1D - ^1D^o$	2 - 2		1103
	25	154.848	20.0403 - 665.832	$3p^6 3d^2 - 3p^6 3d 4f$	$^3P - ^3D^o$	0 - 1		1103
	4	154.888	17.4755 - 663.097	$3p^6 3d^2 - 3p^6 3d 4f$	$^1D - ^3G^o$	2 - 3		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	60	154.921	20.4301 - 665.923	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^3D^\circ$	1 - 2		1103
	40	154.941	20.4301 - 665.832	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^3D^\circ$	1 - 1		1103
	90	154.949	21.2786 - 666.651	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^3D^\circ$	2 - 3		1103
	1	155.124	21.2786 - 665.923	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^3D^\circ$	2 - 2		1103
	1	155.150	21.2786 - 665.832	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^3D^\circ$	2 - 1		1103
	10	155.247	21.2786 - 665.417	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^1F^\circ$	2 - 3		1103
	1	155.414	20.4301 - 663.871	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^1D^\circ$	1 - 2		1103
	1	155.549	17.4755 - 660.358	$3p^6 3d^2 - 3p^6 3d4f$	$^1D - ^3F^\circ$	2 - 3		1103
	1	155.619	21.2786 - 663.871	$3p^6 3d^2 - 3p^6 3d4f$	$^3P - ^1D^\circ$	2 - 2		1103
	1	155.632	17.4755 - 660.015	$3p^6 3d^2 - 3p^6 3d4f$	$^1D - ^3F^\circ$	2 - 2		1103
	120	155.994	28.9273 - 669.978	$3p^6 3d^2 - 3p^6 3d4f$	$^1G - ^1H^\circ$	4 - 5		1103
	4	156.808	28.9273 - 666.651	$3p^6 3d^2 - 3p^6 3d4f$	$^1G - ^3D^\circ$	4 - 3		1103
	10	157.112	28.9273 - 665.417	$3p^6 3d^2 - 3p^6 3d4f$	$^1G - ^1F^\circ$	4 - 3		1103
	150	157.689	28.9273 - 663.097	$3p^6 3d^2 - 3p^6 3d4f$	$^1G - ^3G^\circ$	4 - 3		1103
	150	158.168	28.9273 - 661.169	$3p^6 3d^2 - 3p^6 3d4f$	$^1G - ^3F^\circ$	4 - 4		1103
	120	158.481	28.9273 - 659.917	$3p^6 3d^2 - 3p^6 3d4f$	$^1G - ^1G^\circ$	4 - 4		1103
	120	163.183	17.4755 - 630.283	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(b^2D))$	$^1D - ^1P^\circ$	2 - 1		1103
	4	163.974	20.4301 - 630.283	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(b^2D))$	$^3P - ^1P^\circ$	1 - 1		1103
	25	164.203	21.2786 - 630.283	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(b^2D))$	$^3P - ^1P^\circ$	2 - 1		1103
	25	164.955	17.4755 - 623.699	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4P))$	$^1D - ^3S^\circ$	2 - 1		1103
	90	165.087	67.0783 - 672.820	$3p^6 3d^2 - 3p^6 3d4f$	$^1S - ^1P^\circ$	0 - 1		1103
	1	165.444	1.0515 - 605.489	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^2H))$	$g^3F - ^1G^\circ$	3 - 4		1103
	150	165.490	0.0 - 604.270	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3D^\circ$	2 - 1		1103
	60	165.630	0.0 - 603.757	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3D^\circ$	2 - 2		1103
	40	165.658	20.0403 - 623.699	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4P))$	$^3P - ^3S^\circ$	0 - 1		1103
	1	165.724	0.0 - 603.419	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3D^\circ$	2 - 3		1103
	60	165.764	20.4301 - 623.699	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4P))$	$^3P - ^3S^\circ$	1 - 1		1103
	150	165.919	1.0515 - 603.757	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3D^\circ$	3 - 2		1103
	60	165.996	21.2786 - 623.699	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4P))$	$^3P - ^3S^\circ$	2 - 1		1103
	40	166.010	1.0515 - 603.419	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3D^\circ$	3 - 3		1103
	200	166.365	2.3315 - 603.419	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3D^\circ$	4 - 3		1103
	50	166.629						209
	40	167.047	0.0 - 598.638	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^2P))$	$g^3F - ^1P^\circ$	2 - 1		1103
	25	170.417	17.4755 - 604.270	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^1D - ^3D^\circ$	2 - 1		1103
	4	170.565	17.4755 - 603.757	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^1D - ^3D^\circ$	2 - 2		1103
	25	170.664	17.4755 - 603.419	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^1D - ^3D^\circ$	2 - 3		1103
	40	171.166	20.0403 - 604.270	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^3P - ^3D^\circ$	0 - 1		1103
	25	171.279	20.4301 - 604.270	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^3P - ^3D^\circ$	1 - 1		1103
	60	171.432	20.4301 - 603.757	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^3P - ^3D^\circ$	1 - 2		1103
	40	171.529	21.2786 - 604.270	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^3P - ^3D^\circ$	2 - 1		1103
	40	171.680	21.2786 - 603.757	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^3P - ^3D^\circ$	2 - 2		1103
	90	171.779	21.2786 - 603.419	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^3P - ^3D^\circ$	2 - 3		1103
	90	172.069	17.4755 - 598.638	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^2P))$	$^1D - ^1P^\circ$	2 - 1		1103
	4	172.831	20.0403 - 598.638	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^2P))$	$^3P - ^1P^\circ$	0 - 1		1103
	1	172.948	20.4301 - 598.638	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^2P))$	$^3P - ^1P^\circ$	1 - 1		1103
	25	173.203	21.2786 - 598.638	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^2P))$	$^3P - ^1P^\circ$	2 - 1		1103
	200	173.441	28.9273 - 605.489	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^2H))$	$^1G - ^1G^\circ$	4 - 4		1103
	4	174.069	28.9273 - 603.419	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$^1G - ^3D^\circ$	4 - 3		1103
	90	176.345	1.0515 - 568.118	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3F^\circ$	3 - 4		1103
	60	176.599	0.0 - 566.256	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3F^\circ$	2 - 3		1103
	250	176.744	2.3315 - 568.118	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3F^\circ$	4 - 4		1103
	40	176.904	0.0 - 565.275	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4P))$	$g^3F - ^3P^\circ$	2 - 2		1103
	250	176.928	1.0515 - 566.256	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3F^\circ$	3 - 3		1103
	200	177.172	0.0 - 564.425	$3p^6 3d^2 - 3p^5(^2P^\circ)(3d^3(a^4F))$	$g^3F - ^3F^\circ$	2 - 2		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	177.235	1.0515 - 565.275	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$g^3F - ^3P^o$	3 - 2		1103
	120	177.329	2.3315 - 566.256	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4F))$	$g^3F - ^3F^o$	4 - 3		1103
	60	177.503	1.0515 - 564.425	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4F))$	$g^3F - ^3F^o$	3 - 2		1103
	60	177.555	67.0783 - 630.283	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(b^2D))$	$^1S - ^1P^o$	0 - 1		1103
	4	179.656	67.0783 - 623.699	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$^1S - ^3S^o$	0 - 1		1103
	4	179.720	0.0 - 556.422	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$g^3F - ^1F^o$	2 - 3		1103
	60	180.059	1.0515 - 556.422	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$g^3F - ^1F^o$	3 - 3		1103
	25	180.477	2.3315 - 556.422	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$g^3F - ^1F^o$	4 - 3		1103
	10	180.760	0.0 - 553.220	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^1D^o$	2 - 2		1103
	25	181.104	1.0515 - 553.220	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^1D^o$	3 - 2		1103
	25	181.646	1.0515 - 551.568	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3D^o$	3 - 3		1103
	60	182.071	2.3315 - 551.568	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3D^o$	4 - 3		1103
	10	182.221	17.4755 - 566.256	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4F))$	$^1D - ^3F^o$	2 - 3		1103
	40	182.740	1.0515 - 548.274	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3D^o$	3 - 2		1103
	90	183.539	20.4301 - 565.275	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$^3P - ^3P^o$	1 - 2		1103
	200	183.825	21.2786 - 565.275	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$^3P - ^3P^o$	2 - 2		1103
	40	183.884	17.4755 - 561.303	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$^1D - ^3P^o$	2 - 1		1103
	25	184.114	21.2786 - 564.425	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4F))$	$^3P - ^3F^o$	2 - 2		1103
	60	184.752	20.0403 - 561.303	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$^3P - ^3P^o$	0 - 1		1103
	40	184.886	20.4301 - 561.303	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$^3P - ^3P^o$	1 - 1		1103
	25	185.176	21.2786 - 561.303	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4P))$	$^3P - ^3P^o$	2 - 1		1103
	4	185.465	28.9273 - 568.118	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^4F))$	$^1G - ^3F^o$	4 - 4		1103
	200	185.547	17.4755 - 556.422	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$^1D - ^1F^o$	2 - 3		1103
	4	185.773	0.0 - 538.290	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2D))$	$g^3F - ^1D^o$	2 - 2		1103
	150	186.657	17.4755 - 553.220	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^1D - ^1D^o$	2 - 2		1103
	90	186.868	21.2786 - 556.422	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$^3P - ^1F^o$	2 - 3		1103
	150	187.235	17.4755 - 551.568	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^1D - ^3D^o$	2 - 3		1103
	90	187.692	20.4301 - 553.220	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^3P - ^1D^o$	1 - 2		1103
	40	187.990	21.2786 - 553.220	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^3P - ^1D^o$	2 - 2		1103
	40	188.125	67.0783 - 598.638	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2P))$	$^1S - ^1P^o$	0 - 1		1103
	150	188.396	17.4755 - 548.274	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^1D - ^3D^o$	2 - 2		1103
	150	188.576	21.2786 - 551.568	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^3P - ^3D^o$	2 - 3		1103
	90	189.450	20.4301 - 548.274	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^3P - ^3D^o$	1 - 2		1103
	1	189.573	28.9273 - 556.422	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$^1G - ^1F^o$	4 - 3		1103
	25	189.756	21.2786 - 548.274	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^3P - ^3D^o$	2 - 2		1103
	150	192.006	17.4755 - 538.290	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2D))$	$^1D - ^1D^o$	2 - 2		1103
	4	193.421	21.2786 - 538.290	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2D))$	$^3P - ^1D^o$	2 - 2		1103
	350	195.391	2.3315 - 514.133	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$g^3F - ^3G^o$	4 - 5		1103
	150	196.046	0.0 - 510.086	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$g^3F - ^3G^o$	2 - 3		1103
	120	196.423	1.0515 - 510.158	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$g^3F - ^3G^o$	3 - 4		1103
	40	196.453	1.0515 - 510.086	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$g^3F - ^3G^o$	3 - 3		1103
	60	196.917	2.3315 - 510.158	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$g^3F - ^3G^o$	4 - 4		1103
	25	196.944	2.3315 - 510.086	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$g^3F - ^3G^o$	4 - 3		1103
	60	201.855	1.0515 - 496.454	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^1G^o$	3 - 4		1103
	25	202.378	2.3315 - 496.454	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^1G^o$	4 - 4		1103
	1	204.578	21.2786 - 510.086	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$^3P - ^3G^o$	2 - 3		1103
	25	206.096	28.9273 - 514.133	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$^1G - ^3G^o$	4 - 5		1103
	300	207.712	0.0 - 481.435	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3G^o$	2 - 3		1103
	1	207.831	28.9273 - 510.086	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2H))$	$^1G - ^3G^o$	4 - 3		1103
	90	208.167	1.0515 - 481.435	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3G^o$	3 - 3		1103
	4	208.724	2.3315 - 481.435	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3G^o$	4 - 3		1103
	150	211.930	1.0515 - 472.903	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3G^o$	3 - 4		1103
	40	212.509	2.3315 - 472.903	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3G^o$	4 - 4		1103
	250	212.664	2.3315 - 472.559	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$g^3F - ^3G^o$	4 - 5		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	25	213.893	28.9273 - 496.454	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^1G - ^1G^o$	4 - 4		1103
	150	216.591	2.3315 - 464.034	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$g^3F - ^1H^o$	4 - 5		1103
	150	225.411	28.9273 - 472.559	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2F))$	$^1G - ^3G^o$	4 - 5		1103
	4	225.505	0.0 - 443.4470	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^1P^o$	2 - 1		1103
	1	227.918	1.0515 - 439.8116	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^1F^o$	3 - 3		1103
	4	228.584	2.3315 - 439.8116	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^1F^o$	4 - 3		1103
	20	228.866	0.0 - 436.9522	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3P^o$	2 - 1	Q	93
	90	229.828	28.9273 - 464.034	$3p^6 3d^2 - 3p^5(^2P^o)(3d^3(a^2G))$	$^1G - ^1H^o$	4 - 5		1103
	120	231.044	1.0515 - 433.8712	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3F^o$	3 - 4		1103
	4	231.693	0.0 - 431.6095	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3F^o$	2 - 3		1103
	400	231.728	2.3315 - 433.8712	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3F^o$	4 - 4		1103
	60	232.047	0.0 - 430.9486	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3D^o$	2 - 3		1103
	200	232.256	1.0515 - 431.6095	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3F^o$	3 - 3		1103
	300	232.442	0.0 - 430.2134	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3F^o$	2 - 2		1103
	10	232.613	1.0515 - 430.9486	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3D^o$	3 - 3		1103
	60	232.946	2.3315 - 431.6095	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3F^o$	4 - 3		1103
	400	233.015	1.0515 - 430.2134	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3F^o$	3 - 2		1103
	250	233.308	2.3315 - 430.9486	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3D^o$	4 - 3		1103
	90	233.762	0.0 - 427.7847	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3D^o$	2 - 2		1103
	300	234.337	1.0515 - 427.7847	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3D^o$	3 - 2		1103
	150	234.757	17.4755 - 443.4470	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^1P^o$	2 - 1		1103
	25	235.081	0.0 - 425.3861	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^1D^o$	2 - 2		1103
	90	235.221	0.0 - 425.1286	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^3D^o$	2 - 1		1103
	200	235.662	1.0515 - 425.3861	$3p^6 3d^2 - 3p^6 3d4p$	$g^3F - ^1D^o$	3 - 2		1103
	10	236.180	20.0403 - 443.4470	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^1P^o$	0 - 1		1103
	50	236.388	20.4301 - 443.4470	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^1P^o$	1 - 1		209
	60	236.778	17.4755 - 439.8116	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^1F^o$	2 - 3		1103
	60	236.872	21.2786 - 443.4470	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^1P^o$	2 - 1		1103
	25	238.048	17.4755 - 437.5580	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^3P^o$	2 - 2		1103
	40	238.393	17.4755 - 436.9522	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^3P^o$	2 - 1		1103
	25	238.929	21.2786 - 439.8116	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^1F^o$	2 - 3		1103
	120	239.734	20.4301 - 437.5580	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3P^o$	1 - 2		1103
	120	239.860	20.0403 - 436.9522	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3P^o$	0 - 1		1103
	90	240.053	20.4301 - 437.0013	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3P^o$	1 - 0		1103
	90	240.083	20.4301 - 436.9522	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3P^o$	1 - 1		1103
	300	240.223	21.2786 - 437.5580	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3P^o$	2 - 2		1103
	120	240.572	21.2786 - 436.9522	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3P^o$	2 - 1		1103
	120	241.467	17.4755 - 431.6095	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^3F^o$	2 - 3		1103
	125	241.853	17.4755 - 430.9486	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^3D^o$	2 - 3		1103
	120	242.284	17.4755 - 430.2134	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^3F^o$	2 - 2		1103
	400	243.379	28.9273 - 439.8116	$3p^6 3d^2 - 3p^6 3d4p$	$^1G - ^1F^o$	4 - 3		1103
	120	243.705	21.2786 - 431.6095	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3F^o$	2 - 3		1103
	4	244.030	20.4301 - 430.2134	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3F^o$	1 - 2		1103
	90	244.098	21.2786 - 430.9486	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3D^o$	2 - 3		1103
	120	244.541	21.2786 - 430.2134	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3F^o$	2 - 2		1103
	350	245.153	17.4755 - 425.3861	$3p^6 3d^2 - 3p^6 3d4p$	$^1D - ^1D^o$	2 - 2		1103
	120	245.488	20.4301 - 427.7847	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3D^o$	1 - 2		1103
	60	246.000	21.2786 - 427.7847	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3D^o$	2 - 2		1103
	40	246.859	20.0403 - 425.1286	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3D^o$	0 - 1		1103
	25	246.943	20.4301 - 425.3861	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^1D^o$	1 - 2		1103
	25	247.098	20.4301 - 425.1286	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^3D^o$	1 - 1		1103
	120	247.458	21.2786 - 425.3861	$3p^6 3d^2 - 3p^6 3d4p$	$^3P - ^1D^o$	2 - 2		1103
	10	248.743	28.9273 - 430.9486	$3p^6 3d^2 - 3p^6 3d4p$	$^1G - ^3D^o$	4 - 3		1103
	150	265.697	67.0783 - 443.4470	$3p^6 3d^2 - 3p^6 3d4p$	$^1S - ^1P^o$	0 - 1		1103

FE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	270.363	67.0783 - 436.9522	$3p^6 3d^2 - 3p^6 3d4p$	$^1S - ^3P^o$	0 - 1		1103	
	289.68	1.0515 - 346.2622	$3p^6 3d^2 - 3p^6 3d4s$	$g^3F - ^3D$	3 - 3	F,P	375,1103	
	289.83	0.0 - 345.0287	$3p^6 3d^2 - 3p^6 3d4s$	$g^3F - ^3D$	2 - 2	F,P	375,1103	
	290.31	0.0 - 344.4633	$3p^6 3d^2 - 3p^6 3d4s$	$g^3F - ^3D$	2 - 1	F,P	375,1103	
	290.72	1.0515 - 345.0287	$3p^6 3d^2 - 3p^6 3d4s$	$g^3F - ^3D$	3 - 2	F,P	375,1103	
	290.76	2.3315 - 346.2622	$3p^6 3d^2 - 3p^6 3d4s$	$g^3F - ^3D$	4 - 3	F,P	375,1103	
	291.20	1.0515 - 344.4633	$3p^6 3d^2 - 3p^6 3d4s$	$g^3F - ^3D$	3 - 1	F,P	375,1103	
	291.80	2.3315 - 345.0287	$3p^6 3d^2 - 3p^6 3d4s$	$g^3F - ^3D$	4 - 2	F,P	375,1103	
	300.43	17.4755 - 350.3326	$3p^6 3d^2 - 3p^6 3d4s$	$^1D - ^1D$	2 - 2	F,P	375,1103	
	306.91	20.4301 - 346.2622	$3p^6 3d^2 - 3p^6 3d4s$	$^3P - ^3D$	1 - 3	F,P	375,1103	
	307.70	20.0403 - 345.0287	$3p^6 3d^2 - 3p^6 3d4s$	$^3P - ^3D$	0 - 2	F,P	375,1103	
	307.71	21.2786 - 346.2622	$3p^6 3d^2 - 3p^6 3d4s$	$^3P - ^3D$	2 - 3	F,P	375,1103	
	308.07	20.4301 - 345.0287	$3p^6 3d^2 - 3p^6 3d4s$	$^3P - ^3D$	1 - 2	F,P	375,1103	
	308.24	20.0403 - 344.4633	$3p^6 3d^2 - 3p^6 3d4s$	$^3P - ^3D$	0 - 1	F,P	375,1103	
	311.13	28.9273 - 350.3326	$3p^6 3d^2 - 3p^6 3d4s$	$^1G - ^1D$	4 - 2	F,P	375,1103	
	353.04	67.0783 - 350.3326	$3p^6 3d^2 - 3p^6 3d4s$	$^1S - ^1D$	0 - 2	F,P	375,1103	
	4	1010.260	344.4633 - 443.4470	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^1P^o$	1 - 1		1103
	1	1016.072	345.0287 - 443.4470	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^1P^o$	2 - 1		1103
	40	1073.953	350.3326 - 443.4470	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^1P^o$	2 - 1		1103
	10	1080.637	344.4633 - 437.0013	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^o$	1 - 0		1103
	1	1080.736	345.0287 - 437.5580	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^o$	2 - 2		1103
	10	1087.861	345.0287 - 436.9522	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^o$	2 - 1		1103
	90	1095.343	346.2622 - 437.5580	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3P^o$	3 - 2		1103
	90	1117.580	350.3326 - 439.8116	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^1F^o$	2 - 3		1103
	250	1141.435	346.2622 - 433.8712	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3F^o$	3 - 4		1103
	40	1154.992	345.0287 - 431.6095	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3F^o$	2 - 3		1103
	60	1163.879	345.0287 - 430.9486	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^o$	2 - 3		1103
	150	1166.183	344.4633 - 430.2134	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3F^o$	1 - 2		1103
4	1173.915	345.0287 - 430.2134	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3F^o$	2 - 2		1103	
40	1180.823	346.2622 - 430.9486	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^o$	3 - 3		1103	
40	1208.375	345.0287 - 427.7847	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^o$	2 - 2		1103	
60	1226.653	346.2622 - 427.7847	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^o$	3 - 2		1103	
60	1239.690	344.4633 - 425.1286	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^3D^o$	1 - 1		1103	
1	1244.442	345.0287 - 425.3861	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^1D^o$	2 - 2		1103	
10	1263.844	346.2622 - 425.3861	$3p^6 3d4s - 3p^6 3d4p$	$^3D - ^1D^o$	3 - 2		1103	
90	1332.381	350.3326 - 425.3861	$3p^6 3d4s - 3p^6 3d4p$	$^1D - ^1D^o$	2 - 2		1103	
0	1490.80	0.0 - 67.0783	$3p^6 3d^2 - 3p^6 3d^2$	$g^3F - ^1S$	2 - 0	F,P	1103	

IRON VIII (Fe⁷⁺), Z = 26
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 D_{3/2}$ (19 electrons)
Ionization Potential 1 218 400 cm^{-1} ; 151.06 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
4	93.469	0.000 - 1069.87	$3p^6 3d - 3p^6 7f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085	
5	93.616	1.836 - 1070.03	$3p^6 3d - 3p^6 7f$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		1085	
8	98.371	0.000 - 1016.56	$3p^6 3d - 3p^6 6f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085	
10	98.548	1.836 - 1016.57	$3p^6 3d - 3p^6 6f$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		1085	
25	107.868	0.000 - 927.059	$3p^6 3d - 3p^6 5f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085	
30	108.077	1.836 - 927.102	$3p^6 3d - 3p^6 5f$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		1085	

FE VIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	112.252	0.000 - 890.845	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	15	112.472	0.0 - 889.113	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	20	112.486	1.836 - 890.845	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		1085
	2	112.704	1.836 - 889.113	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	25	112.932	1.836 - 887.325	$3p^63d - 3p^53d(^1F^o)4s$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	1	113.081	0.000 - 884.331	$3p^63d - 3p^53d(^1D^o)4s$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	10	113.315	1.836 - 884.331	$3p^63d - 3p^53d(^1D^o)4s$	$g^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		1085
	5	113.463	0.000 - 881.345	$3p^63d - 3p^53d(^1D^o)4s$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	7	113.763	0.000 - 879.021	$3p^63d - 3p^53d(^1F^o)4s$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	1	113.861	0.000 - 878.264	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		1085
	2	113.963	0.000 - 877.476	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	5	114.295	1.836 - 876.765	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		1085
	4	114.564	1.836 - 874.711	$3p^63d - 3p^53d(^3D^o)4s$	$g^2D - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		1085
	35	116.196	0.000 - 860.615	$3p^63d - 3p^53d(^3F^o)4s$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	1	116.442	1.836 - 860.615	$3p^63d - 3p^53d(^3F^o)4s$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		1085
	60	117.197	1.836 - 855.100	$3p^63d - 3p^53d(^3F^o)4s$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		1085
	1	117.254	0.000 - 852.849	$3p^63d - 3p^53d(^3F^o)4s$	$g^2D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	8	117.661	0.000 - 849.899	$3p^63d - 3p^53d(^3F^o)4s$	$g^2D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	8	118.300	1.836 - 847.145	$3p^63d - 3p^53d(^3F^o)4s$	$g^2D - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$		1085
	3	118.648	0.000 - 842.829	$3p^63d - 3p^53d(^3P^o)4s$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	25	118.907	1.836 - 842.829	$3p^63d - 3p^53d(^3P^o)4s$	$g^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		1085
	15	119.380	0.000 - 837.661	$3p^63d - 3p^53d(^3P^o)4s$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1085
	150	120.31	1.836 - 833.000	$3p^63d - 3p^53d(^3P^o)4s$	$g^2D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$	Q	261
	150	130.941	0.000 - 763.703	$3p^63d - 3p^64f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	200	131.240	1.836 - 763.799	$3p^63d - 3p^64f$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		1085
	80	131.255	1.836 - 763.703	$3p^63d - 3p^64f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	400	167.486	0.000 - 597.065	$3p^63d - 3p^5(3d^2(^3F))$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	200	167.656	0.000 - 596.463	$3p^63d - 3p^5(3d^2(^3F))$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	150	168.002	1.836 - 597.065	$3p^63d - 3p^5(3d^2(^3F))$	$g^2D - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		1085
	100	168.024	0.000 - 595.152	$3p^63d - 3p^5(3d^2(^3P))$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	500	168.172	1.836 - 596.463	$3p^63d - 3p^5(3d^2(^3F))$	$g^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		1085
	450	168.545	1.836 - 595.152	$3p^63d - 3p^5(3d^2(^3P))$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	250	168.929	0.000 - 591.964	$3p^63d - 3p^5(3d^2(^3P))$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1085
	100	174.02						010
	700	176.94						010
	700	185.213	1.836 - 541.755	$3p^63d - 3p^5(3d^2(^3F))$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		1085
	600	186.601	0.000 - 535.909	$3p^63d - 3p^5(3d^2(^3F))$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	300	187.237	1.836 - 535.909	$3p^63d - 3p^5(3d^2(^3F))$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		1085
	200	192.004	0.000 - 520.822	$3p^63d - 3p^5(3d^2(^1S))$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1085
	100	193.967	0.000 - 515.550	$3p^63d - 3p^64p$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	500	194.662	1.836 - 515.550	$3p^63d - 3p^64p$	$g^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		1085
	400	195.972	0.000 - 510.277	$3p^63d - 3p^64p$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1085
	40	196.650	0.000 - 508.518	$3p^63d - 3p^5(3d^2(^1S))$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	230	197.362	1.836 - 508.518	$3p^63d - 3p^5(3d^2(^1S))$	$g^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		1085
	300	217.691	0.000 - 459.367	$3p^63d - 3p^5(3d^2(^1D))$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		1085
	60	218.564	1.836 - 459.367	$3p^63d - 3p^5(3d^2(^1D))$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		1085
	500	224.305	1.836 - 447.658	$3p^63d - 3p^5(3d^2(^1D))$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		1085
	260	231.097	1.836 - 434.555	$3p^63d - 3p^5(3d^2(^1G))$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		1085
	200	231.884	0.000 - 431.250	$3p^63d - 3p^5(3d^2(^1G))$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
	20	232.876	1.836 - 431.250	$3p^63d - 3p^5(3d^2(^1G))$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		1085
		370.427	515.550 - 785.51	$3p^64p - 3p^65s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	Q	009

IRON IX (Fe⁸⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p⁶(¹S₀) (18 electrons)
Ionization Potential 1 884 000 cm⁻¹; 233.6 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10		72.85	0.000 - 1372.67	3s ² 3p ⁶ - 3s ² 3p ⁵ (² P _{1/2})5s	g ¹ S - (³ / ₂) ^o	0 - 1	A	009
		72.891	0.000 - 1371.9	3s ² 3p ⁶ - 3s3p ⁶ 4p	g ¹ S - ¹ P ^o	0 - 1		440
20		73.618	0.000 - 1358.36	3s ² 3p ⁶ - 3s ² 3p ⁵ (² P _{3/2})5s	g ¹ S - (³ / ₂) ^o	0 - 1		729,9
30		82.430	0.000 - 1213.15	3s ² 3p ⁶ - 3s ² 3p ⁵ 4d	g ¹ S - ¹ P ^o	0 - 1		241,9
40		83.457	0.000 - 1198.22	3s ² 3p ⁶ - 3s ² 3p ⁵ 4d	g ¹ S - ³ P ^o	0 - 1		241,9
80		103.566	0.000 - 965.57	3s ² 3p ⁶ - 3s ² 3p ⁵ (² P _{1/2})4s	g ¹ S - (³ / ₂) ^o	0 - 1		241,366
60		105.208	0.000 - 950.500	3s ² 3p ⁶ - 3s ² 3p ⁵ (² P _{3/2})4s	g ¹ S - (³ / ₂) ^o	0 - 1		241,366
25		111.557	413.662 - 1310.15	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ P ^o - ³ F ^o	2 - 3	Q	856
10		111.713	405.765 - 1300.92	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ P ^o - ³ F ^o	0 - 1		241,806
20		111.791	408.307 - 1302.83	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ P ^o - ³ F ^o	1 - 2		241,806
40		112.017	408.307 - 1300.92	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ P ^o - ³ F ^o	1 - 1		729
40		112.096	413.662 - 1305.76	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ P ^o - ³ F ^o	2 - 3	Q	241,806
50		112.375	433.807 - 1323.65	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{1/2})4f	³ F ^o - ³ F ^o	2 - 3	Q	729
20		113.793	425.800 - 1304.59	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ F ^o - ³ F ^o	4 - 5		241,856
40		114.024	429.311 - 1306.32	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ F ^o - ³ F ^o	3 - 4		241,806
20		114.111	433.807 - 1310.15	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ F ^o - ³ F ^o	2 - 3		241,806
30		115.353	456.744 - 1323.65	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{1/2})4f	¹ D ^o - ³ F ^o	2 - 3		241,806
30		115.996	462.609 - 1324.71	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{1/2})4f	³ D ^o - ³ F ^o	2 - 3		241,806
60		116.408	465.8217 - 1324.80	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{1/2})4f	¹ F ^o - ³ F ^o	3 - 4		729
50		116.803	455.612 - 1311.75	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ (² P _{3/2})4f	³ D ^o - ³ F ^o	3 - 4		241,806
90		171.075	0.000 - 584.547	3s ² 3p ⁶ - 3s ² 3p ⁵ 3d	g ¹ S - ¹ P ^o	0 - 1		856
40		217.108	0.000 - 460.609	3s ² 3p ⁶ - 3s ² 3p ⁵ 3d	g ¹ S - ³ D ^o	0 - 1		856
5		218.935	0.0 - 456.744	3s ² 3p ⁶ - 3s ² 3p ⁵ 3d	g ¹ S - ¹ D ^o	0 - 2	F	923
60		241.739	0.0 - 413.662	3s ² 3p ⁶ - 3s ² 3p ⁵ 3d	g ¹ S - ³ P ^o	0 - 2	F	856
40		244.912	0.000 - 408.307	3s ² 3p ⁶ - 3s ² 3p ⁵ 3d	g ¹ S - ³ P ^o	0 - 1		856
		585.2	413.662 - 584.547	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ¹ P ^o	2 - 1	F,P	375,616
		663.4	433.807 - 584.547	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ F ^o - ¹ P ^o	2 - 1	F,P	375,616
		775.6	455.612 - 584.547	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ D ^o - ¹ P ^o	3 - 1	F,P	375,616
		782.5	456.744 - 584.547	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	¹ D ^o - ¹ P ^o	2 - 1	F,P	375,616
		806.9	460.609 - 584.547	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ D ^o - ¹ P ^o	1 - 1	F,P	375,616
		820.1	462.609 - 584.547	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ D ^o - ¹ P ^o	2 - 1	F,P	375,616
		842.3	465.8217 - 584.547	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	¹ F ^o - ¹ P ^o	3 - 1	F,P	375,616
		1739.	408.307 - 465.8217	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ¹ F ^o	1 - 3	F,P	375,616
		1759.	405.765 - 462.609	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ³ D ^o	0 - 2	F,P	375,616
1823.	405.765 - 460.609	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ³ D ^o	0 - 1	F,P	375,616		
1		1841.55	408.307 - 462.609	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ³ D ^o	1 - 2	F	940
3		1912.	408.307 - 460.609	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ³ D ^o	1 - 1	F,P	375,616
		1917.21	413.662 - 465.8217	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ¹ F ^o	2 - 3	F	940
		1962.	405.765 - 456.744	3s ² 3p ⁵ 3d - 3s ² 3p ⁵ 3d	³ P ^o - ¹ D ^o	0 - 2	F,P	375,616

IRON X (Fe⁹⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential 2 114 000 cm⁻¹; 262.1 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		62.8	0. - 1592.4	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)5s	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		271
		75.685	0. - 1321.27	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		241
		76.006	0. - 1315.69	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		241
	30	76.495	15.6832 - 1322.66	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		241,93
		76.53	0. - 1306.68	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4d	g ² P ^o - ² S	$\frac{1}{2} - \frac{3}{2}$		271
	10	76.822	15.6832 - 1317.39	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$	P	856
	20	76.923	15.6832 - 1315.69	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$	P	856
		77.45	15.6832 - 1306.68	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4d	g ² P ^o - ² S	$\frac{1}{2} - \frac{3}{2}$		271
		77.627	0. - 1288.21	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4d	g ² P ^o - ² F	$\frac{3}{2} - \frac{5}{2}$		241
		77.728	0. - 1286.54	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4d	g ² P ^o - ⁴ F	$\frac{3}{2} - \frac{5}{2}$		241
		77.812	0. - 1285.18	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		241
	20	77.865	0. - 1284.27	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		241,93
	20	78.151	15.6832 - 1295.26	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		241
		78.769	15.6832 - 1285.18	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		241,93
	400	94.012	0. - 1063.69	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4s	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		182
	100	95.338	0. - 1048.90	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P ^o - ² P	$\frac{3}{2} - \frac{5}{2}$		182
	300	95.374	15.6832 - 1064.19	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4s	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		182
	400	96.122	0. - 1040.35	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P ^o - ² P	$\frac{3}{2} - \frac{5}{2}$		182
	200	96.788	15.6832 - 1048.90	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		182
	300	97.122	0. - 1029.63	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		182
	10	97.591	15.6832 - 1040.35	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		182
	10	97.838	0. - 1022.10	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		182
	15	100.026	388.7080 + B - 1388.44 + B	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ D - ⁴ F ^o	$\frac{3}{2} - \frac{5}{2}$		241,93
		101.733	426.765 + B - 1409.73 + B	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ F - ⁴ G ^o	$\frac{5}{2} - \frac{7}{2}$		241
		101.846	428.297 + B - 1410.17 + B	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ F - ⁴ G ^o	$\frac{3}{2} - \frac{5}{2}$		241
		102.095	417.6500 + B - 1397.13 + B	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ F - ⁴ G ^o	$\frac{9}{2} - \frac{11}{2}$		241
		102.192	450.7527 + B - 1429.30 + B	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (¹ D)4f	² G - ² H ^o	$\frac{9}{2} - \frac{11}{2}$		241
		102.348	422.7931 + B - 1399.85 + B	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ F - ⁴ G ^o	$\frac{3}{2} - \frac{5}{2}$		241
		102.829	511.77 - 1484.26	3s ² 3p ⁴ (¹ S)3d - 3s ² 3p ⁴ (¹ S)4f	² D - ² F ^o	$\frac{3}{2} - \frac{5}{2}$		241
		103.164	440.8393 + B - 1410.17 + B	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	² F - ² G ^o	$\frac{7}{2} - \frac{9}{2}$		241
		103.319	521.30 - 1489.18	3s ² 3p ⁴ (¹ S)3d - 3s ² 3p ⁴ (¹ S)4f	² D - ² F ^o	$\frac{5}{2} - \frac{7}{2}$	Q	241
		103.724	452.73 - 1416.83	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	² F - ² G ^o	$\frac{5}{2} - \frac{7}{2}$		241
		104.221	450.7527 + B - 1410.17 + B	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (³ P)4f	² G - ² G ^o	$\frac{9}{2} - \frac{11}{2}$	Q	900
		104.248	476.70 - 1435.95	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (¹ D)4f	² F - ² G ^o	$\frac{5}{2} - \frac{7}{2}$		241
		104.638	485.9800 + B - 1441.65 + B	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (¹ D)4f	² F - ² G ^o	$\frac{7}{2} - \frac{9}{2}$		241
		108.697	564.208 - 1484.26	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ S)4f	² P - ² F ^o	$\frac{3}{2} - \frac{5}{2}$	Q	900
		109.160	572.964 - 1489.18	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ S)4f	² D - ² F ^o	$\frac{5}{2} - \frac{7}{2}$	Q	900
		137.027	388.7080 + B - 1118.49 + B	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4p	⁴ D - ⁴ P ^o	$\frac{3}{2} - \frac{5}{2}$		241
		139.868	450.7527 + B - 1165.71 + B	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (¹ D)4p	² G - ² F ^o	$\frac{9}{2} - \frac{11}{2}$		241
		140.296	443.90 - 1156.68	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4p	⁴ P - ⁴ D ^o	$\frac{5}{2} - \frac{7}{2}$		241
		140.678	451.0827 + B - 1161.92 + B	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (¹ D)4p	² G - ² F ^o	$\frac{7}{2} - \frac{9}{2}$		241
		144.328	485.9800 + B - 1178.84 + B	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (¹ D)4p	² F - ² D ^o	$\frac{7}{2} - \frac{9}{2}$		241
	90	170.58	0. - 586.254	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		944
		174.534	0. - 572.964	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		944,856
	50	175.266	15.6832 - 586.254	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		944,856
	30	175.474	0. - 569.882	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P ^o - ² P	$\frac{3}{2} - \frac{5}{2}$		944,856
	80	177.243	0. - 564.208	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P ^o - ² P	$\frac{3}{2} - \frac{5}{2}$		944,856
		180.45	15.6832 - 569.882	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		260
	30	182.310	15.6832 - 564.208	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		944,856
	60	184.542	0. - 541.880	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)3d	g ² P ^o - ² S	$\frac{1}{2} - \frac{3}{2}$		944,856
	50	190.044	15.6832 - 541.880	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)3d	g ² P ^o - ² S	$\frac{1}{2} - \frac{3}{2}$		944,856
		195.399	0. - 511.77	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ S)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		944
	30	201.556	15.6832 - 511.77	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ S)3d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		944,856
	30	209.776	0. - 476.70	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)3d	g ² P ^o - ² F	$\frac{1}{2} - \frac{3}{2}$	Q	944,856

FE X — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	7	220.882	0. - 452.73	$3s^2 3p^5 - 3s^2 3p^4(^3P)3d$	$g^2P^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$	Q	944,923
	10	226.320	0. - 441.87	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	Q	923
		229.99	0. - 434.80	$3s^2 3p^5 - 3s^2 3p^4(^3P)3d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		944
		230.089	0. - 434.61	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		944
		234.356	1165.71+B - 1592.4	$3s^2 3p^4(^1D)4p - 3s^2 3p^4(^1D)5s$	$^2F^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$	Q	944
		238.72	15.6832 - 434.61	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		944
		240.243	15.6832 - 431.93	$3s^2 3p^5 - 3s^2 3p^4(^1D)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		944
		256.38	0. - 390.019+B	$3s^2 3p^5 - 3s^2 3p^4(^3P)3d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	Q	944
	45	257.262	0. - 388.7080+B	$3s^2 3p^5 - 3s^2 3p^4(^3P)3d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$	Q	923
	1	317.043	390.019+B - 705.429+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		746
	25	318.599	391.554+B - 705.429+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4D - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		746
	10	319.936	390.019+B - 702.584+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		746
	60	321.766	388.7080+B - 699.491+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4D - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		746
		324.71	388.7080+B - 696.660+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{9}{2}$	Q	437
	220	345.723	0. - 289.2488	$3s^2 3p^5 - 3s^2 3p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		726
	1	354.824	417.6500+B - 699.491+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		746
	40	358.414	417.6500+B - 696.660+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		746
	1	358.867	426.765+B - 705.429+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		746
	4	360.833	428.297+B - 705.429+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		746
	10	361.409	422.7931+B - 699.491+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		746
	10	362.547	426.765+B - 702.584+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		746
	1	364.589	428.297+B - 702.584+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		746
	1	365.144	422.7931+B - 696.660+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		746
	5	365.543	15.6832 - 289.2488	$3s^2 3p^5 - 3s^2 3p^6$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		726
	4	366.667	426.765+B - 699.491+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^5(^3P^\circ)3d$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		746
		1028.04	388.7080+B - 485.9800+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^4(^1D)3d$	$^4D - ^2F$	$\frac{7}{2} - \frac{7}{2}$	F,P	746
	2	1463.50	417.6500+B - 485.9800+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^4(^1D)3d$	$^4F - ^2F$	$\frac{9}{2} - \frac{7}{2}$	F	940
	1	1582.60	422.7931+B - 485.9800+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^4(^1D)3d$	$^4F - ^2F$	$\frac{7}{2} - \frac{7}{2}$	F	940
	2	1603.21	388.7080+B - 451.0827+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^4(^1D)3d$	$^4D - ^2G$	$\frac{3}{2} - \frac{7}{2}$	F	442,940
	0	1611.70	388.7080+B - 450.7527+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^4(^1D)3d$	$^4D - ^2G$	$\frac{7}{2} - \frac{9}{2}$	F	442,940
	5	1918.25	388.7080+B - 440.8393+B	$3s^2 3p^4(^3P)3d - 3s^2 3p^4(^3P)3d$	$^4D - ^2F$	$\frac{7}{2} - \frac{1}{2}$	F	442,940

IRON XI (Fe^{10+}), Z = 26
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4(^3P_2)$ (16 electrons)
 Ionization Potential 2 341 000 cm^{-1} ; 290.3 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		71.029	12.6678 - 1420.68	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4d$	$g^3P - ^1D^\circ$	1 - 2	Q	241
		72.166	37.7427 - 1423.44	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4d$	$^1D - ^1F^\circ$	2 - 3		241
		72.310	37.7427 - 1420.68	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4d$	$^1D - ^1D^\circ$	2 - 2		241
	10	72.635	0. - 1376.75	$3s^2 3p^4 - 3s^2 3p^3(^4S)4d$	$g^3P - ^3D^\circ$	2 - 3		241,856
	80	77.00	80.8305 - 1379.5	$3s^2 3p^4 - 3s^2 3p^3(^4S)4d$	$^1S - ^3D^\circ$	0 - 1	Q	271
	10	86.149						181
	100	86.513	37.7427 - 1193.64	$3s^2 3p^4 - 3s^2 3p^3(^2P^\circ)4s$	$^1D - ^1P^\circ$	2 - 1		181
	200	86.772	0. - 1152.45	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4s$	$g^3P - ^3D^\circ$	2 - 3		181
	120	87.025	0. - 1149.10	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4s$	$g^3P - ^3D^\circ$	2 - 2		181
	10	87.995	12.6678 - 1149.10	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4s$	$g^3P - ^3D^\circ$	1 - 2		181
	10	88.029	12.6678 - 1148.58	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4s$	$g^3P - ^3D^\circ$	1 - 1		181
	10	88.167	14.3073 - 1148.58	$3s^2 3p^4 - 3s^2 3p^3(^2D^\circ)4s$	$g^3P - ^3D^\circ$	0 - 1		181

FE XI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
200	89.104		37.7427 - 1160.03	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$^1D - ^1D^{\circ}$	2 - 2		181
100	89.185		0. - 1121.260	$3s^23p^4 - 3s^23p^3(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	2 - 1		181
10	89.703		37.7427 - 1152.45	$3s^23p^4 - 3s^23p^3(^2D^{\circ})4s$	$^1D - ^1D^{\circ}$	2 - 3	Q	93
10	89.771							181
100	90.205		12.6678 - 1121.260	$3s^23p^4 - 3s^23p^3(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	1 - 1		181
10	90.345		14.3073 - 1121.260	$3s^23p^4 - 3s^23p^3(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	0 - 1		181
	91.394		428.6 + Y - 1522.76 + Y	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^3F^{\circ} - ^3G$	2 - 3		241
	91.472		431.9 + Y - 1525.13 + Y	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^3F^{\circ} - ^3G$	3 - 4		241
	91.63		394.8 + Z - 1486.10 + Z	$3s^23p^3(^4S^{\circ})3d - 3s^23p^3(^4S^{\circ})4f$	$^5D^{\circ} - ^5F$	3 - 4		241
	91.733		396.0 + Z - 1486.12 + Z	$3s^23p^3(^4S^{\circ})3d - 3s^23p^3(^4S^{\circ})4f$	$^5D^{\circ} - ^5F$	4 - 5		241
	92.81		453.8 + W - 1531.30 + W	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^3G^{\circ} - ^3H$	4 - 5		241
	92.87		456.2 + W - 1533.00 + W	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^3G^{\circ} - ^3H$	5 - 6		241
	93.018		490.3 + S - 1565.36 + S	$3s^23p^3(^2P^{\circ})3d - 3s^23p^3(^2P^{\circ})4f$	$^3F^{\circ} - ^3G$	2 - 3		241
	93.433		462.2 + U - 1532.49 + U	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4f$	$^1G^{\circ} - ^3F$	4 - 4		241
	121.419		396.0 + Z - 1219.59 + Z	$3s^23p^3(^4S^{\circ})3d - 3s^23p^3(^4S^{\circ})4p$	$^5D^{\circ} - ^3P$	4 - 3		241
	121.747		394.8 + Z - 1216.18 + Z	$3s^23p^3(^4S^{\circ})3d - 3s^23p^3(^4S^{\circ})4p$	$^5D^{\circ} - ^3P$	3 - 2		241
	123.470		453.8 + W - 1263.71 + W	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4p$	$^3G^{\circ} - ^3F$	4 - 3	P	241
	123.504		456.2 + W - 1265.89 + W	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4p$	$^3G^{\circ} - ^3F$	5 - 4	P	241
	123.572		488.1 + S - 1297.34 + S	$3s^23p^3(^2P^{\circ})3d - 3s^23p^3(^2P^{\circ})4p$	$^3F^{\circ} - ^3D$	3 - 2		241
	123.822		451.9 + W - 1259.51 + W	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4p$	$^3G^{\circ} - ^3F$	3 - 2		241
	124.725		462.2 + U - 1263.96 + U	$3s^23p^3(^2D^{\circ})3d - 3s^23p^3(^2D^{\circ})4p$	$^1G^{\circ} - ^3F$	4 - 3		241
	176.620		12.6678 - 578.87	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^1D^{\circ}$	1 - 2		944
40	178.060		0. - 561.601	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 2		944,856
40	179.762		37.7427 - 594.04	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^3F^{\circ}$	2 - 3		944,856
90	180.407		0. - 554.302	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 3		944,856
30	180.600		12.6678 - 566.370	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1 - 1		944,856
40	181.140		14.3073 - 566.370	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	0 - 1		944,856
60	182.173		12.6678 - 561.601	$3s^23p^4 - 3s^23p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1 - 2		944,856
	184.41		80.8305 - 623.08	$3s^23p^4 - 3s^23p^3(^2P^{\circ})3d$	$^1S - ^1P^{\circ}$	0 - 1		944
	184.70		0. - 541.41	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 1	P	375
30	184.800		37.7427 - 578.87	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^1D^{\circ}$	2 - 2		944,856
	187.446		0. - 533.46	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3S^{\circ}$	2 - 1		944
70	188.219		0. - 531.294	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 2		944,856
30	189.017		12.6678 - 541.72	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	1 - 0		944,856
30	189.129		12.6678 - 541.41	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	1 - 1		944,856
30	189.735		14.3073 - 541.41	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	0 - 1		944,856
30	189.940		0. - 526.48	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^1P^{\circ}$	2 - 1		944,856
	192.020		12.6678 - 533.46	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3S^{\circ}$	1 - 1		944
20	192.641		14.3073 - 533.46	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3S^{\circ}$	0 - 1		944,856
50	192.819		12.6678 - 531.294	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	1 - 2		944,856
	198.549		37.7427 - 541.41	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^3P^{\circ}$	2 - 1		944
	201.575		0. - 496.09	$3s^23p^4 - 3s^23p^3(^2P^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 2		944
	201.737		37.7427 - 533.46	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1D - ^3S^{\circ}$	2 - 1		944
	224.39		80.8305 - 526.48	$3s^23p^4 - 3s^23p^3(^2D^{\circ})3d$	$^1S - ^1P^{\circ}$	0 - 1	P	375
	308.534		37.7427 - 361.857	$3s^23p^4 - 3s3p^5$	$^1D - ^1P^{\circ}$	2 - 1	P	726
40	341.113		0. - 293.158	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	2 - 1		726
20	349.046		12.6678 - 299.163	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	1 - 0		726
160	352.661		0. - 283.558	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	2 - 2		726
1	355.837		80.8305 - 361.857	$3s^23p^4 - 3s3p^5$	$^1S - ^1P^{\circ}$	0 - 1		726
5	356.519		12.6678 - 293.158	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	1 - 1		726
20	358.621		14.3073 - 293.158	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	0 - 1		726
20	369.154		12.6678 - 283.558	$3s^23p^4 - 3s3p^5$	$g^3P - ^3P^{\circ}$	1 - 2		726
	1237.2		0. - 80.8305	$3s^23p^4 - 3s^23p^4$	$g^3P - ^1S$	2 - 0	F,P	375,940
6	1467.08		12.6678 - 80.8305	$3s^23p^4 - 3s^23p^4$	$g^3P - ^1S$	1 - 0	F	940

IRON XII (Fe¹¹⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [2 668 000] cm⁻¹; [330.8] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
60	63.56		46.0891 - 1619.3	3s ² 3p ³ - 3s ² 3p ² (¹ S)4d	² D° - ² D	5/2 - 3/2		271
40	65.608		41.5551 - 1565.75	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² P	5/2 - 1/2	P	271
	65.805		46.0891 - 1565.75	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² P	5/2 - 3/2		241
	65.905		0. - 1517.34	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	g ⁴ S° - ⁴ P	5/2 - 3/2		241
10	66.047		0. - 1514.07	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	g ⁴ S° - ⁴ F	5/2 - 1/2		241,93
	66.225		41.5551 - 1551.45	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² F	5/2 - 3/2		241
40	66.297		0. - 1508.36	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	g ⁴ S° - ⁴ P	5/2 - 3/2		241,271
	66.43		46.0891 - 1551.45	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² F	5/2 - 3/2	Q	241
	66.526		46.0891 - 1549.28	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² F	5/2 - 1/2		241
	66.960		41.5551 - 1534.99	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ² D	5/2 - 3/2		241
	67.164		80.5147 - 1569.41	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² P° - ² S	5/2 - 3/2		241
	67.291		46.0891 - 1532.19	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ⁴ D	5/2 - 1/2		241
20	67.702		46.0891 - 1523.17	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ² F	5/2 - 1/2		241
	67.78		41.5551 - 1517.34	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ⁴ P	3/2 - 1/2	Q	271
	67.821		41.5551 - 1516.03	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ² F	5/2 - 3/2		241
	67.972		80.5147 - 1551.64	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² P° - ² D	5/2 - 3/2		241
	68.382		74.1081 - 1536.48	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² P° - ² D	1/2 - 1/2		241
100	69.60		80.5147 - 1517.34	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² P° - ⁴ P	3/2 - 1/2	Q	271
60	70.01		80.5147 - 1508.36	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² P° - ⁴ P	3/2 - 3/2	Q	271
60	77.58		0. - 1289.06	3s ² 3p ³ - 3s ² 3p ² (¹ D)4s	g ⁴ S° - ² D	5/2 - 3/2	Q	271
30	79.488		0. - 1258.05	3s ² 3p ³ - 3s ² 3p ² (³ P)4s	g ⁴ S° - ⁴ P	5/2 - 3/2		241,93
15	80.022		0. - 1249.66	3s ² 3p ³ - 3s ² 3p ² (³ P)4s	g ⁴ S° - ⁴ P	3/2 - 3/2		241,93
	80.160		41.5551 - 1289.06	3s ² 3p ³ - 3s ² 3p ² (¹ D)4s	² D° - ² D	5/2 - 3/2		241
120	80.23		41.5551 - 1287.70	3s ² 3p ³ - 3s ² 3p ² (¹ D)4s	² D° - ² D	3/2 - 3/2	Q	271
35	80.510		0. - 1242.20	3s ² 3p ³ - 3s ² 3p ² (³ P)4s	g ⁴ S° - ⁴ P	3/2 - 1/2		241,93
80	81.651		41.5551 - 1266.38	3s ² 3p ³ - 3s ² 3p ² (³ P)4s	² D° - ² P	5/2 - 3/2		241,812
93	81.943		46.0891 - 1266.38	3s ² 3p ³ - 3s ² 3p ² (³ P)4s	² D° - ² P	5/2 - 3/2		241,812
	82.226		41.5551 - 1257.72	3s ² 3p ³ - 3s ² 3p ² (³ P)4s	² D° - ² P	1/2 - 1/2		241
	82.744		80.5147 - 1289.06	3s ² 3p ³ - 3s ² 3p ² (¹ D)4s	² P° - ² D	5/2 - 3/2		241
160	82.837		80.5147 - 1287.70	3s ² 3p ³ - 3s ² 3p ² (¹ D)4s	² P° - ² D	3/2 - 3/2		241,271
4	84.456		427.4 + B - 1611.45 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	3/2 - 5/2	P	241,93
7	84.490		437.2 + B - 1620.77 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	1/2 - 9/2	P	241,93
10	84.517		444.3 + B - 1627.49 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	2/2 - 11/2	P	241,93
5	84.533		431.4 + B - 1614.37 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	3/2 - 7/2	P	241,93
	84.768		448.0 + B - 1627.69 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ D - ⁴ F°	1/2 - 9/2		241
	84.85		453.4 + B - 1632.00 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ D - ⁴ F°	5/2 - 7/2		241
	84.86		443.8 + B - 1622.2 + B	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (³ P)4f	² F - ² G°	5/2 - 1/2		241
	85.14		494.9 + B - 1669.40 + B	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4f	² G - ² H°	1/2 - 9/2		241
50	85.477		498.2 + B - 1668.11 + B	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4f	² G - ² H°	3/2 - 11/2		241,93
	85.669		603.95 - 1771.21	3s ² 3p ² (³ P)3d - 3s ² 3p ² (¹ S)4f	² D - ² F°	5/2 - 1/2		241
	108.440		444.3 + B - 1366.47 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4p	⁴ F - ⁴ D°	3/2 - 7/2		241
	108.605		437.2 + B - 1357.97 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4p	⁴ F - ⁴ D°	5/2 - 7/2		241
	108.862		431.4 + B - 1349.99 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4p	⁴ F - ⁴ D°	5/2 - 3/2		241
	109.015		448.0 + B - 1365.30 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4p	⁴ D - ⁴ P°	3/2 - 7/2		241
	109.509		463.3 + B - 1376.47 + B	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4p	² F - ² D°	1/2 - 5/2		241
	109.712		453.4 + B - 1364.88 + B	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4p	⁴ D - ² D°	3/2 - 7/2		241
	110.591		498.2 + B - 1402.43 + B	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4p	² G - ² F°	3/2 - 7/2		241
	110.732		494.9 + B - 1397.98 + B	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4p	² G - ² F°	1/2 - 5/2		241
20	178.725		46.0891 - 605.54	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² D° - ² D	5/2 - 1/2	Q	856
	179.265		46.0891 - 603.95	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² D° - ² D	3/2 - 3/2		943
	186.856		41.5551 - 576.73	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² D° - ² F	5/2 - 3/2		943
17	186.880		46.0891 - 581.19	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² D° - ² F	3/2 - 3/2		943,923
	188.170		74.1081 - 605.54	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² P° - ² D	1/2 - 1/2		943
	188.45		46.0891 - 576.73	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² D° - ² F	3/2 - 3/2		943

FE XII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		189.561						943
		190.06	0. - 526.14	$3s^2 3p^3 - 3s^2 3p^2(^1S)3d$	$g^4 S^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
		190.459	80.5147 - 605.54	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
	20	191.045	80.5147 - 603.95	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943,856
	25	192.394	0. - 519.766	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4 S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		943,923
	60	193.509	0. - 516.772	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4 S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		943,923
		194.61	0. - 513.84	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4 S^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		943
		194.920	41.5551 - 554.60	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
	90	195.119	0. - 512.508	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4 S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		943,923
		195.19	41.5551 - 553.90	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
	6	196.640	46.0891 - 554.60	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943,923
		196.923	46.0891 - 553.90	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
	200	198.58	74.1081 - 577.72	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		463
		199.26	0. - 501.80	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4 S^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	Q	814
		200.356	80.5147 - 579.62	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{3}{2}$		943
		201.121	80.5147 - 577.72	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		943
		201.413	41.5551 - 538.04	$3s^2 3p^3 - 3s^2 3p^2(^1S)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
		201.540	80.5147 - 576.73	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2P^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	Q	923
		202.090	74.1081 - 568.93	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		943
		203.272	46.0891 - 538.04	$3s^2 3p^3 - 3s^2 3p^2(^1S)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
		204.743	80.5147 - 568.93	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		943
	30	206.368	41.5551 - 513.84	$3s^2 3p^3 - 3s^2 3p^2(^1S)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943,856
	20	208.318	46.0891 - 526.14	$3s^2 3p^3 - 3s^2 3p^2(^1S)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943,856
	20	208.410	74.1081 - 553.90	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		943,856
		209.14	41.5551 - 519.766	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P	1076
		210.932	80.5147 - 554.60	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
	30	211.738	41.5551 - 513.84	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		943,856
	20	214.415	46.0891 - 512.508	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	Q	93
	30	217.271	41.5551 - 501.80	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		943,856
		218.562	80.5147 - 538.04	$3s^2 3p^3 - 3s^2 3p^2(^1S)3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
	11	219.438	46.0891 - 501.80	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		943,923
		230.79	80.5147 - 513.84	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		943
		283.64	41.5551 - 394.12	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		943
		287.23	41.5551 - 389.72	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	Q	437
	8	291.010	46.0891 - 389.72	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		943,923
		335.06	41.5551 - 340.01	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943
	8	338.263	46.0891 - 341.73	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943,923
	20	346.852	0. - 288.307	$3s^2 3p^3 - 3s3p^4$	$g^4 S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		943,856
	30	352.107	0. - 284.005	$3s^2 3p^3 - 3s3p^4$	$g^4 S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		943,856
	40	364.468	0. - 274.372	$3s^2 3p^3 - 3s3p^4$	$g^4 S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		943,856
	150	382.83	80.5147 - 341.73	$3s^2 3p^3 - 3s3p^4$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		943,437
	14	1242.03	0. - 80.5147	$3s^2 3p^3 - 3s^2 3p^3$	$g^4 S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F	940
	8	1349.38	0. - 74.1081	$3s^2 3p^3 - 3s^2 3p^3$	$g^4 S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F	940

IRON XIII (Fe¹²⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [2 912 000] cm⁻¹; [361.0] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		61.659						241
		61.876						241
60	62.099		9.3025 - 1619.6	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ P°	1 - 0	Q	241,271,970
60	62.354		0. - 1603.75	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	0 - 1	Q	241,271,970
	62.387		48.0691 - 1650.62	3s ² 3p ² - 3s ² 3p4d	¹ D - ¹ P°	2 - 1	Q	241
	62.466		18.5610 - 1619.43	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ F°	2 - 3	Q	241,970
100	62.694		9.3025 - 1604.22	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	1 - 2		241,271
	62.72		9.3025 - 1603.75	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	1 - 1	Q	970
	62.963		18.5610 - 1606.79	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	2 - 3		970
	63.188		48.0691 - 1630.65	3s ² 3p ² - 3s ² 3p4d	¹ D - ¹ F°	2 - 3		970
	64.139		91.5102 - 1650.62	3s ² 3p ² - 3s ² 3p4d	¹ S - ¹ P°	0 - 1		970
92	74.327		9.3025 - 1354.68	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	1 - 2		241,812
	74.629		362.33 - 1702.30 + K	3s3p ³ - 3s ² 3p4f	¹ D° - ³ G	2 - 3	Q	970
25	74.845		18.5610 - 1354.68	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	2 - 2		241,856
	75.241							970
93	75.892		9.3025 - 1327.2	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	1 - 0		241,812
20	76.117		48.0691 - 1361.83	3s ² 3p ² - 3s ² 3p4s	¹ D - ¹ P°	2 - 1		241,93
80	78.462		446.9 + K - 1721.40 + K	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	4 - 5		241,271
	78.56		429.4 + K - 1702.30 + K	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	2 - 3		241
20	78.770		436.4 + K - 1705.92 + K	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	3 - 4		241,93
	81.154		503.34 - 1735.57	3s ² 3p3d - 3s ² 3p4f	³ P° - ³ D	0 - 1	Q	970
	82.010		509.250 - 1728.61	3s ² 3p3d - 3s ² 3p4f	³ D° - ³ F	2 - 3	Q	970
	84.275		556.91 - 1743.46	3s ² 3p3d - 3s ² 3p4f	¹ F° - ¹ G	3 - 4		241
	85.461		570.715 - 1740.84	3s ² 3p3d - 3s ² 3p4f	¹ P° - ¹ D	1 - 2		970
	98.128		446.9 + K - 1466.00 + K	3s ² 3p3d - 3s ² 3p4p	³ F° - ³ D	4 - 3		241
	98.387		498.87 - 1515.26	3s ² 3p3d - 3s ² 3p4p	¹ D° - ¹ P	2 - 1		241
	98.523		436.4 + K - 1451.39 + K	3s ² 3p3d - 3s ² 3p4p	³ F° - ³ D	3 - 2		241
	98.826		429.4 + K - 1441.28 + K	3s ² 3p3d - 3s ² 3p4p	³ F° - ³ D	2 - 1		241
	107.384		556.91 - 1488.11	3s ² 3p3d - 3s ² 3p4p	¹ F° - ¹ D	3 - 2		241
50	196.525		48.0691 - 556.91	3s ² 3p ² - 3s ² 3p3d	¹ D - ¹ F°	2 - 3		943,856
30	197.434		0. - 506.502	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	0 - 1		943,856
60	200.021		9.3025 - 509.250	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	1 - 2		943,856
70	201.121		9.3025 - 506.502	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	1 - 1		943,856
80	202.044		0. - 494.942	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	0 - 1		943,856
40	202.424		9.3025 - 503.34	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	1 - 0		943,856
8	203.793		18.5610 - 509.250	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	2 - 2		943,923
70	203.826		18.5610 - 509.176	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	2 - 3		943,856
40	204.263		9.3025 - 498.87	3s ² 3p ² - 3s ² 3p3d	g ³ P - ¹ D°	1 - 2		943,856
50	204.942		18.5610 - 506.502	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	2 - 1		943,856
20	208.679		91.5102 - 570.715	3s ² 3p ² - 3s ² 3p3d	¹ S - ¹ P°	0 - 1		943,856
40	209.617		9.3025 - 486.358	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	1 - 2		943,856
50	209.916		18.5610 - 494.942	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	2 - 1		943,856
40	213.770		18.5610 - 486.358	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ P°	2 - 2		943,856
	216.88		48.0691 - 509.176	3s ² 3p ² - 3s ² 3p3d	¹ D - ³ D°	2 - 3		804
40	221.822		48.0691 - 498.87	3s ² 3p ² - 3s ² 3p3d	¹ D - ¹ D°	2 - 2		943,856
10	228.18		48.0691 - 486.358	3s ² 3p ² - 3s ² 3p3d	¹ D - ³ P°	2 - 2		620
30	233.234		9.3025 - 438.05	3s ² 3p ² - 3s3p ³	g ³ P - ¹ P°	1 - 1		943,856
50	240.713		0. - 415.462	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	0 - 1		943,856
50	246.208		9.3025 - 415.462	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	1 - 1		943,856
50	251.953		18.5610 - 415.462	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	2 - 1		943,856
	256.42		48.0691 - 438.05	3s ² 3p ² - 3s3p ³	¹ D - ¹ P°	2 - 1		943
2	311.552		9.3025 - 330.279	3s ² 3p ² - 3s3p ³	g ³ P - ³ P°	1 - 2		923
8	312.164		9.3025 - 329.647	3s ² 3p ² - 3s3p ³	g ³ P - ³ P°	1 - 1		923
3	318.21		48.0691 - 362.33	3s ² 3p ² - 3s3p ³	¹ D - ¹ D°	2 - 2		943,923

FE XIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	7	320.800	18.5610 - 330.279	$3s^23p^2 - 3s3p^3$	$g^3P - ^3P^\circ$	2 - 2		923
	120	321.47	18.5610 - 329.647	$3s^23p^2 - 3s3p^3$	$g^3P - ^3P^\circ$	2 - 1	Q	437
	20	348.184	0. - 287.205	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^\circ$	0 - 1		923
	10	359.638	9.3025 - 287.360	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^\circ$	1 - 2		923,856
	4	359.837	9.3025 - 287.205	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^\circ$	1 - 1		923
	50	368.12	18.5610 - 290.21	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^\circ$	2 - 3		943,856
	6	1216.43	9.3025 - 91.5102	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1S$	1 - 0	F	442
		1370.8	18.5610 - 91.5102	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1S$	2 - 0	F,P	375,442

IRON XIV (Fe^{13+}), Z = 26
Ground State $1s^22s^22p^63s^23p(^2P_{1/2}^\circ)$ (13 electrons)
Ionization Potential [3 163 000] cm^{-1} ; [392.2] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	58.963	0.00 - 1695.98	$3s^23p - 3s^24d$	$g^2P^\circ - ^2D$	1 - 1		180
	300	59.579	18.8506 - 1697.29	$3s^23p - 3s^24d$	$g^2P^\circ - ^2D$	1 - 1		180
		69.176	356.71 + K - 1802.30 + K	$3s3p^2 - 3s3p4s$	$^4P - ^4P^\circ$	3/2 - 3/2		241
		69.386	348.52 + K - 1789.73 + K	$3s3p^2 - 3s3p4s$	$^4P - ^4P^\circ$	3/2 - 3/2		241
		69.636	366.26 + K - 1802.30 + K	$3s3p^2 - 3s3p4s$	$^4P - ^4P^\circ$	3/2 - 3/2	P	241
		69.685	0.00 - 1435.02	$3s^23p - 3s^24s$	$g^2P^\circ - ^2S$	3/2 - 3/2	P	241
		70.251	366.26 + K - 1789.73 + K	$3s3p^2 - 3s3p4s$	$^4P - ^4P^\circ$	3/2 - 3/2		241
		70.613	18.8506 - 1435.02	$3s^23p - 3s^24s$	$g^2P^\circ - ^2S$	3/2 - 3/2		241
	10	71.377	301.472 - 1702.49	$3s3p^2 - 3s3p4s$	$^2D - ^2P^\circ$	3/2 - 3/2	Q	241,93
	80	71.87	396.515 - 1788. + K	$3s3p^2 - 3s3p4s$	$^2P - ^4P^\circ$	3/2 - 3/2		271
		72.796	800. + K - 2173.7 + K	$3s3p3d - 3s3p4f$	$^4F^\circ - ^4G$	5/2 - 5/2		241
		72.95	800. + K - 2170.8 + K	$3s3p3d - 3s3p4f$	$^4F^\circ - ^4G$	5/2 - 5/2		241
		73.08	800. + K - 2168.36 + K	$3s3p3d - 3s3p4f$	$^4F^\circ - ^4G$	7/2 - 7/2		241
	35	76.022	473.227 - 1788.64	$3s^23d - 3s^24f$	$^2D - ^2F^\circ$	3/2 - 3/2		241,93
		76.152	475.217 - 1788.38	$3s^23d - 3s^24f$	$^2D - ^2F^\circ$	3/2 - 3/2		241
	20	91.009	475.217 - 1574.01	$3s^23d - 3s^24p$	$^2D - ^2P^\circ$	3/2 - 3/2		241,93
		91.273	473.227 - 1568.84	$3s^23d - 3s^24p$	$^2D - ^2P^\circ$	3/2 - 3/2		241
	80	211.328	0.00 - 473.227	$3s^23p - 3s^23d$	$g^2P^\circ - ^2D$	3/2 - 3/2		856
		216.95	356.71 + K - 817.64 + K	$3s3p^2 - 3s3p3d$	$^4P - ^4D^\circ$	3/2 - 3/2		239
		217.9	301.472 - 760.4 + S	$3s3p^2 - 3s3p3d$	$^2D - ^2F^\circ$	3/2 - 3/2	P	1075
		218.21	366.26 + K - 824.53 + K	$3s3p^2 - 3s3p3d$	$^4P - ^4D^\circ$	3/2 - 3/2		239
	60	219.135	18.8506 - 475.217	$3s^23p - 3s^23d$	$g^2P^\circ - ^2D$	3/2 - 3/2		856
	60	220.095	18.8506 - 473.227	$3s^23p - 3s^23d$	$g^2P^\circ - ^2D$	3/2 - 3/2		856
		223.9	299.248 - 745.9 + S	$3s3p^2 - 3s3p3d$	$^2D - ^2F^\circ$	3/2 - 3/2	P	1075
	40	252.190	0.00 - 396.515	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	1/2 - 3/2		856
	50	257.385	0.00 - 388.510	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	1/2 - 3/2		856
	60	264.779	18.8506 - 396.515	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	1/2 - 3/2		856
	50	270.512	18.8506 - 388.510	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	1/2 - 3/2		856
	60	274.203	0.00 - 364.693	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2S$	1/2 - 1/2		923,856
		280.69	356.71 + K - 712.96 + K	$3s3p^2 - 3p^3$	$^4P - ^4S^\circ$	3/2 - 3/2		239
		288.45	366.26 + K - 712.96 + K	$3s3p^2 - 3p^3$	$^4P - ^4S^\circ$	3/2 - 3/2		239
	10	289.160	18.8506 - 364.693	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2S$	1/2 - 1/2		923,856
	50	334.178	0.00 - 299.248	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2D$	1/2 - 1/2		856
	30	353.838	18.8506 - 301.472	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2D$	1/2 - 1/2		856
	5	356.59	18.8506 - 299.248	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2D$	1/2 - 1/2		856

IRON XV (Fe¹⁴⁺), Z = 26
 Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
 Ionization Potential 3 686 000 cm⁻¹; 457.0 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	0	15.498	0. - 6452.44	3s ² - 2p ³ 3s ² 3d	g ¹ S - ¹ P°	0 - 1		716
	5	17.300	253.82 - 6034.2	3s3p - 2p ³ 3s ² 3p	³ P° - ³ P	2 - 1		979
	1	17.345	0. - 5765.35	3s ² - 2p ³ 3s ² 3d	g ¹ S - ³ P°	0 - 1		643
	7	17.555	253.82 - 5950.2	3s3p - 2p ³ 3s ² 3p	³ P° - ³ P	2 - 2		979
	0	17.57	762.103 - 6452.44	3s3d - 2p ³ 3s ² 3d	¹ D - ¹ P°	2 - 1	Q	208
	19	17.593	351.914 - 6035.0	3s3p - 2p ³ 3s ² 3p	¹ P° - ³ D	1 - 2		979
	19	17.620	253.82 - 5929.2	3s3p - 2p ³ 3s ² 3p	³ P° - ³ D	2 - 3		979
	11	17.880	351.914 - 5950.2	3s3p - 2p ³ 3s ² 3p	¹ P° - ³ P	1 - 2		979
	7	17.917	351.914 - 5933.2	3s3p - 2p ³ 3s ² 3p	¹ P° - ¹ P	1 - 1		979
		38.95	0. - 2567.40	3s ² - 3s5p	g ¹ S - ¹ P°	0 - 1		266
	3	41.559	233.95 - 2640.17	3s3p - 3s5d	³ P° - ³ D	0 - 1		237
	10	41.663	239.67 - 2639.88	3s3p - 3s5d	³ P° - ³ D	1 - 2		237
	20	41.903	253.82 - 2640.28	3s3p - 3s5d	³ P° - ³ D	2 - 3		237
		42.93	762.103 - 3091.50	3s3d - 3s6f	¹ D - ¹ F°	2 - 3		266
		43.39	681.41 - 2986.10	3s3d - 3s6f	³ D - ³ F°	3 - 4		266
		43.65	253.82 - 2544.80	3s3p - 3s5s	³ P° - ³ S	2 - 1		266
		49.49	762.103 - 2782.70	3s3d - 3s5f	¹ D - ¹ F°	2 - 3		266
	1	50.062	678.86 - 2676.38	3s3d - 3s5f	³ D - ³ F°	1 - 2		180
	10	50.085	679.79 - 2676.40	3s3d - 3s5f	³ D - ³ F°	2 - 3		180
	100	50.120	681.41 - 2676.62	3s3d - 3s5f	³ D - ³ F°	3 - 4		180
	300	52.911	0. - 1889.97	3s ² - 3s4p	g ¹ S - ¹ P°	0 - 1		180
	100	55.635	233.95 - 2031.34	3s3p - 3s4d	³ P° - ³ D	0 - 1		180
	200	55.793	239.67 - 2032.02	3s3p - 3s4d	³ P° - ³ D	1 - 2		180
	10	55.815	239.67 - 2031.34	3s3p - 3s4d	³ P° - ³ D	1 - 1		180
	300	56.200	253.82 - 2033.18	3s3p - 3s4d	³ P° - ³ D	2 - 3		180
	1	56.236	253.82 - 2032.02	3s3p - 3s4d	³ P° - ³ D	2 - 2		180
	12	59.404	351.914 - 2035.32	3s3p - 3s4d	¹ P° - ¹ D	1 - 2		241,856
		63.96	559.61 - 2123.17	3p ² - 3s4f	¹ D - ¹ F°	2 - 3		137
	1	65.370	233.95 - 1763.67	3s3p - 3s4s	³ P° - ³ S	0 - 1		237
	3	65.612	239.67 - 1763.67	3s3p - 3s4s	³ P° - ³ S	1 - 1		237
	3	66.238	253.82 - 1763.67	3s3p - 3s4s	³ P° - ³ S	2 - 1		237
		68.860	949.66 - 2401.88	3p3d - 3p4f	³ F° - ³ G	4 - 5		970
		68.884	938.19 - 2389.91 + R	3p3d - 3p4f	³ F° - ³ F	3 - 3	Q	970
		68.897	928.45 - 2380.00	3p3d - 3p4f	³ F° - ³ G	2 - 3		970
		69.049	938.19 - 2386.44	3p3d - 3p4f	³ F° - ³ G	3 - 4		970
		69.534	1090.00 + T - 2528.15 + T	3p3d - 3p4f	¹ D° - ¹ F	2 - 3		970
		69.66	351.914 - 1787.4	3s3p - 3s4s	¹ P° - ¹ S	1 - 0		137
	200	69.945	678.86 - 2108.55	3s3d - 3s4f	³ D - ³ F°	1 - 2		180
	300	69.987	679.79 - 2108.63	3s3d - 3s4f	³ D - ³ F°	2 - 3		180
	400	70.054	681.41 - 2108.88	3s3d - 3s4f	³ D - ³ F°	3 - 4		180
		70.224	976.13 + R - 2400.14 + R	3p3d - 3p4f	³ P° - ³ D	0 - 1		970
		70.519	982.43 + R - 2400.49 + R	3p3d - 3p4f	³ P° - ³ D	1 - 2		970
		70.53	982.69 + R - 2400.49 + R	3p3d - 3p4f	³ D° - ³ D	2 - 2		241
		70.59	982.69 + R - 2399.16 + R	3p3d - 3p4f	³ D° - ³ D	3 - 3		241
		70.601	982.69 + R - 2399.16 + R	3p3d - 3p4f	³ D° - ³ D	2 - 3		970
		71.062	982.69 + R - 2389.91 + R	3p3d - 3p4f	³ D° - ³ F	3 - 4		970
		71.267	982.69 + R - 2386.44	3p3d - 3p4f	³ D° - ³ G	3 - 4		970
		73.199	1079.86 + S - 2446.00 + S	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		970
	30	73.471	762.103 - 2123.17	3s3d - 3s4f	¹ D - ¹ F°	2 - 3		970,856
	40	224.745	233.95 - 678.86	3s3p - 3s3d	³ P° - ³ D	0 - 1	Q	856
	20	227.208	239.67 - 679.79	3s3p - 3s3d	³ P° - ³ D	1 - 2		988,856
		227.70	239.67 - 678.86	3s3p - 3s3d	³ P° - ³ D	1 - 1		242
	30	233.865	253.82 - 681.41	3s3p - 3s3d	³ P° - ³ D	2 - 3		856
		234.73	253.82 - 679.79	3s3p - 3s3d	³ P° - ³ D	2 - 2	Q	437

FE XV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	243.783	351.914 - 762.103	3s3p - 3s3d	$^1P^\circ - ^1D$	1 - 2		856
	80	284.147	0. - 351.914	$3s^2 - 3s3p$	$g^1S - ^1P^\circ$	0 - 1		856
		292.36	239.67 - 581.71	$3s3p - 3p^2$	$^3P^\circ - ^3P$	1 - 2		242
		302.45	233.95 - 564.58	$3s3p - 3p^2$	$^3P^\circ - ^3P$	0 - 1		242
		303.40						241
		305.00	351.914 - 679.79	$3s3p - 3s3d$	$^1P^\circ - ^3D$	1 - 2		242
		307.78	239.67 - 564.58	$3s3p - 3p^2$	$^3P^\circ - ^3P$	1 - 1		242
	5	312.55	239.67 - 559.61	$3s3p - 3p^2$	$^3P^\circ - ^1D$	1 - 2		856
	120	317.61	239.67 - 554.51	$3s3p - 3p^2$	$^3P^\circ - ^3P$	1 - 0		437
	200	321.78	253.82 - 564.58	$3s3p - 3p^2$	$^3P^\circ - ^3P$	2 - 1		437
	120	324.97	351.914 - 659.64	$3s3p - 3p^2$	$^1P^\circ - ^1S$	1 - 0	Q	437,983
		327.03	253.82 - 559.61	$3s3p - 3p^2$	$^3P^\circ - ^1D$	2 - 2		137
		372.78	681.41 - 949.66	$3s3d - 3p3d$	$^3D - ^3F^\circ$	3 - 4		242
		387.00	679.79 - 938.19	$3s3d - 3p3d$	$^3D - ^3F^\circ$	2 - 3		242
		400.65	678.86 - 928.45	$3s3d - 3p3d$	$^3D - ^3F^\circ$	1 - 2		242
	14	417.24	0. - 239.67	$3s^2 - 3s3p$	$g^1S - ^3P^\circ$	0 - 1		856
	150	481.46	351.914 - 559.61	$3s3p - 3p^2$	$^1P^\circ - ^1D$	1 - 2		437

IRON XVI (Fe^{15+}), Z = 26
Ground State $1s^2 2s^2 2p^6 3s(^2S_{1/2})$ (11 electrons)
Ionization Potential 3 946 300 cm^{-1} ; 489.27 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	15.158	0. - 6596.1	$2p^6 3s - 2p^5 3s(^3P^\circ)3d$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	Q	643
	17	15.313	0. - 6530.8	$2p^6 3s -$ $2p^5(^2P_{1/2}^\circ)3s3d(^3D_2)$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	Q	945
	77	15.508	277.163 - 6724.7	$2p^6 3p - 2p^5 3s(^3P^\circ)3p$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	Q	643
	88	15.536	0. - 6436.8	$2p^6 3s - 2p^5 3s(^1P^\circ_i)3d$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	Q	643
	1	15.558	298.145 - 6724.7	$2p^6 3p - 2p^5 3s(^3P^\circ)3p$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	Q	643
	1	15.567	0. - 6422.9	$2p^6 3s - 2p^5 3s(^1P^\circ_i)3d$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	Q	643
	5	16.696	277.163 - 6266.6	$2p^6 3p -$ $2p^5(^2P_{1/2}^\circ)3s3p(^1P^\circ_i)$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		979
	7	16.839	277.163 - 6216.0	$2p^6 3p -$ $2p^5(^2P_{1/2}^\circ)3s3p(^1P^\circ_i)$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		979
	13	16.890	675.477 - 6596.1	$2p^6 3d - 2p^5 3s(^3P^\circ)3d$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		979
	2	16.952	675.477 - 6574.5	$2p^6 3d -$ $2p^5(^2P_{1/2}^\circ)3s3d(^3D_1)$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		979
	7	16.993	675.477 - 6560.2	$2p^6 3d -$ $2p^5(^2P_{1/2}^\circ)3s3d(^1D_2)$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		979
	9	17.025	0. - 5873.7	$2p^6 3s - 2p^5 3s^2$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		979
	15	17.087	678.421 - 6530.8	$2p^6 3d -$ $2p^5(^2P_{1/2}^\circ)3s3d(^3D_2)$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		979
	25	17.124	678.421 - 6518.2	$2p^6 3d -$ $2p^5(^2P_{1/2}^\circ)3s3d(^3D_3)$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{1}{2}$		979
	16	17.161	298.145 - 6125.3	$2p^6 3p -$ $2p^5(^2P_{3/2}^\circ)3s3p(^1P^\circ_i)$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		979
	17	17.206	298.145 - 6110.1	$2p^6 3p - 2p^5 3s(^3P^\circ)3p$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		979
	10	17.249	298.145 - 6095.6	$2p^6 3p -$ $2p^5(^2P_{1/2}^\circ)3s3p(^3P^\circ_2)$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		979
	3	17.285	678.421 - 6463.8	$2p^6 3d -$ $2p^5(^2P_{3/2}^\circ)3s3d(^1D_2)$	$^2D - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		979
	2	17.323	0. - 5772.7	$2p^6 3s - 2p^5 3s^2$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		979
	8	17.337	678.421 - 6446.4	$2p^6 3d -$ $2p^5(^2P_{3/2}^\circ)3s3d(^1D_2)$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{1}{2}$		979

FE XVI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	16	17.366	678.421 - 6436.8	$2p^6 3d - 2p^5 3s(^1P^{\circ}) 3d$	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		979
	18	17.399	675.477 - 6422.9	$2p^6 3d - 2p^5 3s(^1P^{\circ}) 3d$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		979
	14	17.413	298.145 - 6041.0	$2p^6 3p -$ $2p^5(^2P^{\circ}_{3/2}) 3s 3p(^3P^{\circ}_2)$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$		979
	16	17.449	675.477 - 6406.5	$2p^6 3d -$ $2p^5(^2P^{\circ}_{3/2}) 3s 3d(^3D_1)$	$^2D - ^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		979
	13	17.467	277.163 - 6002.2	$2p^6 3p -$ $2p^5(^2P^{\circ}_{3/2}) 3s 3p(^3P^{\circ}_1)$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$		979
	40	17.498	298.145 - 6013.1	$2p^6 3p -$ $2p^5(^2P^{\circ}_{3/2}) 3s 3p(^3P^{\circ}_2)$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		979
	40	17.59	298.145 - 5982.2	$2p^6 3p -$ $2p^5(^2P^{\circ}_{3/2}) 3s 3p(^3P^{\circ}_1)$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	Q	736
		27.88	0. - 3587.	$2p^6 3s - 2p^6 9p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		266
		28.67	0. - 3487.97	$2p^6 3s - 2p^6 8p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		266
		29.93	0. - 3341.	$2p^6 3s - 2p^6 7p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		266
		30.10	277.163 - 3599.	$2p^6 3p - 2p^6 9d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		266
		30.33	298.145 - 3595.	$2p^6 3p - 2p^6 9d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		266
	3	31.041	277.163 - 3498.71	$2p^6 3p - 2p^6 8d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	20	31.242	298.145 - 3498.96	$2p^6 3p - 2p^6 8d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		237
	10	32.166	0. - 3108.87	$2p^6 3s - 2p^6 6p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		237
	6	32.192	0. - 3106.36	$2p^6 3s - 2p^6 6p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		237
	10	32.433	277.163 - 3360.44	$2p^6 3p - 2p^6 7d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	35	32.652	298.145 - 3360.74	$2p^6 3p - 2p^6 7d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		237
		32.84	277.163 - 3323.5	$2p^6 3p - 2p^6 7s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$		266
		33.04	298.145 - 3323.5	$2p^6 3p - 2p^6 7s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$		266
		34.21	678.421 - 3602.	$2p^6 3d - 2p^6 9f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		266
	20	34.857	277.163 - 3146.03	$2p^6 3p - 2p^6 6d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	60	35.106	298.145 - 3146.66	$2p^6 3p - 2p^6 6d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		237
	1	35.333	675.477 - 3505.70	$2p^6 3d - 2p^6 8f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		237
	3	35.368	678.421 - 3505.83	$2p^6 3d - 2p^6 8f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		237
		35.59	678.421 - 3487.97	$2p^6 3d - 2p^6 8p$	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P	375
		35.71	277.163 - 3076.3	$2p^6 3p - 2p^6 6s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$		266
		36.01	298.145 - 3076.3	$2p^6 3p - 2p^6 6s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$		266
	60	36.749	0. - 2721.16	$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		237
	20	36.803	0. - 2717.17	$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		237
	6	37.096	675.477 - 3371.19	$2p^6 3d - 2p^6 7f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		237
						$\frac{5}{2} - \frac{7}{2}$		
	10	37.138	678.421 - 3371.07	$2p^6 3d - 2p^6 7f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		237
		39.827	277.163 - 2788.02	$2p^6 3p - 2p^6 5d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		178
		40.153	298.145 - 2788.62	$2p^6 3p - 2p^6 5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		178
	10	40.199	675.477 - 3163.10	$2p^6 3d - 2p^6 6f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		237
	10	40.245	678.421 - 3163.19	$2p^6 3d - 2p^6 6f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		237
		41.14	678.421 - 3108.87	$2p^6 3d - 2p^6 6p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P	266
		41.91	277.163 - 2663.3	$2p^6 3p - 2p^6 5s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$		266
		42.30	298.145 - 2663.3	$2p^6 3p - 2p^6 5s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$		266
		46.661	675.477 - 2818.54	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		178
		46.718	678.421 - 2818.86	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		178
		48.95	678.421 - 2721.16	$2p^6 3d - 2p^6 5p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P	266
		48.98	675.477 - 2717.17	$2p^6 3d - 2p^6 5p$	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P	266
	23	50.350	0. - 1985.75	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		178,856
		50.555	0. - 1977.77	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		178
		54.142	277.163 - 2124.37	$2p^6 3p - 2p^6 4d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		178
	24	54.728	298.145 - 2125.60	$2p^6 3p - 2p^6 4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		178,856
		54.769	298.145 - 2124.37	$2p^6 3p - 2p^6 4d$	$^2P^{\circ} - ^2D$	$\frac{5}{2} - \frac{3}{2}$		178
	20	62.879	277.163 - 1867.53	$2p^6 3p - 2p^6 4s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$		178,93

FE XVI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	63.719	298.145 - 1867.53	$2p^6 3p - 2p^6 4s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		178,93
	20	66.263	675.477 - 2184.61	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		178,93
	30	66.368	678.421 - 2185.17	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		178,93
	30	76.502	678.421 - 1985.75	$2p^6 3d - 2p^6 4p$	$^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		241,93
		76.796	675.477 - 1977.77	$2p^6 3d - 2p^6 4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		241
	10	144.06	2124.37 - 2818.54	$2p^6 4d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1091
	10	144.25	2125.60 - 2818.86	$2p^6 4d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		1091
	10	156.80	2185.17 - 2822.93	$2p^6 4f - 2p^6 5g$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		1091
	50	156.88	2184.61 - 2822.04	$2p^6 4f - 2p^6 5g$	$^2F^\circ - ^2G$	$\frac{5}{2} - \frac{3}{2}$		1091
	300	171.66	2788.62 - 3371.07	$2p^6 5d - 2p^6 7f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	Q	256
	40	251.058	277.163 - 675.477	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		237,856
	40	262.967	298.145 - 678.421	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		237,856
	3	265.007	298.145 - 675.477	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		237
	60	335.407	0. - 298.145	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		237,856
	60	360.798	0. - 277.163	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		237,856

IRON XVII (Fe^{16+}), $Z = 26$
Ground State $1s^2 2s^2 2p^6 (^1S_0)$ (10 electrons)
Ionization Potential [10 180 000] cm^{-1} ; [1262] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		9.324	0.0 - 10725.	$2s^2 2p^6 - 2s 2p^6 8p$	$g^1S - ^3P^\circ$	0 - 1	P	1144
		9.468	0.0 - 10562.	$2s^2 2p^6 - 2s 2p^6 7p$	$g^1S - ^3P^\circ$	0 - 1	P	1144
		9.703	0.0 - 10306.	$2s^2 2p^6 - 2s 2p^6 6p$	$g^1S - ^3P^\circ$	0 - 1	P	1144
		10.120	0.0 - 9881.4	$2s^2 2p^6 - 2s 2p^6 5p$	$g^1S - ^1P^\circ$	0 - 1	P	1144
	40	10.134	0.0 - 9874.6	$2s^2 2p^6 - 2s 2p^6 5p$	$g^1S - ^3P^\circ$	0 - 1		643,1067
	14	10.221	0.0 - 9783.8	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 8d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		1144
	31	10.252	0.0 - 9751.3	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 8s$	$g^1S - (\frac{1}{2}, \frac{1}{2})^\circ$	0 - 1	Q	643,1144
	19	10.332	0.0 - 9678.7	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 8d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		1144
		10.337	0.0 - 9674.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 8d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1	P	1144
	18	10.367	0.0 - 9648.8	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 8s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1	Q	945,1144
	14	10.386	0.0 - 9628.4	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 7d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		643
	17	10.436	0.0 - 9582.2	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 7s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		1144
	28	10.506	0.0 - 9518.4	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 7d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		643
	17	10.550	0.0 - 9478.7	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 7s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		1144
	30	10.655	0.0 - 9382.6	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 6d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		1144
		10.737	0.0 - 9313.6	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 6s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1	P	1144
	37	10.770	0.0 - 9285.1	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 6d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		945,1094
		10.782	0.0 - 9274.7	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 6d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1	P	1144
	12	10.851	0.0 - 9215.7	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 6s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		1144
	4	11.025	0.0 - 9070.3	$2s^2 2p^6 - 2s 2p^6 4p$	$g^1S - ^1P^\circ$	0 - 1	P	447
	2	11.041	0.0 - 9057.2	$2s^2 2p^6 - 2s 2p^6 4p$	$g^1S - ^3P^\circ$	0 - 1	P	447
	32	11.132	0.0 - 8982.3	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 5d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		643
	44	11.253	0.0 - 8886.5	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 5d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		945,1094
	26	11.287	0.0 - 8859.8	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 5s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		945,1094
	25	11.420	0.0 - 8756.6	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 5s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		1144
	63	12.125	0.0 - 8248.8	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 4d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		643
	64	12.264	0.0 - 8153.9	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 4d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		945
	37	12.322	0.0 - 8115.6	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 4d$	$g^1S - \frac{3}{2}P^\circ$	0 - 1		945
	31	12.526	0.0 - 7984.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 4s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		945
	75	12.678	0.0 - 7887.7	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 4s$	$g^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		643

FE XVII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	91	13.834	0.0 - 7228.6	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^1 P^o$	0 - 1		643
	48	13.892	0.0 - 7198.4	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^3 P^o$	0 - 1		643
	112	15.013	0.0 - 6660.9	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 3d$	$g^1 S - \frac{3}{2} \frac{3}{2}^o$	0 - 1		643
	96	15.260	0.0 - 6553.1	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 3d$	$g^1 S - \frac{3}{2} \frac{3}{2}^o$	0 - 1		643
	59	15.449	0.0 - 6472.9	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 3d$	$g^1 S - \frac{3}{2} \frac{3}{2}^o$	0 - 1		643
	20	16.775	0.0 - 5961.3	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 3s$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1		643
	20	17.051	0.0 - 5864.7	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 3s$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1		643
	50	17.100	0.0 - 5848.0	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 3s$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 2	F	1112, 447
		41.37	6484.0 + C - 8901.2 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P_{3/2}^o) 5f$	$^3 F^o - \frac{3}{2} \frac{3}{2}$	4 - 5		1055
		49.787	6136.6 + C - 8145.2 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P^o) 4d$	$^1 P - ^1 D^o$	1 - 2		395
		49.880	6113.3 + C - 8118.1 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P^o) 4d$	$^3 D - ^3 D^o$	2 - 3		395
		50.262	6127.9 + C - 8117.5 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P^o) 4d$	$^3 D - ^3 F^o$	3 - 4		395
		50.33	6248.8 + C - 8235.7 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P^o) 4d$	$^3 P - ^3 F^o$	1 - 2	P	395
		50.397	6251.9 + C - 8236.2 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P^o) 4d$	$^1 D - ^1 F^o$	2 - 3		395
		50.60	6151.1 + C - 8127.4 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P^o) 4d$	$^3 P - ^3 F^o$	2 - 3	P	395
		52.815	6251.9 + C - 8145.2 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P^o) 4d$	$^1 D - ^1 D^o$	2 - 2	Q	900
		57.32	6127.9 + C - 7872.5 + C	$2s^2 2p^5 (^2P^o) 3p - 2s^2 2p^5 (^2P_{3/2}^o) 4s$	$^3 D - \frac{3}{2} \frac{3}{2}^o$	3 - 2		1055
		58.62	6461.9 + C - 8167.8 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P_{3/2}^o) 4f$	$^3 P^o - \frac{3}{2} \frac{3}{2}^o$	2 - 3		1055
		58.76	6461.9 + C - 8163.7 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P_{3/2}^o) 4f$	$^3 P^o - \frac{3}{2} \frac{3}{2}^o$	2 - 2		1055
		58.91	6546.1 + C - 8243.6 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P_{1/2}^o) 4f$	$^3 F^o - \frac{3}{2} \frac{3}{2}^o$	2 - 3		1055
		58.98	6489.3 + C - 8184.8 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P_{3/2}^o) 4f$	$^3 F^o - \frac{3}{2} \frac{3}{2}^o$	3 - 4		1055
		59.26	6611.6 + C - 8299.1 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P_{1/2}^o) 4f$	$^1 F^o - \frac{3}{2} \frac{3}{2}^o$	3 - 4		1055
		59.59	6511.4 + C - 8189.5 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P_{3/2}^o) 4f$	$^3 D^o - \frac{3}{2} \frac{3}{2}^o$	3 - 4		1055
	60	67.21	6615.3 + C - 8103.3 + C	$2s^2 2p^5 (^2P^o) 3d - 2s^2 2p^5 (^2P^o) 4p$	$^1 D^o - ^1 D$	2 - 2	Q	271
		91.96	5864.7 - 6952.3	$2s^2 2p^5 (^2P_{3/2}^o) 3s - 2s 2p^6 3s$	$(\frac{3}{2}, \frac{3}{2})^o - ^1 S$	1 - 0		390
		97.04	6660.9 - 7691.4	$2s^2 2p^5 (^2P_{1/2}^o) 3d - 2s 2p^6 3d$	$\frac{3}{2} \frac{3}{2}^o - ^1 D$	1 - 2	Q	390
		100.89	5961.3 - 6952.3	$2s^2 2p^5 (^2P_{1/2}^o) 3s - 2s 2p^6 3s$	$(\frac{3}{2}, \frac{3}{2})^o - ^1 S$	1 - 0		390
	30	197.029	5864.7 - 6372.2	$2s^2 2p^5 (^2P_{3/2}^o) 3s - 2s^2 2p^5 (^2P^o) 3p$	$(\frac{3}{2}, \frac{3}{2})^o - ^1 S$	1 - 0		923, 93
		243.39	5961.3 - 6372.2	$2s^2 2p^5 (^2P_{1/2}^o) 3s - 2s^2 2p^5 (^2P^o) 3p$	$(\frac{3}{2}, \frac{3}{2})^o - ^1 S$	1 - 0	Q	437

IRON XVIII (Fe¹⁷⁺), Z = 26
 Ground State $1s^2 2s^2 2p^5 (^2P_{3/2}^o)$ (9 electrons)
 Ionization Potential [10 950 000] cm⁻¹; [1358] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	10.192	0.0 - 9813.3	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 5d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	Q	945
	10	10.298	102.579 - 9813.3	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 5d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		945
	31	10.352	0.0 - 9660.0	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 5d$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		945
	26	10.437	0.0 - 9581.3	$2s^2 2p^5 - 2s^2 2p^4 (^1P) 5d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		945
	23	10.460	102.579 - 9662.9	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 5d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		945
	32	10.529	0.0 - 9497.6	$2s^2 2p^5 - 2s^2 2p^4 (^1P) 5d$	$g^2 P^o - ^4 F$	$\frac{3}{2} - \frac{3}{2}$		945
	21	10.543	102.579 - 9587.6	$2s^2 2p^5 - 2s^2 2p^4 (^1P) 5d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		945
	2	11.021	0.0 - 9073.6	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		643
	44	11.253	102.579 - 8989.1	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		945
	47	11.280	0.0 - 8865.2	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		643
	27	11.309	0.0 - 8843.9	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$	Q	945
	3	11.318	0.0 - 8835.5	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		643
	57	11.326	0.0 - 8829.2	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		945
	10	11.384	102.579 - 8886.5	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	Q	643
	49	11.420	0.0 - 8757.0	$2s^2 2p^5 - 2s^2 2p^4 (^1P) 4d$	$g^2 P^o - ^2 F$	$\frac{3}{2} - \frac{3}{2}$		945
	49	11.440	0.0 - 8742.5	$2s^2 2p^5 - 2s^2 2p^4 (^1P) 4d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		945
	28	11.458	0.0 - 8727.5	$2s^2 2p^5 - 2s^2 2p^4 (^1P) 4d$	$g^2 P^o - ^4 F$	$\frac{3}{2} - \frac{3}{2}$		945
	52	11.526	0.0 - 8676.0	$2s^2 2p^5 - 2s^2 2p^4 (^1P) 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		945

FE XVIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	27	11.551	102.579 - 8759.9	$2s^2 2p^5 - 2s^2 2p^4(^1P)4d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
	21	11.575	102.579 - 8742.5	$2s^2 2p^5 - 2s^2 2p^4(^1P)4d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	Q	945
	17	11.640	0.0 - 8591.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
	11	11.741	0.0 - 8517.2	$2s^2 2p^5 - 2s^2 2p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	10	11.762	0.0 - 8502.0	$2s^2 2p^5 - 2s^2 2p^4(^1P)4s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		945
	13	11.778	102.579 - 8593.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
	20	11.865	102.579 - 8530.7	$2s^2 2p^5 - 2s^2 2p^4(^1P)4s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	23	12.003	102.579 - 8433.8	$2s^2 2p^5 - 2s^2 2p^4(^1P)4s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		945
	48	12.847	0.0 - 7783.9	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
		13.001	102.579 - 7794.4	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	38	13.015	102.579 - 7786.1	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	47	13.049	102.579 - 7766.1	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
	30	13.159	0.0 - 7599.4	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$		945
	51	13.319	0.0 - 7508.1	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	48	13.355	0.0 - 7487.8	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	48	13.374	0.0 - 7477.2	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
	55	13.397	102.579 - 7567.0	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
	59	13.464	0.0 - 7427.2	$2s^2 2p^5 - 2s^2 2p^5(^1P^\circ)3p$	$g^2 P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		945
	20	13.91	0.0 - 7184.2	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	Q	736
	30	13.954	0.0 - 7166.4	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850
	50	14.121	102.579 - 7184.2	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850
	40	14.150	0.0 - 7067.0	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850
	90	14.202	0.0 - 7042.0	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850
	60	14.255	0.0 - 7015.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$		850
	52	14.344	102.579 - 7074.2	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	70	14.361	102.579 - 7067.0	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850
	70	14.373	0.0 - 6957.5	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850
	60	14.419	0.0 - 6935.3	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	34	14.453	0.0 - 6919.0	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945
	30	14.467	102.579 - 7015.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$		850
	28	14.485	0.0 - 6903.7	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		850
	61	14.536	0.0 - 6879.5	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^2F$	$\frac{1}{2} - \frac{3}{2}$		850
	56	14.551	0.0 - 6872.5	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	49	14.581	0.0 - 6858.2	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	37	14.610	102.579 - 6947.2	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		945
	6	14.772	102.579 - 6872.5	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	25	14.868	102.579 - 6828.4	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	Q	945
	50	15.491	102.579 - 6557.9	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$		850
	78	15.611	0.0 - 6404.4	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	Q	643
	90	15.623	0.0 - 6400.8	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850,643
	16	15.764	0.0 - 6343.6	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		850
	46	15.826	0.0 - 6318.7	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	53	15.869	102.579 - 6404.4	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		850
	56	16.003	0.0 - 6248.8	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		850
	30	16.024	102.579 - 6343.6	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		850
	41	16.073	0.0 - 6221.6	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	3	16.087	102.579 - 6318.7	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	18	16.109	102.579 - 6310.3	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		850
	14	16.166	1064.697 - 7250.4	$2s^2 2p^6 - 2s^2 2p^5 3s$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		945
	3	16.270	102.579 - 6248.8	$2s^2 2p^5 - 2s^2 2p^4(^1P)3s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		850
	16	16.306	1064.697 - 7197.3	$2s^2 2p^6 - 2s^2 2p^5 3s$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		945
	400	93.923	0.0 - 1064.697	$2s^2 2p^5 - 2s^2 2p^6$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$	P	1104,849
	200	103.937	102.579 - 1064.697	$2s^2 2p^5 - 2s^2 2p^6$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$	P	1104,849
		974.86	0.0 - 102.579	$2s^2 2p^5 - 2s^2 2p^5$	$g^2 P^\circ - g^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F	442

IRON XIX (Fe¹⁸⁺), Z = 26
Ground State 1s²2s²2p⁴(³P₂) (8 electrons)
Ionization Potential [11 740 000] cm⁻¹; [1456] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.918	0.0 - 52138.	1s ² 2s ² 2p ⁴ - 1s2s ² 2p ⁵	g ³ P - ³ P°	2 - 2		429
		1.931	325.143 - 52138.	1s ² 2s ² 2p ⁴ - 1s2s ² 2p ⁵	¹ S - ³ P°	0 - 1		956
28	9.547	0.0 - 10472.8		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)5d	g ³ P - ¹ F°	2 - 3	Q	643
35	9.599	0.0 - 10423.2		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)5d	g ³ P - ³ F°	2 - 3	Q	643
13	9.688	0.0 - 10322.0		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)5d	g ³ P - ³ D°	2 - 3		945
27	9.696	168.870 - 10482.6		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)5d	¹ D - ¹ P°	2 - 1		643
		9.705	168.870 - 10472.8	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)5d	¹ D - ¹ F°	2 - 3		945
37	9.713	0.0 - 10294.6		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)5d	g ³ P - ³ D°	2 - 2	Q	643
13	9.724	0.0 - 10283.8		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)5d	g ³ P - ³ F°	2 - 3		945
17	9.752	168.870 - 10423.2		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)5d	¹ D - ³ F°	2 - 3	Q	643
4	9.766	89.439 - 10327.4		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)5d	g ³ P - ³ S°	1 - 1	Q	945
10	9.799	89.439 - 10294.6		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)5d	g ³ P - ³ D°	1 - 2		945
		9.842	0.0 - 10163.0	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)5d	g ³ P - ³ D°	2 - 3		945
1	9.911	75.263 - 10165.0		2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)5d	g ³ P - ³ D°	0 - 1	P	945
1	9.926	89.439 - 10164.0		2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)5d	g ³ P - ³ D°	1 - 2	P	945
33	10.564	89.439 - 9555.6		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)4d	g ³ P - ³ D°	1 - 2		945
28	10.580	89.439 - 9541.2		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)4d	g ³ P - ³ P°	1 - 1		945
25	10.617	75.263 - 9494.2		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)4d	g ³ P - ³ D°	0 - 1		945
		10.635	0.0 - 9402.9	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ S°	2 - 1		945
34	10.644	0.0 - 9395.0		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ P°	2 - 2		945
36	10.658	0.0 - 9382.6		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ D°	2 - 3		945
25	10.685	0.0 - 9358.9		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ F°	2 - 3		945
20	10.735	89.439 - 9402.9		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ S°	1 - 1		945
37	10.770	89.439 - 9374.5		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ D°	1 - 2		945
		10.813	0.0 - 9248.1	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)4d	g ³ P - ³ D°	2 - 3		945
12	10.824	168.870 - 9407.6		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	¹ D - ¹ D°	2 - 2		945
20	10.851	325.143 - 9541.2		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)4d	¹ S - ³ P°	0 - 1	Q	945
		10.907	75.263 - 9244.0	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)4d	g ³ P - ³ D°	0 - 1		1094
25	10.933	89.439 - 9236.1		2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)4d	g ³ P - ³ D°	1 - 2		945
19	11.980	2134.121 - 10482.6		2p ⁶ - 2s ² 2p ³ (² P°)5d	¹ S - ¹ P°	0 - 1	Q	945
		11.988	2134.121 - 10476.9	2p ⁶ - 2s ² 2p ³ (² P°)5d	¹ S - ³ P°	0 - 1		1089
38	12.990	168.870 - 7867.1		2s ² 2p ⁴ - 2s2p ⁴ (² D)3p	¹ D - ¹ F°	2 - 3		945
10	13.237	0.0 - 7553.8		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	2 - 2	Q	643
11	13.264	0.0 - 7539.2		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	2 - 3		945
55	13.397	89.439 - 7553.8		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	1 - 2		945
48	13.424	0.0 - 7449.4		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ¹ F°	2 - 3		945
		13.440	89.439 - 7529.9	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	1 - 1		945
59	13.464	0.0 - 7427.2		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ S°	2 - 1		945
55	13.504	0.0 - 7405.2		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ P°	2 - 2		945
75	13.520	0.0 - 7396.4		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ D°	2 - 3		945
42	13.555	89.439 - 7467.0		2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	1 - 2		945
25	13.607	922.908 - 8272.0		2s2p ⁵ - 2s2p ⁴ (² D)3d	³ P° - ³ D	2 - 3	Q	945
		13.631	89.439 - 7427.2	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ S°	1 - 1	Q	146
48	13.648	0.0 - 7327.6		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ F°	2 - 3	Q	945
51	13.669	1267.586 - 8583.3		2s2p ⁵ - 2s2p ⁴ (² P)3d	¹ P° - ¹ D	1 - 2		945
45	13.700	1267.586 - 8566.8		2s2p ⁵ - 2s2p ⁴ (² P)3d	¹ P° - ¹ P	1 - 1		945
45	13.735	984.760 - 8265.4		2s2p ⁵ - 2s2p ⁴ (² D)3d	³ P° - ³ D	1 - 2		945
45	13.735	168.870 - 7449.4		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	¹ D - ¹ F°	2 - 3		945
		13.750	168.870 - 7441.6	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	¹ D - ³ F°	2 - 2	Q	643
55	13.795	0.0 - 7249.0		2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 3		945
69	13.851	168.870 - 7388.6		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	¹ D - ¹ D°	2 - 2	Q	643
48	13.936	922.908 - 8098.5		2s2p ⁵ - 2s2p ⁴ (⁴ P)3d	³ P° - ³ D	2 - 3		945
43	14.021	984.760 - 8116.9		2s2p ⁵ - 2s2p ⁴ (⁴ P)3d	³ P° - ³ P	1 - 2		945
12	14.293	325.143 - 7321.6		2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	¹ S - ¹ P°	0 - 1	Q	464

FE XIX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	53	14.668	0.0 - 6817.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ}) 3s$	$g^3P - ^3D^{\circ}$	2 - 3		945
	49	14.706	168.870 - 6968.8	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ}) 3s$	$^1D - ^3P^{\circ}$	2 - 2	Q	945
	38	14.735	0.0 - 6787.8	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ}) 3s$	$g^3P - ^3D^{\circ}$	2 - 2		945
	21	14.806	168.870 - 6922.9	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ}) 3s$	$^1D - ^3P^{\circ}$	2 - 1	Q	945
	20	14.90	75.263 - 6789.2	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ}) 3s$	$g^3P - ^3D^{\circ}$	0 - 1	Q	736
	28	14.929	89.439 - 6787.8	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ}) 3s$	$g^3P - ^3D^{\circ}$	1 - 2		945
	33	14.966	0.0 - 6681.2	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ}) 3s$	$g^3P - ^3S^{\circ}$	2 - 1		945
	53	14.995	168.870 - 6837.7	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ}) 3s$	$^1D - ^1D^{\circ}$	2 - 2		945
	5	15.042	168.870 - 6817.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ}) 3s$	$^1D - ^3D^{\circ}$	2 - 3	Q	643
	11	15.111	168.870 - 6787.8	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ}) 3s$	$^1D - ^3D^{\circ}$	2 - 2	Q	945
	5	15.138	75.263 - 6681.2	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ}) 3s$	$g^3P - ^3S^{\circ}$	0 - 1		945
	26	15.172	89.439 - 6681.2	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ}) 3s$	$g^3P - ^3S^{\circ}$	1 - 1		945
	26	15.193	0.0 - 6580.0 + K	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ}) 3s$	$g^3P - ^3S^{\circ}$	2 - 2	Q	945,680
	2	15.413	89.439 - 6580.0 + K	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ}) 3s$	$g^3P - ^3S^{\circ}$	1 - 2	Q	643,680
	50	78.90	0.0 - 1267.586	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^1P^{\circ}$	2 - 1		1091
	4	83.89	75.263 - 1267.586	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^1P^{\circ}$	0 - 1		1091
	4	84.89	7405.2 - 8583.3	$2s^2 2p^3(^2D^{\circ}) 3d - 2s 2p^4(^2P) 3d$	$^3P^{\circ} - ^1D$	2 - 2		1091
	4	87.02	984.760 - 2134.121	$2s 2p^5 - 2p^6$	$^3P^{\circ} - ^1S$	1 - 0		1091
	250	91.02	168.870 - 1267.586	$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^{\circ}$	2 - 1		1091
	200	101.55	0.0 - 984.760	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^{\circ}$	2 - 1		1091
	50	106.12	325.143 - 1267.586	$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^{\circ}$	0 - 1		1091
	110	106.33	89.439 - 1030.019	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^{\circ}$	1 - 0		1091
	300	108.37	0.0 - 922.908	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^{\circ}$	2 - 2		1091
	110	109.97	75.263 - 984.760	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^{\circ}$	0 - 1		1091
	80	111.70	89.439 - 984.760	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^{\circ}$	1 - 1		1091
	150	115.42	1267.586 - 2134.121	$2s 2p^5 - 2p^6$	$^1P^{\circ} - ^1S$	1 - 0		1091
	200	120.00	89.439 - 922.908	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^{\circ}$	1 - 2		1091
	50	132.63	168.870 - 922.908	$2s^2 2p^4 - 2s 2p^5$	$^1D - ^3P^{\circ}$	2 - 2		1091
		307.56	0.0 - 325.143	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1104
		424.26	89.439 - 325.143	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1104
	150	592.24	0.0 - 168.870	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F	437
		639.91	168.870 - 325.143	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1104
		1068.3	75.263 - 168.870	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1104
		1118.07	0.0 - 89.439	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F	442
		1259.0	89.439 - 168.870	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 2	F,P	375,1104
		1328.7	0.0 - 75.263	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1104

IRON XX (Fe^{19+}), $Z = 26$
Ground State $1s^2 2s^2 2p^3(^4S_{3/2})$ (7 electrons)
Ionization Potential [12 760 000] cm^{-1} ; [1582] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1.9051	323.18 - 52814.	$1s^2 2s^2 2p^3 - 1s 2s^2 2p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1059
		1.9051	175.80 - 52667.	$1s^2 2s^2 2p^3 - 1s 2s^2 2p^4$	$^2D^{\circ} - ^2P$	$\frac{5}{2} - \frac{3}{2}$		1059
		1.9075	0.0 - 52425.	$1s^2 2s^2 2p^3 - 1s 2s^2 2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1059
		1.9075	175.80 - 52601.	$1s^2 2s^2 2p^3 - 1s 2s^2 2p^4$	$^2D^{\circ} - ^2D$	$\frac{5}{2} - \frac{5}{2}$		1059
	38	9.065	0.0 - 11031.	$2s^2 2p^3 - 2s^2 2p^2(^3P) 5d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		945
	21	9.073	138.29 - 11160.	$2s^2 2p^3 - 2s^2 2p^2(^1D) 5d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		945

FE XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
38	9.082	138.29 - 11152.		$2s^2 2p^3 - 2s^2 2p^2(^1D)5d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 3 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
41	9.110	0.0 - 10977.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$g^4S^\circ - ^4F$	$\begin{smallmatrix} 4 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
28	9.163	0.0 - 10913.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$g^4S^\circ - ^4P$	$\begin{smallmatrix} 4 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
28	9.199	175.80 - 11046.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$^2D^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
26	9.208	175.80 - 11036.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
28	9.220	323.18 - 11169.		$2s^2 2p^3 - 2s^2 2p^2(^1D)5d$	$^2P^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
37	9.231	323.18 - 11152.		$2s^2 2p^3 - 2s^2 2p^2(^1D)5d$	$^2P^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
18	9.331	323.18 - 11036.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$^2P^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
18	9.344	323.18 - 11027.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$^2P^\circ - ^4D$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
33	9.364	323.18 - 11000.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$^2P^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
41	9.389	323.18 - 10977.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$^2P^\circ - ^4F$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
37	9.440	323.18 - 10913.		$2s^2 2p^3 - 2s^2 2p^2(^3P)5d$	$^2P^\circ - ^4P$	$\begin{smallmatrix} 2 & - & 5 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
5	9.871	0.0 - 10130.		$2s^2 2p^3 - 2s^2 2p^2(^1D)4d$	$g^4S^\circ - ^2D$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	945
11	9.953	0.0 - 10043.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$g^4S^\circ - ^2D$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
21	9.981	0.0 - 10020.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$g^4S^\circ - ^2D$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
27	9.991	0.0 - 10009.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$g^4S^\circ - ^4P$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
20	10.008	138.29 - 10130.		$2s^2 2p^3 - 2s^2 2p^2(^1D)4d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
62	10.034	175.80 - 10142.		$2s^2 2p^3 - 2s^2 2p^2(^1D)4d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
78	10.047	175.80 - 10130.		$2s^2 2p^3 - 2s^2 2p^2(^1D)4d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		643
25	10.058	0.0 - 9942.3		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$g^4S^\circ - ^4F$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
25	10.095	138.29 - 10043.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
42	10.116	138.29 - 10020.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
25	10.121	0.0 - 9880.5		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$g^4S^\circ - ^4P$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
52	10.128	138.29 - 10009.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2D^\circ - ^4P$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
22	10.159	175.80 - 10020.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2D^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
20	10.177	138.29 - 9964.5		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2D^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
22	10.222	260.09 - 10043.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2P^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
27	10.322	323.18 - 10009.		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2P^\circ - ^4P$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
27	10.344	323.18 - 9992.0		$2s^2 2p^3 - 2s^2 2p^2(^3P)4d$	$^2P^\circ - ^4D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
126	12.393	752.73 - 8821.3		$2s 2p^4 - 2s 2p^3(^3D^\circ)3d$	$^4P - ^4P^\circ$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
36	12.494	820.68 - 8821.3		$2s 2p^4 - 2s 2p^3(^3D^\circ)3d$	$^4P - ^4P^\circ$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	945
30	12.763	138.29 - 7973.4		$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
115	12.812	752.73 - 8557.2		$2s 2p^4 - 2s 2p^3(^3D^\circ)3d$	$^4P - ^2F^\circ$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
48	12.818	0.0 - 7801.5		$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$g^4S^\circ - ^4P$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
107	12.834	175.80 - 7967.3		$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^\circ - ^2P$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		643
30	12.857	138.29 - 7916.1		$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
44	12.888	175.80 - 7935.0		$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
108	12.909	752.73 - 8499.3		$2s 2p^4 - 2s 2p^3(^3D^\circ)3d$	$^4P - ^4S^\circ$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		643
55	12.924	175.80 - 7913.3		$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
49	12.946	323.18 - 8047.6		$2s^2 2p^3 - 2s^2 2p^2(^1S)3d$	$^2P^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
	12.958	752.73 - 8470.0		$2s 2p^4 - 2s 2p^3(^3D^\circ)3d$	$^4P - ^4D^\circ$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	P	945
60	12.970	175.80 - 7884.9		$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^\circ - ^2G$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	643
80	12.983	138.29 - 7843.6		$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2D^\circ - ^2D$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		643
72	12.995	752.73 - 8447.9		$2s 2p^4 - 2s 2p^3(^3D^\circ)3d$	$^4P - ^4D^\circ$	$\begin{smallmatrix} 4 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		643
60	13.07	323.18 - 7974.6		$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2P^\circ - ^2S$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		736
53	13.082	175.80 - 7819.9		$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2D^\circ - ^2F$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
	13.111	1042.21 - 8669.6		$2s 2p^4 - 2s 2p^3(^3P^\circ)3d$	$^2D - ^2D^\circ$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	P	945
37	13.138	1058.13 - 8669.6		$2s 2p^4 - 2s 2p^3(^3P^\circ)3d$	$^2D - ^2D^\circ$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
30	13.159	1058.13 - 8657.5		$2s 2p^4 - 2s 2p^3(^3P^\circ)3d$	$^2D - ^2F^\circ$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
2	13.183	138.29 - 7725.4		$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2D^\circ - ^2P$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		643
23	13.194	1242.08 - 8821.3		$2s 2p^4 - 2s 2p^3(^3D^\circ)3d$	$^2P - ^4P^\circ$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
182	13.232	1242.08 - 8801.4		$2s 2p^4 - 2s 2p^3(^1D^\circ)3d$	$^2P - ^2F^\circ$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	Q	1067
23	13.247	175.80 - 7725.4		$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2D^\circ - ^2P$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$		945
	13.279	1194.85 - 8725.5		$2s 2p^4 - 2s 2p^3(^2S^\circ)3d$	$^2S - ^4D^\circ$	$\begin{smallmatrix} 2 & - & 2 \\ 2 & - & 2 \\ 2 & - & 2 \end{smallmatrix}$	P	945

FE XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
49	13.292	13.292	1339.68 - 8863.0	$2s2p^4 - 2s2p^3(^1D^{\circ})3d$	$^2P - ^2S^{\circ}$	1-1	P	945
	13.298	13.298	323.18 - 7843.6	$2s^22p^3 - 2s^22p^2(^3P)3d$	$^2P^{\circ} - ^2D$	1-1		643
	13.329	13.329	1058.13 - 8560.6	$2s2p^4 - 2s2p^3(^3D^{\circ})3d$	$^2D - ^2F^{\circ}$	1-1	P	945
	13.335	13.335	1058.13 - 8557.2	$2s2p^4 - 2s2p^3(^3D^{\circ})3d$	$^2D - ^2F^{\circ}$	1-1	P	945
50	13.361	13.361	752.73 - 8237.2	$2s2p^4 - 2s2p^3(^3S^{\circ})3d$	$^4P - ^4D^{\circ}$	1-1	P	945,736
	3	13.387	260.09 - 7731.4	$2s^22p^3 - 2s^22p^2(^3P)3d$	$^2P^{\circ} - ^2P$	2-2	Q	643
59	13.464	13.464	1242.08 - 8669.6	$2s2p^4 - 2s2p^3(^3P^{\circ})3d$	$^2P - ^2D^{\circ}$	1-1		945
45	13.735	13.735	0.0 - 7280.1	$2s^22p^3 - 2s^22p^2(^3P)3s$	$g^4S^{\circ} - ^4P$	1-1		945
51	13.770	13.770	1242.08 - 8506.6	$2s2p^4 - 2s2p^3(^3D^{\circ})3d$	$^2P - ^2D^{\circ}$	1-1		643
	0	13.780	175.80 - 7433.5	$2s^22p^3 - 2s^22p^2(^1D)3s$	$^2D^{\circ} - ^2D$	1-1	Q	643
	13.810	13.810	175.80 - 7416.9	$2s^22p^3 - 2s^22p^2(^1D)3s$	$^2D^{\circ} - ^2D$	1-1	P	945
	13.818	13.818	0.0 - 7236.9	$2s^22p^3 - 2s^22p^2(^3P)3s$	$g^4S^{\circ} - ^4P$	2-2	P	945
	13.945	13.945	0.0 - 7171.0	$2s^22p^3 - 2s^22p^2(^3P)3s$	$g^4S^{\circ} - ^4P$	1-1	P	945
	14.009	14.009	175.80 - 7314.1	$2s^22p^3 - 2s^22p^2(^3P)3s$	$^2D^{\circ} - ^2P$	1-1	P	945
	14.014	14.014	138.29 - 7274.0	$2s^22p^3 - 2s^22p^2(^3P)3s$	$^2D^{\circ} - ^2P$	1-1	P	945
	30	14.064	14.064	323.18 - 7433.5	$2s^22p^3 - 2s^22p^2(^1D)3s$	$^2P^{\circ} - ^2D$	1-1	
75	14.387	14.387	323.18 - 7274.0	$2s^22p^3 - 2s^22p^2(^3P)3s$	$^2P^{\circ} - ^2P$	1-1	Q	643
7	16.935	16.935	1954.15 - 7859.5	$2p^5 - 2s^22p^2(^3P)3d$	$^2P^{\circ} - ^2D$	1-1	Q	979
13	17.660	17.660	2061.73 - 7725.4	$2p^5 - 2s^22p^2(^3P)3d$	$^2P^{\circ} - ^2P$	1-1	Q	979
10	80.51	80.51	0.0 - 1242.08	$2s^22p^3 - 2s2p^4$	$g^4S^{\circ} - ^2P$	1-1		1091
4	80.59	80.59	7416.9 - 8657.5	$2s^22p^2(^1D)3s - 2s2p^3(^3P^{\circ})3d$	$^2D - ^2F^{\circ}$	1-1		1091
50	83.24	83.24	138.29 - 1339.68	$2s^22p^3 - 2s2p^4$	$^2D^{\circ} - ^2P$	1-1		1091
4	83.69	83.69	0.0 - 1194.85	$2s^22p^3 - 2s2p^4$	$g^4S^{\circ} - ^2S$	1-1		1091
4	88.24	88.24	820.68 - 1954.15	$2s2p^4 - 2p^5$	$^4P - ^2P^{\circ}$	1-1		1091
50	90.60	90.60	138.29 - 1242.08	$2s^22p^3 - 2s2p^4$	$^2D^{\circ} - ^2P$	1-1		1091
4	92.63	92.63	260.09 - 1339.68	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2P$	1-1		1091
200	93.78	93.78	175.80 - 1242.08	$2s^22p^3 - 2s2p^4$	$^2D^{\circ} - ^2P$	1-1		1091
80	94.64	94.64	138.29 - 1194.85	$2s^22p^3 - 2s2p^4$	$^2D^{\circ} - ^2S$	1-1		1091
10	95.95	95.95	0.0 - 1042.21	$2s^22p^3 - 2s2p^4$	$g^4S^{\circ} - ^2D$	1-1		1091
50	98.09	98.09	1042.21 - 2061.73	$2s2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	1-1		1091
250	98.38	98.38	323.18 - 1339.68	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2P$	1-1		1091
30	101.83	101.83	260.09 - 1242.08	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2P$	1-1		1091
	106.173	106.173	7859.5 - 8801.4	$2s^22p^2(^3P)3d - 2s2p^3(^1D^{\circ})3d$	$^2D - ^2F^{\circ}$	1-1	Q	900
80	106.98	106.98	260.09 - 1194.85	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2S$	1-1		1091
50	108.83	108.83	323.18 - 1242.08	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2P$	1-1		1091
50	109.66	109.66	1042.21 - 1954.15	$2s2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	1-1		1091
200	110.63	110.63	138.29 - 1042.21	$2s^22p^3 - 2s2p^4$	$^2D^{\circ} - ^2D$	1-1		1091
110	111.60	111.60	1058.13 - 1954.15	$2s2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	1-1		1091
300	113.34	113.34	175.80 - 1058.13	$2s^22p^3 - 2s2p^4$	$^2D^{\circ} - ^2D$	1-1		1091
27	113.45	113.45	8058.7 - 8940.3	$2s^22p^2(^1S)3d - 2s2p^3(^1P^{\circ})3d$	$^2D - ^2F^{\circ}$	1-1	Q	390
4	114.72	114.72	323.18 - 1194.85	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2S$	1-1		1091
200	118.66	118.66	0.0 - 842.74	$2s^22p^3 - 2s2p^4$	$g^4S^{\circ} - ^4P$	1-1		1091
29	120.89	120.89	7973.4 - 8800.5	$2s^22p^2(^1D)3d - 2s2p^3(^1D^{\circ})3d$	$^2F - ^2F^{\circ}$	1-1	Q	390
150	121.83	121.83	0.0 - 820.68	$2s^22p^3 - 2s2p^4$	$g^4S^{\circ} - ^4P$	1-1		1091
30	122.00	122.00	1242.08 - 2061.73	$2s2p^4 - 2p^5$	$^2P - ^2P^{\circ}$	1-1		1091
4	127.86	127.86	260.09 - 1042.21	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2D$	1-1		1091
10	131.70	131.70	1194.85 - 1954.15	$2s2p^4 - 2p^5$	$^2S - ^2P^{\circ}$	1-1		1091
325	132.67	132.67	8047.6 - 8801.4	$2s^22p^2(^1S)3d - 2s2p^3(^1D^{\circ})3d$	$^2D - ^2F^{\circ}$	1-1	Q	390
300	132.85	132.85	0.0 - 752.73	$2s^22p^3 - 2s2p^4$	$g^4S^{\circ} - ^4P$	1-1		1091
30	136.06	136.06	323.18 - 1058.13	$2s^22p^3 - 2s2p^4$	$^2P^{\circ} - ^2D$	1-1		1091
10	138.49	138.49	1339.68 - 2061.73	$2s2p^4 - 2p^5$	$^2P - ^2P^{\circ}$	1-1		1091
43	139.47	139.47	7843.6 - 8560.6	$2s^22p^2(^3P)3d - 2s2p^3(^3D^{\circ})3d$	$^2D - ^2F^{\circ}$	1-1	Q	390
50	140.44	140.44	1242.08 - 1954.15	$2s2p^4 - 2p^5$	$^2P - ^2P^{\circ}$	1-1		1091
	309.4	309.4	0.0 - 323.18	$2s^22p^3 - 2s^22p^3$	$g^4S^{\circ} - ^2P^{\circ}$	1-1	F,P	375,1091

FE XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		384.5	0.0 - 260.09	$2s^22p^3 - 2s^22p^3$	$g^4S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		540.9	138.29 - 323.18	$2s^22p^3 - 2s^22p^3$	$^2D^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		569.	0.0 - 175.80	$2s^22p^3 - 2s^22p^3$	$g^4S^\circ - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091
		678.5	175.80 - 323.18	$2s^22p^3 - 2s^22p^3$	$^2D^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091
		723.1	0.0 - 138.29	$2s^22p^3 - 2s^22p^3$	$g^4S^\circ - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		821.0	138.29 - 260.09	$2s^22p^3 - 2s^22p^3$	$^2D^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		1186.	175.80 - 260.09	$2s^22p^3 - 2s^22p^3$	$^2D^\circ - ^2P^\circ$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,1091
		1585.0	260.09 - 323.18	$2s^22p^3 - 2s^22p^3$	$^2P^\circ - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F	1082

IRON XXI (Fe^{20+}), Z = 26
 Ground State $1s^22s^22p^2(^3P_0)$ (6 electrons)
 Ionization Potential [13 620 000] cm^{-1} ; [1689] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1.8916	243.94 - 53100.	$1s^22s^22p^2 - 1s^22s^22p^2$	$^1D - ^1P^\circ$	2 - 1		1059
		1.8942	73.851 - 52870.	$1s^22s^22p^2 - 1s^22s^22p^2$	$g^3P - ^3S^\circ$	1 - 1		1059
		1.8966	117.240 - 52840.	$1s^22s^22p^2 - 1s^22s^22p^2$	$g^3P - ^3D^\circ$	2 - 3		1059
18	8.472	0.0 - 11809.6	0.0 - 11809.6	$1s^22s^22p^2 - 1s^22s^22p5d$	$g^3P - ^3P^\circ$	0 - 1	Q	643
21	8.521	73.851 - 11809.6	73.851 - 11809.6	$1s^22s^22p^2 - 1s^22s^22p5d$	$g^3P - ^3P^\circ$	1 - 1		945
21	8.558	73.851 - 11758.8	73.851 - 11758.8	$1s^22s^22p^2 - 1s^22s^22p5d$	$g^3P - ^3D^\circ$	1 - 2		945
26	8.590	117.240 - 11758.8	117.240 - 11758.8	$1s^22s^22p^2 - 1s^22s^22p5d$	$g^3P - ^3D^\circ$	2 - 2	Q	643
	8.610	73.851 - 11688.3	73.851 - 11688.3	$1s^22s^22p^2 - 1s^22s^22p5d$	$g^3P - ^3P^\circ$	1 - 2	P	945
18	8.643	117.240 - 11687.3	117.240 - 11687.3	$1s^22s^22p^2 - 1s^22s^22p5d$	$g^3P - ^3F^\circ$	2 - 3		946
22	8.741	371.52 - 11809.6	371.52 - 11809.6	$1s^22s^22p^2 - 1s^22s^22p5d$	$^1S - ^3P^\circ$	0 - 1	Q	643
33	9.355	0.0 - 10688.4	0.0 - 10688.4	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^3P^\circ$	0 - 1		643
19	9.421	73.851 - 10688.4	73.851 - 10688.4	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^3P^\circ$	1 - 1		945
26	9.433	73.851 - 10674.9	73.851 - 10674.9	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^1D^\circ$	1 - 2		945
34	9.451	73.851 - 10654.7	73.851 - 10654.7	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^3D^\circ$	1 - 2		945
50	9.460	117.240 - 10688.1	117.240 - 10688.1	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^3D^\circ$	2 - 3		945
32	9.475	117.240 - 10674.9	117.240 - 10674.9	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^1D^\circ$	2 - 2	Q	643
46	9.518	73.851 - 10580.3	73.851 - 10580.3	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^3P^\circ$	1 - 2		945
21	9.559	117.240 - 10580.3	117.240 - 10580.3	$1s^22s^22p^2 - 1s^22s^22p4d$	$g^3P - ^3P^\circ$	2 - 2	Q	643
55	9.581	243.94 - 10681.0	243.94 - 10681.0	$1s^22s^22p^2 - 1s^22s^22p4d$	$^1D - ^1F^\circ$	2 - 3		945
36	11.219	1740.42 - 10654.7	1740.42 - 10654.7	$1s^22p^4 - 1s^22s^22p4d$	$^3P - ^3D^\circ$	1 - 2	Q	643
5	12.088	942.27 - 9214.8	942.27 - 9214.8	$1s^22s2p^3 - 1s^22s2p^2(^3P)3d$	$^3P^\circ - ^1D$	2 - 2	Q	945
1	12.145	0.0 - 8232.9	0.0 - 8232.9	$1s^22s^22p^2 - 1s^22s^22p3d$	$g^3P - ^3P^\circ$	0 - 1	Q	643
23	12.201	803.82 - 8999.7	803.82 - 8999.7	$1s^22s2p^3 - 1s^22s2p^2(^3P)3d$	$^3D^\circ - ^3D$	3 - 3	Q	945
40	12.248	73.851 - 8238.4	73.851 - 8238.4	$1s^22s^22p^2 - 1s^22s^22p3d$	$g^3P - ^3P^\circ$	1 - 2	Q	945
64	12.264	73.851 - 8227.8	73.851 - 8227.8	$1s^22s^22p^2 - 1s^22s^22p3d$	$g^3P - ^3P^\circ$	1 - 0		945
37	12.291	486.94 - 8623.0	486.94 - 8623.0	$1s^22s2p^3 - 1s^22s2p^2(^3P)3d$	$^5S^\circ - ^5P$	2 - 2		945
	12.312	486.94 - 8609.1 + F	486.94 - 8609.1 + F	$1s^22s2p^3 - 1s^22s2p^2(^3P)3d$	$^5S^\circ - ^5P$	2 - 3	P	945
37	12.322	117.240 - 8232.9	117.240 - 8232.9	$1s^22s^22p^2 - 1s^22s^22p3d$	$g^3P - ^3P^\circ$	2 - 1		945,1094
	12.346	777.30 - 8876.8	777.30 - 8876.8	$1s^22s2p^3 - 1s^22s2p^2(^3D)3d$	$^3D^\circ - ^3D$	2 - 3	P	945
27	12.355	777.30 - 8871.3	777.30 - 8871.3	$1s^22s2p^3 - 1s^22s2p^2(^3D)3d$	$^3D^\circ - ^3D$	2 - 2		945
5	12.371	777.30 - 8861.2	777.30 - 8861.2	$1s^22s2p^3 - 1s^22s2p^2(^3D)3d$	$^3D^\circ - ^3F$	2 - 3	P	945,856
54	12.387	803.82 - 8876.8	803.82 - 8876.8	$1s^22s2p^3 - 1s^22s2p^2(^3D)3d$	$^3D^\circ - ^3D$	3 - 3	Q	945
16	12.398	803.82 - 8869.0	803.82 - 8869.0	$1s^22s2p^3 - 1s^22s2p^2(^3D)3d$	$^3D^\circ - ^3F$	3 - 4	Q	464
38	12.411	803.82 - 8861.2	803.82 - 8861.2	$1s^22s2p^3 - 1s^22s2p^2(^3D)3d$	$^3D^\circ - ^3F$	3 - 3		945
41	12.429	243.94 - 8289.6	243.94 - 8289.6	$1s^22s^22p^2 - 1s^22s^22p3d$	$^1D - ^1P^\circ$	2 - 1		945
84	12.436	243.94 - 8285.1	243.94 - 8285.1	$1s^22s^22p^2 - 1s^22s^22p3d$	$^1D - ^1F^\circ$	2 - 3		643

FE XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		12.451	1126.53 - 9158.4	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2P)3d$	$^1D^\circ - ^1F$	2 - 3	P	945
	37	12.463	942.27 - 8966.0	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2P)3d$	$^3P^\circ - ^3F$	2 - 3		945
		12.519	73.851 - 8061.6 + B	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p 3d$	$g^3P - ^3F^\circ$	1 - 2	P	949
	36	12.548	942.27 - 8911.6	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2D)3d$	$^3P^\circ - ^1F$	2 - 3	Q	945
	30	12.575	1260.65 - 9214.8	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2P)3d$	$^1P^\circ - ^1D$	1 - 2	Q	464
	40	12.581	777.30 - 8725.9	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^4P)3d$	$^3D^\circ - ^3D$	2 - 3		945
	107	12.586	924.85 - 8871.3	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2D)3d$	$^3P^\circ - ^3D$	1 - 2	Q	643
	53	12.606	942.27 - 8876.8	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2D)3d$	$^3P^\circ - ^3D$	2 - 3		643
	44	12.623	803.82 - 8725.9	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^4P)3d$	$^3D^\circ - ^3D$	3 - 3	Q	643
	18	12.681	803.82 - 8689.6	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^4P)3d$	$^3D^\circ - ^3F$	3 - 4		945
		12.699	777.30 - 8652.0 + F	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^4P)3d$	$^3D^\circ - ^3F$	2 - 3	P	945
	22	12.714	243.94 - 8109.3	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p 3d$	$^1D - ^1D^\circ$	2 - 2		945
	1	12.726	371.52 - 8232.9	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p 3d$	$^1S - ^3P^\circ$	0 - 1	Q	643
	32	12.743	776.78 - 8623.3	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^4P)3d$	$^3D^\circ - ^3F$	1 - 2		945
	1	12.756	1126.53 - 8966.0	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2P)3d$	$^1D^\circ - ^3F$	2 - 3	Q	643
		12.777	1126.53 - 8953.1 + F	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^2D)3d$	$^1D^\circ - ^1D$	2 - 2	P	945
	52	12.789	803.82 - 8623.3	$1s^2 2s 2p^3 - 1s^2 2s 2p^2(^4P)3d$	$^3D^\circ - ^3F$	3 - 2	Q	643
		12.796	243.94 - 8061.6 + B	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p 3d$	$^1D - ^3F^\circ$	2 - 2	P	949
	60	13.07	117.240 - 7768.4	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^2 3p$	$g^3P - ^3P^\circ$	2 - 2		736
	53	13.146	117.240 - 7724.9	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^2 3p$	$g^3P - ^3P^\circ$	2 - 1	Q	643
	230	17.617	2047.76 - 7724.9	$1s^2 2p^4 - 1s^2 2s 2p^2 3p$	$^1S - ^3P^\circ$	0 - 1	Q	1067
	4	84.26	73.851 - 1260.65	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^1P^\circ$	1 - 1		1091
	4	86.26	486.94 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^5S - ^3P$	2 - 2		1091
	30	91.28	0.0 - 1095.52	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3S^\circ$	0 - 1		1091
		96.12	776.78 - 1817.14	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^1D$	1 - 2	P	955
	80	97.88	73.851 - 1095.52	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3S^\circ$	1 - 1		1091
	250	98.36	243.94 - 1260.65	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$^1D - ^1P^\circ$	2 - 1		1091
	30	98.69	803.82 - 1817.14	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^1D$	3 - 2		1091
	30	99.08	117.240 - 1126.53	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^1D^\circ$	2 - 2		1091
	150	102.22	117.240 - 1095.52	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3S^\circ$	2 - 1		1091
	30	103.77	776.78 - 1740.42	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^3P$	1 - 1		1091
	50	103.83	777.30 - 1740.42	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^3P$	2 - 1		1091
	30	104.29	776.78 - 1735.67	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^3P$	1 - 0		1091
		105.01	1095.52 - 2047.76	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3S^\circ - ^1S$	1 - 0	P	955
	10	108.12	0.0 - 924.85	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3P^\circ$	0 - 1		1091
	50	112.47	371.52 - 1260.65	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$^1S - ^1P^\circ$	0 - 1		1091
	300	113.30	243.94 - 1126.53	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$^1D - ^1D^\circ$	2 - 2		1091
	4	114.30	942.27 - 1817.14	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3P^\circ - ^1D$	2 - 2		1091
	10	115.01	776.78 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^3P$	1 - 2		1091
	30	115.08	777.30 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^3P$	2 - 2		1091
	50	115.15	73.851 - 942.27	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3P^\circ$	1 - 2		1091
	110	117.51	73.851 - 924.85	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3P^\circ$	1 - 1		1091
	50	118.69	73.851 - 916.38	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3P^\circ$	1 - 0		1091
	150	118.71	803.82 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3D^\circ - ^3P$	3 - 2		1091
	200	121.21	117.240 - 942.27	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3P^\circ$	2 - 2		1091
	4	121.36	916.38 - 1740.42	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3P^\circ - ^3P$	0 - 1		1091
	10	123.33	924.85 - 1735.67	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3P^\circ - ^3P$	1 - 0		1091
	4	123.83	117.240 - 924.85	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3P^\circ$	2 - 1		1091
	30	125.29	942.27 - 1740.42	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3P^\circ - ^3P$	2 - 1		1091
	30	127.04	1260.65 - 2047.76	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^1P^\circ - ^1S$	1 - 0		1091
	80	128.73	0.0 - 776.78	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3P - ^3D^\circ$	0 - 1		1091
		138.57	1095.52 - 1817.14	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3S^\circ - ^1D$	1 - 2	P	955
	4	138.61	924.85 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3P^\circ - ^3P$	1 - 2		1091
	80	142.05	942.27 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3P^\circ - ^3P$	2 - 2		1091

FE XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	110	142.16	73.851 - 777.30	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3 P - ^3 D^o$	1 - 2		1091
	4	142.27	73.851 - 776.78	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3 P - ^3 D^o$	1 - 1		1091
	110	144.79	1126.53 - 1817.14	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^1 D^o - ^1 D$	2 - 2		1091
	50	145.65	117.240 - 803.82	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3 P - ^3 D^o$	2 - 3		1091
		151.50	117.240 - 777.30	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3 P - ^3 D^o$	2 - 2		1091
	176	152.15	8211.8 - 8869.0	$1s^2 2s^2 2p 3d - 1s^2 2s 2p^2 (^2D) 3d$	$^3 D^o - ^3 F$	3 - 4	Q	390
	10	155.06	1095.52 - 1740.42	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3 S^o - ^3 P$	1 - 1		1091
	4	156.21	1095.52 - 1735.67	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3 S^o - ^3 P$	1 - 0		1091
	4	181.57	1095.52 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^3 S^o - ^3 P$	1 - 2		1091
		192.40	1126.53 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^1 D^o - ^3 P$	2 - 2	P	955
	85	242.07	73.851 - 486.94	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3 P - ^3 S^o$	1 - 2	Q	437
		259.33	1260.65 - 1646.26	$1s^2 2s 2p^3 - 1s^2 2p^4$	$^1 P^o - ^3 P$	1 - 2	P	955
		270.52	117.240 - 486.94	$1s^2 2s^2 2p^2 - 1s^2 2s 2p^3$	$g^3 P - ^3 S^o$	2 - 2	Q	437
		335.9	73.851 - 371.52	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$g^3 P - ^1 S$	1 - 0	F,P	375,1091
		393.3	117.240 - 371.52	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$g^3 P - ^1 S$	2 - 0	F,P	375,1091
		409.9	0.0 - 243.94	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$g^3 P - ^1 D$	0 - 2	F,P	375,1091
		587.9	73.851 - 243.94	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$g^3 P - ^1 D$	1 - 2	F,P	375,1091
		783.8	243.94 - 371.52	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$^1 D - ^1 S$	2 - 0	F,P	375,1091
		789.3	117.240 - 243.94	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$g^3 P - ^1 D$	2 - 2	F,P	375,1091
		853.0	0.0 - 117.240	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$g^3 P - g^3 P$	0 - 2	F,P	375,1091
		1354.08	0.0 - 73.851	$1s^2 2s^2 2p^2 - 1s^2 2s^2 2p^2$	$g^3 P - g^3 P$	0 - 1	F	442

IRON XXII (Fe^{21+}), Z = 26
Ground State $1s^2 2s^2 2p(^2P_{1/2}^o)$ (5 electrons)
Ionization Potential [14 510 000] cm^{-1} ; [1799] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1.8754	0.0 - 53326.	$1s^2 2s^2 2p - 1s 2s^2 2p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	Q	1059
		1.8779	0.0 - 53242.	$1s^2 2s^2 2p - 1s 2s^2 2p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	Q	1059
		1.8794	118.26 - 53326.	$1s^2 2s^2 2p - 1s 2s^2 2p^2$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		1059
		1.8824	118.26 - 53242.	$1s^2 2s^2 2p - 1s 2s^2 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1059
		1.8851	118.26 - 53166.	$1s^2 2s^2 2p - 1s 2s^2 2p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		1059
		1.8867	118.26 - 53121.	$1s^2 2s^2 2p - 1s 2s^2 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1059
		1.936	1627.71 - 53242.	$1s^2 2p^3 - 1s 2s^2 2p^2$	$^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	Q	716
	28	8.736	460.19 - 11906.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o)4d$	$^4 P - ^2 D^o$	$\frac{3}{2} - \frac{5}{2}$	Q	643
	13	8.786	512.90 - 11899.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^4 P - ^2 F^o$	$\frac{3}{2} - \frac{7}{2}$	Q	643
	44	8.960	736.51 - 11897.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o)4d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{5}{2}$		946
	25	8.977	759.61 - 11899.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{7}{2}$		946
	37	8.992	404.55 - 11526.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{9}{2}$		946
		9.006	512.90 - 11617.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^4 P - ^4 D^o$	$\frac{5}{2} - \frac{7}{2}$		946
	26	9.013	460.19 - 11558.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^4 P - ^2 F^o$	$\frac{3}{2} - \frac{5}{2}$	Q	643
	11	9.033	460.19 - 11526.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{9}{2}$	Q	643
	13	9.053	512.90 - 11558.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^4 P - ^2 F^o$	$\frac{3}{2} - \frac{5}{2}$	Q	643
	17	9.058	118.26 - 11161.	$1s^2 2s^2 2p - 1s^2 2s^2 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	Q	643
	17	9.093	0.0 - 10999.	$1s^2 2s^2 2p - 1s^2 2s^2 4s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	Q	643
		9.163	992.28 - 11906.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o)4d$	$^2 P - ^2 D^o$	$\frac{3}{2} - \frac{5}{2}$		946
	59	9.183	759.61 - 11649.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o)4d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{7}{2}$		946
	31	9.190	118.26 - 10999.	$1s^2 2s^2 2p - 1s^2 2s^2 4s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	Q	643
	36	9.215	759.61 - 11611.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{5}{2}$		946
	45	9.241	736.51 - 11558.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{7}{2}$		946
	37	9.262	759.61 - 11558.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o)4d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{7}{2}$	Q	643

FE XXII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
27	9.299		736.51 - 11492.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 4d$	$^2D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$	Q	643
15	9.320		759.61 - 11492.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 4d$	$^2D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$	Q	643
27	9.412		992.28 - 11617.	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 4d$	$^2P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	Q	643
17	9.663		736.51 - 11085.	$1s^2 2s 2p^2 - 1s^2 2s^2 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Q	643
19	9.675		736.51 - 11073.	$1s^2 2s 2p^2 - 1s^2 2s^2 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Q	643
11	9.785		853.48 - 11073.	$1s^2 2s 2p^2 - 1s^2 2s^2 4p$	$^2S - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Q	643
5	9.894		978.22 - 11085.	$1s^2 2s 2p^2 - 1s^2 2s^2 4p$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	Q	945
49	11.440		0.0 - 8739.7	$1s^2 2s^2 2p - 1s^2 2s 2p 3p$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		945,946
28	11.458		118.26 - 8845.0	$1s^2 2s^2 2p - 1s^2 2s 2p 3p$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		945,946
29	11.650		0.0 - 8583.7	$1s^2 2s^2 2p - 1s^2 2s 2p 3p$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		946
59	11.669		118.26 - 8687.9	$1s^2 2s^2 2p - 1s^2 2s 2p 3p$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		946
14	11.707		512.90 - 9054.9	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Q	945
59	11.718		759.61 - 9294.5	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o) 3d$	$^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$	Q	643
130	11.748		460.19 - 8972.3	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		946
100	11.767		0.0 - 8498.3	$1s^2 2s^2 2p - 1s^2 2s^2 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		946
130	11.789		759.61 - 9242.0	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o) 3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		946
128	11.797		404.55 - 8881.3	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		946
82	11.815		118.26 - 8583.7	$1s^2 2s^2 2p - 1s^2 2s 2p 3p$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	Q	643
92	11.823		512.90 - 8972.3	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		946
135	11.837		512.90 - 8961.0	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		946
82	11.846		853.48 - 9294.5	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o) 3d$	$^2S - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Q	643
92	11.886		460.19 - 8873.4	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$		946
120	11.921		118.26 - 8506.8	$1s^2 2s^2 2p - 1s^2 2s^2 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		946
90	11.960		512.90 - 8873.4	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		643
23	11.969		0.0 - 8357.0	$1s^2 2s^2 2p - 1s^2 2s^2 3s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	Q	945
125	11.976		512.90 - 8862.9	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^4P - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		946
72	12.027		853.48 - 9168.1	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o) 3d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		643
150	12.045		759.61 - 9061.8	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		946
60	12.053		736.51 - 9033.2	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		946
97	12.077		992.28 - 9272.5	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o) 3d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		946
91	12.095		759.61 - 9033.2	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		946
70	12.193		853.48 - 9054.9	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		946
40	12.231		992.28 - 9168.1	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o) 3d$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		945
5	12.259		978.22 - 9133.7	$1s^2 2s 2p^2 - 1s^2 2s 2p(^1P^o) 3d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Q	643
37	12.322		853.48 - 8969.0	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		945,946
135	12.380		978.22 - 9054.9	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		643
32	12.653		978.22 - 8881.3	$1s^2 2s 2p^2 - 1s^2 2s 2p(^3P^o) 3d$	$^2P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	Q	643
1	13.095		736.51 - 8371.6	$1s^2 2s 2p^2 - 1s^2 2s^2 3p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Q	643
1	13.547		992.28 - 8371.6	$1s^2 2s 2p^2 - 1s^2 2s^2 3p$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Q	146
48	13.578		978.22 - 8341.2	$1s^2 2s 2p^2 - 1s^2 2s^2 3p$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	Q	945
	14.082		1396.42 - 8498.3	$1s^2 2p^3 - 1s^2 2s^2 3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	Q	1067
54	14.859		1627.71 - 8357.0	$1s^2 2p^3 - 1s^2 2s^2 3s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{3}{2}$		643
50	100.78		0.0 - 992.28	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1091
150	102.23		0.0 - 978.22	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1091
30	109.53							1091
10	112.21		736.51 - 1627.71	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		1091
200	114.41		118.26 - 992.28	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1091
50	115.19		759.61 - 1627.71	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		1091
110	116.28		118.26 - 978.22	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1091
150	117.17		0.0 - 853.48	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1091
110	117.52		404.55 - 1255.57	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$		1091
200	120.03		736.51 - 1569.63	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		1091
110	125.71		460.19 - 1255.57	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$		1091
4	129.17		853.48 - 1627.71	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		1091

FE XXII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	110	134.65	512.90 - 1255.57	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^4P - ^4S^o$	$\frac{5}{2} - \frac{3}{2}$		1091
	110	135.78	0.0 - 736.51	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1091
	30	136.01	118.26 - 853.48	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1091
	4	139.64	853.48 - 1569.63	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		1091
		143.30	8357.0 - 9054.9	$1s^2 2s^2 3s - 1s^2 2s 2p(^3P^o) 3d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	Q	390
	110	144.85	736.51 - 1426.87	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1091
	80	149.87	759.61 - 1426.87	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		1091
	30	151.54	736.51 - 1396.42	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		1091
	4	153.96	978.22 - 1627.71	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		1091
	50	155.92	118.26 - 759.61	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1091
	50	157.03	759.61 - 1396.42	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2D - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		1091
	50	157.37	992.28 - 1627.71	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	161.74	118.26 - 736.51	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1091
	4	169.08	978.22 - 1569.63	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		1091
	4	173.21	992.28 - 1569.63	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	217.30	0.0 - 460.19	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		730
	40	230.129	992.28 - 1426.87	$1s^2 2s 2p^2 - 1s^2 2p^3$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$	Q	856
	120	247.19	0.0 - 404.55	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$		730
		253.38	118.26 - 512.90	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P	375
	120	292.46	118.26 - 460.19	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		730
	150	349.3	118.26 - 404.55	$1s^2 2s^2 2p - 1s^2 2s 2p^2$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		730
		845.6	0.0 - 118.26	$1s^2 2s^2 2p - 1s^2 2s^2 2p$	$g^2P^o - g^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F	1137

IRON XXIII (Fe^{22+}), $Z = 26$
Ground State $1s^2 2s^2 (^1S_0)$ (4 electrons)
Ionization Potential [15 730 000] cm^{-1} ; [1950] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1.8704	0.0 - 53464.	$1s^2 2s^2 - 1s^2 2s^2 2p$	$g^1S - ^1P^o$	0 - 1		1059,856
	28	7.445	472.13 - 13902.	$1s^2 2s 2p - 1s^2 2p 5p$	$^3P^o - ^3D$	2 - 3		946
	20	7.472	0.0 - 13383.	$1s^2 2s^2 - 1s^2 2s 5p$	$g^1S - ^1P^o$	0 - 1		946
	20	7.680	379.16 - 13400.	$1s^2 2s 2p - 1s^2 2s 5d$	$^3P^o - ^3D$	1 - 2		946
	17	7.733	472.13 - 13404.	$1s^2 2s 2p - 1s^2 2s 5d$	$^3P^o - ^3D$	2 - 3		946
	23	7.755	1027.37 - 13922.	$1s^2 2p^2 - 1s^2 2p 5d$	$^3P - ^1D^o$	1 - 2		946
	28	7.778	1071.87 - 13929.	$1s^2 2p^2 - 1s^2 2p 5d$	$^3P - ^3D^o$	2 - 3		946
	16	7.826	1027.37 - 13805.	$1s^2 2p^2 - 1s^2 2p 5d$	$^3P - ^3D^o$	1 - 2		946
	37	7.849	1204.57 - 13945.	$1s^2 2p^2 - 1s^2 2p 5d$	$^1D - ^1F^o$	2 - 3		946
	32	7.854	1071.87 - 13805.	$1s^2 2p^2 - 1s^2 2p 5d$	$^3P - ^3D^o$	2 - 2		946
	32	7.883	752.76 - 13438.	$1s^2 2s 2p - 1s^2 2s 5d$	$^1P^o - ^1D$	1 - 2		946
		7.935	1204.57 - 13805.	$1s^2 2p^2 - 1s^2 2p 5d$	$^1D - ^3D^o$	2 - 2	Q	839
	15	8.159	1027.37 - 13291. +K	$1s^2 2p^2 - 1s^2 2s 5p$	$^3P - ^3P^o$	1 - 1	Q	643
	19	8.180	1071.87 - 13291. +K	$1s^2 2p^2 - 1s^2 2s 5p$	$^3P - ^3P^o$	2 - 1	Q	643
	17	8.210	1204.57 - 13383.	$1s^2 2p^2 - 1s^2 2s 5p$	$^1D - ^1P^o$	2 - 1	Q	643
	40	8.273	472.13 - 12560.	$1s^2 2s 2p - 1s^2 2p 4p$	$^3P^o - ^3D$	2 - 3		946
		8.289	379.16 - 12440.	$1s^2 2s 2p - 1s^2 2p 4p$	$^3P^o - ^3D$	1 - 2		1057
	30	8.303	0.0 - 12044.	$1s^2 2s^2 - 1s^2 2s 4p$	$g^1S - ^1P^o$	0 - 1		946
		8.316	0.0 - 12025.	$1s^2 2s^2 - 1s^2 2s 4p$	$g^1S - ^3P^o$	0 - 1		1057
	24	8.529	348.21 - 12073.	$1s^2 2s 2p - 1s^2 2s 4d$	$^3P^o - ^3D$	0 - 1		946
	40	8.550	379.16 - 12075.	$1s^2 2s 2p - 1s^2 2s 4d$	$^3P^o - ^3D$	1 - 2		946
	22	8.575	956.16 - 12615.	$1s^2 2p^2 - 1s^2 2p 4d$	$^3P - ^3P^o$	0 - 1	Q	643
	20	8.601	472.13 - 12099.	$1s^2 2s 2p - 1s^2 2s 4d$	$^3P^o - ^1D$	2 - 2	Q	643
	45	8.614	472.13 - 12081.	$1s^2 2s 2p - 1s^2 2s 4d$	$^3P^o - ^3D$	2 - 3		946

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
24	8.630		1027.37 - 12614.	$1s^2 2p^2 - 1s^2 2p4d$	$^3P - ^3P^o$	1 - 2		946
18	8.643		1027.37 - 12597.	$1s^2 2p^2 - 1s^2 2p4d$	$^3P - ^1D^o$	1 - 2		946
34	8.664		1071.87 - 12614.	$1s^2 2p^2 - 1s^2 2p4d$	$^3P - ^3P^o$	2 - 2		946
61	8.672		1071.87 - 12603.	$1s^2 2p^2 - 1s^2 2p4d$	$^3P - ^3D^o$	2 - 3		946
16	8.723		1027.37 - 12487.	$1s^2 2p^2 - 1s^2 2p4d$	$^3P - ^3D^o$	1 - 1	Q	643
35	8.731		1027.37 - 12481.	$1s^2 2p^2 - 1s^2 2p4d$	$^3P - ^3D^o$	1 - 2		946
42	8.752		1204.57 - 12631.	$1s^2 2p^2 - 1s^2 2p4d$	$^1D - ^1F^o$	2 - 3		946
32	8.763		1071.87 - 12483.	$1s^2 2p^2 - 1s^2 2p4d$	$^3P - ^3F^o$	2 - 3		946
15	8.775		1204.57 - 12597.	$1s^2 2p^2 - 1s^2 2p4d$	$^1D - ^1D^o$	2 - 2	Q	643
34	8.814		752.76 - 12099.	$1s^2 2s2p - 1s^2 2s4d$	$^1P^o - ^1D$	1 - 2		946
16	8.862		1204.57 - 12481.	$1s^2 2p^2 - 1s^2 2p4d$	$^1D - ^3D^o$	2 - 2	Q	643
12	8.870		1204.57 - 12481.	$1s^2 2p^2 - 1s^2 2p4d$	$^1D - ^3D^o$	2 - 2	Q	643
22	8.935		1422.91 - 12615.	$1s^2 2p^2 - 1s^2 2p4d$	$^1S - ^3P^o$	0 - 1	Q	643
	10.83		472.13 - 9705.7	$1s^2 2s2p - 1s^2 2p3p$	$^3P^o - ^3S$	2 - 1		1057
76	10.903		472.13 - 9643.9	$1s^2 2s2p - 1s^2 2p3p$	$^3P^o - ^3P$	2 - 2		946
94	10.927		472.13 - 9623.8	$1s^2 2s2p - 1s^2 2p3p$	$^3P^o - ^3D$	2 - 3		946
25	10.933		379.16 - 9524.1	$1s^2 2s2p - 1s^2 2p3p$	$^3P^o - ^3D$	1 - 2		945,946
53	10.980		0.0 - 9107.5	$1s^2 2s^2 - 1s^2 2s3p$	$g^1S - ^1P^o$	0 - 1		946
88	11.018		0.0 - 9076.1	$1s^2 2s^2 - 1s^2 2s3p$	$g^1S - ^3P^o$	0 - 1		946
15	11.070		752.76 - 9786.2	$1s^2 2s2p - 1s^2 2s3s$	$^1P^o - ^1S$	1 - 0	Q	945
25	11.145		752.76 - 9725.5	$1s^2 2s2p - 1s^2 2p3p$	$^1P^o - ^1D$	1 - 2		643
45	11.298		348.21 - 9198.9	$1s^2 2s2p - 1s^2 2s3d$	$^3P^o - ^3D$	0 - 1		946
57	11.326		379.16 - 9209.2	$1s^2 2s2p - 1s^2 2s3d$	$^3P^o - ^3D$	1 - 2		945,946
	11.333		379.16 - 9198.9	$1s^2 2s2p - 1s^2 2s3d$	$^3P^o - ^3D$	1 - 1		1057
49	11.361		472.13 - 9272.9	$1s^2 2s2p - 1s^2 2s3d$	$^3P^o - ^1D$	2 - 2	Q	643
30	11.399		752.76 - 9527.9	$1s^2 2s2p - 1s^2 2p3p$	$^1P^o - ^1P$	1 - 1		643
	11.422		1071.87 - 9827.3	$1s^2 2p^2 - 1s^2 2p3d$	$^3P - ^1P^o$	2 - 1		1057
	11.440		472.13 - 9211.9	$1s^2 2s2p - 1s^2 2s3d$	$^3P^o - ^3D$	2 - 3		1057
138	11.493		1027.37 - 9728.3	$1s^2 2p^2 - 1s^2 2p3d$	$^3P - ^3D^o$	1 - 2		946
135	11.519		1071.87 - 9753.1	$1s^2 2p^2 - 1s^2 2p3d$	$^3P - ^3P^o$	2 - 2		643
142	11.594		1204.57 - 9827.8	$1s^2 2p^2 - 1s^2 2p3d$	$^1D - ^1F^o$	2 - 3		946
85	11.614		1027.37 - 9637.4	$1s^2 2p^2 - 1s^2 2p3d$	$^3P - ^3D^o$	1 - 1		946
	11.668		1071.87 - 9637.4	$1s^2 2p^2 - 1s^2 2p3d$	$^3P - ^3D^o$	2 - 1	Q	1057
115	11.692		1071.87 - 9624.7	$1s^2 2p^2 - 1s^2 2p3d$	$^3P - ^3F^o$	2 - 3		643,946
145	11.737		752.76 - 9272.9	$1s^2 2s2p - 1s^2 2s3d$	$^1P^o - ^1D$	1 - 2		946
130	11.748		1204.57 - 9716.7	$1s^2 2p^2 - 1s^2 2p3d$	$^1D - ^1D^o$	2 - 2		946
82	11.870		472.13 - 8896.7	$1s^2 2s2p - 1s^2 2s3s$	$^3P^o - ^3S$	2 - 1		643
78	11.898		1422.91 - 9827.3	$1s^2 2p^2 - 1s^2 2p3d$	$^1S - ^1P^o$	0 - 1		946
20	12.174		1422.91 - 9637.4	$1s^2 2p^2 - 1s^2 2p3d$	$^1S - ^3D^o$	0 - 1	Q	643
300	132.85		0.0 - 752.76	$1s^2 2s^2 - 1s^2 2s2p$	$g^1S - ^1P^o$	0 - 1		1091,443
50	136.53		472.13 - 1204.57	$1s^2 2s2p - 1s^2 2p^2$	$^3P^o - ^1D$	2 - 2		1091
50	144.36		379.16 - 1071.87	$1s^2 2s2p - 1s^2 2p^2$	$^3P^o - ^3P$	1 - 2		1091
30	147.24		348.21 - 1027.37	$1s^2 2s2p - 1s^2 2p^2$	$^3P^o - ^3P$	0 - 1		1091
30	149.22		752.76 - 1422.91	$1s^2 2s2p - 1s^2 2p^2$	$^1P^o - ^1S$	1 - 0		1091
10	154.27		379.16 - 1027.37	$1s^2 2s2p - 1s^2 2p^2$	$^3P^o - ^3P$	1 - 1		1091
50	166.74		472.13 - 1071.87	$1s^2 2s2p - 1s^2 2p^2$	$^3P^o - ^3P$	2 - 2		1091
10	173.31		379.16 - 956.16	$1s^2 2s2p - 1s^2 2p^2$	$^3P^o - ^3P$	1 - 0		1091
4	180.10		472.13 - 1027.37	$1s^2 2s2p - 1s^2 2p^2$	$^3P^o - ^3P$	2 - 1		1091
80	221.33		752.76 - 1204.57	$1s^2 2s2p - 1s^2 2p^2$	$^1P^o - ^1D$	1 - 2		1091
120	263.76		0.0 - 379.16	$1s^2 2s^2 - 1s^2 2s2p$	$g^1S - ^3P^o$	0 - 1		437

IRON XXIV (Fe²³⁺), Z = 26
 Ground State 1s²2s(²S_{1/2}) (3 electrons)
 Ionization Potential 16 500 000 cm⁻¹; 2046 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.588	0.00 - 62972.	1s ² 2s - 1s2s(¹ S ₀)3p(² P _{1/2})	g ² S - (0, $\frac{1}{2}$) ^o	$\frac{1}{2} - \frac{1}{2}$		741
		1.5926	0.00 - 62790.	1s ² 2s - 1s2s(³ S ₁)3p(² P _{3/2})	g ² S - (1, $\frac{3}{2}$) ^o	$\frac{1}{2} - \frac{3}{2}$		741
		1.5960	392.02 - 63050.11	1s ² 2p - 1s2p(³ P ^o ₁)3p(² P _{1/2})	² P ^o - (1, $\frac{1}{2}$) ^o	$\frac{1}{2} - \frac{1}{2}$		741
19		1.8520	392.02 - 54394.	1s ² 2p - 1s2p ²	² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$		643,305
21		1.8560	520.79 - 54394.	1s ² 2p - 1s2p ²	² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$		643,305
		1.8567	0.00 - 53856.	1s ² 2s - 1s(² S)(2s2p(¹ P ^o))	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		1106
13		1.8579	392.02 - 54230.	1s ² 2p - 1s2p ²	² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		643,305
		1.8589	0.00 - 53795.	1s ² 2s - 1s(² S)(2s2p(³ P ^o))	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		643
22		1.8609	0.00 - 53735.	1s ² 2s - 1s(² S)(2s2p(³ P ^o))	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		643,305
19		1.8620	520.79 - 54230.	1s ² 2p - 1s2p ²	² P ^o - ² P	$\frac{3}{2} - \frac{3}{2}$		643,305
12		1.8631	392.02 - 54066.	1s ² 2p - 1s2p ²	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		643,305
43		1.8655	520.79 - 54126.	1s ² 2p - 1s2p ²	² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		643,305
		1.8729	520.79 - 53904.	1s ² 2p - 1s2p ²	² P ^o - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		1059
		1.8735	520.79 - 53880.	1s ² 2p - 1s2p ²	² P ^o - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		1059
5		6.365	0.00 - 15711.	1s ² 2s - 1s ² 9p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$	P	643,736
40		6.451	0.00 - 15501.	1s ² 2s - 1s ² 8p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$	P	643,736
		6.527	392.02 - 15715.	1s ² 2p - 1s ² 9d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$	P	643
5		6.583	0.00 - 15191.	1s ² 2s - 1s ² 7p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		643
		6.617	392.02 - 15508.	1s ² 2p - 1s ² 8d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$	P	643
		6.672	520.79 - 15510.	1s ² 2p - 1s ² 8d	² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$	P	643
		6.752	392.02 - 15202.	1s ² 2p - 1s ² 7d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$	P	643
5		6.787	520.79 - 15255.	1s ² 2p - 1s ² 7d	² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		643
5		6.808	0.00 - 14689.	1s ² 2s - 1s ² 6p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		643
5		6.972	392.02 - 14735.	1s ² 2p - 1s ² 6d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		643
5		7.000	392.02 - 14675.	1s ² 2p - 1s ² 6s	² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$	Q	643
15		7.033	520.79 - 14740.	1s ² 2p - 1s ² 6d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		643
18		7.066	520.79 - 14675.	1s ² 2p - 1s ² 6s	² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$	Q	643
18		7.169	0.00 - 13949.	1s ² 2s - 1s ² 5p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		643
25		7.370	392.02 - 13961.	1s ² 2p - 1s ² 5d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		643
		7.391	392.02 - 13922.	1s ² 2p - 1s ² 5s	² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$	P	986
36		7.438	520.79 - 13965.	1s ² 2p - 1s ² 5d	² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		643
		7.462	520.79 - 13922.	1s ² 2p - 1s ² 5s	² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$	P	986
34		7.983	0.00 - 12527.	1s ² 2s - 1s ² 4p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		643
25		7.993	0.00 - 12511.	1s ² 2s - 1s ² 4p	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		643
35		8.231	392.02 - 12541.	1s ² 2p - 1s ² 4d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		643
25		8.285	392.02 - 12465.	1s ² 2p - 1s ² 4s	² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$		643
58		8.315	520.79 - 12547.	1s ² 2p - 1s ² 4d	² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		643
19		8.371	520.79 - 12465.	1s ² 2p - 1s ² 4s	² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$	Q	643
103		10.619	0.00 - 9417.1	1s ² 2s - 1s ² 3p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		643
80		10.663	0.00 - 9378.2	1s ² 2s - 1s ² 3p	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		643
120		11.030	392.02 - 9459.7	1s ² 2p - 1s ² 3d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		643
185		11.171	520.79 - 9472.5	1s ² 2p - 1s ² 3d	² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		643
42		11.187	520.79 - 9459.7	1s ² 2p - 1s ² 3d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$	Q	643
61		11.261	392.02 - 9272.6	1s ² 2p - 1s ² 3s	² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$		643
125		11.426	520.79 - 9272.6	1s ² 2p - 1s ² 3s	² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		643
300		192.017	0.00 - 520.79	1s ² 2s - 1s ² 2p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$	P	977,730
300		255.090	0.00 - 392.02	1s ² 2s - 1s ² 2p	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$	P	977,730

IRON XXV (Fe²⁴⁺), Z = 26
Ground State 1s²(¹S₀) (2 electrons)
Ionization Potential 71 208 000 cm⁻¹; 8828.8 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.443	0. - 69300.	1s ² - 1s6p	g ¹ S - ¹ P°	0 - 1	P	728
		1.461	0. - 68459.	1s ² - 1s5p	g ¹ S - ¹ P°	0 - 1	P	918,839
		1.495	0. - 66912.	1s ² - 1s4p	g ¹ S - ¹ P°	0 - 1	P	918,956
		1.5731	0. - 63571.	1s ² - 1s3p	g ¹ S - ¹ P°	0 - 1	P	918,956
		1.5750	0. - 63496.	1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	P	918,956
		1.7824	54047. - 110151.	1s2p - 2p ²	¹ P° - ¹ S	1 - 0	P	626
		1.7866	53787. - 109759.	1s2s - 2s2p	¹ S - ¹ P°	0 - 1	P	626
		1.7875	53534. - 109478.	1s2s - 2s2p	³ S - ³ P°	1 - 2	P	626
		1.7913	54047. - 109872.	1s2p - 2p ²	¹ P° - ¹ D	1 - 2	P	626
		1.7919	53901. - 109708.	1s2p - 2p ²	³ P° - ³ P	2 - 2	P	626
	90	1.8503	0. - 54047.	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	P	918,305
	19	1.8553	0. - 53901.	1s ² - 1s2p	g ¹ S - ³ P°	0 - 2	F,P	375,305,918
	6	1.8594	0. - 53785.	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	P	918,305
	34	1.8680	0. - 53534.	1s ² - 1s2s	g ¹ S - ³ S	0 - 1	F,P	375,305,918
		7.795	54047. - 66879.	1s2p - 1s4s	¹ P° - ¹ S	1 - 0	Q	956
	180	10.003	53534. - 63531.	1s2s - 1s3p	³ S - ³ P°	1 - 2	P	918,736
		10.038	53534. - 63496.	1s2s - 1s3p	³ S - ³ P°	1 - 1	P	918
		10.221	53787. - 63571.	1s2s - 1s3p	¹ S - ¹ P°	0 - 1	P	918
		272.48	53534. - 53901.	1s2s - 1s2p	³ S - ³ P°	1 - 2	P	918
		384.62	53787. - 54047.	1s2s - 1s2p	¹ S - ¹ P°	0 - 1	P	918
		398.41	53534. - 53785.	1s2s - 1s2p	³ S - ³ P°	1 - 1	P	918
		961.5	63427. - 63531.	1s3s - 1s3p	³ S - ³ P°	1 - 2	P	918
		1298.7	63494. - 63571.	1s3s - 1s3p	¹ S - ¹ P°	0 - 1	P	918
		1449.3	63427. - 63496.	1s3s - 1s3p	³ S - ³ P°	1 - 1	P	918

IRON XXVI (Fe²⁵⁺), Z = 26
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 74 828 700 cm⁻¹; 9277.65 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.392	0.0 - 71853.9380	1s - 5p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.425	0.0 - 70179.2740	1s - 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.502	0.0 - 66561.5150	1s - 3p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.504	0.0 - 66510.7870	1s - 3p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	1042
		1.778	0.0 - 56241.5800	1s - 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.784	0.0 - 56070.5000	1s - 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	1042
		6.338	56075.2200 - 71853.9380	2s - 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		6.404	56241.5800 - 71857.5115	2p - 5d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042
		7.090	56075.2200 - 70179.2740	2s - 4p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		7.171	56241.5800 - 70186.2543	2p - 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042
		9.536	56075.2200 - 66561.5150	2s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		9.674	56241.5800 - 66578.0490	2p - 3d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	1042

COBALT, Z = 27
 Unclassified Lines

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	8.414						716
	10	8.518						716
	20	8.715						716
	20	8.795						716
	20	8.880						716
	20	8.966						716
	20	9.028						716
	20	9.087						716
	40	9.139						716
	20	9.245						716
	20	9.475						716
	30	10.023						716
	30	10.130						716
	30	10.624						716
	30	10.840						716
	50	11.237						716
	50	11.357						716
	50	11.399						716
	20	11.542						716
	20	11.581						716
	20	11.612						716
	20	11.672						716
	30	11.801						716
	20	11.851						716
	30	12.47						716
	40	12.689						716
	30	12.781						716
	70	12.922						716
	30	13.272						716
	30	13.417						716
	30	13.921						716
	0	13.997						716
	10	14.476						716
	10	14.513						716
	10	14.664						716
	10	14.761						716
	10	14.824						716
	200	152.66						256
	800	153.89						256
	400	155.27						256
	400	156.59						256
	500	163.85						256
	200	166.09						256
	400	166.71						256
	100	167.68						300
	300	174.67						256
	300	174.71						256
	300	175.93						256
	300	177.30						256
	300	177.93						256
	150	206.23						003
	10	206.60						003
	10	209.82						003
	40	210.37						003

CO UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	210.77						003
	20	213.06						003
	80	215.26						003
	20	216.21						003
	250	216.70						003
	20	217.88						003
	10	218.56						003
	10	219.09						003
	40	219.64						003
	10	220.10						003
	10	220.23						003
	150	220.37						003
	20	220.81						003
	150	221.06						003
	10	222.72						003
	10	224.60						003
	40	225.43						003
	10	225.87						003
	20	227.88						003
	20	238.17						003
	10	239.37						003
	10	240.74						003
	100	412.59					Q	286
	50	414.52						286
	10	415.94						286

COBALT I (Co⁰⁺), Z = 27
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 4s^2 (^4F_{9/2})$ (27 electrons)
Ionization Potential 63 430 cm^{-1} ; 7.864 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
47	12	1814.20	0.0 - 55.12030	$3d^7 4s^2 -$	$ga^4F - 8^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
46	12	1820.42	0.0 - 54.93232	$3d^7 4s^2 -$	$ga^4F - 6^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
	1	1825.17				$\frac{9}{2} - \frac{7}{2}$		603
51	12	1828.35	1.40684 - 56.10184	$3d^7 4s^2 -$	$ga^4F - 4^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
48	15	1832.47	0.81600 - 55.38711	$3d^7 4s^2 -$	$ga^4F - 9^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
50	10	1834.34	1.40684 - 55.9223	$3d^7 4s^2 -$	$ga^4F - 3^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
	10	1834.99						603
	8	1837.82	1.40684 - 55.81891	$3d^7 4s^2 -$	$ga^4F - 2^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
44	15	1838.28	0.0 - 54.39860	$3d^7 4s^2 -$	$ga^4F - 4^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
49	10	1840.55	1.40684 - 55.73787	$3d^7 4s^2 -$	$ga^4F - 1^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
	10	1840.79						603
47	10	1841.47	0.81600 - 55.12030	$3d^7 4s^2 -$	$ga^4F - 8^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	3	1841.88	1.80933 - 56.10184	$3d^7 4s^2 -$	$ga^4F - 4^\circ$	$\frac{3}{2} - \frac{1}{2}$		603
45	25	1842.34	1.40684 - 55.6847	$3d^7 4s^2 -$	$ga^4F - v^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		603
	8	1843.45	0.81600 - 55.06149	$3d^7 4s^2 -$	$ga^4F - 7^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	4	1846.94						603
46	30	1847.89	0.81600 - 54.93232	$3d^7 4s^2 -$	$ga^4F - 6^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	8	1851.49	1.80933 - 55.81891	$3d^7 4s^2 -$	$ga^4F - 2^\circ$	$\frac{3}{2} - \frac{1}{2}$		603

CO I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
48	15	1852.52	1.40684 - 55.38711	$3d^7 4s^2 -$	$ga^4F - 9^\circ$	$\frac{5}{2} - \frac{5}{2}$		603
45	30	1852.71	0.81600 - 54.7912	$3d^7 4s^2 -$	$ga^4F - v^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		603
49	8	1854.28	1.80933 - 55.73787	$3d^7 4s^2 -$	$ga^4F - 1^\circ$	$\frac{3}{2} - \frac{3}{2}$		603
45	40	1855.05	1.40684 - 55.31404	$3d^7 4s^2 -$	$ga^4F - v^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		603
45	15	1856.13	1.80933 - 55.6847	$3d^7 4s^2 -$	$ga^4F - v^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		603
45	3	1858.26	1.80933 - 55.62284	$3d^7 4s^2 -$	$ga^4F - v^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		603
	4	1864.92						603
	6	1866.27	0.81600 - 54.39860	$3d^7 4s^2 -$	$ga^4F - 4^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	3	1866.45	1.80933 - 55.38711	$3d^7 4s^2 -$	$ga^4F - 9^\circ$	$\frac{3}{2} - \frac{3}{2}$		603
	5	1869.16						603
	5	1870.45	0.0 - 53.46310	$3d^7 4s^2 -$	$ga^4F - 2^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
	10	1876.01						603
	7	1876.48						603
	8	1876.88						603
	15	1877.40						603
	25	1878.28						603
	4	1880.34						603
	15	1880.82						603
42	10	1884.45	0.0 - 53.06596	$3d^7 4s^2 -$	$ga^4F - 1^\circ$	$\frac{9}{2} - \frac{9}{2}$		603
	10	1884.56						603
	12	1887.89						603
	6	1889.60						603
	10	1889.87						603
	3	1893.43						603
	3	1894.07						603
	10	1897.48						603
	8	1897.73						603
	20	1901.75						603
	10	1902.15						603
	5	1904.75						603
	6	1905.41						603
	20	1905.87						603
	5	1906.72						603
	15	1924.46						603
122	12	1925.05	7.44241 - 59.38889	$3d^8(a^3F)4s -$	$a^2F - 7^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
39	10	1926.90	0.0 - 51.89675	$3d^7 4s^2 -$	$ga^4F - t^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
95	15	1929.34	3.48282 - 55.31404	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
	6	1930.90	1.40684 - 53.19598	$3d^7 4s^2 -$	$ga^4F - u^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		603
	10	1931.00						603
	8	1931.89						603
	3	1933.03						603
43	12	1934.34	1.40684 - 53.10378	$3d^7 4s^2 -$	$ga^4F - s^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		603
	0	1935.46	1.40684 - 53.07492	$3d^7 4s^2 -$	$ga^4F - u^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
98	30	1936.58	3.48282 - 55.12030	$3d^8(a^3F)4s -$	$b^4F - 8^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
	10	1938.94						603
	3	1939.75						603
95	15	1940.16	4.14266 - 55.6847	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
97	12	1943.64	3.48282 - 54.93232	$3d^8(a^3F)4s -$	$b^4F - 6^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
104	12	1945.09	4.69018 - 56.10184	$3d^8(a^3F)4s -$	$b^4F - 4^\circ$	$\frac{5}{2} - \frac{5}{2}$		603
	0	1945.86	3.48282 - 54.87408	$3d^8(a^3F)4s -$	$b^4F - 5^\circ$	$\frac{9}{2} - \frac{9}{2}$		603
100	25	1946.79	4.14266 - 55.50878	$3d^8(a^3F)4s -$	$b^4F - 9^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	5	1947.58						603
	10	1948.09						603
95	15	1949.00	3.48282 - 54.7912	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		603

CO I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
99	12	1951.44	4.14266 - 55.38711	$3d^8(a^3F)4s -$	$b^4F - 9^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
103	25	1951.90	4.69018 - 55.9223	$3d^8(a^3F)4s -$	$b^4F - 3^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
38	8	1953.71	0.0 - 51.18463	$3d^74s^2 -$	$ga^4F - 5^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
95	30	1954.22	4.14266 - 55.31404	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
105	30	1955.17	5.07583 - 56.22204	$3d^8(a^3F)4s -$	$b^4F - 5^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
41	15	1956.22	1.40684 - 52.52604	$3d^74s^2 -$	$ga^4F - 0^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
39	12	1957.69	0.81600 - 51.89675	$3d^74s^2 -$	$ga^4F - t^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	8	1958.10	1.40684 - 52.47664	$3d^74s^2 -$	$ga^4F - 8^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	25	1958.55						603
101	15	1958.94	4.69018 - 55.73787	$3d^8(a^3F)4s -$	$b^4F - 1^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
95	15	1961.00	4.69018 - 55.6847	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
39	8	1961.26	1.80933 - 52.79613	$3d^74s^2 -$	$ga^4F - t^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	25	1961.59						603
95	12	1963.38	4.69018 - 55.62284	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		603
122	20	1963.55	8.46081 - 59.38889	$3d^8(a^3F)4s -$	$a^2F - 7^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	8	1963.92	4.14266 - 55.06149	$3d^8(a^3F)4s -$	$b^4F - 7^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
94	20	1964.03	3.48282 - 54.39860	$3d^8(a^3F)4s -$	$b^4F - 4^\circ$	$\frac{9}{2} - \frac{7}{2}$		603
103	9	1966.68	5.07583 - 55.9223	$3d^8(a^3F)4s -$	$b^4F - 3^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
100	10	1967.78	4.69018 - 55.50878	$3d^8(a^3F)4s -$	$b^4F - 9^\circ$	$\frac{5}{2} - \frac{5}{2}$		603
	25	1968.69						603
97	25	1968.93	4.14266 - 54.93232	$3d^8(a^3F)4s -$	$b^4F - 6^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	3	1969.68						603
102	50	1970.71	5.07583 - 55.81891	$3d^8(a^3F)4s -$	$b^4F - 2^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
37		1970.77	0.0 - 50.74166	$3d^74s^2 - 3d^74s(^3D)4p$	$ga^4F - s^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		488
96	30	1971.16	4.14266 - 54.87408	$3d^8(a^3F)4s -$	$b^4F - 5^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
41	15	1971.75	1.80933 - 52.52604	$3d^74s^2 -$	$ga^4F - 0^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
99	30	1972.52	4.69018 - 55.38711	$3d^8(a^3F)4s -$	$b^4F - 9^\circ$	$\frac{5}{2} - \frac{5}{2}$		603
	0	1972.82	1.80933 - 52.49817	$3d^74s^2 -$	$ga^4F - 9^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	5	1973.62						603
101	25	1973.85	5.07583 - 55.73787	$3d^8(a^3F)4s -$	$b^4F - 1^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
95	15	1974.39	4.14266 - 54.7912	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		603
	6	1975.36	4.69018 - 55.31404	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		603
	20	1975.67						603
	6	1975.94	5.07583 - 55.6847	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
40	30	1976.97	1.40684 - 51.98931	$3d^74s^2 -$	$ga^4F - 7^\circ$	$\frac{5}{2} - \frac{5}{2}$		603
95	10	1978.36	5.07583 - 55.62284	$3d^8(a^3F)4s -$	$b^4F - v^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	12	1978.53						603
39	15	1980.59	1.40684 - 51.89675	$3d^74s^2 -$	$ga^4F - t^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		603
	40	1980.89						603
37	20	1981.97	1.80933 - 52.26401	$3d^74s^2 - 3d^74s(^3D)4p$	$ga^4F - s^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
37	20	1982.52	1.40684 - 51.84727	$3d^74s^2 - 3d^74s(^3D)4p$	$ga^4F - s^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
100	8	1982.81	5.07583 - 55.50878	$3d^8(a^3F)4s -$	$b^4F - 9^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	10	1985.25	4.69018 - 55.06149	$3d^8(a^3F)4s -$	$b^4F - 7^\circ$	$\frac{5}{2} - \frac{5}{2}$		603
38	10	1985.36	0.81600 - 51.18463	$3d^74s^2 -$	$ga^4F - 5^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
	4	1985.88						603
	6	1986.31	0.81600 - 51.16003	$3d^74s^2 - 3d^74s(^3D)4p$	$ga^4F - w^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	15	1987.03						603
37	12	1987.15	0.81600 - 51.13938	$3d^74s^2 - 3d^74s(^3D)4p$	$ga^4F - s^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	10	1987.24						603
99	20	1987.65	5.07583 - 55.38711	$3d^8(a^3F)4s -$	$b^4F - 9^\circ$	$\frac{7}{2} - \frac{5}{2}$		603
	10	1989.28						603
94	25	1989.80	4.14266 - 54.39860	$3d^8(a^3F)4s -$	$b^4F - 4^\circ$	$\frac{7}{2} - \frac{7}{2}$		603
97	30	1990.34	4.69018 - 54.93232	$3d^8(a^3F)4s -$	$b^4F - 6^\circ$	$\frac{5}{2} - \frac{7}{2}$		603
	3	1991.80	1.80933 - 52.01445	$3d^74s^2 - 3d^74s(^3D)4p$	$ga^4F - w^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		603

CO I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
37	20	1992.79	1.80933 - 51.84727	$3d^7 4s^2 - 3d^7 4s(^3D)4p$	$ga^4F - s^4D^o$	$\frac{1}{2} - \frac{3}{2}$		603
	10	1993.25						603
	15	1994.98						603
	25	1998.49						603

COBALT II (Co¹⁺), Z = 27
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6(^3F_4)$ (26 electrons)
Ionization Potential $137\,795 \text{ cm}^{-1}$; 17.083 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	1020.757	0.0 - 97.96779	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3F^o$	4 - 3		982
	1	1031.560	0.0 - 96.94221	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3G^o$	4 - 5		982
	1	1032.185	0.0 - 96.88243	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3G^o$	4 - 4		982
	0	1034.148						982
	3	1034.229	1.59732 - 98.28775	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3D^o$	2 - 2		982
	0	1034.334	1.59732 - 98.27964	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3G^o$	2 - 3		982
	3	1035.778	0.95051 - 97.49653	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3D^o$	3 - 3		982
	1	1040.452	0.95051 - 97.06295	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3F^o$	3 - 4		982
	1	1041.917	0.0 - 95.97663	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3F^o$	4 - 4		982
	2	1052.333	0.95051 - 95.97663	$3d^8 - 3d^7(a^4F)5p$	$ga^3F - ^3F^o$	3 - 4		982
	1	1070.594	4.56081 - 97.96779	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3F^o$	3 - 3		982
	1	1071.477	4.95020 - 98.27964	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3G^o$	2 - 3		982
	0	1074.488	4.56081 - 97.62856	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^5G^o$	3 - 2		982
	5	1076.274	4.02900 - 96.94221	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3G^o$	4 - 5		982
	0	1076.975	4.02900 - 96.88243	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^5G^o$	4 - 4		982
	0	1079.006	4.95020 - 97.62856	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3G^o$	2 - 2		982
	10	1079.348	3.35058 - 95.99872	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^5G^o$	5 - 6		982
	5	1081.978	5.20482 - 97.62856	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3G^o$	1 - 2		982
	5	1082.422	4.95020 - 97.33581	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^5G^o$	2 - 3		982
	5	1083.178	4.56081 - 96.88243	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^5G^o$	3 - 4		982
	5	1084.520	4.02900 - 96.23666	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3G^o$	4 - 5		982
	5	1087.586	4.02900 - 95.97663	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^5F^o$	4 - 4		982
	3	1087.710	4.56081 - 96.49616	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3F^o$	3 - 3		982
	3	1090.690	3.35058 - 95.03619	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3D^o$	5 - 4		982
	3	1091.066	4.02900 - 95.68350	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3D^o$	4 - 3		982
	0	1091.167	4.56081 - 96.2060	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3D^o$	3 - 2		982
	0	1095.833	4.95020 - 96.2060	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3D^o$	2 - 2		982
	0	1098.802	4.02900 - 95.03619	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$a^5F - ^3D^o$	4 - 4		982
	1	1130.378	9.81296 - 98.27964	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^3G^o$	4 - 3		982
	5	1147.728	9.81296 - 96.94221	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^3G^o$	4 - 5		982
	10	1148.518	9.81296 - 96.88243	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^5G^o$	4 - 4		982
	5	1149.464	10.70847 - 97.70516	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^3G^o$	3 - 4		982
	2	1149.996	11.32196 - 98.27964	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^5G^o$	2 - 3		982
	0	1154.118	11.32196 - 97.96779	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^3F^o$	2 - 3		982
	5	1157.088	9.81296 - 96.23666	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^5G^o$	4 - 5		982
	1	1160.437	10.70847 - 96.88243	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^3G^o$	3 - 4		982
	0	1162.600	11.32196 - 97.33581	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^5G^o$	2 - 3		982
	5	1169.544	11.65148 - 97.15384	$3d^8 - 3d^7(a^4F)5p$	$a^1D - ^3F^o$	2 - 1		982
	0	1173.114	13.40448 - 98.64867	$3d^8 - 3d^7(a^4F)5p$	$a^3P - ^3F^o$	1 - 2		982
	1	1176.802	10.70847 - 95.68350	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$b^3F - ^3D^o$	3 - 3		982
	2	1187.413	0.0 - 84.2164	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - v^3D^o$	4 - 3		982
	1	1189.428	13.26077 - 97.33581	$3d^8 - 3d^7(a^4F)5p$	$a^3P - ^5G^o$	2 - 3		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1197.793	13.40448 - 96.89107	$3d^8 - 3d^7(a^4F)5p$	$a^3P - ^5F^\circ$	1 - 2		982
	1	1198.418	0.95051 - 84.3946	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - v^3D^\circ$	3 - 2		982
	0	1203.598	4.02900 - 87.1125	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - v^3F^\circ$	4 - 4		982
	1	1207.417	1.59732 - 84.4196	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - v^3D^\circ$	2 - 1		982
	1	1210.358	1.59732 - 84.2164	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - v^3D^\circ$	2 - 3		982
	0	1232.253	4.56081 - 85.7126	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - y^3P^\circ$	3 - 2		982
	0	1234.353	4.02900 - 85.0443	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - y^3P^\circ$	4 - 3		982
	0	1250.804	18.33880 - 98.28775	$3d^7(a^4P)4s - 3d^7(a^4F)5p$	$a^3P - ^3D^\circ$	1 - 2		982
	5	1258.737	4.95020 - 84.3946	$3d^7(a^4F)4s - 3d^6(a^2F)4p$	$a^3F - v^3D^\circ$	2 - 2		982
	0	1262.401	5.20482 - 84.4196	$3d^7(a^4F)4s - 3d^6(a^2F)4p$	$a^5F - v^3D^\circ$	1 - 1		982
	20	1265.934	3.35058 - 82.3435	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - y^3F^\circ$	5 - 4		982
	3	1268.348	47.07874 - 125.9207	$3d^7(a^4F)4p - 3d^7(a^4F)7d$	$z^3G^\circ - ^5H$	6 - 7		982
	0	1269.383	19.19011 - 97.96779	$3d^8 - 3d^7(a^4F)5p$	$a^1G - ^3F^\circ$	4 - 3		982
	40	1271.936	3.35058 - 81.9707	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	5 - 5		982
	20	1272.282	4.02900 - 82.6275	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - y^3F^\circ$	4 - 3		982
	20	1276.902	4.02900 - 82.3435	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	4 - 4		982
	10	1277.642	4.56081 - 82.8300	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	3 - 2		982
	0	1279.434	4.95020 - 83.11053	$3d^7(a^4F)4s - 3d^6(a^2F)4p$	$a^5F - w^3G^\circ$	2 - 3		982
	8	1280.681	9.81296 - 87.8962	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - v^3F^\circ$	4 - 3		982
	15	1280.960	4.56081 - 82.6275	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - y^3F^\circ$	3 - 3		982
	10	1281.890	4.95020 - 82.9599	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	2 - 1		982
	100	1283.018	4.02900 - 81.9707	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	4 - 5		982
	0	1283.513	17.77171 - 95.68350	$3d^7(a^4P)4s - 3d^7(a^4F)5p$	$a^3P - ^5D^\circ$	3 - 3		982
	10	1284.029	4.95020 - 82.8300	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	2 - 2		982
	1	1284.244	18.33880 - 96.2060	$3d^7(a^4P)4s - 3d^7(a^4F)5p$	$a^3P - ^5D^\circ$	1 - 2		982
	15	1285.639	4.56081 - 82.3435	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - y^3F^\circ$	3 - 4		982
	10	1286.087	5.20482 - 82.9599	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	1 - 1		982
	5	1286.848	10.70847 - 88.4175	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - v^3F^\circ$	3 - 2		982
	10	1287.381	4.95020 - 82.6275	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - y^3F^\circ$	2 - 3		982
	10	1288.243	5.20482 - 82.8300	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - y^3F^\circ$	1 - 2		982
	30	1293.666	9.81296 - 87.1125	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - v^3F^\circ$	4 - 4		982
	25	1295.535	10.70847 - 87.8962	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - v^3F^\circ$	3 - 3		982
	30	1295.860	9.81296 - 86.9813	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - u^3D^\circ$	4 - 3		982
	20	1297.099	11.32196 - 88.4175	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - v^3F^\circ$	2 - 2		982
12	40	1299.576	3.35058 - 80.2995	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - x^3D^\circ$	5 - 4		982
	30	1302.392	10.70847 - 87.4900	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - u^3D^\circ$	3 - 2		982
	2	1305.926	11.32196 - 87.8962	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - v^3F^\circ$	2 - 3		982
	20	1306.759	11.32196 - 87.8473	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - u^3D^\circ$	2 - 1		982
12	80	1306.953	4.02900 - 80.5433	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - x^3D^\circ$	4 - 3		982
	0	1307.976	45.19778 - 121.6516	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^3F^\circ - ^3H$	5 - 5		982
	3	1308.834	10.70847 - 87.1125	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - v^3F^\circ$	3 - 4		982
12	40	1311.122	4.02900 - 80.2995	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - x^3D^\circ$	4 - 4		982
12	40	1311.857	4.56081 - 80.7887	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - x^3D^\circ$	3 - 2		982
	10	1312.901	11.32196 - 87.4900	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - u^3D^\circ$	2 - 2		982
12	30	1315.417	4.95020 - 80.9715	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - x^3D^\circ$	2 - 1		982
12	30	1316.094	4.56081 - 80.5433	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - x^3D^\circ$	3 - 3		982
	1	1316.521	22.00947 - 97.96779	$3d^7(a^4G)4s - 3d^7(a^4F)5p$	$a^3G - ^3F^\circ$	4 - 3		982
12	20	1318.186	5.20482 - 81.06666	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - x^3D^\circ$	1 - 0		982
12	30	1318.596	4.95020 - 80.7887	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - x^3D^\circ$	2 - 2		982
12	20	1319.844	5.20482 - 80.9715	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - x^3D^\circ$	1 - 1		982
	5	1321.725	11.32196 - 86.9813	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - u^3D^\circ$	2 - 3		982
12	3	1322.879	4.95020 - 80.5433	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^5F - x^3D^\circ$	2 - 3		982
12	2	1323.036	5.20482 - 80.7887	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$a^3F - x^3D^\circ$	1 - 2		982
	8	1324.791	45.19778 - 120.68176	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^3F^\circ - ^5G$	5 - 6		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1335.188	45.97217 - 120.8670	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^5F^\circ - ^3F$	3 - 3		982
	0	1336.482	45.37885 - 120.2013	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^5F^\circ - ^3F$	4 - 4		982
	0	1342.593	11.65148 - 86.1338	$3d^8 - 3d^6(a^5D)4s4p$	$a^1D - y^5P^\circ$	2 - 1		982
	3	1345.399	9.81296 - 84.14038	$3d^7(a^4F)4s - 3d^7(a^2F)4p$	$b^3F - w^3F^\circ$	4 - 4		982
	2	1346.503	47.34594 - 121.61200	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^5G^\circ - ^3H$	5 - 6		982
	0	1346.739	13.59332 - 87.8473	$3d^8 - 3d^6(a^5D)4s4p$	$a^3P - u^3D^\circ$	0 - 1		982
	1	1347.175	13.26077 - 87.4900	$3d^8 - 3d^6(a^5D)4s4p$	$a^3P - u^3D^\circ$	2 - 2		982
	5	1349.267	45.19778 - 119.3117	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^5F^\circ - ^5F$	5 - 5		982
	30	1350.450	9.81296 - 83.8624	$3d^7(a^4F)4s - 3d^7(a^2F)4p$	$b^3F - w^3F^\circ$	4 - 3		982
	3	1351.025	48.15107 - 122.1692	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^5G^\circ - ^5H$	3 - 4		982
	10	1354.179	47.80758 - 121.6516	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^5G^\circ - ^5H$	4 - 5		982
	3	1358.633	47.07874 - 120.68176	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^5G^\circ - ^5G$	6 - 6		982
	8	1360.577	47.34594 - 120.8437	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^5G^\circ - ^5H$	5 - 6		982
	5	1368.798	48.55616 - 121.61200	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^3G^\circ - ^3H$	5 - 6		982
	0	1372.573	47.34594 - 120.2013	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^5G^\circ - ^3F$	5 - 4		982
	2	1373.233	25.14737 - 97.96779	$3d^7(a^2G)4s - 3d^7(a^4F)5p$	$b^1G - ^3F^\circ$	4 - 3		982
	8	1378.069	11.65148 - 84.2164	$3d^8 - 3d^7(a^2F)4p$	$a^1D - v^3D^\circ$	2 - 3		982
	5	1380.098	47.03927 - 119.4974	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^5D^\circ - ^5F$	3 - 4		982
	0	1380.829	47.80758 - 120.2285	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^5G^\circ - ^5F$	4 - 3		982
	1	1383.044	49.34843 - 121.6516	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^3G^\circ - ^5H$	4 - 5		982
	5	1383.357	48.55616 - 120.8437	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^3G^\circ - ^5H$	5 - 6		982
	8	1384.397	47.07874 - 119.3117	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3G^\circ - ^5F$	6 - 5		982
	3	1385.966	47.34594 - 119.4974	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^5G^\circ - ^5F$	5 - 4		982
	2	1389.779	49.69781 - 121.6516	$3d^7(a^4F)4p - 3d^7(a^4F)6d$	$z^3F^\circ - ^5H$	4 - 5		982
	1	1390.447	10.70847 - 82.6275	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - y^5F^\circ$	3 - 3		982
	2	1395.757	48.55616 - 120.2013	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3G^\circ - ^3F$	5 - 4		982
	0	1395.905	11.32196 - 82.9599	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$b^3F - y^5F^\circ$	2 - 1		982
	0	1396.915	0.95051 - 72.53535	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - y^1F^\circ$	3 - 3		982
	0	1398.226	49.34843 - 120.8670	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3G^\circ - ^3F$	4 - 3		982
	10	1402.153	24.88657 - 96.2060	$3d^7(a^2P)4s - 3d^7(a^4F)5p$	$c^3P - ^5D^\circ$	2 - 2		982
	0	1402.352	11.65148 - 82.9599	$3d^8 - 3d^6(a^5D)4s4p$	$a^1D - y^5F^\circ$	2 - 1		982
	5	1405.798	13.26077 - 84.3946	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^\circ$	2 - 2		982
	1	1407.269	0.95051 - 72.0090	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3H^\circ$	3 - 4		982
	5	1408.149	13.40448 - 84.4196	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^\circ$	1 - 1		982
	10	1408.643	13.40448 - 84.3946	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^\circ$	1 - 2		982
	20	1409.324	13.26077 - 84.2164	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^\circ$	2 - 3		982
	0	1409.616	48.55616 - 119.4974	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3G^\circ - ^5F$	5 - 4		982
	5	1410.681	25.31765 - 96.2060	$3d^7(a^2P)4s - 3d^7(a^4F)5p$	$c^3P - ^5D^\circ$	1 - 2		982
	3	1410.833	49.34843 - 120.2285	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3G^\circ - ^5F$	4 - 3		982
	0	1411.823	50.03655 - 120.8670	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3G^\circ - ^3F$	3 - 3		982
	10	1411.907	13.59332 - 84.4196	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^\circ$	0 - 1		982
	3	1412.368	27.48461 - 98.28775	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^3D^\circ$	3 - 2		982
	0	1414.398	27.58531 - 98.28775	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^3D^\circ$	1 - 2		982
	0	1417.708	28.11206 - 98.64867	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^3F^\circ$	2 - 2		982
	3	1419.268	0.0 - 70.45793	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^\circ$	4 - 3		982
	15	1424.778	0.0 - 70.18630	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^\circ$	4 - 4		982
	1	1424.989	28.11206 - 98.28775	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^3D^\circ$	2 - 2		982
	1	1425.526	49.34843 - 119.4974	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3G^\circ - ^5F$	4 - 4		982
	0	1426.034	17.77171 - 87.8962	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - v^3F^\circ$	3 - 3		982
	20	1429.002						825
	0	1431.522	28.11206 - 97.96779	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^3F^\circ$	2 - 3		982
	2	1432.143	0.95051 - 70.77525	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^\circ$	3 - 2		982
	2	1432.608	27.90237 - 97.70516	$3d^7(a^2H)4s - 3d^7(a^4F)5p$	$a^3H - ^3G^\circ$	4 - 4		982
	0	1436.503	49.69781 - 119.3117	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3F^\circ - ^5F$	4 - 5		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1438.507	28.11206 - 97.62856	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^5G^\circ$	2 - 2		982
	10	1438.689	0.95051 - 70.45793	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^\circ$	3 - 3		982
	1	1441.610	13.26077 - 82.6275	$3d^8 - 3d^6(a^5D)4s4p$	$a^3P - y^3F^\circ$	2 - 3		982
	3	1444.334	0.95051 - 70.18630	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^\circ$	3 - 4		982
	5	1445.547	1.59732 - 70.77525	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^\circ$	2 - 2		982
	3	1446.114	18.33880 - 87.4900	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - u^3D^\circ$	1 - 2		982
	1	1446.845	50.38186 - 119.4974	$3d^7(a^4F)4p - 3d^7(a^4F)7s$	$z^3F^\circ - ^5F$	3 - 4		982
	15	1448.012	0.0 - 69.06026	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^\circ$	4 - 3		982
	50	1454.962						825
	15	1455.881	0.95051 - 69.63727	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^\circ$	3 - 2		982
	0	1459.720	27.46913 - 95.97663	$3d^7(a^2H)4s - 3d^7(a^4F)5p$	$a^3H - ^5F^\circ$	5 - 4		982
	2	1460.038	27.48461 - 95.97663	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^5F^\circ$	3 - 4		982
	3	1461.856	0.95051 - 69.35664	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^\circ$	3 - 3		982
	1	1462.308	28.11206 - 96.49616	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^5F^\circ$	2 - 3		982
	20	1466.211	0.0 - 68.20339	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^\circ$	4 - 5		982
	10	1468.224	0.95051 - 69.06026	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^\circ$	3 - 3		982
25	15	1468.384	18.03165 - 86.1338	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3P^\circ$	2 - 1		982
	12	1469.725	1.59732 - 69.63727	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^\circ$	2 - 2		982
	2	1470.900	27.46913 - 95.45610	$3d^7(a^2H)4s - 3d^7(a^4F)5p$	$a^3H - ^5F^\circ$	5 - 5		982
25	20	1471.868	17.77171 - 85.7126	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3P^\circ$	3 - 2		982
	1	1472.245	19.19011 - 87.1125	$3d^8 - 3d^6(a^5D)4s4p$	$a^1G - v^3F^\circ$	4 - 4		982
	30	1472.896	0.95051 - 68.84367	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^\circ$	3 - 4		982
25	5	1475.023	18.33880 - 86.1338	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3P^\circ$	1 - 1		982
	30	1475.813	1.59732 - 69.35664	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^\circ$	2 - 3		982
	10	1476.672	1.59732 - 69.31745	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^\circ$	2 - 1		982
25	8	1477.526	18.03165 - 85.7126	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3P^\circ$	2 - 2		982
	0	1480.346	27.48461 - 95.03619	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$a^3D - ^5D^\circ$	3 - 4		982
	20	1480.955	0.0 - 67.52420	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - y^3D^\circ$	4 - 3		982
25	20	1484.261	18.33880 - 85.7126	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3P^\circ$	1 - 2		982
25	30	1486.494	17.77171 - 85.0443	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3P^\circ$	3 - 3		982
	5	1489.564	27.90237 - 95.03619	$3d^7(a^2H)4s - 3d^7(a^4F)5p$	$a^3H - ^5D^\circ$	4 - 4		982
	10	1489.659						825
	0	1490.764	31.19952 - 98.27964	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$b^1D - ^3G^\circ$	2 - 3		982
	10	1491.701						825
25	10	1492.257	18.03165 - 85.0443	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3P^\circ$	2 - 3		982
	10	1492.798	0.95051 - 67.93951	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - x^3D^\circ$	3 - 2		982
	0	1494.124						825
	10	1497.675						825
	20	1500.897						825
	0	1502.091	0.95051 - 67.52420	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - x^3D^\circ$	3 - 3		982
	1	1506.856	18.03165 - 84.3946	$3d^7(a^4P)4s - 3d^7(a^2F)4p$	$a^3P - v^3D^\circ$	2 - 2		982
	0	1507.313	1.59732 - 67.93951	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - x^3D^\circ$	2 - 2		982
	20	1509.228	0.95051 - 67.20942	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - z^1D^\circ$	3 - 2		982
	0	1509.654	45.19778 - 111.43881	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5H$	5 - 6		982
	10	1509.946	1.59732 - 67.82465	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - x^3D^\circ$	2 - 1		982
	1	1514.740	0.0 - 66.01779	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^1F^\circ$	4 - 3		982
	5	1515.805	45.37885 - 111.35014	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5G$	4 - 5		982
	5	1516.342	45.19778 - 111.14596	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5F$	5 - 4		982
	10	1516.447	45.19778 - 111.14100	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5G$	5 - 6		982
	15	1519.394	45.19778 - 111.01385	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5F$	5 - 5		982
	10	1520.523	45.37885 - 111.14596	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5F$	4 - 4		982
	2	1523.575	45.37885 - 111.01385	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5F$	4 - 5		982
	10	1525.793						825
	3	1530.746	4.02900 - 69.35664	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^5F - x^3G^\circ$	4 - 3		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
6	0	1534.340	45.97217 - 111.14596	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5F^{\circ} - ^5F$	3 - 4		982	
	3	1534.813	0.0 - 65.15418	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3G^{\circ}$	4 - 4		982	
	1	1536.022	22.00947 - 87.1125	$3d^7(a^2G)4s - 3d^6(a^5D)4s4p$	$a^3G - v^3F^{\circ}$	4 - 4		982	
	1	1536.678	4.56081 - 69.63727	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$a^3F - w^3D^{\circ}$	3 - 2		982	
	2	1537.769	46.32096 - 111.35014	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5D^{\circ} - ^5G$	4 - 5		982	
	1	1539.388	3.35058 - 68.31147	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$a^3F - z^3I^{\circ}$	5 - 6		982	
	3	1539.456	0.0 - 64.95750	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3H^{\circ}$	4 - 5		982	
	1	1542.598	46.32096 - 111.14596	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5D^{\circ} - ^5F$	4 - 4		982	
	5	1542.970	47.34594 - 112.15567	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^3H$	5 - 6		982	
	0	1543.270	18.03165 - 82.8300	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3F^{\circ}$	2 - 2		982	
	1	1545.744	46.32096 - 111.01385	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5D^{\circ} - ^5F$	4 - 5		982	
	50	1547.965	0.0 - 64.60172	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3G^{\circ}$	4 - 5		825	
	0	1548.665	17.77171 - 82.3435	$3d^7(a^4P)4s - 3d^6(a^5D)4s4p$	$a^3P - y^3F^{\circ}$	3 - 4		982	
	1	1552.002	5.20482 - 69.63727	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$a^3F - w^3D^{\circ}$	1 - 2		982	
	2	1552.294	1.59732 - 66.01779	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3I^{\circ}$	2 - 3		982	
	15	1552.750	0.0 - 64.40146	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3G^{\circ}$	4 - 4		982	
	5	1553.748	0.0 - 64.36026	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^{\circ}$	4 - 3		982	
	10	1557.029	0.95051 - 65.17489	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3G^{\circ}$	3 - 3		982	
	15	1557.393	47.07874 - 111.28803	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^5H$	6 - 7		982	
	15	1557.550	0.95051 - 65.15418	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3G^{\circ}$	3 - 4		982	
	2	1559.905	47.03927 - 111.14596	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5D^{\circ} - ^5F$	3 - 4		982	
	10	1560.226	47.34594 - 111.43881	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^5H$	5 - 6		982	
	20	1560.874	0.95051 - 65.01706	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^{\circ}$	3 - 2		825	
	10	1560.966	47.07874 - 111.14100	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^5G$	6 - 6		982	
	5	1562.391	47.34594 - 111.35014	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^5G$	5 - 5		982	
	0	1563.372	0.95051 - 64.91481	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - z^3P^{\circ}$	3 - 2		982	
	3	1564.087	47.07874 - 111.01385	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^5F$	6 - 5		982	
	8	1567.567	0.0 - 63.79290	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3H^{\circ}$	4 - 4		982	
	0	1570.666	47.34594 - 111.01385	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^5F$	5 - 5		982	
	0	1570.988	48.55616 - 112.21070	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3G^{\circ} - ^5H$	5 - 5		982	
	8	1572.332	48.55616 - 112.15567	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3G^{\circ} - ^3H$	5 - 6		982	
	10	1572.645	0.0 - 63.58701	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^{\circ}$	4 - 3		982	
	5	1572.878	1.59732 - 65.17489	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3G^{\circ}$	2 - 3		982	
	1	1573.415	45.97217 - 109.5283	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5F^{\circ} - ^5F$	3 - 3		982	
	15	1574.552	0.0 - 63.51040	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^{\circ}$	4 - 4		982	
	5	1575.575	45.97217 - 109.4422	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5F^{\circ} - ^3F$	3 - 4		982	
	1	1576.019	0.95051 - 64.40146	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3G^{\circ}$	3 - 4		982	
	1	1576.387	24.41136 - 87.8473	$3d^7(a^2G)4s - 3d^6(a^5D)4s4p$	$b^3P - u^3D^{\circ}$	0 - 1		982	
	15	1576.780	1.59732 - 65.01706	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^{\circ}$	2 - 2		982	
	15	1577.038	0.95051 - 64.36026	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^{\circ}$	3 - 3		982	
	1	1578.679	0.0 - 63.34450	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - z^3P^{\circ}$	4 - 3		982	
	2	1579.355	1.59732 - 64.91481	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - z^3P^{\circ}$	2 - 2		982	
	2	1579.600	0.0 - 63.30666	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3H^{\circ}$	4 - 5		982	
	0	1579.820	22.41460 - 85.7126	$3d^7(a^2G)4s - 3d^6(a^5D)4s4p$	$a^3G - y^3P^{\circ}$	3 - 2		982	
	5	1580.361	45.19778 - 108.47438	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5F^{\circ} - ^5F$	5 - 5		982	
	3	1581.714	24.26757 - 87.4900	$3d^7(a^2G)4s - 3d^6(a^5D)4s4p$	$b^3P - u^3D^{\circ}$	1 - 2		982	
	10	1583.439	19.19011 - 82.3435	$3d^8 - 3d^6(a^5D)4s4p$	$a^3G - y^3F^{\circ}$	4 - 4		982	
	1	1584.247	46.32096 - 109.4422	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5D^{\circ} - ^3F$	4 - 4		982	
	3	1584.889	45.37885 - 108.47438	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5F^{\circ} - ^5F$	4 - 5		982	
	5	1585.418	46.45282 - 109.5283	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5F^{\circ} - ^5F$	2 - 3		982	
	2	1586.910							982
	5	1587.422	48.15107 - 111.14596	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^5G^{\circ} - ^5F$	3 - 4		982	
	0	1588.267	24.88657 - 87.8473	$3d^7(a^2P)4s - 3d^6(a^5D)4s4p$	$c^3P - u^3D^{\circ}$	2 - 1		982	
	5	1589.654	24.07460 - 86.9813	$3d^7(a^2G)4s - 3d^6(a^5D)4s4p$	$b^3P - u^3D^{\circ}$	2 - 3		982	

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
24	3	1590.263	48.55616 - 111.43881	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3G^\circ - ^5H$	5 - 6		982
	20	1590.542	11.65148 - 74.52296	$3d^8 - 3d^7(a^2D)4p$	$a^1D - y^1P^\circ$	2 - 1		982
	3	1590.778	49.34843 - 112.21070	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3G^\circ - ^5H$	4 - 5		982
	1	1591.142	45.97217 - 108.81990	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3F^\circ - ^5F$	3 - 4		982
	3	1591.294	0.95051 - 63.79290	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3H^\circ$	3 - 4		982
	1	1593.074	17.77171 - 80.5433	$3d^7(a^4P)4s - 3d^6(a^2D)4s4p$	$a^5P - x^5D^\circ$	3 - 3		982
	3	1593.294	1.59732 - 64.36026	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^\circ$	2 - 3		982
	3	1593.442	18.03165 - 80.7887	$3d^7(a^4P)4s - 3d^6(a^2D)4s4p$	$a^5P - x^5D^\circ$	2 - 2		982
	2	1594.193	18.33880 - 81.06666	$3d^7(a^4P)4s - 3d^6(a^2D)4s4p$	$a^5P - x^5D^\circ$	1 - 0		982
	5	1594.337	9.81296 - 72.53535	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - y^1F^\circ$	4 - 3		982
20	1595.778	0.95051 - 63.61612	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^\circ$	3 - 2		982	
5	1596.514	0.95051 - 63.58701	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^\circ$	3 - 3		982	
5	1596.615	18.33880 - 80.9715	$3d^7(a^4P)4s - 3d^6(a^2D)4s4p$	$a^5P - x^5D^\circ$	1 - 1		982	
10	1596.928	5.20482 - 67.82465	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^3F - x^3D^\circ$	1 - 1		982	
1	1597.360	24.88657 - 87.4900	$3d^7(a^2P)4s - 3d^6(a^2D)4s4p$	$c^3P - u^3D^\circ$	2 - 2		982	
5	1598.095	4.95020 - 67.52420	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^3F - x^3D^\circ$	2 - 3		982	
2	1598.463	0.95051 - 63.51040	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^\circ$	3 - 4		982	
20	1599.300	17.77171 - 80.2995	$3d^7(a^4P)4s - 3d^6(a^2D)4s4p$	$a^5P - x^5D^\circ$	3 - 4		982	
10	1599.702	18.03165 - 80.5433	$3d^7(a^4P)4s - 3d^6(a^2D)4s4p$	$a^5P - x^5D^\circ$	2 - 3		982	
1	1600.027	46.32096 - 108.81990	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5D^\circ - ^5F$	4 - 4		982	
3	1600.276	47.03927 - 109.5283	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5D^\circ - ^5F$	3 - 3		982	
8	1601.291	18.33880 - 80.7887	$3d^7(a^2P)4s - 3d^6(a^2D)4s4p$	$a^3P - x^3D^\circ$	1 - 2		982	
30	1605.987	1.59732 - 63.86530	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^\circ$	2 - 1		825	
15	1608.402	25.31765 - 87.4900	$3d^7(a^2P)4s - 3d^6(a^2D)4s4p$	$c^3P - u^3D^\circ$	1 - 2		982	
2	1610.439	24.88657 - 86.9813	$3d^7(a^2P)4s - 3d^6(a^2D)4s4p$	$c^3P - u^3D^\circ$	2 - 3		982	
5	1612.853	49.34843 - 111.35014	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3G^\circ - ^5G$	4 - 5		982	
2	1616.734	22.00947 - 83.8624	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - w^3F^\circ$	4 - 3		982	
3	1620.201	47.80758 - 109.5283	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5G^\circ - ^5F$	4 - 3		982	
5	1621.985	49.69781 - 111.35014	$3d^7(a^4F)4p - 3d^7(a^4F)5d$	$z^3F^\circ - ^5G$	4 - 5		982	
0	1622.661							825
5	1626.699	47.34594 - 108.81990	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5G^\circ - ^5F$	5 - 4		982	
3	1627.481	24.26757 - 85.7126	$3d^7(a^2G)4s - 3d^6(a^2D)4s4p$	$b^3P - y^3P^\circ$	1 - 2		982	
10	1628.775	47.07874 - 108.47438	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5G^\circ - ^5F$	6 - 5		982	
2	1629.273	48.15107 - 109.5283	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^5G^\circ - ^5F$	3 - 3		982	
3	1630.457	11.32196 - 72.65432	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - y^1D^\circ$	2 - 2		982	
10	1632.326	13.26077 - 74.52296	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^1P^\circ$	2 - 1		982	
1	1632.609	3.35058 - 64.60172	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^3F - y^3G^\circ$	5 - 5		982	
2	1632.727	24.88657 - 86.1338	$3d^7(a^2P)4s - 3d^6(a^2D)4s4p$	$c^3P - y^5P^\circ$	2 - 1		982	
0	1633.370							825
3	1633.632	11.32196 - 72.53535	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - y^1F^\circ$	2 - 3		982	
10	1637.302							825
20	1638.815							825
10	1639.263	11.65148 - 72.65432	$3d^8 - 3d^7(a^2D)4p$	$a^1D - y^1D^\circ$	2 - 2		982	
20	1640.127	24.07460 - 85.0443	$3d^7(a^2G)4s - 3d^6(a^2D)4s4p$	$b^3P - y^5P^\circ$	2 - 3		825	
1	1641.229	13.59332 - 74.52296	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^1P^\circ$	0 - 1		982	
3	1642.396	48.55616 - 109.4422	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3G^\circ - ^5F$	5 - 4		982	
5	1642.468	11.65148 - 72.53535	$3d^8 - 3d^7(a^2D)4p$	$a^1D - y^1F^\circ$	2 - 3		982	
1	1647.266	4.95020 - 65.65758	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^3F - y^3P^\circ$	2 - 1		982	
20	1647.758							825
100	1649.303							825
0	1654.203	5.20482 - 65.65758	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^3F - y^3P^\circ$	1 - 1		982	
20	1655.089							825
30	1656.669							825
60	1656.948							825

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	1657.028						825
	20	1657.400						825
	10	1657.835	24.07460 - 84.3946	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$b^3P - v^3D^\circ$	2 - 2		982
	30	1657.933						825
	8	1658.190	5.20482 - 65.51212	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^5F - y^3P^\circ$	1 - 0		982
	20	1658.377						825
	0	1658.779						825
	30	1659.062						825
	0	1659.378	48.55616 - 108.81990	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3G^\circ - ^5F$	5 - 4		982
	10	1659.830	3.35058 - 63.59759	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^5F - z^3H^\circ$	5 - 6		982
	10	1661.255	11.65148 - 71.84675	$3d^8 - 3d^7(a^2D)4p$	$a^1D - x^3P^\circ$	2 - 2		982
	1	1662.443	24.26757 - 84.4196	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$b^3P - v^3D^\circ$	1 - 1		982
	10	1664.058	49.34843 - 109.4422	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3G^\circ - ^3F$	4 - 4		982
	10	1664.824	10.70847 - 70.77525	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - x^3F^\circ$	3 - 2		825
	40	1666.316						825
	40	1666.406	24.41136 - 84.4196	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$b^3P - v^3D^\circ$	0 - 1		825
	10	1667.534						825
		1668.655	22.41460 - 82.3435	$3d^7(a^2G)4s - 3d^6(a^5D)4s4p$	$a^3G - y^3F^\circ$	3 - 4		825
	10	1669.541	25.14737 - 85.0443	$3d^7(a^2G)4s - 3d^6(a^5D)4s4p$	$b^1G - y^3P^\circ$	4 - 3		982
	2	1669.883	13.26077 - 73.14456	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^\circ$	2 - 1		982
	1	1671.557	5.20482 - 65.02863	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^5F - z^3P^\circ$	1 - 1		982
	1	1672.690	28.11206 - 87.8962	$3d^7(a^2D)4s - 3d^6(a^5D)4s4p$	$a^3D - v^3F^\circ$	2 - 3		982
	10	1673.199						825
	0	1673.662	10.70847 - 70.45793	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - x^3F^\circ$	3 - 3		982
	3	1673.793	49.69781 - 109.4422	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3F^\circ - ^3F$	4 - 4		982
	20	1673.956						825
	30	1674.953						825
	10	1677.674	61.26056 - 120.8670	$3d^7(a^4P)4p - 3d^7(a^4F)7s$	$y^5D^\circ - ^3F$	2 - 3		982
	3	1679.048	4.02900 - 63.58701	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^\circ$	4 - 3		982
	5	1679.242	13.59332 - 73.14456	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^\circ$	0 - 1		982
	40	1679.423	9.81296 - 69.35664	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - x^3G^\circ$	4 - 3		825
	0	1679.674	11.32196 - 70.8571	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - z^3P^\circ$	2 - 1		982
	20	1680.187						825
	5	1680.921	50.03655 - 109.5283	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3G^\circ - ^3F$	3 - 3		982
	0	1681.458	49.34843 - 108.81990	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3G^\circ - ^3F$	4 - 4		982
	20	1682.124						825
	100	1682.355						825
	70	1683.518						825
	8	1683.698	13.26077 - 72.65432	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^1D^\circ$	2 - 2		982
	60	1683.765						825
	1	1685.486	24.88657 - 84.2164	$3d^7(a^2P)4s - 3d^7(a^2F)4p$	$c^3P - v^3D^\circ$	2 - 3		982
	20	1685.882	4.02900 - 63.34450	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - z^3P^\circ$	4 - 3		825
	70	1686.934						825
	60	1687.069	13.26077 - 72.53535	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^1F^\circ$	2 - 3		825
	2	1687.845	9.81296 - 69.06026	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - w^3D^\circ$	4 - 3		982
	20	1688.338						825
	3	1689.024	11.65148 - 70.8571	$3d^8 - 3d^7(a^2P)4p$	$a^1D - z^1P^\circ$	2 - 1		982
	15	1691.324	49.34843 - 108.47438	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3G^\circ - ^3F$	4 - 5		982
	5	1691.413	49.69781 - 108.81990	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3F^\circ - ^5F$	4 - 4		982
	20	1692.651	27.90237 - 86.9813	$3d^7(a^2H)4s - 3d^6(a^5D)4s4p$	$a^3H - u^1D^\circ$	4 - 3		982
	20	1693.340	4.56081 - 63.61612	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^\circ$	3 - 2		982
	20	1693.786						825
	20	1693.846						825
	2	1694.452	9.81296 - 68.82956	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$b^3F - z^1I^\circ$	4 - 5		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1696.967	10.70847 - 69.63727	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - w^3D^\circ$	3 - 2		982
	3	1697.356	4.95020 - 63.86530	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^\circ$	2 - 1		982
	1	1700.515	11.65148 - 70.45793	$3d^8 - 3d^7(a^2D)4p$	$a^1D - x^3F^\circ$	2 - 3		982
	0	1704.738	5.20482 - 63.86530	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^\circ$	1 - 1		982
	8	1706.053	11.65148 - 70.26620	$3d^8 - 3d^7(a^2P)4p$	$a^1D - y^3S^\circ$	2 - 1		982
	10	1706.806	45.19778 - 103.78743	$3d^7(a^4F)4p - 3d^7(a^2G)5s$	$z^5F^\circ - ^1G$	5 - 4		982
	20	1706.937						825
	15	1707.579	24.26757 - 82.8300	$3d^7(a^2G)4s - 3d^6(a^2D)4s4p$	$b^3P - y^5F^\circ$	1 - 2		982
	50	1707.822						825
	3	1711.088	13.40448 - 71.84675	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^\circ$	1 - 2		982
	5	1713.734	10.70847 - 69.06026	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - w^3D^\circ$	3 - 3		982
	0	1715.114	63.30666 - 121.61200	$3d^7(a^2G)4p - 3d^7(a^4F)6d$	$z^3H^\circ - ^1H$	5 - 6		825
	0	1715.938						825
	0	1720.182						825
	10	1723.013	3.35058 - 61.38843	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^5D^\circ$	5 - 4		982
	20	1725.232	25.14737 - 83.11053	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$b^1G - w^3G^\circ$	4 - 3		982
	0	1726.230	51.51241 - 109.4422	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3D^\circ - ^3F$	3 - 4		982
	20	1727.823						825
	3	1732.756	9.81296 - 67.52420	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - x^3D^\circ$	4 - 3		982
	5	1734.130	11.65148 - 69.31745	$3d^8 - 3d^7(a^2D)4p$	$a^1D - w^3D^\circ$	2 - 1		982
	2	1736.218	13.26077 - 70.8571	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^1P^\circ$	2 - 1		982
	1	1737.321	27.48461 - 85.0443	$3d^7(a^2D)4s - 3d^6(a^2D)4s4p$	$a^2D - y^5P^\circ$	3 - 3		982
	60	1738.870	40.77111 - 98.27964	$3d^7(a^2F)4s - 3d^7(a^4F)5p$	$c^3F - ^3G^\circ$	2 - 3		825
	15	1740.563	13.40448 - 70.8571	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^1P^\circ$	1 - 1		982
	1	1741.895	11.65148 - 69.06026	$3d^8 - 3d^7(a^2D)4p$	$a^1D - w^3D^\circ$	2 - 3		982
	0	1743.021	13.40448 - 70.77525	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3F^\circ$	1 - 2		825
	15	1743.395	4.02900 - 61.38843	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^5D^\circ$	4 - 4		982
	1	1744.980	51.51241 - 108.81990	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3D^\circ - ^5F$	3 - 4		982
	0	1745.247	52.22992 - 109.5283	$3d^7(a^4F)4p - 3d^7(a^4F)6s$	$z^3D^\circ - ^5F$	2 - 3		982
	2	1745.800	63.58701 - 120.8670	$3d^7(a^4P)4p - 3d^7(a^4F)7s$	$y^3D^\circ - ^3F$	3 - 3		982
	1	1746.025	40.69560 - 97.96779	$3d^64s^2 - 3d^7(a^4F)5p$	$a^2D - ^3F^\circ$	4 - 3		982
	10	1746.215						825
	1	1746.299	13.59332 - 70.8571	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^1P^\circ$	0 - 1		982
	1	1747.305	10.70847 - 67.93951	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - x^3D^\circ$	3 - 2		982
	5	1747.884	4.02900 - 61.24096	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^5D^\circ$	4 - 3		982
	3	1748.332	13.26077 - 70.45793	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3F^\circ$	2 - 3		982
	0	1748.772						825
	5	1754.118	40.69560 - 97.70516	$3d^64s^2 - 3d^7(a^4F)5p$	$a^2D - ^3G^\circ$	4 - 4		982
	8	1754.216	13.26077 - 70.26620	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3S^\circ$	2 - 1		982
	0	1755.205	41.31420 - 98.28775	$3d^64s^2 - 3d^7(a^4F)5p$	$a^2D - ^3D^\circ$	3 - 2		982
	2	1755.475	41.31420 - 98.27964	$3d^64s^2 - 3d^7(a^4F)5p$	$a^2D - ^3G^\circ$	3 - 3		982
	0	1756.819	41.04706 - 97.96779	$3d^7(a^2F)4s - 3d^7(a^4F)5p$	$c^3F - ^3F^\circ$	4 - 3		982
	8	1757.136	41.7383 - 98.64867	$3d^64s^2 - 3d^7(a^4F)5p$	$a^2D - ^3F^\circ$	2 - 2		982
	0	1757.770						825
	0	1758.548	29.26897 - 86.1338	$3d^7(a^2P)4s - 3d^6(a^2D)4s4p$	$a^1P - y^3P^\circ$	1 - 1		982
	5	1758.654	13.40448 - 70.26620	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3S^\circ$	1 - 1		982
	3	1758.814	63.34450 - 120.2013	$3d^7(a^4P)4p - 3d^7(a^4F)7s$	$z^5P^\circ - ^3F$	3 - 4		982
	1	1759.698	4.56081 - 61.38843	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^5D^\circ$	3 - 4		982
	20	1759.841	25.14737 - 81.9707	$3d^7(a^2G)4s - 3d^6(a^2D)4s4p$	$b^1G - y^5F^\circ$	4 - 5		982
	0	1760.509	40.69560 - 97.49653	$3d^64s^2 - 3d^7(a^4F)5p$	$a^2D - ^3D^\circ$	4 - 3		982
	3	1761.435	27.10596 - 83.8776	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^\circ$	6 - 5		982
	0	1761.67						825
	1	1762.665	27.48461 - 84.2164	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - v^3D^\circ$	3 - 3		982
	5	1763.683	4.56081 - 61.26056	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^5D^\circ$	3 - 2		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1764.288	4.56081 - 61.24096	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^5D^\circ$	3 - 3		982
	0	1764.512	13.59332 - 70.26620	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3S^\circ$	0 - 1		982
	5	1765.108	41.31420 - 97.96779	$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	3 - 3		982
	0	1766.249	11.32196 - 67.93951	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - x^3D^\circ$	2 - 2		982
	0	1768.501	30.56736 - 87.1125	$3d^7(a^2H)4s - 3d^6(a^5D)4s4p$	$a^1H - v^3F^\circ$	5 - 4		982
	0	1771.523	41.04706 - 97.49653	$3d^7(a^2F)4s - 3d^7(a^4F)5p$	$c^3F - ^3D^\circ$	4 - 3		982
10	1773.042	4.95020 - 61.35042		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - ^3D^\circ$	2 - 1		825
1	1773.332	41.31420 - 97.70516		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^3G^\circ$	3 - 4		982
2	1774.059	40.69560 - 97.06295		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^3F^\circ$	4 - 4		982
2	1775.872	4.95020 - 61.26056		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^\circ$	2 - 2		982
0	1776.464	4.95020 - 61.24096		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^\circ$	2 - 3		982
2	1777.681	5.20482 - 61.45822		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - ^3D^\circ$	1 - 0		982
3	1777.863	40.69560 - 96.94221		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^3G^\circ$	4 - 5		982
5	1778.315	13.40448 - 69.63727		$3d^8 - 3d^7(a^2D)4p$	$a^3P - w^3D^\circ$	1 - 2		982
1	1779.194	9.81296 - 66.01779		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^3F^\circ$	4 - 3		982
5	1779.756	40.69560 - 96.88243		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5G^\circ$	4 - 4		982
1	1779.921	41.31420 - 97.49653		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^3D^\circ$	3 - 3		982
0	1780.213	11.65148 - 67.82465		$3d^8 - 3d^7(a^2P)4p$	$a^1D - x^3D^\circ$	2 - 1		982
1	1783.940	5.20482 - 61.26056		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^\circ$	1 - 2		982
1	1784.194	45.97217 - 102.02046		$3d^7(a^4F)4p - 3d^7(a^2G)5s$	$z^3F^\circ - ^3G^\circ$	3 - 3		982
5	1785.026	41.31420 - 97.33581		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5G^\circ$	3 - 3		982
2	1785.626	40.87944 - 96.88243		$3d^7(a^2F)4s - 3d^7(a^4F)5p$	$c^3F - ^5G^\circ$	3 - 4		982
1	1786.374	47.80758 - 103.78743		$3d^7(a^4F)4p - 3d^7(a^2G)5s$	$z^5G^\circ - ^1G^\circ$	4 - 4		982
0	1786.970	27.90237 - 83.8624		$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3F^\circ$	4 - 3		982
3	1787.972	27.46913 - 83.3986		$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^\circ$	5 - 4		982
1	1788.487	13.40448 - 69.31745		$3d^8 - 3d^7(a^2D)4p$	$a^3P - w^3D^\circ$	1 - 1		982
1	1789.218	41.7383 - 97.62856		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5G^\circ$	2 - 2		982
3	1789.802	11.65148 - 67.52420		$3d^8 - 3d^7(a^2P)4p$	$a^1D - x^3D^\circ$	2 - 3		982
1	1790.520	65.01706 - 120.8670		$3d^7(a^2G)4p - 3d^7(a^4F)7s$	$y^3F^\circ - ^3F^\circ$	2 - 3		982
10	1792.096	40.69560 - 96.49616		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	4 - 3		982
5	1793.465	41.7383 - 97.49653		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^3D^\circ$	2 - 3		982
0	1794.556	13.59332 - 69.31745		$3d^8 - 3d^7(a^2D)4p$	$a^3P - w^3D^\circ$	0 - 1		982
2	1798.634	41.7383 - 97.33581		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5G^\circ$	2 - 3		982
10	1799.306	41.31420 - 96.89107		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	3 - 2		982
8	1799.589	41.31420 - 96.88243		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5G^\circ$	3 - 4		982
0	1799.906	11.65148 - 67.20942		$3d^8 - 3d^7(a^2P)4p$	$a^1D - z^3D^\circ$	2 - 2		982
8	1800.451	40.69560 - 96.23666		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5G^\circ$	4 - 5		982
0	1801.909	27.90237 - 83.3986		$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^\circ$	4 - 4		982
5	1804.537	41.7383 - 97.15384		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	2 - 1		982
60	1804.954							825
20	1808.019	10.70847 - 66.01779		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^3F^\circ$	3 - 3		982
15	1808.915	40.69560 - 95.97663		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	4 - 4		982
1	1810.149	27.58531 - 82.8300		$3d^7(a^2D)4s - 3d^6(a^5D)4s4p$	$a^3D - y^3F^\circ$	1 - 2		982
3	1811.324	27.90237 - 83.11053		$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^\circ$	4 - 3		982
15	1812.181	41.31420 - 96.49616		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	3 - 3		982
10	1813.141	41.7383 - 96.89107		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	2 - 2		982
8	1813.398	42.0089 - 97.15384		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	1 - 1		982
15	1818.566	40.69560 - 95.68350		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^\circ$	4 - 3		982
0	1821.064	40.77111 - 95.68350		$3d^7(a^2F)4s - 3d^7(a^4F)5p$	$c^3F - ^5D^\circ$	2 - 3		982
10	1821.769	41.31420 - 96.2060		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^\circ$	3 - 2		982
2	1822.090	42.0089 - 96.89107		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	1 - 2		982
3	1822.356	27.46913 - 82.3435		$3d^7(a^2H)4s - 3d^6(a^5D)4s4p$	$a^3H - y^3F^\circ$	5 - 4		982
10	1824.060							825
20	1826.113	40.69560 - 95.45610		$3d^64s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^\circ$	4 - 5		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1826.189	41.7383 - 96.49616	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^o$	2 - 3		982
	0	1828.838	13.26077 - 67.93951	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	2 - 2		982
	10	1829.404	41.31420 - 95.97663	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5F^o$	3 - 4		982
	5	1831.880	9.81296 - 64.40146	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^1G^o$	4 - 4		982
	3	1833.287	9.81296 - 64.36026	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	4 - 3		982
	1	1833.676	13.40448 - 67.93951	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	1 - 2		982
	8	1835.945	41.7383 - 96.2060	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^o$	2 - 2		982
	10	1837.559	13.40448 - 67.82465	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	1 - 1		982
	15	1839.274	41.31420 - 95.68350	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^o$	3 - 3		982
	15	1839.371	11.65148 - 66.01779	$3d^8 - 3d^7(a^2G)4p$	$a^1D - z^1F^o$	2 - 3		982
	20	1840.229	40.69560 - 95.03619	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^o$	4 - 4		982
	0	1841.315	10.70847 - 65.01706	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	3 - 2		982
	0	1842.853	13.26077 - 67.52420	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	2 - 3		982
	1	1843.939	13.59332 - 67.82465	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	0 - 1		982
	1	1844.788	10.70847 - 64.91481	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - z^1P^o$	3 - 2		982
	10	1845.117	42.0089 - 96.2060	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^o$	1 - 2		982
	200	1845.910						825
	10	1848.466						825
	2	1849.524	27.90237 - 81.9707	$3d^7(a^2H)4s - 3d^6(a^2D)4s4p$	$a^3H - y^3F^o$	4 - 5		982
	5	1851.641	11.65148 - 65.65758	$3d^8 - 3d^7(a^2P)4p$	$a^1D - y^3P^o$	2 - 1		982
	0	1852.564	9.81296 - 63.79290	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^3H^o$	4 - 4		825
	10	1853.732	41.7383 - 95.68350	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^o$	2 - 3		982
	2	1859.621	9.81296 - 63.58701	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - y^3D^o$	4 - 3		982
	8	1860.217	11.65148 - 65.40859	$3d^8 - 3d^7(a^2P)4p$	$a^1D - y^3P^o$	2 - 2		982
	15	1861.445	41.31420 - 95.03619	$3d^6 4s^2 - 3d^7(a^4F)5p$	$a^5D - ^5D^o$	3 - 4		982
	5	1862.303	9.81296 - 63.51040	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	4 - 4		982
	3	1862.366	11.32196 - 65.01706	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	2 - 2		982
	5	1863.874	10.70847 - 64.36026	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	3 - 3		982
	0	1864.162	45.37885 - 99.02266	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5F^o - ^5P$	4 - 3		982
	8	1867.021	29.26897 - 82.8300	$3d^7(a^2P)4s - 3d^6(a^2D)4s4p$	$a^1P - y^5F^o$	1 - 2		982
	0	1868.331	11.65148 - 65.17489	$3d^8 - 3d^7(a^2G)4p$	$a^1D - y^3G^o$	2 - 3		982
	3	1872.465	44.09094 - 97.49653	$3d^7(a^2F)4s - 3d^7(a^4F)5p$	$a^1F - ^3D^o$	3 - 3		982
	0	1883.246	46.45282 - 99.55267	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5F^o - ^5P$	2 - 1		982
	0	1883.812	10.70847 - 63.79290	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^3H^o$	3 - 4		982
	1	1886.658	17.77171 - 70.77525	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$a^5P - x^3F^o$	3 - 2		982
	2	1890.086	10.70847 - 63.61612	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - y^3D^o$	3 - 2		982
	0	1893.865	10.70847 - 63.51040	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	3 - 4		982
	10	1895.491	13.26077 - 66.01779	$3d^8 - 3d^7(a^2G)4p$	$a^3P - z^1F^o$	2 - 3		982
	5	1897.496	46.32096 - 99.02266	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5D^o - ^5P$	4 - 3		982
	0	1898.885	31.19952 - 83.8624	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$b^1D - w^3F^o$	2 - 3		982
	0	1899.020	10.70847 - 63.36743	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - z^3P^o$	3 - 2		982
	3	1903.191	11.32196 - 63.86530	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - y^3D^o$	2 - 1		982
	0	1907.951						825
	8	1908.523	13.26077 - 65.65758	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3P^o$	2 - 1		982
	8	1913.758	13.40448 - 65.65758	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3P^o$	1 - 1		982
	0	1915.856	47.03927 - 99.23528	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5D^o - ^5P$	3 - 2		982
	10	1917.625	13.26077 - 65.40859	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3P^o$	2 - 2		982
	3	1919.103	13.40448 - 65.51212	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3P^o$	1 - 0		982
	5	1920.707	13.59332 - 65.65758	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3P^o$	0 - 1		982
	5	1922.531	47.53748 - 99.55267	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5D^o - ^5P$	2 - 1		982
	5	1922.924	13.40448 - 65.40859	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3P^o$	1 - 2		982
	0	1923.679	47.03927 - 99.02266	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5D^o - ^5P$	3 - 3		982
	0	1925.457	11.65148 - 63.58701	$3d^8 - 3d^7(a^4P)4p$	$a^1D - y^3D^o$	2 - 3		982
	0	1926.263	13.26077 - 65.17489	$3d^8 - 3d^7(a^2G)4p$	$a^3P - y^3G^o$	2 - 3		982

CO II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
5	0	1932.107	13.26077 - 65.01706	$3d^8 - 3d^7(a^2G)4p$	$a^3P - y^3F^o$	2 - 2		982
	0	1933.618	11.65148 - 63.36743	$3d^8 - 3d^7(a^4P)4p$	$a^1D - z^5P^o$	2 - 2		982
	0	1934.091	47.84889 - 99.55267	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5D^o - ^5P$	1 - 1		982
	0	1934.513	11.65148 - 63.34450	$3d^8 - 3d^7(a^4P)4p$	$a^1D - z^5P^o$	2 - 3		982
	1	1935.962	13.26077 - 64.91481	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	2 - 2		982
	5	1937.076	13.40448 - 65.02863	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	1 - 1		982
	5	1938.550	17.77171 - 69.35664	$3d^7(a^4P)4s - 3d^7(a^2G)4p$	$a^5P - x^3G^o$	3 - 3		982
	0	1940.395	49.69781 - 101.23365	$3d^7(a^4F)4p - 3d^7(a^2G)5s$	$z^3F^o - ^3G$	4 - 5		982
	30	1941.286	0.0 - 51.51241	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	4 - 3		982
	2	1942.283	47.53748 - 99.02266	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5D^o - ^5P$	2 - 3		982
	2	1943.656	4.56081 - 56.01062	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - z^5S^o$	3 - 2		982
	20	1944.181	13.59332 - 65.02863	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	0 - 1		825
	1	1946.029	47.84889 - 99.23528	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5D^o - ^5P$	1 - 2		982
	0	1949.747	17.77171 - 69.06026	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$a^3P - w^3D^o$	3 - 3		982
	30	1950.093	0.95051 - 52.22992	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	3 - 2		982
	2	1950.566	19.19011 - 70.45793	$3d^8 - 3d^7(a^2D)4p$	$a^1G - x^3F^o$	4 - 3		982
	0	1952.149	69.61760 - 120.8437	$3d^7(a^2H)4p - 3d^7(a^4F)6d$	$z^1I^o - ^5H$	6 - 6		982
	1	1952.567	47.80758 - 99.02266	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^5G^o - ^5P$	4 - 3		982
	5	3	1953.069	13.40448 - 64.60565	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	1 - 0	
0		1955.471	22.00947 - 73.14723	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$a^1G - y^1G^o$	4 - 4		982
20		1957.429	1.59732 - 52.68477	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	2 - 1		982
5	30	1968.918	11.65148 - 62.44062	$3d^8 - 3d^7(a^4P)4p$	$a^1D - z^3S^o$	2 - 1		825
	3	1975.013	1.59732 - 52.22992	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	2 - 2		982
4	1	1981.736	13.40448 - 63.86530	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	1 - 1		982
	100	1983.162						825
	5	1983.948	13.26077 - 63.66532	$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	2 - 1		982
	1	1984.826	0.0 - 50.38186	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	4 - 3		982
	1	1985.898	13.26077 - 63.61612	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	2 - 2		982
	5	1987.029	13.26077 - 63.58701	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	2 - 3		982
	0	1989.165	13.59332 - 63.86530	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	0 - 1		982
	5	1989.617	13.40448 - 63.66532	$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	1 - 1		982
	30	1989.845	24.26757 - 74.52296	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$b^3P - y^1P^o$	1 - 1		982
	3	1991.563	13.40448 - 63.61612	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	1 - 2		982
	3	1997.122	13.59332 - 63.66532	$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	0 - 1		982

COBALT III (Co²⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁶3d⁷(⁴F_{9/2}) (25 electrons)
Ionization Potential 270 200 cm⁻¹; 33.50 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	649.342						673
	0	651.323						673
	5	666.271						673
	3	668.867						673
	0	681.867						673
	5	682.084	15.2019 - 161.8113	$3d^7 -$	$a^4P - v^4P^o$	$\frac{5}{2} - \frac{5}{2}$		673
	3	683.140	15.4282 - 161.8113	$3d^7 -$	$a^4P - v^4P^o$	$\frac{3}{2} - \frac{5}{2}$		673
	15	708.767	15.2019 - 156.2914	$3d^7 - 3d^6(b^3P)4p$	$a^4P - w^4P^o$	$\frac{3}{2} - \frac{5}{2}$		673
	10	709.912	15.4282 - 156.2914	$3d^7 - 3d^6(b^3P)4p$	$a^4P - w^4P^o$	$\frac{3}{2} - \frac{5}{2}$		673
	15	709.996	15.2019 - 156.0478	$3d^7 - 3d^6(b^3P)4p$	$a^4P - w^4P^o$	$\frac{5}{2} - \frac{3}{2}$		673
	0	710.592						673
	0	711.002	0.0 - 140.6454	$3d^7 - 3d^6(^1G)4p$	$ga^4F - x^2F^o$	$\frac{9}{2} - \frac{7}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	711.741	15.2019 - 155.7024	$3d^7 - 3d^6(b^3P)4p$	$a^4P - y^4S^o$	$\frac{5}{2} - \frac{3}{2}$		673
	0	712.193						673
	2	712.890	15.4282 - 155.7024	$3d^7 - 3d^6(b^3P)4p$	$a^4P - y^4S^o$	$\frac{3}{2} - \frac{3}{2}$		673
	0	714.836	15.8114 - 155.7024	$3d^7 - 3d^6(b^3P)4p$	$a^4P - y^4S^o$	$\frac{1}{2} - \frac{3}{2}$		673
	0	715.125						673
	2	716.055	0.8412 - 140.4924	$3d^7 - 3d^6(^3D)4p$	$ga^4F - w^4F^o$	$\frac{7}{2} - \frac{9}{2}$		673
	1	717.490	0.8412 - 140.2116	$3d^7 - 3d^6(^3D)4p$	$ga^4F - w^4F^o$	$\frac{7}{2} - \frac{5}{2}$		673
	0	735.720						673
	2	738.066						673
	1	741.032						673
	0	745.762						673
	0	745.939						673
	0	747.375						673
	1	748.019						673
	0	748.419						673
	0	752.485						673
	3	752.759						673
	2	754.795						673
	5	755.253						673
	0	755.512						673
6	1	755.972	0.0 - 132.2771	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
	1	756.064	1.4513 - 133.7114	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^2D^o$	$\frac{9}{2} - \frac{7}{2}$		673
	5	756.338	1.8668 - 134.0798	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		673
6	20	758.212	0.0 - 131.8871	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4G^o$	$\frac{9}{2} - \frac{9}{2}$		673
7	3	759.592	0.8412 - 132.4890	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{7}{2} - \frac{5}{2}$		673
	3	759.644						673
7	0	759.970	0.0 - 131.5816	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{9}{2} - \frac{7}{2}$		673
	1	760.211	0.0 - 131.5383	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^2H^o$	$\frac{9}{2} - \frac{9}{2}$		673
6	30	760.825	0.8412 - 132.2771	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
6	1	761.202	0.0 - 131.3711	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4G^o$	$\frac{9}{2} - \frac{11}{2}$		673
	1	762.038						673
7	3	762.529	1.4513 - 132.5924	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{5}{2} - \frac{3}{2}$		673
	0	762.694						673
7	50	762.775	0.0 - 131.0982	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{9}{2} - \frac{9}{2}$		673
	0	763.013	0.0 - 131.0542	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^2H^o$	$\frac{9}{2} - \frac{11}{2}$		673
7	25	763.131	1.4513 - 132.4890	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	0	764.229						673
6	2	764.363	1.4513 - 132.2771	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4G^o$	$\frac{5}{2} - \frac{7}{2}$		673
	2	764.418						673
7	10	764.866	0.8412 - 131.5816	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
7	20	764.959	1.8668 - 132.5924	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
	3	765.104	0.8412 - 131.5383	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^2H^o$	$\frac{7}{2} - \frac{9}{2}$		673
7	3	765.561	1.8668 - 132.4890	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{3}{2} - \frac{5}{2}$		673
6	10	766.667	1.4513 - 131.8839	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		673
7	20	767.703	0.8412 - 131.0982	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
	15	767.770						673
7	20	768.458	1.4513 - 131.5816	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4F^o$	$\frac{5}{2} - \frac{7}{2}$		673
6	10	769.128	1.8668 - 131.8839	$3d^7 - 3d^6(^3G)4p$	$ga^4F - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		673
	5	769.343						673
	3	769.459	0.8412 - 130.8019	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^2G^o$	$\frac{7}{2} - \frac{9}{2}$		673
	1	770.192	16.9776 - 146.8156	$3d^7 - 3d^6(^1D)4p$	$a^2G - v^2F^o$	$\frac{9}{2} - \frac{7}{2}$		673
	2	770.723						673
5	0	770.967	0.0 - 129.7069	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
5	10	771.638	0.0 - 129.5923	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^o$	$\frac{9}{2} - \frac{9}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
5	30	771.868	0.0 - 129.5560	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		673
	1	773.125	0.8412 - 130.1838	$3d^7 - 3d^6(^3F)4p$	$ga^4F - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	2	775.446	1.4513 - 130.4078	$3d^7 - 3d^6(^3F)4p$	$ga^4F - z^2F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
5	10	775.992	0.8412 - 129.7069	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
5	20	776.688	0.8412 - 129.5923	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
	5	776.794	1.4513 - 130.1838	$3d^7 - 3d^6(^3F)4p$	$ga^4F - z^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
5	3	779.436	1.4513 - 129.7473	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
5	20	779.683	1.4513 - 129.7069	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
	0	780.287						673
	20	781.130	0.0 - 128.0177	$3d^7 - 3d^6(^3F)4p$	$ga^4F - x^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
	3	781.250						673
5	15	781.983	1.8668 - 129.7473	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		673
	10	783.179	0.8412 - 128.5249	$3d^7 - 3d^6(^3F)4p$	$ga^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		673
	0	785.034						673
	10	785.207	1.4513 - 128.8046	$3d^7 - 3d^6(^3F)4p$	$ga^4F - x^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		673
	1	785.426	0.0 - 127.3177	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
	1	785.677						673
4	15	785.883	0.8412 - 128.0852	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		673
	8	786.958	1.8668 - 128.9378	$3d^7 - 3d^6(^3F)4p$	$ga^4F - x^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		673
	5	787.406	0.0 - 126.9981	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		673
4	8	787.562	1.4513 - 128.4231	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		673
	8	788.057	0.0 - 126.8921	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
	2	788.693						673
	0	788.815						673
4	30	789.447	1.8668 - 128.5363	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		673
4	2	789.662	1.4513 - 128.0852	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
4	50	790.197	0.0 - 126.5494	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
	3	790.268						673
	25	790.688	0.8412 - 127.3177	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	3	791.440						673
	5	792.661	0.8412 - 126.9981	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
	5	792.833						673
	2	793.600	1.4513 - 127.4581	$3d^7 - 3d^6(^3P)4p$	$ga^4F - z^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		673
	1	794.493	1.4513 - 127.3177	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^2G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
4	5	795.475	0.8412 - 126.5494	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	2	797.166	1.4513 - 126.8921	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		673
	2	797.312	1.4513 - 126.8709	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
	0	799.034	0.8412 - 125.9927	$3d^7 - 3d^6(^3P)4p$	$ga^4F - z^2D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
	2	799.237	1.8668 - 126.9876	$3d^7 - 3d^6(^3F)4p$	$ga^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		673
4	0	799.361	1.4513 - 126.5494	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
	10	799.919	0.0 - 125.0124	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		673
3	2	800.445	1.4513 - 126.3818	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		673
	30	801.493	0.0 - 124.7659	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		673
	1	802.434	15.2019 - 139.8187	$3d^7 - 3d^6(^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
	3	802.943	15.2019 - 139.7434	$3d^7 - 3d^6(^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
3	5	803.942	0.8412 - 125.2270	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	1	804.495	15.4282 - 139.7310	$3d^7 - 3d^6(^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		673
3	20	805.345	0.8412 - 125.0124	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
	3	805.379	0.8412 - 125.0033	$3d^7 - 3d^6(^3P)4p$	$ga^4F - y^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		673
	3	806.962	1.4513 - 125.3691	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
	1	807.156	23.0588 - 146.9507	$3d^7 - 3d^6(^3D)4p$	$a^2D - x^2D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
3	15	807.910	1.4513 - 125.2270	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
	3	808.033	23.0588 - 146.8156	$3d^7 - 3d^6(^3D)4p$	$a^2D - v^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
13	5	808.612	16.9776 - 140.6454	$3d^7 - 3d^6(^3G)4p$	$a^2G - x^2F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
3	15	809.221	15.2019 - 138.7747	$3d^7 - 3d^6(^3D)4p$	$a^4P - x^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
	10	809.609	16.9776 - 140.4924	$3d^7 - 3d^6(^3D)4p$	$a^2G - w^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	15	809.706	1.8668 - 125.3691	$3d^7 - 3d^6(^3H)4p$	$ga^4F - z^4G^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
12	2	809.844						673
	15	810.502	16.9776 - 140.3584	$3d^7 - 3d^6(^1G)4p$	$a^2G - w^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
13	10	810.716	15.4282 - 138.7747	$3d^7 - 3d^6(^3D)4p$	$a^4P - x^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
	10	811.951	15.8114 - 138.9705	$3d^7 - 3d^6(^3D)4p$	$a^4P - x^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
13	10	812.869	17.7662 - 140.7873	$3d^7 - 3d^6(^1G)4p$	$a^2G - x^2F^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
	1	814.066	16.9776 - 139.8187	$3d^7 - 3d^6(^3D)4p$	$a^2G - w^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
12	2	814.649						673
	25	815.555	17.7662 - 140.3829	$3d^7 - 3d^6(^1G)4p$	$a^2G - w^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
11	0	816.407						673
	10	816.617	17.7662 - 140.2258	$3d^7 - 3d^6(^3D)4p$	$a^2G - w^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
11	1	816.864						673
	1	817.937						673
11	20	818.600	16.9776 - 139.1375	$3d^7 - 3d^6(^1I)4p$	$a^2G - x^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
11	3	820.066	16.9776 - 138.9210	$3d^7 - 3d^6(^1I)4p$	$a^2G - x^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
11	0	821.771						673
	15	825.403	17.7662 - 138.9210	$3d^7 - 3d^6(^1I)4p$	$a^2G - x^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		673
10	1	828.608	16.9776 - 137.6613	$3d^7 - 3d^6(^3G)4p$	$a^2G - x^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	10	829.072	23.0588 - 143.6771	$3d^7 - 3d^6(^3D)4p$	$a^2D - w^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		673
10	5	832.050						673
	1	836.128						673
10	1	837.330						673
	25	838.133	16.9776 - 136.2901	$3d^7 - 3d^6(^3G)4p$	$a^2G - y^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
19	30	839.284	22.7203 - 141.8688	$3d^7 - 3d^6(^1I)4p$	$a^2H - y^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
18	20	844.097	22.7203 - 141.1905	$3d^7 - 3d^6(^1G)4p$	$a^2H - w^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
19	8	844.310	23.4343 - 141.8738	$3d^7 - 3d^6(^1I)4p$	$a^2H - y^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
10	1	844.411	16.9776 - 135.4040	$3d^7 - 3d^6(^3G)4p$	$a^2G - y^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	10	844.866	17.7662 - 136.1291	$3d^7 - 3d^6(^3G)4p$	$a^2G - y^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
18	1	845.793						673
	30	848.088	23.4343 - 141.3473	$3d^7 - 3d^6(^1G)4p$	$a^2H - w^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
18	0	849.210	23.4343 - 141.1905	$3d^7 - 3d^6(^1G)4p$	$a^2H - w^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
16	5	849.485	16.9776 - 134.6961	$3d^7 - 3d^6(^3G)4p$	$a^2G - y^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
	3	850.067	17.7662 - 135.4040	$3d^7 - 3d^6(^3G)4p$	$a^2G - y^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		673
16	3	850.424	23.0588 - 140.6454	$3d^7 - 3d^6(^1G)4p$	$a^2D - x^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		673
	0	850.965						673
17	1	858.663	15.4282 - 131.8839	$3d^7 - 3d^6(^3G)4p$	$a^4P - x^4G^\circ$	$\frac{1}{2} - \frac{5}{2}$		673
	15	858.975	22.7203 - 139.1375	$3d^7 - 3d^6(^1I)4p$	$a^2H - x^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
17	0	865.567	16.9776 - 132.5062	$3d^7 - 3d^6(^3G)4p$	$a^2G - y^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
	0	865.898	23.4343 - 138.9210	$3d^7 - 3d^6(^1I)4p$	$a^2H - x^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
16	15	870.007	22.7203 - 137.6613	$3d^7 - 3d^6(^3G)4p$	$a^2H - x^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
16	10	874.294	23.4343 - 137.8124	$3d^7 - 3d^6(^3G)4p$	$a^2H - x^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	5	876.594	16.9776 - 131.0542	$3d^7 - 3d^6(^3H)4p$	$a^2G - z^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
9	0	877.881						673
	0	878.080	20.1949 - 134.0798	$3d^7 - 3d^6(^3F)4p$	$a^2P - y^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
9	10	878.543	16.9776 - 130.8019	$3d^7 - 3d^6(^3F)4p$	$a^2G - y^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	5	878.963	17.7662 - 131.5383	$3d^7 - 3d^6(^3H)4p$	$a^2G - z^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		673
9	0	879.480						673
	10	880.950	20.1949 - 133.7114	$3d^7 - 3d^6(^3F)4p$	$a^2P - y^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		673
9	0	882.025	15.4282 - 128.8046	$3d^7 - 3d^6(^3F)4p$	$a^4P - x^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
	5	883.154	23.0588 - 136.2901	$3d^7 - 3d^6(^3G)4p$	$a^2D - y^2F^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
9	1	883.345	16.9776 - 130.1838	$3d^7 - 3d^6(^3F)4p$	$a^2G - z^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	2	883.703	20.9185 - 134.0798	$3d^7 - 3d^6(^3F)4p$	$a^2P - y^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	883.960	15.8114 - 128.9378	$3d^7 - 3d^6(^3F)4p$	$a^4P - x^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
	2	884.192	15.4282 - 128.5249	$3d^7 - 3d^6(^3F)4p$	$a^4P - x^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	0	885.011	15.8114 - 128.8046	$3d^7 - 3d^6(^3F)4p$	$a^4P - x^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		673
	5	886.378	15.2019 - 128.0177	$3d^7 - 3d^6(^3F)4p$	$a^4P - x^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		673
	0	887.777	17.7662 - 130.4078	$3d^7 - 3d^6(^3F)4p$	$a^2G - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	0	887.988	15.8114 - 128.4231	$3d^7 - 3d^6(^3P)4p$	$a^4P - y^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		673
	5	891.902	20.1949 - 132.3149	$3d^7 - 3d^6(^3P)4p$	$a^2P - z^2S^\circ$	$\frac{3}{2} - \frac{1}{2}$		673
15	15	893.045	22.7203 - 134.6961	$3d^7 - 3d^6(^3G)4p$	$a^2H - y^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
15	8	893.095	23.4343 - 135.4040	$3d^7 - 3d^6(^3G)4p$	$a^2H - y^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	8	893.713	24.2368 - 136.1291	$3d^7 - 3d^6(^3G)4p$	$a^2D - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	1	897.686	20.9185 - 132.3149	$3d^7 - 3d^6(^3P)4p$	$a^2P - z^2S^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
	1	899.025						673
	5	903.730	23.0588 - 133.7114	$3d^7 - 3d^6(^3F)4p$	$a^2D - y^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
	5	908.491	16.9776 - 127.0509	$3d^7 - 3d^6(^3H)4p$	$a^2G - z^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	0	910.415	24.2368 - 134.0798	$3d^7 - 3d^6(^3F)4p$	$a^2D - y^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	0	910.721	15.2019 - 125.0033	$3d^7 - 3d^6(^3P)4p$	$a^4P - y^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
	2	912.817	17.7662 - 127.3177	$3d^7 - 3d^6(^3H)4p$	$a^2G - z^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
	2	913.239	37.3165 - 146.8156	$3d^7 - 3d^6(^1D)4p$	$a^2F - v^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
	1	916.714						673
	1	918.233						673
	2	920.371	22.7203 - 131.3711	$3d^7 - 3d^6(^3G)4p$	$a^2H - x^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
14	10	923.075	22.7203 - 131.0542	$3d^7 - 3d^6(^3H)4p$	$a^2H - z^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
14	8	925.045	23.4343 - 131.5383	$3d^7 - 3d^6(^3H)4p$	$a^2H - z^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	0	925.230	22.7203 - 130.8019	$3d^7 - 3d^6(^3F)4p$	$a^2H - y^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
	0	926.591	15.2019 - 123.1231	$3d^7 - 3d^6(^3P)4p$	$a^4P - z^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		673
	5	927.224	23.0588 - 130.9090	$3d^7 - 3d^6(^3P)4p$	$a^2D - z^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		673
	2	5	929.970	0.0 - 107.5301	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$	673
	2	3	932.733	0.8412 - 108.0529	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$	673
	2	3	935.003	1.4513 - 108.4034	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$	673
	2	30	936.639	0.0 - 106.7649	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$	673
	2	20	937.310	0.8412 - 107.5301	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$	673
	2	10	938.077	1.4513 - 108.0529	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$	673
	2	5	938.647	1.8668 - 108.4034	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	673
	1	30	939.060	0.0 - 106.4889	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$	673
	2	0	941.756	1.8668 - 108.0529	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	673
	0	942.051						673
	1	20	942.388	0.8412 - 106.9543	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$	673
	2	1	942.696	1.4513 - 107.5301	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$	673
	2	1	944.084	0.8412 - 106.7649	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$	673
	1	20	944.768	1.4513 - 107.2966	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$	673
	0	945.198	20.1949 - 125.9927	$3d^7 - 3d^6(^3P)4p$	$a^2P - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	1	10	946.526	0.8412 - 106.4889	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$	673
	1	20	946.594	1.8668 - 107.5073	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	673
	1	10	947.838	1.4513 - 106.9543	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$	673
	1	5	948.501	1.8668 - 107.2966	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	673
	0	951.264	0.8412 - 105.9651	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^6P^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
	2	952.279	0.0 - 105.0087	$3d^7 - 3d^6(^3D)4p$	$ga^4F - z^6P^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	2	952.812	22.7203 - 127.6729	$3d^7 - 3d^6(^3H)4p$	$a^2H - z^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		673
	2	953.977	23.4343 - 128.2589	$3d^7 - 3d^6(^3H)4p$	$a^2H - z^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
	1	989.169						673
	5	992.145	37.0210 - 137.8124	$3d^7 - 3d^6(^3G)4p$	$a^2F - x^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
	8	996.558						673
	2	1008.997	37.0210 - 136.1291	$3d^7 - 3d^6(^3G)4p$	$a^2F - y^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
	0	1030.280						673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1037.174						673
	15	1043.243	15.4282 - 111.2831	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		673
	20	1044.281	15.2019 - 110.9615	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		673
	3	1046.760	15.4282 - 110.9615	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		673
	2	1047.471	37.0210 - 132.4890	$3d^7 - 3d^6(^3G)4p$	$a^2F - x^4F^o$	$\frac{1}{2} - \frac{5}{2}$		673
	3	1048.879						673
	20	1050.762	15.2019 - 110.3712	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4P^o$	$\frac{5}{2} - \frac{5}{2}$		673
	10	1050.977	15.8114 - 110.9615	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		673
	10	1053.257	15.4282 - 110.3712	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$		673
	0	1064.568						673
	2	1077.530						673
	2	1078.127						673
	2	1079.098						673
8	1	1088.486	15.4282 - 107.2966	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		673
8	1	1089.899	15.2019 - 106.9543	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		673
8	0	1090.554	15.8114 - 107.5073	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$		673
	0	1090.668						673
8	10	1092.581	15.4282 - 106.9543	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{5}{2}$		673
8	5	1093.066	15.8114 - 107.2966	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$		673
8	15	1095.443	15.2019 - 106.4889	$3d^7 - 3d^6(^3D)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		673
	1	1114.405						673
	2	1270.646						673
	3	1272.416						673
	2	1286.626						673
	1	1308.850						673
	2	1371.419	98.8232 - 171.7404	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{5}{2} - \frac{3}{2}$		673
	3	1371.779	99.0435 - 171.9415	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{1}{2}$		673
	0	1372.536						673
	0	1376.576	98.8232 - 171.4666	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{5}{2} - \frac{5}{2}$		673
	2	1378.208	99.1822 - 171.7404	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{1}{2} - \frac{3}{2}$		673
	10	1378.665	98.5456 - 171.0793	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{7}{2} - \frac{7}{2}$		673
	5	1380.775	99.0435 - 171.4666	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{5}{2}$		673
	20	1383.971	98.8232 - 171.0793	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{5}{2} - \frac{7}{2}$		673
	50	1384.187	98.2903 - 170.5352	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{3}{2} - \frac{5}{2}$		673
	10	1389.079	98.5456 - 170.5352	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6D^o - f^6D$	$\frac{7}{2} - \frac{9}{2}$		673
	2	1396.210	99.1822 - 170.8046	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6P$	$\frac{1}{2} - \frac{1}{2}$		673
	10	1402.415	98.2903 - 169.5959	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1403.755	98.2903 - 169.5277	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{11}{2} - \frac{9}{2}$		673
	10	1404.009	98.5456 - 169.7703	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{7}{2} - \frac{5}{2}$		673
	5	1405.032	98.8232 - 169.9960	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{5}{2} - \frac{3}{2}$		673
	1	1405.451	99.0435 - 170.1947	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{3}{2} - \frac{1}{2}$		673
	5	1408.808	98.5456 - 169.5277	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{7}{2} - \frac{5}{2}$		673
	50	1409.340						673
	5	1412.012	55.7292 - 126.5494	$3d^6(^3D)4s - 3d^6(^3P)4p$	$a^4D - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		673
	10	1412.974	98.8232 - 169.5959	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{5}{2} - \frac{7}{2}$		673
	10	1413.884	99.0435 - 169.7703	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6D$	$\frac{1}{2} - \frac{5}{2}$		673
	1	1425.329	98.2903 - 168.4496	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6F$	$\frac{7}{2} - \frac{5}{2}$		673
	3	1425.650	98.5456 - 168.6889	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6F$	$\frac{7}{2} - \frac{5}{2}$		673
	1	1425.984						673
	2	1427.308	98.8232 - 168.8855	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6F$	$\frac{5}{2} - \frac{3}{2}$		673
	2	1428.331						673
	0	1429.236	99.0435 - 169.0112	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6F$	$\frac{3}{2} - \frac{1}{2}$		673
	0	1429.324	86.3271 - 156.2914	$3d^6(^1G)4s - 3d^6(^3P)4p$	$c^2G - w^4P^o$	$\frac{7}{2} - \frac{5}{2}$		673
	30	1430.177	98.2903 - 168.2115	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^o - e^6F$	$\frac{9}{2} - \frac{9}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	1430.530	98.5456 - 168.4496	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{7}{2} - \frac{7}{2}$		673
	30	1431.323	98.8232 - 168.6889	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{5}{2} - \frac{5}{2}$		673
	10	1431.800	99.0435 - 168.8855	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{3}{2} - \frac{3}{2}$		673
	10	1432.065	99.1822 - 169.0112	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{1}{2} - \frac{1}{2}$		673
	10	1432.556						673
	200	1434.259	98.2903 - 168.0127	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{9}{2} - \frac{11}{2}$		673
	1	1434.642	99.1822 - 168.8855	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{1}{2} - \frac{3}{2}$		673
	100	1435.426	98.5456 - 168.2115	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{7}{2} - \frac{9}{2}$		673
	5	1435.840	99.0435 - 168.6889	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{5}{2} - \frac{5}{2}$		673
	20	1436.236	98.8232 - 168.4496	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6D^\circ - e^6F$	$\frac{3}{2} - \frac{3}{2}$		673
	2	1445.427						673
	3	1447.216						673
	1	1448.890						673
	3	1463.037						673
	2	1463.936						673
	2	1464.733						673
	2	1464.932						673
	2	1465.101						673
	3	1465.558	103.5937 - 171.8258	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{5}{2} - \frac{3}{2}$		673
	5	1466.579	105.0087 - 173.1949	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6P^\circ - f^6D$	$\frac{7}{2} - \frac{5}{2}$		673
	3	1466.919	103.6557 - 171.8258	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{3}{2} - \frac{3}{2}$		673
	10	1467.394	103.5937 - 171.7404	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6F^\circ - f^6D$	$\frac{5}{2} - \frac{3}{2}$		673
	10	1467.663	103.5937 - 171.7296	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{3}{2} - \frac{3}{2}$		673
	2	1468.010						673
	10	1468.992	103.6557 - 171.7296	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{3}{2} - \frac{5}{2}$		673
	1	1470.282						673
	1	1470.700						673
	2	1471.140						673
	2	1471.328	103.5017 - 171.4666	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6F^\circ - f^6D$	$\frac{7}{2} - \frac{5}{2}$		673
	1	1471.575	72.2705 - 140.2258	$3d^6(^3H)4s - 3d^6(^3D)4p$	$a^4H - w^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
	20	1472.019	103.5937 - 171.5276	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{5}{2} - \frac{7}{2}$		673
	3	1472.756						673
	2	1473.303						673
	5	1473.528						673
	3	1474.278						673
	3	1474.953						673
	1	1475.266	103.2450 - 171.0289	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{11}{2} - \frac{11}{2}$		673
	20	1475.635	103.5017 - 171.2691	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{7}{2} - \frac{9}{2}$		673
	5	1476.366	72.0833 - 139.8187	$3d^6(^3H)4s - 3d^6(^3D)4p$	$a^4H - w^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1476.895						673
	2	1477.260	103.3867 - 171.0793	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6F^\circ - f^6D$	$\frac{9}{2} - \frac{7}{2}$		673
	50	1478.367	103.3867 - 171.0289	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{9}{2} - \frac{11}{2}$		673
	2	1478.858						673
	3	1479.393						673
	2	1479.880						673
	100	1481.905	103.2450 - 170.7257	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6G$	$\frac{11}{2} - \frac{13}{2}$		673
	10	1483.363						673
	20	1483.800						673
	1	1484.565	73.2860 - 140.6454	$3d^6(^3F)4s - 3d^6(^1G)4p$	$b^4F - x^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	15	1485.170						673
	2	1485.510						673
	2	1487.962	73.2860 - 140.4924	$3d^6(^3F)4s - 3d^6(^3D)4p$	$b^4F - w^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	5	1488.174						673
	1	1488.465						673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1488.753						673
	1	1488.975						673
	0	1489.243	103.3867 - 170.5352	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^6F^\circ - f^6D$	$\frac{3}{2} - \frac{3}{2}$		673
	1	1489.550						673
	20	1489.899						673
	1	1490.511						673
	10	1491.273						673
	5	1492.528						673
	20	1493.152	72.3419 - 139.3142	$3d^6(^3P)4s - 3d^6(^3D)4p$	$b^4P - x^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		673
	3	1493.595	73.5402 - 140.4924	$3d^6(^3F)4s - 3d^6(^3D)4p$	$b^4F - w^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	2	1498.144	56.3738 - 123.1231	$3d^6(^3D)4s - 3d^6(^3P)4p$	$a^4D - z^4S^\circ$	$\frac{3}{2} - \frac{1}{2}$		673
	20	1498.830						673
	50	1499.124	106.4889 - 173.1949	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4D^\circ - f^4D$	$\frac{7}{2} - \frac{5}{2}$		673
	5	1499.877	73.5402 - 140.2116	$3d^6(^3F)4s - 3d^6(^3D)4p$	$b^4F - w^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
	20	1500.269	106.9543 - 173.6093	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4D^\circ - f^4D$	$\frac{7}{2} - \frac{5}{2}$		673
	5	1502.531	107.2966 - 173.8511	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4D^\circ - f^4D$	$\frac{7}{2} - \frac{5}{2}$		673
	3	1504.362	73.7266 - 140.2001	$3d^6(^3F)4s - 3d^6(^3D)4p$	$b^4F - w^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		673
	10	1505.249	72.3419 - 138.7747	$3d^6(^3P)4s - 3d^6(^3D)4p$	$b^4P - x^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		673
	1	1508.683	103.2450 - 169.5277	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6D$	$\frac{11}{2} - \frac{9}{2}$		673
	2	1510.489	73.5402 - 139.7434	$3d^6(^3F)4s - 3d^6(^3D)4p$	$b^4F - w^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
	5	1511.404						673
	3	1511.730						673
	5	1511.920	103.3867 - 169.5277	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6D$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1512.997	103.5017 - 169.5959	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6D$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1513.706						673
	50	1515.027						673
	2	1515.638						673
	2	1515.776						673
	3	1515.982						673
	2	1517.070						673
	2	1517.153						673
	15	1517.482	107.2966 - 173.1949	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4D^\circ - f^4D$	$\frac{1}{2} - \frac{5}{2}$		673
	10	1517.724	106.4889 - 172.3770	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$		673
	1	1518.636	106.9543 - 172.8027	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^4D^\circ - e^4F$	$\frac{5}{2} - \frac{5}{2}$		673
	15	1519.326	106.7649 - 172.5836	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4F^\circ - f^4D$	$\frac{9}{2} - \frac{7}{2}$		673
	3	1522.049						673
	20	1522.885	107.5301 - 173.1949	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4F^\circ - f^4D$	$\frac{7}{2} - \frac{5}{2}$		673
	10	1523.153						673
	15	1524.113	106.7649 - 172.3770	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^4F^\circ - e^4F$	$\frac{9}{2} - \frac{7}{2}$		673
	3	1524.472						673
	2	1524.942						673
	2	1525.163						673
	15	1525.407	108.0529 - 173.6093	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4F^\circ - f^4D$	$\frac{5}{2} - \frac{3}{2}$		673
	30	1526.734						673
	20	1527.780	106.4889 - 171.9426	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{9}{2}$		673
	3	1527.948	108.4034 - 173.8511	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4F^\circ - f^4D$	$\frac{1}{2} - \frac{1}{2}$		673
	3	1530.385						673
	10	1530.906	103.6908 - 169.0112	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6F$	$\frac{1}{2} - \frac{1}{2}$		673
	15	1531.068						673
	10	1532.032	107.5301 - 172.8027	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^4F^\circ - e^4F$	$\frac{7}{2} - \frac{5}{2}$		673
	200	1534.268	106.7649 - 171.9426	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^4F^\circ - e^4F$	$\frac{9}{2} - \frac{9}{2}$		673
	5	1536.554	108.0529 - 173.1335	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^4F^\circ - e^4F$	$\frac{5}{2} - \frac{3}{2}$		673
	5	1536.955	103.3867 - 168.4496	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6F$	$\frac{9}{2} - \frac{7}{2}$		673
	2	1539.255	103.2450 - 168.2115	$3d^6(^3D)4p - 3d^6(^3D)4d$	$z^6F^\circ - e^6F$	$\frac{11}{2} - \frac{9}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1539.458						673
	100	1542.094	107.5301 - 172.3770	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^4F^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$		673
	10	1542.616	103.3867 - 168.2115	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6F^\circ - e^6F$	$\frac{9}{2} - \frac{9}{2}$		673
	30	1543.981	103.2450 - 168.0127	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6F^\circ - e^6F$	$\frac{11}{2} - \frac{11}{2}$		673
	3	1544.129	105.0087 - 169.7703	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6D$	$\frac{7}{2} - \frac{7}{2}$		673
	30	1544.411	78.9278 - 143.6771	$3d^6(^3F)4s - 3d^6(^3D)4p$	$b^2F - w^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
	40	1544.880	108.4034 - 173.1335	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^4F^\circ - e^4F$	$\frac{3}{2} - \frac{3}{2}$		673
	5	1547.309						673
	20	1548.413	105.0087 - 169.5910	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6P$	$\frac{7}{2} - \frac{7}{2}$		673
	20	1549.940	105.0087 - 169.5277	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6D$	$\frac{7}{2} - \frac{7}{2}$		673
	5	1551.536	82.3633 - 146.8156	$3d^6(^3G)4s - 3d^6(^1D)4p$	$b^2G - v^2F^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	5	1553.015	105.9651 - 170.3555	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6P$	$\frac{9}{2} - \frac{9}{2}$		673
	5	1557.328	106.5919 - 170.8046	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6P$	$\frac{3}{2} - \frac{3}{2}$		673
	2	1561.746	105.9651 - 169.9960	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6D$	$\frac{3}{2} - \frac{3}{2}$		673
	5	1563.158	76.5189 - 140.4924	$3d^6(^3G)4s - 3d^6(^3D)4p$	$a^3G - w^4F^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
	2	1564.090	77.4116 - 141.3473	$3d^6(^3H)4s - 3d^6(^1G)4p$	$b^2H - w^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
	3	1567.173						673
	0	1567.917	77.4116 - 141.1905	$3d^6(^3H)4s - 3d^6(^1G)4p$	$b^2H - w^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
	1	1568.308	106.5919 - 170.3555	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6P$	$\frac{3}{2} - \frac{3}{2}$		673
	1	1569.264	77.6229 - 141.3473	$3d^6(^3H)4s - 3d^6(^1G)4p$	$b^2H - w^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		673
	1	1572.266	106.5919 - 170.1947	$3d^6(^5D)4p - 3d^6(^5D)4d$	$z^6P^\circ - e^6D$	$\frac{3}{2} - \frac{1}{2}$		673
	10	1573.921						673
	2	1576.025						673
	0	1578.093	47.0031 - 110.3712	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^6D - z^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
	0	1580.619						673
	0	1580.735	77.1211 - 140.3829	$3d^6(^3G)4s - 3d^6(^1G)4p$	$a^4G - w^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1581.502						673
	3	1582.044						673
	1	1584.663	77.1211 - 140.2258	$3d^6(^3G)4s - 3d^6(^3D)4p$	$a^4G - w^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	15	1586.180						673
	10	1587.186	73.2860 - 136.2901	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^4F - y^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
59	10	1588.642	77.4116 - 140.3584	$3d^6(^3H)4s - 3d^6(^1G)4p$	$b^2H - w^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
59	10	1593.446						673
	0	1594.182	77.4723 - 140.2001	$3d^6(^3G)4s - 3d^6(^3D)4p$	$a^4G - w^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		673
	10	1594.953	77.1211 - 139.8187	$3d^6(^3G)4s - 3d^6(^3D)4p$	$a^4G - w^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	3	1601.903						673
	15	1603.563	77.3831 - 139.7434	$3d^6(^3G)4s - 3d^6(^3D)4p$	$a^4G - w^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
	5	1607.410	110.3712 - 172.5836	$3d^6(^3D)4p - 3d^6(^3D)5s$	$z^4P^\circ - f^1D$	$\frac{7}{2} - \frac{7}{2}$		673
	5	1608.777						673
	5	1608.864	77.4723 - 139.6272	$3d^6(^3G)4s - 3d^6(^3D)4p$	$a^4G - w^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		673
	5	1608.950						673
	5	1618.491						673
	2	1620.051	77.4116 - 139.1375	$3d^6(^3H)4s - 3d^6(^1D)4p$	$b^2H - x^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
	3	1620.254	78.9278 - 140.6454	$3d^6(^3F)4s - 3d^6(^1G)4p$	$b^2F - x^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
	3	1622.923						673
	1	1629.157						673
	5	1629.666	79.4253 - 140.7873	$3d^6(^3F)4s - 3d^6(^1G)4p$	$b^2F - x^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
	5	1635.521	76.5189 - 137.6613	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
36	30	1645.986	71.6231 - 132.3768	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - y^4H^\circ$	$\frac{13}{2} - \frac{13}{2}$		673
36	1	1647.100	71.8737 - 132.5870	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - y^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
	5	1649.153	47.4154 - 108.0529	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^6D - z^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
36	200	1649.265	71.8737 - 132.5062	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - y^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
36	0	1651.783	72.0833 - 132.6238	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - y^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1652.024	86.2838 - 146.8156	$3d^6(^1G)4s - 3d^6(^1D)4p$	$c^2G - v^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm $^{-1}$)	Configurations	Terms	J - J	Notes	References
36	5	1652.182	47.0031 - 107.5301	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
	10	1652.791	72.0833 - 132.5870	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - y^4H^o$	$\frac{9}{2} - \frac{9}{2}$		673
	58	1659.757	77.4116 - 137.6613	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - x^2G^o$	$\frac{11}{2} - \frac{9}{2}$		673
	58	1661.422	77.6229 - 137.8124	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - x^2G^o$	$\frac{11}{2} - \frac{7}{2}$		673
23	3	1663.500	47.4154 - 107.5301	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4F^o$	$\frac{9}{2} - \frac{7}{2}$		673
	50	1665.269	46.4383 - 106.4889	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4D^o$	$\frac{9}{2} - \frac{7}{2}$		673
23	5	1668.032	47.0031 - 106.9543	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$		673
	2	1672.133	72.0833 - 131.8871	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - x^4G^o$	$\frac{9}{2} - \frac{9}{2}$		673
	10	1673.325	47.0031 - 106.7649	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4F^o$	$\frac{7}{2} - \frac{9}{2}$		673
	20	1673.679	71.6231 - 131.3711	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - x^2G^o$	$\frac{11}{2} - \frac{11}{2}$		673
23	15	1677.901	47.6986 - 107.2966	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$		673
	5	1679.481	72.3419 - 131.8839	$3d^6(^3P)4s - 3d^6(^3G)4p$	$b^4P - x^4G^o$	$\frac{11}{2} - \frac{5}{2}$		673
23	20	1679.578	47.4154 - 106.9543	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$		673
	1	1680.734	71.8737 - 131.3711	$3d^6(^3H)4s - 3d^6(^3G)4p$	$a^4H - x^4G^o$	$\frac{11}{2} - \frac{11}{2}$		673
23	10	1681.074	47.0031 - 106.4889	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$		673
	1	1683.180						673
	5	1687.910						673
	3	1689.283	72.0833 - 131.2799	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^2G^o$	$\frac{9}{2} - \frac{7}{2}$		673
22	100	1689.858	47.4154 - 106.5919	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{5}{2} - \frac{3}{2}$		673
	5	1690.399						673
	30	1693.085						673
22	1	1695.090						673
	600	1696.008	47.0031 - 105.9651	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{7}{2} - \frac{5}{2}$		673
22	5	1696.875						673
	5	1696.980	71.8737 - 130.8019	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^2G^o$	$\frac{11}{2} - \frac{9}{2}$		673
	575	1697.988	47.6986 - 106.5919	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{3}{2} - \frac{3}{2}$		673
	1	1699.880	82.3633 - 141.1905	$3d^6(^3G)4s - 3d^6(^1G)4p$	$b^2G - w^2H^o$	$\frac{9}{2} - \frac{11}{2}$		673
	1	1701.770	73.7266 - 132.4890	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^4F - x^4F^o$	$\frac{9}{2} - \frac{9}{2}$		673
22	3	1702.506	73.5402 - 132.2771	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^4F - x^4G^o$	$\frac{7}{2} - \frac{7}{2}$		673
	500	1702.790	47.8648 - 106.5919	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{1}{2} - \frac{1}{2}$		673
	5	1704.817	77.4723 - 136.1291	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	0	1705.306						673
22	600	1707.348	46.4383 - 105.0087	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{9}{2} - \frac{7}{2}$		673
22	500	1707.951	47.4154 - 105.9651	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{5}{2} - \frac{5}{2}$		673
	3	1709.395						673
22	5	1711.531	82.9207 - 141.3473	$3d^6(^3G)4s - 3d^6(^1G)4p$	$b^2G - w^2H^o$	$\frac{7}{2} - \frac{9}{2}$		673
	2	1712.489						673
	2	1715.768	77.1211 - 135.4040	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^2H^o$	$\frac{9}{2} - \frac{9}{2}$		673
	200	1716.251	47.6986 - 105.9651	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{3}{2} - \frac{5}{2}$		673
	2	1718.887	76.5189 - 134.6961	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^2H^o$	$\frac{11}{2} - \frac{11}{2}$		673
	3	1719.383						673
	20	1720.068	72.2705 - 130.4078	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		673
	10	1721.151	72.0833 - 130.1838	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - z^2F^o$	$\frac{9}{2} - \frac{7}{2}$		673
	3	1721.678						673
	1	1722.911	73.5402 - 131.5816	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^4F - x^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
22	1	1723.327						673
	1	1723.536	77.3831 - 135.4040	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^2H^o$	$\frac{7}{2} - \frac{9}{2}$		673
	500	1723.970	47.0031 - 105.0087	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{7}{2} - \frac{7}{2}$		673
	35	100	1726.134	71.6231 - 129.5560	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{11}{2} - \frac{11}{2}$	
57	15	1726.726	72.2705 - 130.1838	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$		673
	3	1728.091	82.9207 - 140.7873	$3d^6(^3G)4s - 3d^6(^1G)4p$	$b^2G - x^2F^o$	$\frac{9}{2} - \frac{9}{2}$		673
	5	1729.724	73.2860 - 131.0982	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^4F - x^4F^o$	$\frac{9}{2} - \frac{9}{2}$		673
	250	1730.669	77.6229 - 135.4040	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - y^2H^o$	$\frac{9}{2} - \frac{9}{2}$		673
	0	1732.358	82.9207 - 140.6454	$3d^6(^3G)4s - 3d^6(^1G)4p$	$b^2G - x^2F^o$	$\frac{7}{2} - \frac{7}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
35	200	1732.545	71.8737 - 129.5923	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{11}{2} - \frac{9}{2}$		673
35	10	1733.635	71.8737 - 129.5560	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{11}{2} - \frac{11}{2}$		673
35	50	1735.400	72.0833 - 129.7069	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
22	250	1736.312	47.4154 - 105.0087	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6P^o$	$\frac{9}{2} - \frac{7}{2}$		673
	3	1736.856	77.1211 - 134.6961	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^2H^o$	$\frac{9}{2} - \frac{11}{2}$		673
	3	1737.523	73.7266 - 131.2799	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^2G^o$	$\frac{9}{2} - \frac{7}{2}$		673
	1	1738.653	73.2860 - 130.8019	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^2G^o$	$\frac{9}{2} - \frac{9}{2}$		673
35	30	1739.833	72.2705 - 129.7473	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
35	5	1741.057	72.2705 - 129.7069	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
	2	1742.372	86.2838 - 143.6771	$3d^6(^3G)4s - 3d^6(^3D)4p$	$c^2G - w^2F^o$	$\frac{9}{2} - \frac{7}{2}$		673
	10	1743.212						673
63	30	1743.311	78.9278 - 136.2901	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - y^2F^o$	$\frac{7}{2} - \frac{7}{2}$		673
35	2	1744.529	72.2705 - 129.5923	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{7}{2} - \frac{9}{2}$		673
57	400	1745.674	77.4116 - 134.6961	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - y^2H^o$	$\frac{11}{2} - \frac{11}{2}$		673
	0	1746.131						673
	20	1746.369	73.5402 - 130.8019	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^2G^o$	$\frac{7}{2} - \frac{9}{2}$		673
	5	1746.853						673
28	25	1749.728	70.9341 - 128.0852	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{5}{2} - \frac{5}{2}$		673
	100	1751.037						673
29	200	1751.854						673
	0	1754.761	83.7996 - 140.7873	$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - x^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
21	500	1755.979	46.4383 - 103.3867	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	30	1756.851	76.7911 - 133.7114	$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^2P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		673
	15	1757.531	73.2860 - 130.1838	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	0	1758.454	73.5402 - 130.4078	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$		673
	5	1759.144	83.7996 - 140.6454	$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - x^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
21	1000	1760.354	46.4383 - 103.2450	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{5}{2} - \frac{11}{2}$		673
	1	1761.082						673
69	10	1761.367	82.3633 - 139.1375	$3d^6(^3G)4s - 3d^6(^1I)4p$	$b^2G - x^2H^o$	$\frac{9}{2} - \frac{11}{2}$		673
	100	1763.465	83.9389 - 140.6454	$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - x^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
63	15	1763.533	79.4253 - 136.1291	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - y^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	0	1765.414	73.5402 - 130.1838	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	1	1765.566						673
21	30	1767.084	47.0031 - 103.5937	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{7}{2} - \frac{5}{2}$		673
	50	1767.308	83.7996 - 140.3829	$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - w^2G^o$	$\frac{5}{2} - \frac{5}{2}$		673
	5	1768.003						673
	200	1768.238	83.9389 - 140.4924	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{7}{2} - \frac{9}{2}$		673
	100	1768.471	73.8618 - 130.4078	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	10	1769.495						673
21	500	1769.957	47.0031 - 103.5017	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{7}{2} - \frac{7}{2}$		673
	10	1770.500						673
	100	1771.259	73.7266 - 130.1838	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{5}{2} - \frac{7}{2}$		673
	200	1771.854	83.7734 - 140.2116	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{5}{2} - \frac{5}{2}$		673
	300	1772.233	83.7996 - 140.2258	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{5}{2} - \frac{7}{2}$		673
	200	1772.438	83.9389 - 140.3584	$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - w^2G^o$	$\frac{5}{2} - \frac{5}{2}$		673
	50	1772.549						673
	100	1772.671	83.7996 - 140.2116	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{5}{2} - \frac{5}{2}$		673
73	500	1773.215	85.4741 - 141.8688	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - y^2I^o$	$\frac{13}{2} - \frac{13}{2}$		673
21	1000	1773.568	47.0031 - 103.3867	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{7}{2} - \frac{9}{2}$		673
73	500	1774.418	85.5173 - 141.8738	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - y^2I^o$	$\frac{11}{2} - \frac{11}{2}$		673
73	10	1774.577	85.5173 - 141.8688	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - y^2I^o$	$\frac{11}{2} - \frac{13}{2}$		673
	1	1776.630	83.9389 - 140.2258	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
43	600	1777.145	73.2860 - 129.5560	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
21	100	1778.091	47.4154 - 103.6557	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{5}{2} - \frac{5}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
28	20	1779.536	72.3419 - 128.5363	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		673
29	3	1779.896	72.3419 - 128.5249	$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^4P - x^4D^o$	$\frac{3}{2} - \frac{3}{2}$		673
21	750	1780.046	47.4154 - 103.5937	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^6D - z^6F^o$	$\frac{5}{2} - \frac{3}{2}$		673
	0	1780.686						673
	5	1782.195						673
21	850	1782.966	47.4154 - 103.5017	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^6D - z^6F^o$	$\frac{5}{2} - \frac{7}{2}$		673
43	500	1784.055	73.5402 - 129.5923	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{7}{2} - \frac{9}{2}$		673
	30	1784.790						673
	3	1784.944						673
	20	1785.116	83.7996 - 139.8187	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{7}{2}$		673
69	5	1785.705	82.9207 - 138.9210	$3d^6(^3G)4s - 3d^6(^1D)4p$	$b^2G - x^2H^o$	$\frac{3}{2} - \frac{9}{2}$		673
21	50	1785.965	47.6986 - 103.6908	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{1}{2}$		673
43	200	1786.342	73.7266 - 129.7069	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{5}{2} - \frac{7}{2}$		673
	50	1786.679	83.7734 - 139.7434	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{5}{2}$		673
21	600	1787.082	47.6986 - 103.6557	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{1}{2}$		673
	50	1787.502	83.7996 - 139.7434	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{5}{2}$		673
	30	1787.575	83.7893 - 139.7310	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{1}{2} - \frac{1}{2}$		673
	50	1788.627						673
21	600	1789.070	47.6986 - 103.5937	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{5}{2}$		673
43	100	1789.373	73.8618 - 129.7473	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{3}{2} - \frac{1}{2}$		673
	100	1789.549	83.9389 - 139.8187	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{7}{2}$		673
49	500	1790.258	76.5189 - 132.3768	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^o$	$\frac{11}{2} - \frac{11}{2}$		673
	50	1790.389	83.7734 - 139.6272	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{1}{2}$		673
	25	1790.892	83.7893 - 139.6272	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$		673
72	300	1791.153	85.5173 - 141.3473	$3d^6(^1D)4s - 3d^6(^1G)4p$	$a^2I - w^2H^o$	$\frac{11}{2} - \frac{9}{2}$		673
21	500	1791.277	47.8648 - 103.6908	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^6D - z^6F^o$	$\frac{1}{2} - \frac{1}{2}$		673
34	100	1792.144	71.8737 - 127.6729	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{11}{2} - \frac{11}{2}$		673
21	300	1792.410	47.8648 - 103.6557	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{1}{2} - \frac{1}{2}$		673
28	200	1793.924	72.3419 - 128.0852	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		673
72	100	1794.804	85.4741 - 141.1905	$3d^6(^1D)4s - 3d^6(^1G)4p$	$a^2I - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		673
	2	1795.426	76.7911 - 132.4890	$3d^6(^3P)4s - 3d^6(^3G)4p$	$b^2P - x^4F^o$	$\frac{3}{2} - \frac{5}{2}$		673
72	10	1796.200	85.5173 - 141.1905	$3d^6(^1D)4s - 3d^6(^1G)4p$	$a^2I - w^2H^o$	$\frac{11}{2} - \frac{11}{2}$		673
	5	1796.664						673
	10	1797.095	78.4343 - 134.0798	$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^2P - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$		673
28	500	1798.064	70.9341 - 126.5494	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		673
29	5	1798.876	73.2145 - 128.8046	$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^4P - x^4D^o$	$\frac{1}{2} - \frac{3}{2}$		673
		1799.0	1.4513 - 57.0368	$3d^7 - 3d^6(^5D)4s$	$ga^4F - a^4D$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,673
	50	1800.469	83.7734 - 139.3142	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^o$	$\frac{3}{2} - \frac{1}{2}$		673
		1800.7	0.8412 - 56.3738	$3d^7 - 3d^6(^5D)4s$	$ga^4F - a^4D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,673
	25	1800.974	83.7893 - 139.3142	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^o$	$\frac{1}{2} - \frac{1}{2}$		673
	25	1801.030	76.7911 - 132.3149	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$		673
	0	1801.940						673
49	1	1802.917	77.1211 - 132.5870	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^o$	$\frac{9}{2} - \frac{9}{2}$		673
49	500	1805.535	77.1211 - 132.5062	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^o$	$\frac{9}{2} - \frac{11}{2}$		673
47	10	1806.096	76.5189 - 131.8871	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^o$	$\frac{11}{2} - \frac{9}{2}$		673
	10	1806.350						673
	5	1806.492						673
		1806.9	1.4513 - 56.7948	$3d^7 - 3d^6(^5D)4s$	$ga^4F - a^4D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,673
68	300	1808.384	82.3633 - 137.6613	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^2G - x^2G^o$	$\frac{9}{2} - \frac{9}{2}$		673
	40	1809.233						673
	5	1809.904						673
33	15	1810.464	72.0833 - 127.3177	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^2G^o$	$\frac{9}{2} - \frac{7}{2}$		673
28	100	1811.317	73.2145 - 128.4231	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$		673
49	400	1811.466	77.3831 - 132.5870	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^o$	$\frac{3}{2} - \frac{5}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
33	3	1811.694	83.7734 - 138.9705	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$		673
	5	1812.336	71.8737 - 127.0509	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^2G^o$	$\frac{11}{2} - \frac{9}{2}$		673
	50	1812.550	83.7996 - 138.9705	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$		673
48		1812.6	1.8668 - 57.0368	$3d^7 - 3d^6(^3D)4s$	$ga^4F - a^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,673
	50	1813.044	77.1211 - 132.2771	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		
49	300	1813.186	77.4723 - 132.6238	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^o$	$\frac{3}{2} - \frac{3}{2}$		673
48	10	1814.084	71.8737 - 126.9981	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4F^o$	$\frac{11}{2} - \frac{9}{2}$		673
	100	1814.219	77.4723 - 132.5924	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
48	2	1814.573						673
	100	1814.683	77.3831 - 132.4890	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
56	100	1814.865	91.7151 - 146.8156	$3d^6(^1D)4s - 3d^6(^1D)4p$	$b^2D - v^2F^o$	$\frac{3}{2} - \frac{1}{2}$		673
	20	1815.063	77.4116 - 132.5062	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - y^4H^o$	$\frac{11}{2} - \frac{11}{2}$		673
42	200	1815.596	73.7266 - 128.8046	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{5}{2} - \frac{3}{2}$		673
42	200	1815.686	73.8618 - 128.9378	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{3}{2} - \frac{1}{2}$		673
78	5	1816.084	86.2838 - 141.3473	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2H^o$	$\frac{3}{2} - \frac{1}{2}$		673
33	10	1816.250	70.9341 - 125.9927	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$		673
	20	1816.617	72.2705 - 127.3177	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^2G^o$	$\frac{3}{2} - \frac{1}{2}$		673
78	100	1817.518	86.3271 - 141.3473	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2H^o$	$\frac{3}{2} - \frac{1}{2}$		673
48	100	1817.626	77.4723 - 132.4890	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
	20	1817.750						673
42	200	1818.684	73.5402 - 128.5249	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{7}{2} - \frac{5}{2}$		673
	2	1819.009	83.7996 - 138.7747	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^o$	$\frac{3}{2} - \frac{3}{2}$		673
33	1	1819.070	73.2860 - 128.2589	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^2I^o$	$\frac{3}{2} - \frac{11}{2}$		673
	30	1819.261	72.0833 - 127.0509	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$		673
56	200	1819.330	77.4116 - 132.3768	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - y^4H^o$	$\frac{11}{2} - \frac{11}{2}$		673
	100	1819.733						673
42	100	1820.064	73.8618 - 128.8046	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F,P	673
		1820.6	1.8668 - 56.7948	$3d^7 - 3d^6(^3D)4s$	$ga^4F - a^4D$	$\frac{3}{2} - \frac{1}{2}$		375,673
		1820.7	1.4513 - 56.3738	$3d^7 - 3d^6(^3D)4s$	$ga^4F - a^4D$	$\frac{3}{2} - \frac{1}{2}$		375,673
	1	1821.004	72.0833 - 126.9981	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
78	400	1821.262	86.2838 - 141.1905	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2H^o$	$\frac{9}{2} - \frac{11}{2}$		673
47	400	1821.688	77.3831 - 132.2771	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		673
68	400	1821.766	82.9207 - 137.8124	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^2G - x^2G^o$	$\frac{3}{2} - \frac{3}{2}$		673
		1821.9	0.8412 - 55.7292	$3d^7 - 3d^6(^3D)4s$	$ga^4F - a^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,673
56	100	1822.046	77.6229 - 132.5062	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - y^4H^o$	$\frac{9}{2} - \frac{11}{2}$		
32	1	1822.215	71.6231 - 126.5013	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{11}{2} - \frac{11}{2}$		673
32	600	1823.079	71.6231 - 126.4755	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{11}{2} - \frac{11}{2}$		673
	100	1823.414						673
42	150	1823.622	83.9389 - 138.7747	$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^o$	$\frac{7}{2} - \frac{5}{2}$		673
	100	1824.874	73.7266 - 128.5249	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{3}{2} - \frac{1}{2}$		673
33	400	1825.365	78.9278 - 133.7114	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		673
	300	1825.464	72.2705 - 127.0509	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$		673
47	565	1825.947	77.1211 - 131.8871	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^o$	$\frac{9}{2} - \frac{9}{2}$		673
	1	1826.716						673
42	300	1827.094	73.2860 - 128.0177	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{9}{2} - \frac{7}{2}$		673
42	5	1829.392	73.8618 - 128.5249	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{3}{2} - \frac{1}{2}$		673
55	200	1829.674	77.6229 - 132.2771	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		673
26	750	1830.093	55.7292 - 110.3712	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4P^o$	$\frac{7}{2} - \frac{5}{2}$		673
32	300	1830.581	71.8737 - 126.5013	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{11}{2} - \frac{11}{2}$		673
	20	1830.780	72.2705 - 126.8921	$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
	150	1830.870						673
32	750	1831.439	71.8737 - 126.4755	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{11}{2} - \frac{11}{2}$		673
26	565	1831.916	56.3738 - 110.9615	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		673
48	400	1832.201	76.5189 - 131.0982	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^o$	$\frac{11}{2} - \frac{9}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
39	1	1832.784	73.8618 - 128.4231	$3d^6(^3F)4s - 3d^6(^3P)4p$	$b^4F - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$		673
	50	1833.876	72.3419 - 126.8709	$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^4P - y^4F^o$	$\frac{1}{2} - \frac{3}{2}$		673
47	75	1834.840	77.3831 - 131.8839	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^o$	$\frac{2}{2} - \frac{3}{2}$		673
32	1000	1835.000	71.6231 - 126.1190	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{13}{2} - \frac{15}{2}$		673
26	100	1835.255	56.7948 - 111.2831	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		673
42	150	1835.617	73.5402 - 128.0177	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{2}{2} - \frac{2}{2}$		673
54	20	1835.687	77.4116 - 131.8871	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - x^4G^o$	$\frac{11}{2} - \frac{9}{2}$		673
	300	1836.200	77.1211 - 131.5816	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^o$	$\frac{9}{2} - \frac{7}{2}$		673
32	600	1837.630	72.0833 - 126.5013	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{9}{2} - \frac{11}{2}$		673
47	100	1837.840	77.4723 - 131.8839	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^o$	$\frac{2}{2} - \frac{3}{2}$		673
77	2	1838.659						673
	50	1839.535	86.2838 - 140.6454	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - x^2F^o$	$\frac{9}{2} - \frac{7}{2}$		673
39	20	1839.636	73.7266 - 128.0852	$3d^6(^3F)4s - 3d^6(^3P)4p$	$b^4F - y^4D^o$	$\frac{5}{2} - \frac{3}{2}$		673
	5	1841.582						673
42	15	1841.924	73.7266 - 128.0177	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^o$	$\frac{5}{2} - \frac{7}{2}$		673
	1	1842.109	79.4253 - 133.7114	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^2D^o$	$\frac{5}{2} - \frac{5}{2}$		673
47	2	1843.332	77.1211 - 131.3711	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^o$	$\frac{7}{2} - \frac{11}{2}$		673
26	200	1843.443	57.0368 - 111.2831	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		673
	200	1843.532	73.2145 - 127.4581	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$		673
48	75	1843.960						673
	30	1844.684						673
48	50	1844.726	86.2838 - 140.4924	$3d^6(^1G)4s - 3d^6(^3D)4p$	$c^2G - w^4F^o$	$\frac{9}{2} - \frac{9}{2}$		673
	100	1845.074	77.3831 - 131.5816	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
26	2	1845.636						673
	20	1846.050						673
26	500	1846.157	56.7948 - 110.9615	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		673
32	50	1846.514	72.0833 - 126.2393	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{9}{2} - \frac{9}{2}$		673
	125	1847.300						673
76	125	1847.825	76.7911 - 130.9090	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - z^2P^o$	$\frac{1}{2} - \frac{3}{2}$		673
	25	1848.030						673
76	150	1849.299	86.2838 - 140.3584	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2G^o$	$\frac{9}{2} - \frac{9}{2}$		673
	300	1849.464	70.9341 - 125.0033	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - y^4P^o$	$\frac{7}{2} - \frac{3}{2}$		673
76	200	1849.932	86.3271 - 140.3829	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2G^o$	$\frac{7}{2} - \frac{7}{2}$		673
	300	1850.503	72.3419 - 126.3818	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4P^o$	$\frac{3}{2} - \frac{3}{2}$		673
76	10	1850.780	86.3271 - 140.3584	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2G^o$	$\frac{7}{2} - \frac{9}{2}$		673
	50	1851.509	73.2145 - 127.2247	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4P^o$	$\frac{1}{2} - \frac{1}{2}$		673
26	200	1851.937	56.3738 - 110.3712	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4P^o$	$\frac{5}{2} - \frac{5}{2}$		673
48	20	1852.645	77.1211 - 131.0982	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^o$	$\frac{9}{2} - \frac{9}{2}$		673
32	500	1852.919	72.2705 - 126.2393	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^o$	$\frac{7}{2} - \frac{9}{2}$		673
54	10	1853.266	77.6229 - 131.5816	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - x^4F^o$	$\frac{9}{2} - \frac{7}{2}$		673
	10	1853.841	86.2838 - 140.2258	$3d^6(^1G)4s - 3d^6(^3D)4p$	$c^2G - w^4F^o$	$\frac{9}{2} - \frac{7}{2}$		673
67	125	1854.194						673
	400	1854.393	82.3633 - 136.2901	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^2G - y^2F^o$	$\frac{9}{2} - \frac{7}{2}$		673
53	400	1854.763	77.6229 - 131.5383	$3d^6(^3H)4s - 3d^6(^3H)4p$	$b^2H - z^2H^o$	$\frac{9}{2} - \frac{9}{2}$		673
	25	1855.331	86.3271 - 140.2258	$3d^6(^1G)4s - 3d^6(^3D)4p$	$c^2G - w^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
47	50	1855.954	78.4343 - 132.3149	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$		673
	50	1857.657						673
47	50	1858.487	77.4723 - 131.2799	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - y^2G^o$	$\frac{5}{2} - \frac{7}{2}$		673
41	50	1859.510	73.5402 - 127.3177	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		673
	1	1860.428						673
40	2	1860.866						673
	600	1861.775	73.2860 - 126.9981	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^o$	$\frac{9}{2} - \frac{9}{2}$		673
55	100	1862.660	77.4116 - 131.0982	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - x^4F^o$	$\frac{11}{2} - \frac{7}{2}$		673
31	5	1863.134	71.6231 - 125.2962	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^o$	$\frac{13}{2} - \frac{11}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
71	200	1863.467	85.4741 - 139.1375	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - x^2H^{\circ}$	$\frac{13}{2} - \frac{11}{2}$		673
	20	1863.615	78.9278 - 132.5870	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - y^4H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
31	750	1863.826	71.6231 - 125.2762	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{13}{2} - \frac{13}{2}$		673
53	400	1864.187	77.4116 - 131.0542	$3d^6(^3H)4s - 3d^6(^3H)4p$	$b^2H - z^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		673
	50	1864.519						673
31	100	1865.424	72.0833 - 125.6905	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
40	100	1865.456	73.2860 - 126.8921	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
26	20	1866.497	56.7948 - 110.3712	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		673
	100	1866.615						673
31	50	1867.490	71.8737 - 125.4216	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		673
	30	1867.930	86.2838 - 139.8187	$3d^6(^1G)4s - 3d^6(^3D)4p$	$c^2G - w^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
41	30	1868.796	73.5402 - 127.0509	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
54	30	1870.012	77.6229 - 131.0982	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - x^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		673
40	75	1870.634	73.5402 - 126.9981	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
31	500	1871.870	71.8737 - 125.2962	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		673
31	300	1871.952	72.2705 - 125.6905	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
71	200	1872.532	85.5173 - 138.9210	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - x^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		673
31	300	1872.575	71.8737 - 125.2762	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{11}{2} - \frac{13}{2}$		673
52	1	1873.014	77.4116 - 130.8019	$3d^6(^3H)4s - 3d^6(^3F)4p$	$b^2H - y^2G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		673
40	100	1874.355	73.5402 - 126.8921	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
31	300	1874.822	72.0833 - 125.4216	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		673
40	200	1875.094	73.5402 - 126.8709	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	0	1875.609						673
39	50	1877.464	73.2860 - 126.5494	$3d^6(^3F)4s - 3d^6(^3P)4p$	$b^4F - y^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		673
40	50	1877.544	73.7266 - 126.9876	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		673
	10	1879.170	73.2860 - 126.5013	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		673
31	300	1879.244	72.0833 - 125.2962	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		673
67	100	1879.385	82.9207 - 136.1291	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^2G - y^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		673
	50	1879.753	79.4253 - 132.6238	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - y^4H^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
	50	1880.321						673
52	30	1880.449	77.6229 - 130.8019	$3d^6(^3H)4s - 3d^6(^3F)4p$	$b^2H - y^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		673
40	50	1880.912	73.7266 - 126.8921	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		673
	150	1881.080						673
31	150	1881.427	72.2705 - 125.4216	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673
30	250	1881.691	72.0833 - 125.2270	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	P	673
30	350	1881.722	71.6231 - 124.7659	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{13}{2} - \frac{11}{2}$	P	673
30	300	1881.867	71.8737 - 125.0124	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		673
40	150	1882.323	73.8618 - 126.9876	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		673
30	200	1883.286	72.2705 - 125.3691	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		673
	3	1884.532	79.4253 - 132.4890	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - x^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
	15	1885.476	76.5189 - 129.5560	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - y^4G^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		673
40	50	1886.469	73.8618 - 126.8709	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		673
	200	1886.742						673
30	10	1888.345	72.2705 - 125.2270	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	10	1888.451	73.2860 - 126.2393	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4I^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		673
	10	1889.090	77.4723 - 130.4078	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - z^2F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		673
30	20	1889.321	72.0833 - 125.0124	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		673
30	2	1890.642	71.8737 - 124.7659	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		673
75	150	1892.011	86.2838 - 139.1375	$3d^6(^1G)4s - 3d^6(^1I)4p$	$c^2G - x^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		673
39	20	1893.095	73.7266 - 126.5494	$3d^6(^3F)4s - 3d^6(^3P)4p$	$b^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	5	1893.911	77.3831 - 130.1838	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		673
	500	1895.368	85.4741 - 138.2343	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - z^2K^{\circ}$	$\frac{13}{2} - \frac{15}{2}$		673
	30	1895.495						673
30	1	1896.031	72.2705 - 125.0124	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	1897.560	73.5402 - 126.2393	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4I^o$	$\frac{7}{2} - \frac{9}{2}$		673
	5	1899.183	78.9278 - 131.5816	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - x^4F^o$	$\frac{7}{2} - \frac{7}{2}$		673
75	50	1899.795	86.2838 - 138.9210	$3d^6(^1G)4s - 3d^6(^1I)4p$	$c^2G - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$		673
62	50	1900.763	78.9278 - 131.5383	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^2F - z^2H^o$	$\frac{7}{2} - \frac{7}{2}$		673
75	300	1901.357	86.3271 - 138.9210	$3d^6(^1G)4s - 3d^6(^1I)4p$	$c^2G - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$		673
	5	1903.199						673
	300	1905.354	82.9207 - 135.4040	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^2G - y^2H^o$	$\frac{7}{2} - \frac{7}{2}$		673
	20	1905.674	78.4343 - 130.9090	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - z^2P^o$	$\frac{1}{2} - \frac{1}{2}$		673
	5	1905.810	77.1211 - 129.5923	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - y^4G^o$	$\frac{5}{2} - \frac{5}{2}$		673
	30	1906.265	79.4253 - 131.8839	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		673
	30	1907.458						673
	150	1909.666	78.4343 - 130.7995	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - z^2P^o$	$\frac{1}{2} - \frac{1}{2}$		673
	1	1910.151	78.9278 - 131.2799	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^2G^o$	$\frac{7}{2} - \frac{7}{2}$		673
66	300	1910.840	82.3633 - 134.6961	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^2G - y^2H^o$	$\frac{7}{2} - \frac{7}{2}$		673
25	20	1911.174	55.7292 - 108.0529	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
	10	1912.465						673
	30	1912.952	77.4723 - 129.7473	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - y^4G^o$	$\frac{5}{2} - \frac{5}{2}$		673
	50	1916.112	70.9341 - 123.1231	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		673
	20	1917.321	79.4253 - 131.5816	$3d^6(^3F)4s - 3d^6(^3G)4p$	$b^2F - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
20	500	1919.120	46.4383 - 98.5456	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^o$	$\frac{5}{2} - \frac{5}{2}$		673
	5	1919.980	77.6229 - 129.7069	$3d^6(^3H)4s - 3d^6(^3F)4p$	$b^2H - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$		673
25	1	1922.000	56.3738 - 108.4034	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
	2	1923.801						673
	50	1924.529						673
	10	1924.722						673
38	20	1925.260	73.2860 - 125.2270	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1925.513						673
	15	1925.563	77.6229 - 129.5560	$3d^6(^3H)4s - 3d^6(^3F)4p$	$b^2H - y^4G^o$	$\frac{3}{2} - \frac{11}{2}$		673
	1	1925.910						673
	1	1926.365						673
	2	1926.659						673
	5	1927.198	85.4741 - 137.3630	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - z^2K^o$	$\frac{13}{2} - \frac{13}{2}$		673
61	200	1927.740	78.9278 - 130.8019	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^2G^o$	$\frac{7}{2} - \frac{7}{2}$		673
61	100	1928.490	79.4253 - 131.2799	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^2G^o$	$\frac{7}{2} - \frac{7}{2}$		673
20	500	1928.570	46.4383 - 98.2903	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^o$	$\frac{5}{2} - \frac{5}{2}$		673
	200	1928.802	85.5173 - 137.3630	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - z^2K^o$	$\frac{13}{2} - \frac{13}{2}$		673
	300	1929.756	47.0031 - 98.8232	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^o$	$\frac{7}{2} - \frac{5}{2}$		673
25	50	1930.479	55.7292 - 107.5301	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
	5	1932.442						673
	1	1932.766	76.5189 - 128.2589	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2I^o$	$\frac{11}{2} - \frac{11}{2}$		673
38	50	1933.250	73.2860 - 125.0124	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
	1	1933.742						673
	50	1934.274						673
38	50	1934.734	73.5402 - 125.2270	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^o$	$\frac{7}{2} - \frac{7}{2}$		673
25	100	1935.023	56.3738 - 108.0529	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
38	20	1936.392	73.7266 - 125.3691	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
	5	1936.784	76.7911 - 128.4231	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		673
20	300	1936.933	47.4154 - 99.0435	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^o$	$\frac{5}{2} - \frac{5}{2}$		673
	100	1937.661	56.7948 - 108.4034	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		673
20	500	1940.147	47.0031 - 98.5456	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^o$	$\frac{7}{2} - \frac{5}{2}$		673
38	50	1941.460	73.8618 - 125.3691	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
38	100	1941.730	73.7266 - 125.2270	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^o$	$\frac{9}{2} - \frac{7}{2}$		673
20	200	1942.369	47.6986 - 99.1822	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^o$	$\frac{7}{2} - \frac{5}{2}$		673
38	100	1942.497	73.2860 - 124.7659	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^o$	$\frac{9}{2} - \frac{11}{2}$		673

CO III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
38	100	1942.796	73.5402 – 125.0124	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		673
20	200	1945.234	47.4154 – 98.8232	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		673
25	300	1946.792	57.0368 – 108.4034	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		673
20	5	1947.626	47.6986 – 99.0435	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		673
20	100	1948.655	47.8648 – 99.1822	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
	30	1949.533	76.7911 – 128.0852	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - y^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		673
20	200	1949.805	47.0031 – 98.2903	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^\circ$	$\frac{7}{2} - \frac{9}{2}$		673
	2	1950.668						673
25	400	1950.911	56.7948 – 108.0529	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		673
60	50	1950.961	78.9278 – 130.1838	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - z^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
24	200	1952.158	55.7292 – 106.9543	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		673
20	500	1953.942	47.8648 – 99.0435	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
25	300	1954.791	56.3738 – 107.5301	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		673
46	100	1954.876	76.5189 – 127.6729	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		673
46	30	1955.505	77.1211 – 128.2589	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
20	200	1955.793	47.4154 – 98.5456	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^\circ$	$\frac{5}{2} - \frac{7}{2}$		673
20	200	1956.011	47.6986 – 98.8232	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		673
	0	1956.770						673
	30	1958.590						673
25	500	1959.414	55.7292 – 106.7649	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		673
60	50	1961.450	79.4253 – 130.4078	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - z^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
	3	1963.243						673
24	100	1963.743	56.3738 – 107.2966	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		673
	3	1964.765	77.1211 – 128.0177	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - x^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	2	1966.029						673
51	3	1966.680	77.4116 – 128.2589	$3d^6(^3H)4s - 3d^6(^3H)4p$	$b^2H - z^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		673
	20	1969.312	78.9278 – 129.7069	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
24	300	1970.054	55.7292 – 106.4889	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		673
24	100	1971.889	56.7948 – 107.5073	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		673
	5	1973.667	76.7911 – 127.4581	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	10	1973.767	78.9278 – 129.5923	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		673
	2	1974.003						673
51	200	1974.883	77.6229 – 128.2589	$3d^6(^3H)4s - 3d^6(^3H)4p$	$b^2H - z^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		673
24	200	1977.031	56.3738 – 106.9543	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
45	50	1978.948	76.5189 – 127.0509	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
24	200	1980.113	56.7948 – 107.2966	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
	1	1981.000	76.5189 – 126.9981	$3d^6(^3G)4s - 3d^6(^3F)4p$	$a^4G - y^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		673
24	100	1981.345	57.0368 – 107.5073	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		673
	1	1982.049						673
	1	1982.361						673
	30	1984.324	77.6229 – 128.0177	$3d^6(^3H)4s - 3d^6(^3F)4p$	$b^2H - x^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
	3	1986.704						673
	30	1987.197	79.4253 – 129.7473	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		673
	10	1987.952						673
	5	1988.806	79.4253 – 129.7069	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^2F - y^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		673
51	400	1989.598	77.4116 – 127.6729	$3d^6(^3H)4s - 3d^6(^3H)4p$	$b^2H - z^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		673
24	100	1989.645	57.0368 – 107.2966	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		673
	10	1990.841						673
	1	1991.929						673
45	10	1992.158	77.1211 – 127.3177	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		673
24	100	1993.625	56.7948 – 106.9543	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		673
24	50	1995.397	56.3738 – 106.4889	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		673
	3	1999.913						673

COBALT IV (Co³⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁶3d⁶(⁵D₄) (24 electrons)
Ionization Potential [413 500] cm⁻¹; [51.27] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	81	606.788	0.0 - 164.8032	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	4 - 3		1088
	74	607.594	0.6391 - 165.2262	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	3 - 2		1088
	55	608.243	1.0777 - 165.4885	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	2 - 1		1088
	66	609.159	0.6391 - 164.8032	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	3 - 3		1088
	70	609.215	1.0777 - 165.2262	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	2 - 2		1088
	64	609.278	1.3573 - 165.4885	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	1 - 1		1088
	43	609.782	1.4936 - 165.4885	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	0 - 1		1088
	37	610.254	1.3573 - 165.2262	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	1 - 2		1088
	24	610.790	1.0777 - 164.8032	3d ⁶ - 3d ⁵ (a ⁶ S)4p	ga ⁵ D - ⁵ P ^o	2 - 3		1088
		732.00	0.0 - 136.6125	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	4 - 3	F,P	375,1087
		733.34	0.0 - 136.3629	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	4 - 4	F,P	375,1087
		735.44	0.6391 - 136.6125	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	3 - 3	F,P	375,1087
		735.94	0.6391 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	3 - 1	F,P	375,1087
		736.79	0.6391 - 136.3629	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	3 - 4	F,P	375,1087
		737.82	1.0777 - 136.6125	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	2 - 3	F,P	375,1087
		738.33	1.0777 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	2 - 1	F,P	375,1087
		738.98	1.0777 - 136.3999	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	2 - 0	F,P	375,1087
		739.18	1.0777 - 136.3629	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	2 - 4	F,P	375,1087
		739.35	1.3573 - 136.6112	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	1 - 2	F,P	375,1087
		739.85	1.3573 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	1 - 1	F,P	375,1087
		740.10	1.4936 - 136.6112	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	0 - 2	F,P	375,1087
		740.51	1.3573 - 136.3999	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	1 - 0	F,P	375,1087
		740.60	1.4936 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	ga ⁵ D - ⁵ D	0 - 1	F,P	375,1087
		752.85	0.0 - 132.8287	3d ⁶ - 3d ⁵ (a ⁴ P)4s	ga ⁵ D - ⁵ P	4 - 2	F,P	375,1087
		753.41	0.0 - 132.7291	3d ⁶ - 3d ⁵ (a ⁴ P)4s	ga ⁵ D - ⁵ P	4 - 3	F,P	375,1087
		755.78	0.6391 - 132.9526	3d ⁶ - 3d ⁵ (a ⁴ P)4s	ga ⁵ D - ⁵ P	3 - 1	F,P	375,1087
		756.49	0.6391 - 132.8287	3d ⁶ - 3d ⁵ (a ⁴ P)4s	ga ⁵ D - ⁵ P	3 - 2	F,P	375,1087
		757.06	0.6391 - 132.7291	3d ⁶ - 3d ⁵ (a ⁴ P)4s	ga ⁵ D - ⁵ P	3 - 3	F,P	375,1087
		759.01	1.0777 - 132.8287	3d ⁶ - 3d ⁵ (a ⁴ P)4s	ga ⁵ D - ⁵ P	2 - 2	F,P	375,1087
		759.91	1.3573 - 132.9526	3d ⁶ - 3d ⁵ (a ⁴ P)4s	ga ⁵ D - ⁵ P	1 - 1	F,P	375,1087
		773.85	0.0 - 129.2237	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	4 - 4	F,P	375,1087
		774.02	0.0 - 129.1952	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	4 - 5	F,P	375,1087
		774.39	0.0 - 129.1340	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	4 - 6	F,P	375,1087
		777.67	0.6391 - 129.2287	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	3 - 3	F,P	375,1087
		777.70	0.6391 - 129.2237	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	3 - 4	F,P	375,1087
		777.87	0.6391 - 129.1952	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	3 - 5	F,P	375,1087
		780.33	1.0777 - 129.2287	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	2 - 3	F,P	375,1087
		780.36	1.0777 - 129.2237	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	2 - 4	F,P	375,1087
		782.04	1.3573 - 129.2287	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	1 - 3	F,P	375,1087
		782.91	1.4936 - 129.2222	3d ⁶ - 3d ⁵ (a ⁶ S)4s	ga ⁵ D - ⁵ G	0 - 2	F,P	375,1087
		879.28	22.8833 - 136.6125	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ P - ⁵ D	2 - 3	F,P	375,1087
		881.22	22.8833 - 136.3629	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ P - ⁵ D	2 - 4	F,P	375,1087
		893.79	24.7292 - 136.6125	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ P - ⁵ D	1 - 3	F,P	375,1087
		894.53	24.7292 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ P - ⁵ D	1 - 1	F,P	375,1087
		899.16	25.3960 - 136.6112	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ F - ⁵ D	4 - 2	F,P	375,1087
		899.58	25.4487 - 136.6112	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ P - ⁵ D	0 - 2	F,P	375,1087
		900.33	25.4487 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ P - ⁵ D	0 - 1	F,P	375,1087
		901.17	25.3960 - 136.3629	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ F - ⁵ D	4 - 4	F,P	375,1087
		901.91	25.7359 - 136.6112	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ F - ⁵ D	3 - 2	F,P	375,1087
		902.66	25.7359 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ F - ⁵ D	3 - 1	F,P	375,1087
		903.81	25.9690 - 136.6112	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ F - ⁵ D	2 - 2	F,P	375,1087
		904.57	25.9690 - 136.5191	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ F - ⁵ D	2 - 1	F,P	375,1087
		905.54	25.9690 - 136.3999	3d ⁶ - 3d ⁵ (a ⁴ D)4s	a ³ F - ⁵ D	2 - 0	F,P	375,1087
		909.54	22.8833 - 132.8287	3d ⁶ - 3d ⁵ (a ⁴ P)4s	a ³ P - ⁵ P	2 - 2	F,P	375,1087

CO IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		910.37	22.8833 - 132.7291	$3d^6 - 3d^5(a^4P)4s$	$a^3P - ^5P$	2 - 3	F,P	375,1087
		925.07	24.7292 - 132.8287	$3d^6 - 3d^5(a^4P)4s$	$a^3P - ^5P$	1 - 2	F,P	375,1087
		925.93	24.7292 - 132.7291	$3d^6 - 3d^5(a^4P)4s$	$a^3P - ^5P$	1 - 3	F,P	375,1087
		930.20	25.4487 - 132.9526	$3d^6 - 3d^5(a^4P)4s$	$a^3P - ^5P$	0 - 1	F,P	375,1087
		931.27	25.4487 - 132.8287	$3d^6 - 3d^5(a^4P)4s$	$a^3P - ^5P$	0 - 2	F,P	375,1087
		947.47	23.6795 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	6 - 4	F,P	375,1087
		947.73	23.6795 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	6 - 5	F,P	375,1087
		948.28	23.6795 - 129.1340	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	6 - 6	F,P	375,1087
		950.60	24.0318 - 129.2287	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	5 - 3	F,P	375,1087
		950.64	24.0318 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	5 - 4	F,P	375,1087
		950.90	24.0318 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	5 - 5	F,P	375,1087
		952.77	24.2720 - 129.2287	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	4 - 3	F,P	375,1087
		952.82	24.2720 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3H - ^5G$	4 - 4	F,P	375,1087
		963.13	25.3960 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	4 - 4	F,P	375,1087
		963.40	25.3960 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	4 - 5	F,P	375,1087
		963.97	25.3960 - 129.1340	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	4 - 6	F,P	375,1087
		966.25	25.7359 - 129.2287	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	3 - 3	F,P	375,1087
		966.30	25.7359 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	3 - 4	F,P	375,1087
		966.56	25.7359 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	3 - 5	F,P	375,1087
		968.43	25.9690 - 129.2287	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	2 - 3	F,P	375,1087
		968.48	25.9690 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3F - ^5G$	2 - 4	F,P	375,1087
		973.01	0.0 - 102.7739	$3d^6 - 3d^5(a^6S)4s$	$ga^5D - ^5S$	4 - 2	F,P	375,1087
		979.10	0.6391 - 102.7739	$3d^6 - 3d^5(a^6S)4s$	$ga^5D - ^5S$	3 - 2	F,P	375,1087
		983.32	1.0777 - 102.7739	$3d^6 - 3d^5(a^6S)4s$	$ga^5D - ^5S$	2 - 2	F,P	375,1087
		997.36	36.3480 - 136.6125	$3d^6 - 3d^5(a^4D)4s$	$a^3D - ^5D$	2 - 3	F,P	375,1087
		997.70	36.3820 - 136.6125	$3d^6 - 3d^5(a^4D)4s$	$a^3D - ^5D$	1 - 3	F,P	375,1087
		998.27	29.0218 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	5 - 5	F,P	375,1087
		998.63	36.3820 - 136.5191	$3d^6 - 3d^5(a^4D)4s$	$a^3D - ^5D$	1 - 1	F,P	375,1087
		998.88	29.0218 - 129.1340	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	5 - 6	F,P	375,1087
		999.42	36.5545 - 136.6125	$3d^6 - 3d^5(a^4D)4s$	$a^3D - ^5D$	3 - 3	F,P	375,1087
		999.85	36.3480 - 136.3629	$3d^6 - 3d^5(a^4D)4s$	$a^3D - ^5D$	2 - 4	F,P	375,1087
		1001.9	36.5545 - 136.3629	$3d^6 - 3d^5(a^4D)4s$	$a^3D - ^5D$	3 - 4	F,P	375,1087
		1003.7	29.5922 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	4 - 4	F,P	375,1087
		1004.0	29.5922 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	4 - 5	F,P	375,1087
		1004.6	29.5922 - 129.1340	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	4 - 6	F,P	375,1087
		1006.4	29.8675 - 129.2287	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	3 - 3	F,P	375,1087
		1006.5	29.8675 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	3 - 4	F,P	375,1087
		1006.8	29.8675 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$a^3G - ^5G$	3 - 5	F,P	375,1087
		1035.1	36.3480 - 132.9526	$3d^6 - 3d^5(a^4P)4s$	$a^3D - ^5P$	2 - 1	F,P	375,1087
		1035.5	36.3820 - 132.9526	$3d^6 - 3d^5(a^4P)4s$	$a^3D - ^5P$	1 - 1	F,P	375,1087
		1036.5	36.3480 - 132.8287	$3d^6 - 3d^5(a^4P)4s$	$a^3D - ^5P$	2 - 2	F,P	375,1087
		1037.4	36.5545 - 132.9526	$3d^6 - 3d^5(a^4P)4s$	$a^3D - ^5P$	3 - 1	F,P	375,1087
		1038.7	36.5545 - 132.8287	$3d^6 - 3d^5(a^4P)4s$	$a^3D - ^5P$	3 - 2	F,P	375,1087
		1039.8	36.5545 - 132.7291	$3d^6 - 3d^5(a^4P)4s$	$a^3D - ^5P$	3 - 3	F,P	375,1087
		1104.3	0.0 - 90.5544	$3d^6 - 3d^5(a^6S)4s$	$ga^5D - ^7S$	4 - 3	F,P	375,1087
		1112.2	0.6391 - 90.5544	$3d^6 - 3d^5(a^6S)4s$	$ga^5D - ^7S$	3 - 3	F,P	375,1087
		1277.3	58.3206 - 136.6112	$3d^6 - 3d^5(a^4D)4s$	$b^3P - ^5D$	0 - 2	F,P	375,1087
		1278.8	58.3206 - 136.5191	$3d^6 - 3d^5(a^4D)4s$	$b^3P - ^5D$	0 - 1	F,P	375,1087
		1287.1	58.9198 - 136.6112	$3d^6 - 3d^5(a^4D)4s$	$b^3P - ^5D$	1 - 2	F,P	375,1087
		1288.7	58.9198 - 136.5191	$3d^6 - 3d^5(a^4D)4s$	$b^3P - ^5D$	1 - 1	F,P	375,1087
		1301.0	59.7488 - 136.6125	$3d^6 - 3d^5(a^4D)4s$	$b^3F - ^5D$	2 - 3	F,P	375,1087
		1302.5	59.8382 - 136.6112	$3d^6 - 3d^5(a^4D)4s$	$b^3F - ^5D$	4 - 2	F,P	375,1087
		1302.6	59.7488 - 136.5191	$3d^6 - 3d^5(a^4D)4s$	$b^3F - ^5D$	2 - 1	F,P	375,1087
		1303.6	59.9028 - 136.6125	$3d^6 - 3d^5(a^4D)4s$	$b^3F - ^5D$	3 - 3	F,P	375,1087

CO IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1304.6	59.7488 - 136.3999	$3d^6 - 3d^5(a^4D)4s$	$b^3F - ^5D$	2 - 0	F,P	375,1087
		1305.2	59.9028 - 136.5191	$3d^6 - 3d^5(a^4D)4s$	$b^3F - ^5D$	3 - 1	F,P	375,1087
		1306.8	59.8382 - 136.3629	$3d^6 - 3d^5(a^4D)4s$	$b^3F - ^5D$	4 - 4	F,P	375,1087
		1306.9	60.0984 - 136.6125	$3d^6 - 3d^5(a^4D)4s$	$b^3P - ^5D$	2 - 3	F,P	375,1087
		1307.0	60.0984 - 136.6112	$3d^6 - 3d^5(a^4D)4s$	$b^3P - ^5D$	2 - 2	F,P	375,1087
		1311.2	60.0984 - 136.3629	$3d^6 - 3d^5(a^4D)4s$	$b^3P - ^5D$	2 - 4	F,P	375,1087
		1339.9	58.3206 - 132.9526	$3d^6 - 3d^5(a^4P)4s$	$b^3P - ^5P$	0 - 1	F,P	375,1087
		1342.1	58.3206 - 132.8287	$3d^6 - 3d^5(a^4P)4s$	$b^3P - ^5P$	0 - 2	F,P	375,1087
30		1346.82	90.5544 - 164.8032	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^5P^o$	3 - 3	P	492,1087
		1350.7	58.9198 - 132.9526	$3d^6 - 3d^5(a^4P)4s$	$b^3P - ^5P$	1 - 1	F,P	375,1087
		1353.0	58.9198 - 132.8287	$3d^6 - 3d^5(a^4P)4s$	$b^3P - ^5P$	1 - 2	F,P	375,1087
		1354.8	58.9198 - 132.7291	$3d^6 - 3d^5(a^4P)4s$	$b^3P - ^5P$	1 - 3	F,P	375,1087
		1374.9	60.0984 - 132.8287	$3d^6 - 3d^5(a^4P)4s$	$b^3P - ^5P$	2 - 2	F,P	375,1087
		1376.8	60.0984 - 132.7291	$3d^6 - 3d^5(a^4P)4s$	$b^3P - ^5P$	2 - 3	F,P	375,1087
		1441.2	59.8382 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$b^3F - ^5G$	4 - 4	F,P	375,1087
		1441.8	59.8382 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$b^3F - ^5G$	4 - 5	F,P	375,1087
		1442.5	59.9028 - 129.2287	$3d^6 - 3d^5(a^6S)4s$	$b^3F - ^5G$	3 - 3	F,P	375,1087
		1442.6	59.9028 - 129.2237	$3d^6 - 3d^5(a^6S)4s$	$b^3F - ^5G$	3 - 4	F,P	375,1087
		1443.1	59.8382 - 129.1340	$3d^6 - 3d^5(a^6S)4s$	$b^3F - ^5G$	4 - 6	F,P	375,1087
		1443.2	59.9028 - 129.1952	$3d^6 - 3d^5(a^6S)4s$	$b^3F - ^5G$	3 - 5	F,P	375,1087
300		1463.4	22.8833 - 91.2184	$3d^6 - 3d^6$	$a^3P - b^1D$	2 - 2	F,P	375,1087
		1502.19	90.5544 - 157.1237	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^7P^o$	3 - 4	P	492,1087
		1504.0	24.7292 - 91.2184	$3d^6 - 3d^6$	$a^3P - b^1D$	1 - 2	F,P	375,1087
		1519.2	25.3960 - 91.2184	$3d^6 - 3d^6$	$a^3F - b^1D$	4 - 2	F,P	375,1087
		1520.5	25.4487 - 91.2184	$3d^6 - 3d^6$	$a^3P - b^1D$	0 - 2	F,P	375,1087
250		1521.64	90.5544 - 156.2728	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^7P^o$	3 - 3	P	492,1087
		1527.1	25.7359 - 91.2184	$3d^6 - 3d^6$	$a^3F - b^1D$	3 - 2	F,P	375,1087
		1532.6	25.9690 - 91.2184	$3d^6 - 3d^6$	$a^3F - b^1D$	2 - 2	F,P	375,1087
150		1534.00	90.5544 - 155.7436	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^7P^o$	3 - 2	P	492,1087
		1592.5	91.2184 - 154.0122	$3d^6 - 3d^5(a^2F)4s$	$b^1D - ^3F$	2 - 3	F,P	375,1087
80		1594.52	102.7739 - 165.4885	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^5P^o$	2 - 1	P	492,1087
150		1601.22	102.7739 - 165.2262	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^5P^o$	2 - 2	P	492,1087
		1605.0	91.2184 - 153.5249	$3d^6 - 3d^5(a^2F)4s$	$b^1D - ^3F$	2 - 2	F,P	375,1087
		1611.7	91.2184 - 153.2653	$3d^6 - 3d^5(a^2F)4s$	$b^1D - ^3F$	2 - 4	F,P	375,1087
200		1612.14	102.7739 - 164.8032	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^5P^o$	2 - 3	P	492,1087
		1663.9	0.0 - 60.0984	$3d^6 - 3d^6$	$ga^5D - b^3P$	4 - 2	F,P	375,1087
		1671.2	0.0 - 59.8382	$3d^6 - 3d^6$	$ga^5D - b^3F$	4 - 4	F,P	375,1087
		1671.6	91.2184 - 151.0406	$3d^6 - 3d^5(a^2D)4s$	$b^1D - ^3D$	2 - 2	F,P	375,1087
		1673.6	91.2184 - 150.9709	$3d^6 - 3d^5(a^2D)4s$	$b^1D - ^3D$	2 - 3	F,P	375,1087
		1681.8	0.6391 - 60.0984	$3d^6 - 3d^6$	$ga^5D - b^3P$	3 - 2	F,P	375,1087
		1687.4	0.6391 - 59.9028	$3d^6 - 3d^6$	$ga^5D - b^3F$	3 - 3	F,P	375,1087
		1689.2	0.6391 - 59.8382	$3d^6 - 3d^6$	$ga^5D - b^3F$	3 - 4	F,P	375,1087
		1694.3	1.0777 - 60.0984	$3d^6 - 3d^6$	$ga^5D - b^3P$	2 - 2	F,P	375,1087
		1700.0	1.0777 - 59.9028	$3d^6 - 3d^6$	$ga^5D - b^3F$	2 - 3	F,P	375,1087
		1701.8	1.0777 - 59.8382	$3d^6 - 3d^6$	$ga^5D - b^3F$	2 - 4	F,P	375,1087
		1704.4	1.0777 - 59.7488	$3d^6 - 3d^6$	$ga^5D - b^3F$	2 - 2	F,P	375,1087
		1708.1	1.3573 - 59.9028	$3d^6 - 3d^6$	$ga^5D - b^3F$	1 - 3	F,P	375,1087
		1712.6	1.3573 - 59.7488	$3d^6 - 3d^6$	$ga^5D - b^3F$	1 - 2	F,P	375,1087
		1715.8	0.6391 - 58.9198	$3d^6 - 3d^6$	$ga^5D - b^3P$	3 - 1	F,P	375,1087
		1716.6	1.4936 - 59.7488	$3d^6 - 3d^6$	$ga^5D - b^3F$	0 - 2	F,P	375,1087
		1728.8	1.0777 - 58.9198	$3d^6 - 3d^6$	$ga^5D - b^3P$	2 - 1	F,P	375,1087
		1737.2	1.3573 - 58.9198	$3d^6 - 3d^6$	$ga^5D - b^3P$	1 - 1	F,P	375,1087
		1746.9	1.0777 - 58.3206	$3d^6 - 3d^6$	$ga^5D - b^3P$	2 - 0	F,P	375,1087
		1755.5	1.3573 - 58.3206	$3d^6 - 3d^6$	$ga^5D - b^3P$	1 - 0	F,P	375,1087

CO IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1822.5	36.3480 - 91.2184	$3d^6 - 3d^6$	$a^3D - b^1D$	2 - 2	F,P	375,1087
		1829.4	36.5545 - 91.2184	$3d^6 - 3d^6$	$a^3D - b^1D$	3 - 2	F,P	375,1087
		1833.7	36.6833 - 91.2184	$3d^6 - 3d^6$	$a^1G - b^1D$	4 - 2	F,P	375,1087
		1867.20	220.5485 - 274.1045	$3d^5(c^2D)4s - 3d^5(a^2P)4p$	$^1D - ^1D^o$	2 - 2	P	375,1087
		1867.54	160.3514 - 213.8979	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^o$	2 - 3	P	375,1087
		1868.19	153.5249 - 207.0526	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3F^o$	2 - 2	P	375,1087
100		1869.20	102.7739 - 156.2728	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^7P^o$	2 - 3	P	492,1087
		1869.38	160.4043 - 213.8979	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^o$	4 - 3	P	375,1087
		1870.25	153.5249 - 206.9936	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3F^o$	2 - 3	P	375,1087
		1873.26	153.2653 - 206.6483	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3F^o$	4 - 4	P	375,1087
		1886.80	163.7179 - 216.7178	$3d^5(a^6G)4s - 3d^5(a^2F)4p$	$^1G - ^1G^o$	4 - 4	P	375,1087
50		1887.87	102.7739 - 155.7436	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^7P^o$	2 - 2	P	492,1087
		1889.21	151.0406 - 203.9728	$3d^5(a^2D)4s - 3d^5(a^4P)4p$	$^3D - ^3D^o$	2 - 1	P	375,1087
		1891.24	158.8467 - 211.7220	$3d^5(a^2H)4s - 3d^5(a^2I)4p$	$^3H - ^3I^o$	6 - 5	P	375,1087
		1891.70	150.9709 - 203.8334	$3d^5(a^2D)4s - 3d^5(a^4P)4p$	$^3D - ^3D^o$	3 - 2	P	375,1087
		1894.20	151.0406 - 203.8334	$3d^5(a^2D)4s - 3d^5(a^4P)4p$	$^3D - ^3D^o$	2 - 2	P	375,1087
		1898.85	153.2653 - 205.9287	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3D^o$	4 - 3	P	375,1087
		1899.61	153.5249 - 206.1672	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3D^o$	2 - 1	P	375,1087
		1899.84	154.0122 - 206.6483	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3F^o$	3 - 4	P	375,1087
		1901.51	150.9709 - 203.5606	$3d^5(a^2D)4s - 3d^5(a^4P)4p$	$^3D - ^3D^o$	3 - 3	P	375,1087
		1904.04	151.0406 - 203.5606	$3d^5(a^2D)4s - 3d^5(a^4P)4p$	$^3D - ^3D^o$	2 - 3	P	375,1087
		1923.54	154.0122 - 205.9997	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3D^o$	3 - 2	P	375,1087
		1941.74	216.6511 - 268.1514	$3d^5(a^2D)4s - 3d^5(a^2P)4p$	$^3D - ^3P^o$	3 - 2	P	375,1087
		1950.01	152.3514 - 203.6333	$3d^5(a^4F)4s - 3d^5(a^4D)4p$	$^3F - ^3D^o$	2 - 1	P	375,1087
		1950.39	152.1262 - 203.3980	$3d^5(a^4F)4s - 3d^5(a^4D)4p$	$^3F - ^3D^o$	5 - 4	P	375,1087
		1951.09	163.7529 - 215.0064	$3d^5(b^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^o$	3 - 4	P	375,1087
		1955.58	163.8706 - 215.0064	$3d^5(b^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^o$	4 - 4	P	375,1087
		1956.71	152.2642 - 203.3703	$3d^5(a^2F)4s - 3d^5(a^4D)4p$	$^3F - ^3D^o$	3 - 2	P	375,1087
		1961.76	178.4394 - 229.4140	$3d^5(b^2D)4s - 3d^5(b^2F)4p$	$^3D - ^3F^o$	3 - 4	P	375,1087
		1964.72	152.1611 - 203.0590	$3d^5(a^4F)4s - 3d^5(a^4D)4p$	$^3F - ^3D^o$	4 - 3	P	375,1087
		1966.72	162.8890 - 213.7351	$3d^5(a^4H)4s - 3d^5(a^2I)4p$	$^1H - ^1H^o$	5 - 5	P	375,1087
		1967.64	216.6865 - 267.5087	$3d^5(c^2D)4s - 3d^5(a^2P)4p$	$^3D - ^3P^o$	2 - 1	P	375,1087
		1968.78	148.0981 - 198.8909	$3d^5(a^2I)4s - 3d^5(a^2G)4p$	$^3I - ^3H^o$	6 - 5	P	375,1087
		1981.70	148.1060 - 198.5678	$3d^5(a^2I)4s - 3d^5(a^2G)4p$	$^3I - ^3H^o$	7 - 6	P	375,1087
		1982.24	153.5249 - 203.9728	$3d^5(a^2F)4s - 3d^5(a^4P)4p$	$^3F - ^3D^o$	2 - 1	P	375,1087
		1983.63	178.3965 - 228.8090	$3d^5(b^2D)4s - 3d^5(b^2F)4p$	$^3D - ^3F^o$	2 - 3	P	375,1087
		1987.82	163.7529 - 214.0593	$3d^5(b^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^o$	3 - 2	P	375,1087
		1994.22	163.7529 - 213.8979	$3d^5(b^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^o$	3 - 3	P	375,1087
		1998.91	163.8706 - 213.8979	$3d^5(b^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^o$	4 - 3	P	375,1087

COBALT V (Co⁴⁺), Z = 27
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 (^6S_{5/2})$ (23 electrons)
Ionization Potential [641 200] cm^{-1} ; [79.5] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
180	297.799		59.4549 - 395.2502	$3d^5 - 3d^4(b^1D)4p$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		985
30	301.656		59.4549 - 390.9592	$3d^5 - 3d^4(b^1D)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
290	308.449		66.7604 - 390.9592	$3d^5 - 3d^4(b^1D)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		985
70	308.534		70.5025 - 394.6143	$3d^5 - 3d^4(b^1D)4p$	$b^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
150	309.410		66.2287 - 389.4239	$3d^5 - 3d^4(b^1D)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		985
400	312.769		40.8909 - 360.6146	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	470	312.900	41.0238 - 360.6146	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	300	313.039	40.8909 - 360.3392	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	440	313.465	40.7532 - 359.7672	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	580	314.714	40.7532 - 358.4998	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4S^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	350	314.852	40.8909 - 358.4998	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4S^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	190	314.983	41.0238 - 358.4998	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4S^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	160	315.036	37.2175 - 354.6396	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4G^o$	11-12-1-2-3-4-5-6-7-8-9-10		985
	90	317.107	44.9841 - 360.3392	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	80	317.677	44.9841 - 359.7672	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	90	318.514	37.2888 - 351.2488	$3d^5 - 3d^4(b^3P)4p$	$a^4G - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	130	318.965	44.9841 - 358.4998	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4S^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	90	319.257	37.3040 - 350.5320	$3d^5 - 3d^4(b^3P)4p$	$a^4G - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	630	319.686	37.2175 - 350.0240	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	11-12-1-2-3-4-5-6-7-8-9-10		985
	300	319.764	37.2888 - 350.0240	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	600	320.145	37.2888 - 349.6469	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	450	320.186	37.2895 - 349.6076	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	470	320.284	37.3040 - 349.5258	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	150	320.928	54.3392 - 365.9371	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2H^o$	11-12-1-2-3-4-5-6-7-8-9-10		985
	730	320.968	54.3766 - 365.9371	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2H^o$	11-12-1-2-3-4-5-6-7-8-9-10		985
	20	321.213	54.3392 - 365.6601	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2G^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	60	321.969	41.0238 - 351.6091	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	70	322.222	37.2895 - 347.6323	$3d^5 - 3d^4(a^1F)4p$	$a^4G - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	170	322.813	40.7532 - 350.5320	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	250	322.984	85.6362 - 395.2502	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	160	323.124	40.8909 - 350.3706	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	460	323.231	54.3392 - 363.7167	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2H^o$	11-12-1-2-3-4-5-6-7-8-9-10		985
	170	323.583	85.5735 - 394.6143	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	50	323.649	85.6362 - 394.6143	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	30	324.418	76.8645 - 385.1083	$3d^5 - 3d^4(b^1D)4p$	$a^2S - ^2P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	90	325.541	76.8645 - 384.0459	$3d^5 - 3d^4(b^1D)4p$	$a^2S - ^2P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	510	325.650	44.7091 - 351.7877	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	400	326.132	44.9841 - 351.6091	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	540	326.221	44.7091 - 351.2488	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	190	326.514	44.9841 - 351.2488	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	380	326.935	44.9075 - 350.7782	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	520	327.281	44.9841 - 350.5320	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	270	327.371	44.9075 - 350.3706	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	440	327.455	44.9841 - 350.3706	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	210	327.936	44.7091 - 349.6469	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	70	328.238	44.9841 - 349.6469	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	200	328.362	44.9867 - 349.5258	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	50	329.274	60.5322 - 364.2292	$3d^5 - 3d^4(b^1G)4p$	$a^2F - ^2G^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	70	329.996	57.0826 - 360.1179	$3d^5 - 3d^4(b^3P)4p$	$a^2D - ^2P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	250	332.164	66.2287 - 367.2764	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	520	332.604	65.2838 - 365.9371	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2H^o$	11-12-1-2-3-4-5-6-7-8-9-10		985
	680	332.910	65.2838 - 365.6601	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2G^o$	11-12-1-2-3-4-5-6-7-8-9-10		985
	200	332.948	59.4549 - 359.7967	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^2G^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	170	333.232	66.7604 - 366.8488	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2F^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	20	333.857	85.5735 - 385.1083	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2P^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	290	333.907	64.7423 - 364.2292	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2G^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	40	334.083	61.2845 - 360.6146	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	230	334.478	64.7423 - 363.7167	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2H^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	120	334.520	60.8303 - 359.7672	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4D^o$	1-2-3-4-5-6-7-8-9-10-11-12		985
	110	334.562	66.7604 - 365.6601	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2G^o$	1-2-3-4-5-6-7-8-9-10-11-12		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	230	335.085	65.2838 - 363.7167	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
	260	335.115	85.6362 - 384.0459	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
	220	335.569	66.2287 - 364.2292	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	240	336.169	66.7604 - 364.2292	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	20	336.956	70.5025 - 367.2764	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
	110	337.618	70.6528 - 366.8488	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	390	338.125	64.7423 - 360.4907	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	370	338.697	95.7087 - 390.9592	$3d^5 - 3d^4(b^1D)4p$	$b^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	160	338.922	64.7423 - 359.7967	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	180	338.973	70.6528 - 365.6601	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	390	339.543	65.2838 - 359.7967	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
	220	339.834	66.2287 - 360.4907	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	410	340.452	70.5025 - 364.2292	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	400	340.487	95.7265 - 389.4239	$3d^5 - 3d^4(b^1D)4p$	$b^2G - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	180	340.935	60.8303 - 354.1417	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	80	341.012	60.9736 - 354.2181	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	240	341.101	60.9736 - 354.1417	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	140	341.220	70.6528 - 363.7167	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	140	341.255	66.7604 - 359.7967	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	110	341.378	61.2845 - 354.2181	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	90	341.492	61.2845 - 354.1164	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
	260	341.573	60.9736 - 353.7355	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2D^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	130	341.626	60.5322 - 353.2487	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	90	341.975	60.8303 - 353.2487	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	70	342.143	60.9736 - 353.2487	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	130	343.062	61.2132 - 352.7002	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	100	343.151	61.2845 - 352.7002	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
	280	343.552	59.4549 - 350.5320	$3d^5 - 3d^4(b^1P)4p$	$a^2F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
	470	343.862	60.9736 - 351.7877	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
	760	344.332	60.8303 - 351.2488	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
	420	344.443	61.2845 - 351.6091	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
	150	344.599	59.4549 - 349.6469	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	210	344.841	70.5025 - 360.4907	$3d^5 - 3d^4(b^1F)4p$	$b^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	320	345.026	70.6528 - 360.4907	$3d^5 - 3d^4(b^1F)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	260	345.052	57.8232 - 347.6323	$3d^5 - 3d^4(a^1F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	560	345.353	60.9736 - 350.5320	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
	270	345.442	64.7423 - 354.2181	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	440	345.610	37.2175 - 326.5600	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
	750	345.788	60.8303 - 350.0240	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	260	345.883	60.5322 - 349.6469	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	330	345.917	61.2845 - 350.3706	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
	410	345.962	60.9736 - 350.0240	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	640	346.029	60.5322 - 349.5258	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
	470	346.185	57.0826 - 345.9421	$3d^5 - 3d^4(a^1F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	210	346.232	60.8303 - 349.6469	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	680	346.412	60.9736 - 349.6469	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	430	346.452	37.3040 - 325.9414	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
	610	346.748	61.2132 - 349.6076	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	380	346.787	61.2845 - 349.6469	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	420	346.801	37.2895 - 325.6398	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	330	346.847	61.2132 - 349.5258	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	520	346.933	61.2845 - 349.5258	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	150	347.234	66.2287 - 354.2181	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	150	347.878	66.7604 - 354.2181	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
200	348.312		60.5322 - 347.6323	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2D^\circ$	2-2		985
340	349.058		59.4549 - 345.9421	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2D^\circ$	2-2		985
310	349.078		66.2287 - 352.7002	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^4G^\circ$	2-2		985
130	349.139		61.2132 - 347.6323	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2D^\circ$	2-2		985
90	350.082		0.0 - 285.6430	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6D^\circ$	2-2		985
100	350.374		60.5322 - 345.9421	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2D^\circ$	2-2		985
270	350.464		0.0 - 285.3350	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6D^\circ$	2-2		985
180	351.068		40.8909 - 325.7351	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	2-2		985
80	351.513		66.7604 - 351.2488	$3d^5 - 3d^4(b^3P)4p$	$a^2G - ^4D^\circ$	2-2		985
190	351.653		40.7532 - 325.1255	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	2-2		985
180	351.737		37.2175 - 321.5214	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^\circ$	2-2		985
440	351.791		0.0 - 284.2599	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^4P^\circ$	2-2		985
320	351.823		37.2888 - 321.5214	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^\circ$	2-2		985
270	351.967		60.8303 - 344.9494	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2G^\circ$	2-2		985
290	351.986		41.0238 - 325.1255	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	2-2		985
210	352.020		70.5025 - 354.5790	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2F^\circ$	2-2		985
180	352.206		70.6528 - 354.5790	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2F^\circ$	2-2		985
310	352.594		70.5025 - 354.1164	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2D^\circ$	2-2		985
190	352.654		70.6528 - 354.2181	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2F^\circ$	2-2		985
460	352.794		40.7532 - 324.2058	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^\circ$	2-2		985
340	352.967		40.8909 - 324.2058	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^\circ$	2-2		985
240	353.031		66.7604 - 350.0240	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^4F^\circ$	2-2		985
410	353.256		70.6528 - 353.7355	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2D^\circ$	2-2		985
450	353.362		0.0 - 282.9956	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^4P^\circ$	2-2		985
200	353.849		37.3040 - 319.9157	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2G^\circ$	2-2		985
120	353.899		60.9736 - 343.5414	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2G^\circ$	2-2		985
360	354.089		40.7532 - 323.1694	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	2-2		985
160	354.206		37.2895 - 319.6119	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2G^\circ$	2-2		985
250	354.264		40.8909 - 323.1694	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	2-2		985
220	354.285		61.2845 - 343.5414	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2G^\circ$	2-2		985
110	354.374		40.8909 - 323.0762	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^\circ$	2-2		985
280	354.486		59.4549 - 341.5500	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2F^\circ$	2-2		985
170	354.550		41.0238 - 323.0762	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^\circ$	2-2		985
270	354.799		44.7091 - 326.5600	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	2-2		985
170	354.985		85.5735 - 367.2764	$3d^5 - 3d^4(b^3G)4p$	$b^2D - ^2F^\circ$	2-2		985
390	355.492		44.9841 - 326.2851	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	2-2		985
980	355.618		0.0 - 281.2014	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6P^\circ$	2-2		985
740	355.714		37.2175 - 318.3446	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^\circ$	2-2		985
480	355.925		44.9867 - 325.9414	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	2-2		985
950	355.969		0.0 - 280.9235	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6P^\circ$	2-2		985
380	356.091		44.9075 - 325.7351	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	2-2		985
900	356.153		0.0 - 280.7787	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6P^\circ$	2-2		985
630	356.192		44.9867 - 325.7351	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	2-2		985
360	356.312		44.9867 - 325.6398	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	2-2		985
210	356.412		60.9736 - 341.5500	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2F^\circ$	2-2		985
340	356.566		37.2175 - 317.6697	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^\circ$	2-2		985
520	356.660		37.2888 - 317.6697	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^\circ$	2-2		985
320	356.880		64.7423 - 344.9494	$3d^5 - 3d^4(a^1F)4p$	$a^4H - ^2G^\circ$	2-2		985
600	356.963		44.9841 - 325.1255	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	2-2		985
280	357.383		115.4371 - 395.2502	$3d^5 - 3d^4(b^3D)4p$	$a^2P - ^2D^\circ$	2-2		985
230	357.520		61.2845 - 340.9895	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2F^\circ$	2-2		985
570	357.572		65.2838 - 344.9494	$3d^5 - 3d^4(a^1F)4p$	$a^2H - ^2G^\circ$	2-2		985
730	357.616		37.3040 - 316.9362	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^\circ$	2-2		985
650	357.660		37.2888 - 316.8844	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2H^\circ$	2-2		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	400	357.712	37.3040 - 316.8592	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	710	357.786	44.7091 - 324.2058	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	530	357.818	37.2895 - 316.7610	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	320	357.958	37.2175 - 316.5810	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
	350	358.050	37.2888 - 316.5810	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	130	358.234	115.4685 - 394.6143	$3d^5 - 3d^4(b^1D)4p$	$a^2P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		985
	650	358.449	44.7091 - 323.6901	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	670	358.627	37.2895 - 316.1320	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4H^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	370	358.682	64.7423 - 343.5414	$3d^5 - 3d^4(a^1F)4p$	$a^2H - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	520	358.922	37.3040 - 315.9167	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2H^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	180	359.117	44.7091 - 323.1694	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	320	359.237	37.2895 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	720	359.471	44.9841 - 323.1694	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	720	359.471	66.7604 - 344.9494	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	180	359.494	44.9075 - 323.0762	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	560	359.570	44.9075 - 323.0186	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		985
	650	359.598	44.9841 - 323.0762	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		985
	650	359.598	57.0826 - 335.1641	$3d^5 - 3d^4(a^1D)4p$	$a^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	210	359.671	44.9867 - 323.0186	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		985
	140	359.758	37.2895 - 315.2554	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	310	359.967	37.2888 - 315.0922	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	190	360.138	59.4549 - 337.1299	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	180	360.305	37.3040 - 314.8455	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	440	360.604	66.2287 - 343.5414	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	720	360.798	37.2895 - 314.4548	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	770	360.823	54.3392 - 331.4844	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
	210	361.063	59.4549 - 336.4148	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	660	361.122	37.3040 - 314.2191	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	250	361.188	57.8232 - 334.6902	$3d^5 - 3d^4(a^1D)4p$	$a^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		985
	230	361.264	64.7423 - 341.5500	$3d^5 - 3d^4(a^1F)4p$	$a^2H - ^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	360	361.296	66.7604 - 343.5414	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	870	361.532	37.2175 - 313.8178	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
	570	361.619	37.2888 - 313.8178	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	760	361.799	54.3766 - 330.7734	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
	990	361.849	37.2175 - 313.5771	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
	980	361.875	37.2888 - 313.6267	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	390	361.935	37.2888 - 313.5771	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	280	362.111	40.7532 - 316.9116	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	350	362.238	37.2175 - 313.2787	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
	750	362.294	37.3040 - 313.3110	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	980	362.332	37.2888 - 313.2787	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	390	362.476	60.5322 - 336.4148	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	760	362.512	37.2888 - 313.1427	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
	930	362.531	37.3040 - 313.1427	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	780	362.590	37.3040 - 313.0831	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	220	362.663	41.0238 - 316.7610	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^4F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		985
	190	362.702	59.4549 - 335.1641	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	200	362.764	44.9841 - 320.6446	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4G^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		985
	810	362.978	40.7532 - 316.2540	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	890	362.983	37.3040 - 312.7929	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	370	363.074	40.7532 - 316.1789	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
	360	363.208	66.2287 - 341.5500	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
	320	363.257	40.8909 - 316.1789	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		985
	390	363.432	41.0238 - 316.1789	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
310	363.594	57.0826 - 332.1142	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		985	
600	363.707	37.2895 - 312.2356	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
280	363.763	40.7532 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
220	363.843	41.0238 - 315.8687	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		985	
510	363.947	66.2287 - 340.9895	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
510	364.242	57.0826 - 331.6244	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
550	364.324	85.6362 - 360.1179	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		985	
640	364.480	40.8909 - 315.2554	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
700	364.512	40.7532 - 315.0922	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
600	364.541	37.2175 - 311.5345	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		985	
450	364.567	70.6528 - 344.9494	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
450	364.657	57.8232 - 332.0530	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
560	364.709	37.2888 - 311.4796	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985	
450	364.747	60.5322 - 334.6902	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
680	364.865	57.0826 - 331.1567	$3d^5 - 3d^4(a^3S)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
520	365.000	41.0238 - 314.9973	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		985	
580	365.023	40.8909 - 314.8455	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
470	365.361	37.3040 - 311.0057	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
860	365.465	37.2175 - 310.8421	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		985	
630	365.483	57.8232 - 331.4311	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		985	
310	365.552	37.2888 - 310.8421	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
350	365.677	40.7532 - 314.2191	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
770	365.721	37.2175 - 310.6494	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		985	
500	365.753	61.2845 - 334.6902	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
600	365.816	37.2888 - 310.6494	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^\circ$	$\frac{9}{2} - \frac{11}{2}$		985	
490	365.851	57.8232 - 331.1567	$3d^5 - 3d^4(a^3S)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
720	366.185	54.3766 - 327.4624	$3d^5 - 3d^4(a^3I)4p$	$a^2I - ^2K^\circ$	$\frac{13}{2} - \frac{15}{2}$		985	
240	366.248	70.5025 - 343.5414	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
230	366.361	44.9867 - 317.9410	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
280	366.448	70.6528 - 343.5414	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
620	366.550	37.2175 - 310.0311	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		985	
450	366.645	37.2888 - 310.0311	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985	
620	366.757	59.4549 - 332.1142	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
440	366.894	40.7532 - 313.3110	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
700	367.092	40.8909 - 313.3110	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
680	367.136	60.5322 - 332.9066	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
620	367.208	37.3040 - 309.6258	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^\circ$	$\frac{7}{2} - \frac{9}{2}$		985	
600	367.341	44.7091 - 316.9362	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4H^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
870	367.379	44.7091 - 316.9116	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
870	367.379	37.2888 - 309.4818	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985	
330	367.443	44.7091 - 316.8592	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
470	367.526	54.3392 - 326.4283	$3d^5 - 3d^4(a^3I)4p$	$a^2I - ^2K^\circ$	$\frac{11}{2} - \frac{13}{2}$		985	
760	367.577	54.3766 - 326.4283	$3d^5 - 3d^4(a^3I)4p$	$a^2I - ^2K^\circ$	$\frac{13}{2} - \frac{13}{2}$		985	
850	367.744	44.9841 - 316.9116	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
990	367.794	54.3766 - 326.2679	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		985	
990	367.820	44.9867 - 316.8592	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
600	367.844	44.9075 - 316.7610	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		985	
530	367.951	44.9867 - 316.7610	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
220	368.003	57.0826 - 328.8184	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		985	
500	368.161	61.2845 - 332.9066	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	
640	368.256	95.7265 - 367.2764	$3d^5 - 3d^4(b^3G)4p$	$b^2G - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
600	368.634	44.9841 - 316.2540	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		985	
880	368.670	54.3392 - 325.5845	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		985	
760	368.787	40.7532 - 311.9125	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		985	

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	780	368.806	95.7087 - 366.8488	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		985
	320	368.878	60.5322 - 331.6244	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		985
	330	368.939	70.5025 - 341.5500	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		985
	330	369.058	44.9075 - 315.8687	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$\frac{1}{2} - \frac{7}{2}$		985
	800	369.144	70.6528 - 341.5500	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	20	369.214	61.2132 - 332.0530	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		985
	430	369.450	44.9841 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		985
	620	369.703	70.5025 - 340.9895	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	880	369.784	54.3392 - 324.7677	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		985
	820	369.863	66.7604 - 337.1299	$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		985
	640	369.893	44.9075 - 315.2554	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$\frac{1}{2} - \frac{7}{2}$		985
	910	369.988	37.2175 - 307.4964	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		985
	720	370.055	54.3392 - 324.5715	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^o$	$\frac{11}{2} - \frac{13}{2}$		985
	990	370.106	54.3766 - 324.5715	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^o$	$\frac{13}{2} - \frac{13}{2}$		985
	230	370.183	44.7091 - 314.8455	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		985
	470	370.220	44.9841 - 315.0922	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		985
	380	370.245	44.9075 - 314.9973	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		985
	300	370.356	44.9867 - 314.9973	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	450	370.436	95.7087 - 365.6601	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	520	370.560	59.4549 - 329.3198	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	50	370.815	115.4371 - 385.1083	$3d^5 - 3d^4(b^1D)4p$	$a^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	790	370.966	37.2888 - 306.8546	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$		985
	400	371.102	40.8909 - 310.3579	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^2S^o$	$\frac{3}{2} - \frac{1}{2}$		985
	40	371.246	59.4549 - 328.8184	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	130	371.286	41.0238 - 310.3579	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^2S^o$	$\frac{1}{2} - \frac{1}{2}$		985
	770	371.415	40.7532 - 309.9937	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{7}{2}$		985
	800	371.650	37.3040 - 306.3728	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$\frac{7}{2} - \frac{9}{2}$		985
	50	371.739	85.5735 - 354.5790	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		985
	160	371.837	66.2287 - 335.1641	$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$		985
	20	371.964	44.9841 - 313.8258	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		985
	740	372.083	37.2895 - 306.0464	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$\frac{5}{2} - \frac{7}{2}$		985
	600	372.297	44.7091 - 313.3110	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		985
	440	372.324	85.6362 - 354.2181	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		985
	350	372.377	85.5735 - 354.1164	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2D^o$	$\frac{7}{2} - \frac{7}{2}$		985
	460	372.433	95.7265 - 364.2292	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	260	372.614	44.7091 - 313.0831	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		985
	390	372.680	44.9841 - 313.3110	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$		985
	330	372.701	57.8232 - 326.1356	$3d^5 - 3d^4(a^1G)4p$	$a^2D - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		985
	160	372.736	60.5322 - 328.8184	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{7}{2}$		985
	620	372.987	40.7532 - 308.8635	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		985
	560	373.123	95.7087 - 363.7167	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		985
	710	373.149	95.7265 - 363.7167	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		985
	640	373.171	40.8909 - 308.8635	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		985
	530	373.503	57.0826 - 324.8186	$3d^5 - 3d^4(a^1G)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		985
	130	373.673	44.9075 - 312.5180	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		985
	190	373.980	57.0826 - 324.4775	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		985
	260	374.329	54.3766 - 321.5214	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		985
	290	374.438	85.6362 - 352.7002	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		985
	50	374.526	44.9075 - 311.9125	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		985
	410	374.632	44.9841 - 311.9125	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		985
	110	374.677	40.7532 - 307.6492	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{1}{2}$		985
	280	374.840	54.3392 - 321.1222	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4G^o$	$\frac{11}{2} - \frac{9}{2}$		985
	670	374.872	40.8909 - 307.6492	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	710	374.893	64.7423 - 331.4844	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	270	375.057	41.0238 - 307.6492	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		985
	40	375.264	70.6528 - 337.1299	$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	150	375.657	65.2838 - 331.4844	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		985
	250	375.896	64.7423 - 330.7734	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		985
	120	376.036	125.0227 - 390.9592	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	260	376.276	70.6528 - 336.4148	$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	440	376.402	54.3392 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		985
	550	376.501	60.5322 - 326.1356	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	320	376.535	54.3392 - 319.9157	$3d^5 - 3d^4(a^3F)4p$	$a^2I - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		985
	800	376.662	65.2838 - 330.7734	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	380	376.713	60.8303 - 326.2851	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	390	376.773	60.5322 - 325.9414	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	630	376.840	59.4549 - 324.8186	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	310	376.913	60.9736 - 326.2851	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	330	376.996	66.2287 - 331.4844	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	350	377.108	59.4549 - 324.6304	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	20	377.202	60.5322 - 325.6398	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	620	377.326	59.4549 - 324.4775	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	150	377.402	60.9736 - 325.9414	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	140	377.506	85.6362 - 350.5320	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	490	377.570	61.2845 - 326.1356	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		985
	440	377.693	95.7265 - 360.4907	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	400	377.751	66.7604 - 331.4844	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	90	377.845	61.2845 - 325.9414	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	50	377.961	64.7423 - 329.3198	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	580	378.054	70.6528 - 335.1641	$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	120	378.175	61.2132 - 325.6398	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	220	378.280	125.0688 - 389.4239	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	40	378.376	60.5322 - 324.8186	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	480	378.439	76.8645 - 341.1100	$3d^5 - 3d^4(a^1D)4p$	$a^2S - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	580	378.461	76.8645 - 341.0930	$3d^5 - 3d^4(a^1D)4p$	$a^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		985
	530	378.519	70.5025 - 334.6902	$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	780	378.661	95.7087 - 359.7967	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	840	378.676	64.7423 - 328.8184	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	740	378.736	65.2838 - 329.3198	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{11}{2}$		985
	530	378.766	66.7604 - 330.7734	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		985
	290	378.833	54.3766 - 318.3446	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^o$	$\frac{13}{2} - \frac{13}{2}$		985
	90	379.012	61.2845 - 325.1255	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	20	379.280	60.9736 - 324.6304	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		985
	270	379.751	54.3392 - 317.6697	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	740	379.804	54.3766 - 317.6697	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^o$	$\frac{13}{2} - \frac{11}{2}$		985
	60	379.892	60.9736 - 324.2058	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	110	379.948	61.2845 - 324.4775	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	20	380.006	57.0826 - 320.2345	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	20	380.343	61.2845 - 324.2058	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	350	380.430	60.8303 - 323.6901	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	260	380.634	60.9736 - 323.6901	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	130	380.747	60.5322 - 323.1694	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	720	380.819	54.3392 - 316.9362	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^o$	$\frac{11}{2} - \frac{9}{2}$		985
	700	380.865	66.7604 - 329.3198	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	360	381.091	70.5025 - 332.9066	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	260	381.327	54.3392 - 316.5810	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4F^o$	$\frac{11}{2} - \frac{9}{2}$		985
	180	381.391	60.9736 - 323.1694	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	140	381.595	66.7604 - 328.8184	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	350	381.671	57.0826 - 319.0889	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		985
	120	381.876	61.2132 - 323.0762	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	210	381.963	61.2132 - 323.0186	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	190	381.978	61.2845 - 323.0762	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	230	382.155	57.8232 - 319.4972	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	760	382.295	54.3392 - 315.9167	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{3}{2}$		985
	250	382.463	70.6528 - 332.1142	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		985
	140	382.752	57.8232 - 319.0889	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	150	382.864	59.4549 - 320.6446	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	360	382.930	65.2838 - 326.4283	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2K^o$	$\frac{11}{2} - \frac{11}{2}$		985
	390	383.166	65.2838 - 326.2679	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	840	383.270	54.3766 - 315.2898	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		985
	870	383.322	54.3392 - 315.2161	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		985
	800	383.348	57.0826 - 317.9410	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	560	383.371	64.7423 - 325.5845	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		985
	670	383.594	60.8303 - 321.5214	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		985
	340	383.792	59.4549 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		985
	200	384.167	85.6362 - 345.9421	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		985
	320	384.177	65.2838 - 325.5845	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		985
	630	384.395	60.9736 - 321.1222	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	540	384.442	57.8232 - 317.9410	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	410	384.555	59.4549 - 319.4972	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		985
	450	384.578	64.7423 - 324.7677	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2I^o$	$\frac{9}{2} - \frac{11}{2}$		985
	180	384.754	66.2287 - 326.1356	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{5}{2}$		985
	230	384.780	64.7423 - 324.6304	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	290	384.843	60.5322 - 320.3781	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		985
	20	384.945	57.0826 - 316.8592	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		985
	100	385.042	66.2287 - 325.9414	$3d^5 - 3d^4(a^3D)4p$	$a^2G - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		985
	330	385.103	60.9736 - 320.6446	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	620	385.157	59.4549 - 319.0889	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		985
	40	385.341	66.7604 - 326.2679	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		985
	620	385.564	61.2845 - 320.6446	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		985
	350	385.669	65.2838 - 324.5715	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		985
	40	385.751	54.3392 - 313.5771	$3d^5 - 3d^4(a^3F)4p$	$a^2I - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		985
	700	385.852	61.2132 - 320.3781	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		985
	640	385.961	61.2845 - 320.3781	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		985
	650	385.974	61.2845 - 320.3781	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		985
	650	385.974	60.5322 - 319.6119	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		985
	290	386.042	60.9736 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		985
	270	386.062	125.0227 - 384.0459	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		985
	360	386.188	60.9736 - 319.9157	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	580	386.257	60.8303 - 319.7241	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		985
	460	386.318	95.7265 - 354.5790	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		985
	330	386.362	66.7604 - 325.5845	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		985
	320	386.714	66.2287 - 324.8186	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	370	386.733	57.0826 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	240	386.761	60.5322 - 319.0889	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	360	386.832	95.7087 - 354.2181	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		985
	790	386.940	95.7087 - 354.1417	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	70	386.995	66.2287 - 324.6304	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	70	387.064	57.8232 - 316.1789	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^4S^o$	$\frac{5}{2} - \frac{3}{2}$		985
	170	387.124	70.5025 - 328.8184	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		985
	470	387.222	66.2287 - 324.4775	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	40	387.428	60.9736 - 319.0889	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^o$	$\frac{7}{2} - \frac{3}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	350	387.509	66.7604 - 324.8186	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	340	387.526	57.8232 - 315.8687	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	250	387.583	66.7604 - 324.7677	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		985
	330	387.791	66.7604 - 324.6304	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	410	387.846	57.8232 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	270	387.890	61.2845 - 319.0889	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	330	388.289	95.7087 - 353.2487	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	70	388.416	59.4549 - 316.9116	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	320	388.486	60.5322 - 317.9410	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
	110	388.543	57.0826 - 314.4548	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	130	388.843	57.8232 - 314.9973	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	460	388.899	57.0826 - 314.2191	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
	460	388.899	54.3392 - 311.4796	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
	330	389.071	57.8232 - 314.8455	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	270	389.144	95.7265 - 352.7002	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
	420	389.410	59.4549 - 316.2540	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	280	389.431	64.7423 - 321.5214	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		985
	270	389.496	57.0826 - 313.8258	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	260	389.515	61.2132 - 317.9410	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	110	389.627	61.2845 - 317.9410	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	60	389.662	57.8232 - 314.4548	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	50	389.921	59.4549 - 315.9167	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	270	390.047	60.5322 - 316.9116	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	90	390.126	60.5322 - 316.8592	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	90	390.216	54.3766 - 310.6494	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
	190	390.268	65.2838 - 321.5214	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
	20	390.559	76.8645 - 332.9066	$3d^5 - 3d^4(a^3D)4p$	$a^2S - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
	220	390.626	57.8232 - 313.8258	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	300	390.719	60.9736 - 316.9116	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	240	390.761	70.6528 - 326.5600	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	370	390.772	64.7423 - 320.6446	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	320	390.872	65.2838 - 321.1222	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
	440	391.005	60.8303 - 316.5810	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	430	391.068	57.0826 - 312.7929	$3d^5 - 3d^4(a^3H)4p$	$a^2D - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	360	391.117	40.7532 - 296.4302	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	500	391.184	59.4549 - 315.0922	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	340	391.221	60.9736 - 316.5810	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	150	391.273	61.2845 - 316.8592	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	290	391.323	61.2132 - 316.7610	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	530	391.402	64.7423 - 320.2345	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	370	391.455	85.6362 - 341.0930	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	340	391.486	70.5025 - 325.9414	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	260	391.511	85.5735 - 340.9895	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	150	391.559	59.4549 - 314.8455	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	50	391.603	85.6362 - 340.9895	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	300	391.668	40.7532 - 296.0714	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	310	391.720	60.9736 - 316.2540	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	320	391.742	64.7423 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^\circ$	$\frac{10}{2} - \frac{10}{2}$		985
	520	391.889	64.7423 - 319.9157	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	90	391.964	60.5322 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	170	392.170	40.7532 - 295.7418	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	130	392.203	61.2845 - 316.2540	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	310	392.323	66.2287 - 321.1222	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	660	392.359	64.7423 - 319.6119	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	520	392.384	40.8909 - 295.7418	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	470	392.525	66.7604 - 321.5214	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		985
	790	392.577	65.2838 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		985
	170	392.645	60.9736 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^o$	$\frac{7}{2} - \frac{3}{2}$		985
	240	392.725	65.2838 - 319.9157	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		985
	230	392.832	60.5322 - 315.0922	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^o$	$\frac{3}{2} - \frac{7}{2}$		985
	150	392.948	41.0238 - 295.5100	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		985
	450	393.020	65.2838 - 319.7241	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	390	393.062	57.8232 - 312.2356	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	140	393.139	59.4549 - 313.8178	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		985
	370	393.211	70.5025 - 324.8186	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		985
	150	393.295	60.8303 - 315.0922	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		985
	100	393.447	70.6528 - 324.8186	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	70	393.471	66.2287 - 320.3781	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^o$	$\frac{7}{2} - \frac{3}{2}$		985
	490	393.734	70.6528 - 324.6304	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	370	393.819	57.0826 - 311.0057	$3d^5 - 3d^4(a^3H)4p$	$a^2D - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		985
	330	393.884	66.7604 - 320.6446	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		985
	210	393.973	70.6528 - 324.4775	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	140	394.032	66.2287 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		985
	470	394.185	66.2287 - 319.9157	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	480	394.518	66.7604 - 320.2345	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		985
	470	394.659	66.2287 - 319.6119	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	620	394.838	66.2287 - 319.4972	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		985
	560	394.863	66.7604 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		985
	230	394.994	61.2845 - 314.4548	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	260	395.015	66.7604 - 319.9157	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	90	395.162	65.2838 - 318.3446	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		985
	440	395.276	60.8303 - 313.8178	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		985
	410	395.313	66.7604 - 319.7241	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^o$	$\frac{7}{2} - \frac{11}{2}$		985
	150	395.359	61.2845 - 314.2191	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	360	395.489	66.7604 - 319.6119	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		985
	110	395.602	60.5322 - 313.3110	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		985
	220	395.653	60.8303 - 313.5771	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		985
	290	395.800	60.9736 - 313.6267	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	180	395.866	60.5322 - 313.1427	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		985
	140	395.958	60.5322 - 313.0831	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		985
	580	396.218	65.2838 - 317.6697	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	250	396.346	60.9736 - 313.2787	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	900	396.461	37.2175 - 289.4475	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^o$	$\frac{11}{2} - \frac{9}{2}$		985
	340	396.521	64.7423 - 316.9362	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^o$	$\frac{9}{2} - \frac{9}{2}$		985
	390	396.572	37.2888 - 289.4475	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		985
	300	396.598	37.3040 - 289.4475	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		985
	500	396.787	59.4549 - 311.4796	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		985
	270	397.046	61.2845 - 313.1427	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		985
	80	397.143	61.2845 - 313.0831	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		985
	970	397.237	37.2895 - 289.0290	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$		985
	940	397.258	37.3040 - 289.0290	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	400	397.455	65.2838 - 316.8844	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	270	397.488	61.2132 - 312.7929	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		985
	310	397.623	85.6362 - 337.1299	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		985
	900	397.717	37.3040 - 288.7384	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^o$	$\frac{7}{2} - \frac{3}{2}$		985
	260	397.831	44.7091 - 296.0714	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^o$	$\frac{7}{2} - \frac{9}{2}$		985
	80	397.936	65.2838 - 316.5810	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4F^o$	$\frac{11}{2} - \frac{9}{2}$		985
	740	398.007	37.2895 - 288.5397	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^o$	$\frac{5}{2} - \frac{3}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	240	398.130	64.7423 - 315.9167	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2H^\circ$	2-2		985
	550	398.269	44.9841 - 296.0714	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	2-2		985
	290	398.667	44.9075 - 295.7418	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	2-2		985
	270	398.759	85.6362 - 336.4148	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2F^\circ$	2-2		985
	410	398.792	44.9841 - 295.7418	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	2-2		985
	90	398.871	66.2287 - 316.9362	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	2-2		985
	160	399.037	44.9075 - 295.5100	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	1-1		985
	80	399.082	59.4549 - 310.0311	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4G^\circ$	2-2		985
	210	399.165	44.9867 - 295.5100	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	2-1		985
	560	399.244	60.5322 - 311.0057	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^2G^\circ$	2-2		985
	200	399.727	59.4549 - 309.6258	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^4I^\circ$	2-2		985
	590	399.989	60.8303 - 310.8421	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	2-11		985
	160	400.155	66.2287 - 316.1320	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	2-2		985
	190	400.199	70.5025 - 320.3781	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^4G^\circ$	2-2		985
	250	400.291	60.8303 - 310.6494	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4I^\circ$	2-11		985
	170	400.445	61.2845 - 311.0057	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^2G^\circ$	2-2		985
	290	400.500	66.2287 - 315.9167	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2H^\circ$	2-2		985
	320	400.667	70.6528 - 320.2345	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2F^\circ$	2-2		985
	340	400.756	85.6362 - 335.1641	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2D^\circ$	2-2		985
	410	400.923	76.8645 - 326.2888	$3d^5 - 3d^4(a^3D)4p$	$a^2S - ^2P^\circ$	2-2		985
	260	401.031	70.6528 - 320.0121	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2H^\circ$	2-2		985
	70	401.217	95.7087 - 344.9494	$3d^5 - 3d^4(a^1F)4p$	$b^2G - ^2G^\circ$	2-2		985
	170	401.354	66.7604 - 315.9167	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2H^\circ$	2-2		985
	310	401.421	85.5735 - 334.6902	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2D^\circ$	2-2		985
	110	401.514	60.9736 - 310.0311	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^\circ$	2-2		985
	230	401.615	70.5025 - 319.4972	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2F^\circ$	1-1		985
	520	402.186	37.2175 - 285.8557	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6D^\circ$	2-2		985
	210	402.348	115.4371 - 363.9774	$3d^5 - 3d^4(a^3P)4p$	$a^2P - ^2S^\circ$	2-2		985
	100	402.401	115.4685 - 363.9774	$3d^5 - 3d^4(a^3P)4p$	$a^2P - ^2S^\circ$	2-2		985
	270	402.518	70.6528 - 319.0889	$3d^5 - 3d^4(a^3P)4p$	$b^2F - ^2D^\circ$	2-2		985
	20	402.778	40.7532 - 289.0290	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4F^\circ$	2-2		985
	190	402.905	61.2845 - 309.4818	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^\circ$	2-2		985
	130	403.148	37.2888 - 285.3350	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6D^\circ$	2-2		985
	60	403.204	61.2132 - 309.2254	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^\circ$	2-2		985
	20	403.526	95.7265 - 343.5414	$3d^5 - 3d^4(a^1F)4p$	$b^2G - ^2G^\circ$	2-2		985
	230	404.142	70.5025 - 317.9410	$3d^5 - 3d^4(a^3P)4p$	$b^2F - ^2D^\circ$	2-2		985
	150	404.314	85.5735 - 332.9066	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2D^\circ$	2-2		985
	120	404.415	85.6362 - 332.9066	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2D^\circ$	2-2		985
	320	405.714	85.6362 - 332.1142	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2D^\circ$	2-2		985
	170	406.074	64.7423 - 311.0057	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2G^\circ$	2-2		985
	210	406.522	85.6362 - 331.6244	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2F^\circ$	2-2		985
	220	406.738	85.5735 - 331.4311	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2P^\circ$	2-2		985
	190	406.764	95.7087 - 341.5500	$3d^5 - 3d^4(a^1F)4p$	$b^2G - ^2F^\circ$	2-2		985
	120	407.117	70.5025 - 316.1320	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^4H^\circ$	2-2		985
	290	407.164	70.6528 - 316.2540	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2F^\circ$	2-2		985
	240	407.300	85.6362 - 331.1567	$3d^5 - 3d^4(a^1S)4p$	$b^2D - ^2P^\circ$	2-2		985
	130	407.521	115.4685 - 360.8572	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2P^\circ$	2-2		985
	130	407.723	95.7265 - 340.9895	$3d^5 - 3d^4(a^1F)4p$	$b^2G - ^2F^\circ$	2-2		985
	180	407.912	70.5025 - 315.6575	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2F^\circ$	2-2		985
	630	408.345	40.7532 - 285.6430	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6D^\circ$	2-2		985
	320	408.539	66.2287 - 311.0057	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2G^\circ$	2-2		985
	600	408.579	40.8909 - 285.6430	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6D^\circ$	2-2		985
	580	408.595	44.7091 - 289.4475	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^\circ$	2-2		985
	150	408.695	115.4371 - 360.1179	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2P^\circ$	2-2		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	470	409.005	40.7532 - 285.2481	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	$\frac{5}{2} - \frac{1}{2}$		985
	140	409.097	70.6528 - 315.0922	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	130	409.241	40.8909 - 285.2481	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	210	409.301	44.7091 - 289.0290	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	360	409.457	41.0238 - 285.2481	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	$\frac{1}{2} - \frac{1}{2}$		985
	390	409.596	40.8909 - 285.0337	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	430	409.751	44.9841 - 289.0290	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	$\frac{5}{2} - \frac{1}{2}$		985
	160	409.819	41.0238 - 285.0337	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	390	410.250	44.9867 - 288.7384	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	150	410.455	44.9075 - 288.5397	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		985
	200	410.594	44.9867 - 288.5397	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	470	410.666	40.7532 - 284.2599	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	340	410.900	40.8909 - 284.2599	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	160	411.088	66.2287 - 309.4818	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	110	411.755	66.7604 - 309.6258	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^4I^o$	$\frac{3}{2} - \frac{1}{2}$		985
	500	412.808	40.7532 - 282.9956	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	210	412.868	125.0688 - 367.2764	$3d^5 - 3d^4(b^1G)4p$	$c^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	80	413.044	40.8909 - 282.9956	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	320	413.272	41.0238 - 282.9956	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		985
	360	413.517	125.0227 - 366.8488	$3d^5 - 3d^4(b^1G)4p$	$c^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	90	414.220	95.7087 - 337.1299	$3d^5 - 3d^4(a^1D)4p$	$b^2G - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	520	414.745	40.8909 - 282.0028	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	300	414.977	41.0238 - 282.0028	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	660	415.050	44.7091 - 285.6430	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	480	415.238	70.6528 - 311.4796	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	140	415.476	95.7265 - 336.4148	$3d^5 - 3d^4(a^1D)4p$	$b^2G - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	480	415.528	44.9841 - 285.6430	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	420	415.796	70.5025 - 311.0057	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	140	415.882	40.7532 - 281.2014	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	110	416.078	44.9075 - 285.2481	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6D^o$	$\frac{1}{2} - \frac{1}{2}$		985
	390	416.211	44.9867 - 285.2481	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	120	416.373	40.7532 - 280.9235	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	120	416.447	44.9075 - 285.0337	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	110	416.620	40.7532 - 280.7787	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	480	417.449	44.7091 - 284.2599	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	390	417.928	44.9841 - 284.2599	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	160	418.050	125.0227 - 364.2292	$3d^5 - 3d^4(b^1G)4p$	$c^2D - ^2G^o$	$\frac{5}{2} - \frac{1}{2}$		985
	160	418.164	115.4371 - 354.5790	$3d^5 - 3d^4(b^3F)4p$	$a^2P - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	270	418.457	70.5025 - 309.4818	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4G^o$	$\frac{5}{2} - \frac{1}{2}$		985
	140	418.973	115.4371 - 354.1164	$3d^5 - 3d^4(a^1F)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	220	419.028	115.4685 - 354.1164	$3d^5 - 3d^4(a^1F)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	290	419.641	115.4371 - 353.7355	$3d^5 - 3d^4(a^1F)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		985
		419.98	0.0 - 238.1062	$3d^5 - 3d^4(a^3P)4s$	$ga^6S - ^4P$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
	290	420.013	44.9075 - 282.9956	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		985
	410	420.152	44.9841 - 282.9956	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	110	420.317	57.8232 - 295.7418	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	200	420.721	57.8232 - 295.5100	$3d^5 - 3d^4(a^5D)4p$	$a^2D - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	170	421.476	115.4371 - 352.7002	$3d^5 - 3d^4(b^3F)4p$	$a^2P - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		985
	240	421.770	44.9075 - 282.0028	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		985
	410	421.937	44.9867 - 282.0028	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	250	423.144	95.7265 - 332.0530	$3d^5 - 3d^4(a^3D)4p$	$b^2G - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	120	423.348	44.7091 - 280.9235	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^6P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	370	423.882	95.7087 - 331.6244	$3d^5 - 3d^4(a^3D)4p$	$b^2G - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$		985
	380	424.105	44.9867 - 280.7787	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6P^o$	$\frac{3}{2} - \frac{1}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	330	424.167	95.7265 - 331.4844	$3d^5 - 3d^4(a^1I)4p$	$b^2G - ^2H^o$	2 1		985
	760	424.450	60.8303 - 296.4302	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	2 1		985
	210	424.561	60.5322 - 296.0714	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^o$	2 1		985
	400	424.706	60.9736 - 296.4302	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^o$	2 1		985
	350	425.155	60.5322 - 295.7418	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^o$	2 1		985
	680	425.357	60.9736 - 296.0714	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	2 1		985
	440	425.419	95.7087 - 330.7734	$3d^5 - 3d^4(a^1I)4p$	$b^2G - ^2H^o$	2 1	II	985
	20	425.799	61.2132 - 296.0714	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	2 1		985
	280	425.919	61.2845 - 296.0714	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^o$	2 1		985
	350	426.262	85.6362 - 320.2345	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2F^o$	2 1		985
	250	426.389	61.2132 - 295.7418	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^o$	2 1		985
	490	426.517	61.2845 - 295.7418	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^o$	2 1		985
	400	426.811	61.2132 - 295.5100	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4D^o$	2 1		985
	270	427.492	85.5735 - 319.4972	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2F^o$	2 1		985
	160	428.065	95.7087 - 329.3198	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2G^o$	2 1		985
	50	429.014	95.7265 - 328.8184	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2G^o$	2 1		985
	50	433.728	95.7087 - 326.2679	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2H^o$	2 1	II	985
	160	435.719	125.0688 - 354.5790	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2F^o$	2 1		985
	170	436.330	125.0227 - 354.2181	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2F^o$	2 1		985
	260	436.508	95.7265 - 324.8186	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2F^o$	2 1		985
	510	436.834	95.7087 - 324.6304	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2G^o$	2 1		985
	220	437.161	95.7265 - 324.4775	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2G^o$	2 1		985
	100	437.247	125.0227 - 353.7355	$3d^5 - 3d^4(a^1F)4p$	$c^2D - ^2D^o$	2 1		985
	580	437.415	60.8303 - 289.4475	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	2 1		985
	280	437.639	60.5322 - 289.0290	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^o$	2 1		985
	110	437.690	60.9736 - 289.4475	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	2 1		985
	130	438.156	125.0227 - 353.2487	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^4G^o$	2 1		985
	280	438.211	60.8303 - 289.0290	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	2 1		985
	380	438.494	60.9736 - 289.0290	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	2 1		985
	260	439.047	60.9736 - 288.7384	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^o$	2 1		985
	330	439.085	61.2845 - 289.0290	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^o$	2 1		985
	60	439.523	61.2132 - 288.7384	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^o$	2 1		985
	270	439.658	61.2845 - 288.7384	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^4F^o$	2 1		985
	340	439.899	61.2132 - 288.5397	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^o$	2 1		985
	140	444.392	60.8303 - 285.8557	$3d^5 - 3d^4(a^5D)4p$	$a^4F - ^6D^o$	2 1		985
	170	450.532	95.7087 - 317.6697	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^4H^o$	2 1	II	985
	200	452.134	95.7087 - 316.8844	$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2H^o$	2 1	II	985
	240	454.157	95.7265 - 315.9167	$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2H^o$	2 1		985
		481.82	0.0 - 207.5485	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^6D$	2 1	F,P	375,1087
		483.18	0.0 - 206.9622	$3d^5 - 3d^4(a^5D)4s$	$ga^6S - ^6D$	2 1	F,P	375,1087
		484.32	0.0 - 206.4760	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^6D$	2 1	F,P	375,1087
		506.71	40.7532 - 238.1062	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		507.06	40.8909 - 238.1062	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		507.40	41.0238 - 238.1062	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		511.25	40.7532 - 236.3531	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		511.61	40.8909 - 236.3531	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		511.96	41.0238 - 236.3531	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		514.28	40.7532 - 235.1999	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		514.64	40.8909 - 235.1999	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		515.00	41.0238 - 235.1999	$3d^5 - 3d^4(a^3P)4s$	$a^4P - ^4P$	2 1	F,P	375,1087
		517.07	44.7091 - 238.1062	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2 1	F,P	375,1087
		517.81	44.9841 - 238.1062	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2 1	F,P	375,1087
		521.80	44.7091 - 236.3531	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2 1	F,P	375,1087
		522.55	44.9841 - 236.3531	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2 1	F,P	375,1087

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		522.56	44.9867 - 236.3531	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		525.51	44.9075 - 235.1999	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		525.72	44.9841 - 235.1999	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		525.73	44.9867 - 235.1999	$3d^5 - 3d^4(a^3P)4s$	$a^4D - ^4P$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		562.89	40.7532 - 218.4072	$3d^5 - 3d^4(a^5D)4s$	$a^4P - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		563.33	40.8909 - 218.4072	$3d^5 - 3d^4(a^5D)4s$	$a^4P - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		565.10	40.7532 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4P - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		565.54	40.8909 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4P - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		565.96	41.0238 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4P - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		567.28	40.8909 - 217.1710	$3d^5 - 3d^4(a^5D)4s$	$a^4P - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		568.84	41.0238 - 216.8205	$3d^5 - 3d^4(a^5D)4s$	$a^4P - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		575.71	44.7091 - 218.4072	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		576.62	44.9841 - 218.4072	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		576.63	44.9867 - 218.4072	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		578.02	44.7091 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		578.68	44.9075 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		578.94	44.9841 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		578.95	44.9867 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		579.84	44.7091 - 217.1710	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		580.51	70.5025 - 242.7650	$3d^5 - 3d^4(a^3H)4s$	$b^2F - ^2H$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		580.76	44.9841 - 217.1710	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		580.77	44.9867 - 217.1710	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		581.69	44.9075 - 216.8205	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		581.95	44.9841 - 216.8205	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		581.96	44.9867 - 216.8205	$3d^5 - 3d^4(a^5D)4s$	$a^4D - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		634.61	60.8303 - 218.4072	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		635.19	60.9736 - 218.4072	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		637.42	60.8303 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		638.00	60.9736 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		639.27	61.2845 - 217.7132	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		640.21	60.9736 - 217.1710	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		641.20	61.2132 - 217.1710	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		641.49	61.2845 - 217.1710	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		642.64	61.2132 - 216.8205	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
		642.94	61.2845 - 216.8205	$3d^5 - 3d^4(a^5D)4s$	$a^4F - ^4D$	2-1, 2-1, 2-1, 2-1	F,P	375,1087
60	1106.889	244.8212 - 335.1641		$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^2F - ^2D^o$	2-1, 2-1, 2-1, 2-1		985
70	1172.334	238.3903 - 323.6901		$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^4F - ^4D^o$	2-1, 2-1, 2-1, 2-1		985
200	1178.578	268.8858 - 353.7355		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	2-1, 2-1, 2-1, 2-1		985
570	1179.603	236.7460 - 321.5214		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^o$	2-1, 2-1, 2-1, 2-1		985
340	1180.759	236.4312 - 321.1222		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^o$	2-1, 2-1, 2-1, 2-1		985
390	1182.383	241.9853 - 326.5600		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^o$	2-1, 2-1, 2-1, 2-1		985
80	1183.440	244.8212 - 329.3198		$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$^2F - ^2G^o$	2-1, 2-1, 2-1, 2-1		985
610	1183.622	236.1580 - 320.6446		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^o$	2-1, 2-1, 2-1, 2-1		985
210	1183.900	241.1741 - 325.6398		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^o$	2-1, 2-1, 2-1, 2-1		985
360	1184.685	241.8754 - 326.2851		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^o$	2-1, 2-1, 2-1, 2-1		985
260	1185.399	241.5824 - 325.9414		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^o$	2-1, 2-1, 2-1, 2-1		985
170	1191.163	244.8667 - 328.8184		$3d^4(a^3F)4s - 3d^4(a^1G)4p$	$^2F - ^2G^o$	2-1, 2-1, 2-1, 2-1		985
570	1199.199							985
120	1200.709	277.3302 - 360.6146		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	2-1, 2-1, 2-1, 2-1		985
340	1202.523	276.6088 - 359.7672		$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^o$	2-1, 2-1, 2-1, 2-1		985
190	1202.908	238.3903 - 321.5214		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^o$	2-1, 2-1, 2-1, 2-1		985
530	1205.121	277.3607 - 360.3392		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	2-1, 2-1, 2-1, 2-1		985
120	1205.361	277.3768 - 360.3392		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^o$	2-1, 2-1, 2-1, 2-1		985
180	1205.889	248.6982 - 331.6244		$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^2G - ^2F^o$	2-1, 2-1, 2-1, 2-1		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	240	1206.808	238.2591 – 321.1222	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	180	1207.460	242.7650 – 325.5845	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	400	1207.538	243.4552 – 326.2679	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
	370	1210.771	277.7479 – 360.3392	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	500	1211.033	277.1924 – 359.7672	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	110	1212.417	238.1646 – 320.6446	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	130	1213.494	277.3607 – 359.7672	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	670	1218.435						985
	290	1218.705	242.7650 – 324.8186	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	130	1219.488	242.7650 – 324.7677	$3d^4(a^3H)4s - 3d^4(a^3I)4p$	$^2H - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		985
	360	1221.016	207.5485 – 289.4475	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	170	1221.132	276.6088 – 358.4998	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
	560	1225.499	236.7460 – 318.3446	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
	100	1229.507	238.3903 – 319.7241	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		985
	650	1231.914	243.4552 – 324.6304	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
	100	1232.805	243.4552 – 324.5715	$3d^4(a^3H)4s - 3d^4(a^3I)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
	300	1237.956	236.1580 – 316.9362	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	290	1238.373	277.7479 – 358.4998	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	280	1238.864	248.0989 – 328.8184	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	270	1240.370	248.6982 – 329.3198	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	240	1242.954	236.4312 – 316.8844	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
	90	1249.341	251.5822 – 331.6244	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
	100	1250.694	235.9611 – 315.9167	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	150	1252.723	236.3531 – 316.1789	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	140	1252.984	244.8212 – 324.6304	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	160	1253.788	236.1580 – 315.9167	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
	130	1255.384	244.8212 – 324.4775	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	650	1257.300	241.9853 – 321.5214	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
	450	1259.935	205.8789 – 285.2481	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
	530	1262.577	241.1741 – 320.3781	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
	140	1262.770	251.5822 – 330.7734	$3d^4(a^3G)4s - 3d^4(a^3I)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		985
	140	1263.162	206.4760 – 285.6430	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
	380	1263.373	205.8789 – 285.0337	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		985
	740	1264.240	261.9940 – 341.0930	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2P^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	740	1264.240	252.3850 – 331.4844	$3d^4(a^3I)4s - 3d^4(a^3I)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
	630	1264.837	241.5824 – 320.6446	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	330	1265.304	262.0773 – 341.1100	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
	480	1267.024	206.1085 – 285.0337	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	310	1267.090	216.8205 – 295.7418	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
	80	1267.238	262.0773 – 340.9895	$3d^4(a^3D)4s - 3d^4(a^3F)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	350	1267.422	217.1710 – 296.0714	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
	730	1267.541	206.9622 – 285.8557	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
	90	1267.679	235.9611 – 314.8455	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
	770	1268.089	206.4760 – 285.3350	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	140	1268.957	238.1062 – 316.9116	$3d^4(a^3P)4s - 3d^4(a^3G)4p$	$^4P - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	660	1269.485	206.4760 – 285.2481	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
	180	1269.886	238.1646 – 316.9116	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	70	1270.182	238.1296 – 316.8592	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
	210	1270.374	217.7132 – 296.4302	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
	210	1270.729	238.1646 – 316.8592	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
	270	1270.821	216.8205 – 295.5100	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		985
	460	1270.952	206.9622 – 285.6430	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
	270	1271.415	238.2591 – 316.9116	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
	110	1271.758	238.1296 – 316.7610	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	420	1272.737	217.1710 - 295.7418	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	50	1274.007	236.3531 - 314.8455	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	710	1274.834	252.3319 - 330.7734	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	150	1275.694	252.3850 - 330.7734	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	780	1275.955	206.9622 - 285.3350	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^6D - ^6D^o$	$\frac{5}{2} - \frac{5}{2}$		985
	730	1276.192	217.7132 - 296.0714	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	340	1276.502	217.1710 - 295.5100	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	270	1276.769	238.2591 - 316.5810	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		985
	830	1277.023	207.5485 - 285.8557	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^6D - ^6D^o$	$\frac{5}{2} - \frac{5}{2}$		985
	150	1278.924	238.3903 - 316.5810	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		985
	700	1279.571	206.1085 - 284.2599	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^6D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		985
	210	1279.808	241.8754 - 320.0121	$3d^4(a^2G)4s - 3d^4(a^3G)4p$	$^4G - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$		985
	90	1280.377	236.3531 - 314.4548	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	130	1280.862	238.1062 - 316.1789	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$		985
	240	1280.964	243.4552 - 321.5214	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		985
	130	1281.389	241.8754 - 319.9157	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	540	1281.583	217.7132 - 295.7418	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	790	1281.668	218.4072 - 296.4302	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	70	1281.797	238.1646 - 316.1789	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4S^o$	$\frac{5}{2} - \frac{3}{2}$		985
	440	1284.296	238.3903 - 316.2540	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	140	1284.546	241.8754 - 319.7241	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		985
	670	1285.598	207.5485 - 285.3350	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^6D - ^6D^o$	$\frac{5}{2} - \frac{5}{2}$		985
	760	1286.372	251.5822 - 329.3198	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	740	1286.930	248.8559 - 326.5600	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	350	1287.590	218.4072 - 296.0714	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		985
	170	1289.170	248.6982 - 326.2679	$3d^4(a^2G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		985
	100	1289.476	238.1062 - 315.6575	$3d^4(a^3P)4s - 3d^4(a^3G)4p$	$^4P - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	80	1290.439	238.1646 - 315.6575	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	140	1290.557	248.0989 - 325.5845	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		985
	140	1290.762	236.3531 - 313.8258	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		985
	230	1290.834	236.1580 - 313.6267	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		985
	710	1291.199	277.1924 - 354.6396	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{11}{2}$		985
	250	1291.616	255.4841 - 332.9066	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	290	1292.015	289.4492 - 366.8488	$3d^4(b^3G)4s - 3d^4(b^1G)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		985
	90	1292.758	289.4951 - 366.8488	$3d^4(b^3G)4s - 3d^4(b^1G)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		985
	280	1293.698	206.9622 - 284.2599	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^6D - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$		985
	680	1294.024	249.0068 - 326.2851	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^4D - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$		985
	110	1294.503	277.3302 - 354.5790	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	110	1294.547	242.7650 - 320.0121	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		985
	90	1295.647	235.9611 - 313.1427	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		985
	220	1296.186	238.1062 - 315.2554	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	170	1296.230	236.4312 - 313.5771	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		985
	510	1296.662	236.1580 - 313.2787	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	730	1296.733	251.7015 - 328.8184	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		985
	380	1297.172	238.1646 - 315.2554	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		985
	10	1298.106	235.1999 - 312.2356	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	650	1298.961	236.1580 - 313.1427	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		985
	410	1299.434	236.3531 - 313.3110	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		985
	110	1300.613	248.6982 - 325.5845	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		985
	250	1300.933	238.1296 - 314.9973	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^2P^o$	$\frac{7}{2} - \frac{7}{2}$		985
	660	1301.279	242.7650 - 319.6119	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	320	1301.387	277.3768 - 354.2181	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	600	1301.544	235.9611 - 312.7929	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	140	1301.729	255.2925 - 332.1142	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
650	1302.409		277.3607 - 354.1417	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
640	1302.745		249.1797 - 325.9414	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
460	1302.864		283.7367 - 360.4907	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		985
180	1303.118		238.1062 - 314.8455	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
120	1303.270		236.3531 - 313.0831	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
260	1303.433		248.0989 - 324.8186	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		985
280	1303.563		235.1999 - 311.9125	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
260	1303.749		238.3903 - 315.0922	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		985
280	1304.967		255.4841 - 332.1142	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^\circ$	$\frac{1}{2} - \frac{5}{2}$		985
280	1305.710		238.2591 - 314.8455	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
230	1306.013		255.4841 - 332.0530	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		985
250	1306.227		249.1797 - 325.7351	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
130	1306.858		206.4760 - 282.9956	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
620	1307.391		289.4492 - 365.9371	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		985
80	1307.872		243.4552 - 319.9157	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		985
90	1308.298		249.3000 - 325.7351	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
80	1308.412		255.0029 - 331.4311	$3d^4(a^1S)4s - 3d^4(a^3D)4p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		985
360	1309.267		248.0989 - 324.4775	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		985
760	1309.603		241.9853 - 318.3446	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{13}{2}$		985
70	1309.783		238.1062 - 314.4548	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
420	1309.936		249.3000 - 325.6398	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		985
570	1310.070		255.2925 - 331.6244	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
330	1310.182		238.1296 - 314.4548	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
130	1310.599		244.8212 - 321.1222	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		985
70	1311.150		243.4552 - 319.7241	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
270	1312.148		289.4492 - 365.6601	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
630	1312.257		283.5921 - 359.7967	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
340	1312.944		289.4951 - 365.6601	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
130	1313.146		255.0029 - 331.1567	$3d^4(a^1S)4s - 3d^4(a^1S)4p$	$^2S - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
130	1313.636		205.8789 - 282.0028	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		985
320	1313.719		248.6982 - 324.8186	$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
130	1313.822		238.1062 - 314.2191	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
70	1314.238		238.1296 - 314.2191	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
660	1314.681		268.8858 - 344.9494	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
200	1314.840		238.1646 - 314.2191	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
430	1316.708		255.4841 - 331.4311	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
640	1316.964		248.6982 - 324.6304	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
150	1317.613		206.1085 - 282.0028	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4P^\circ$	$\frac{7}{2} - \frac{1}{2}$		985
110	1317.822		236.3531 - 312.2356	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
310	1318.014		277.3768 - 353.2487	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
110	1318.152		255.2925 - 331.1567	$3d^4(a^3D)4s - 3d^4(a^1S)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
20	1318.838		244.8212 - 320.6446	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
560	1319.353		241.8754 - 317.6697	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		985
140	1319.646		244.8667 - 320.6446	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
60	1320.667		238.1062 - 313.8258	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
20	1321.070		238.1296 - 313.8258	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
90	1321.273		241.9853 - 317.6697	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
70	1321.669		238.1646 - 313.8258	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
190	1322.741		242.3403 - 317.9410	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
240	1322.981		241.1741 - 316.7610	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
240	1323.467		238.2591 - 313.8178	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
820	1324.251		236.7460 - 312.2606	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{13}{2} - \frac{15}{2}$		985
120	1325.172		238.1646 - 313.6267	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
640	1325.780		238.3903 - 313.8178	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
380	1326.019	244.8212 - 320.2345		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^{\circ}$	2-1		985
510	1326.788	277.3302 - 352.7002		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^{\circ}$	4-1		985
610	1326.825	244.8667 - 320.2345		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^{\circ}$	2-1		985
610	1326.825	238.2591 - 313.6267		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^{\circ}$	4-1		985
690	1327.073	241.5824 - 316.9362		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^{\circ}$	4-1		985
370	1328.432	241.5824 - 316.8592		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^{\circ}$	4-1		985
310	1329.708	238.1062 - 313.3110		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^{\circ}$	4-1		985
410	1329.791	249.0068 - 324.2058		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^{\circ}$	4-1		985
500	1329.952	244.8212 - 320.0121		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2H^{\circ}$	2-1		985
720	1330.024	238.3903 - 313.5771		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^{\circ}$	4-1		985
30	1330.532	235.1999 - 310.3579		$3d^4(a^3P)4s - 3d^4(b^3P)4p$	$^4P - ^2S^{\circ}$	4-1		985
160	1330.729	238.1646 - 313.3110		$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4P^{\circ}$	4-1		985
530	1330.932	261.9940 - 337.1299		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2F^{\circ}$	2-1		985
800	1331.016	252.3319 - 327.4624		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2I - ^2K^{\circ}$	2-1		985
810	1331.501	236.4312 - 311.5345		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^{\circ}$	4-1		985
250	1331.652	244.8212 - 319.9157		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^{\circ}$	2-1		985
110	1332.252	241.8754 - 316.9362		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^{\circ}$	4-1		985
70	1332.459	236.4312 - 311.4796		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2G^{\circ}$	4-1		985
480	1332.688	241.8754 - 316.9116		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^{\circ}$	4-1		985
470	1332.981	238.2591 - 313.2787		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^{\circ}$	4-1		985
470	1333.170	241.8754 - 316.8844		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2H^{\circ}$	4-1		985
410	1333.723	238.1646 - 313.1427		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^{\circ}$	4-1		985
620	1334.080	241.1741 - 316.1320		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^{\circ}$	4-1		985
130	1334.205	241.9853 - 316.9362		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^{\circ}$	4-1		985
70	1334.782	238.1646 - 313.0831		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^{\circ}$	4-1		985
333	1335.035	242.7650 - 317.6697		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^{\circ}$	2-1		985
250	1335.110	205.8789 - 280.7787		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^{\circ}$	6-1		985
580	1335.304	243.4552 - 318.3446		$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^{\circ}$	2-1		985
650	1336.287	248.8559 - 323.6901		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^{\circ}$	4-1		985
70	1336.630	206.1085 - 280.9235		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^{\circ}$	6-1		985
40	1337.070	244.8212 - 319.6119		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^{\circ}$	2-1		985
370	1337.875	244.8667 - 319.6119		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^{\circ}$	2-1		985
290	1338.084	289.4951 - 364.2292		$3d^4(b^3G)4s - 3d^4(b^3G)4p$	$^2G - ^2G^{\circ}$	2-1		985
120	1338.233	206.4760 - 281.2014		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^{\circ}$	6-1		985
730	1338.948	251.5822 - 326.2679		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^{\circ}$	2-1		985
450	1339.226	206.1085 - 280.7787		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^{\circ}$	6-1		985
630	1339.337	238.1296 - 312.7929		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^{\circ}$	4-1		985
240	1339.752	276.6088 - 351.2488		$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4D^{\circ}$	4-1		985
360	1339.924	244.8667 - 319.4972		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^{\circ}$	2-1		985
460	1340.421	244.4854 - 319.0889		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^{\circ}$	2-1		985
510	1340.563	241.9853 - 316.5810		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^{\circ}$	4-1		985
30	1341.389	241.5824 - 316.1320		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^{\circ}$	4-1		985
110	1341.675	238.2591 - 312.7929		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^{\circ}$	4-1		985
700	1342.448	236.1580 - 310.6494		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^{\circ}$	4-1		985
480	1343.227	206.4760 - 280.9235		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^{\circ}$	6-1		985
780	1343.487	251.7015 - 326.1356		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2F^{\circ}$	2-1		985
80	1343.884	236.4312 - 310.8421		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^{\circ}$	4-1		985
50	1344.460	241.8754 - 316.2540		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2F^{\circ}$	4-1		985
370	1345.200	262.0773 - 336.4148		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2F^{\circ}$	2-1		985
230	1345.267	241.5824 - 315.9167		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2H^{\circ}$	4-1		985
840	1345.660	207.5485 - 281.8606		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^{\circ}$	6-1		985
420	1345.850	206.4760 - 280.7787		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^{\circ}$	6-1		985
290	1346.479	244.8212 - 319.0889		$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^2D^{\circ}$	2-1		985
350	1346.997	206.9622 - 281.2014		$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^{\circ}$	6-1		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
220	1347.317		289.4951 - 363.7167	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		985
420	1347.442		243.4552 - 317.6697	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		985
130	1348.236		242.7650 - 316.9362	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
120	1348.376		249.0068 - 323.1694	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		985
70	1348.985		238.1062 - 312.2356	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
230	1349.431		238.1296 - 312.2356	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
560	1349.601		236.7460 - 310.8421	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{13}{2} - \frac{11}{2}$		985
740	1350.071		238.1646 - 312.2356	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
740	1350.561		252.3850 - 326.4283	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2K^{\circ}$	$\frac{11}{2} - \frac{13}{2}$		985
460	1350.625		277.7479 - 351.7877	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		985
160	1351.269		236.3531 - 310.3579	$3d^4(a^3P)4s - 3d^4(b^3P)4p$	$^4P - ^2S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
670	1352.058		206.9622 - 280.9235	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
60	1352.512		252.3319 - 326.2679	$3d^4(a^1I)4s - 3d^4(a^1G)4p$	$^2I - ^2H^{\circ}$	$\frac{13}{2} - \frac{11}{2}$		985
250	1352.757		276.6088 - 350.5320	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		985
410	1353.109		236.7460 - 310.6494	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{13}{2} - \frac{11}{2}$		985
110	1353.248		249.1797 - 323.0762	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
140	1353.392		277.3607 - 351.2488	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		985
600	1353.495		251.7015 - 325.5845	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^{\circ}$	$\frac{2}{2} - \frac{2}{2}$		985
200	1354.300		249.1797 - 323.0186	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		985
110	1354.889		238.1062 - 311.9125	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
800	1355.271		206.9622 - 280.7482	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
120	1355.701		276.6088 - 350.3706	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		985
30	1356.502		249.3000 - 323.0186	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		985
510	1357.508		235.9611 - 309.6258	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		985
770	1357.720		207.5485 - 281.2014	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6P^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
50	1358.692		236.4312 - 310.0311	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
80	1360.022		242.3403 - 315.8687	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^2P - ^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		985
60	1361.370		244.4854 - 317.9410	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
520	1361.860		243.4552 - 316.8844	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		985
760	1362.489		206.4760 - 279.8711	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		985
110	1363.499		241.8754 - 315.2161	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		985
190	1363.810		236.1580 - 309.4818	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
440	1364.180		241.9853 - 315.2898	$3d^4(a^3P)4s - 3d^4(a^3H)4p$	$^4G - ^2I^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		985
250	1364.914		235.9611 - 309.2254	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		985
250	1365.732		238.2591 - 311.4796	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		985
360	1365.809		241.8754 - 315.0922	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
530	1366.126		207.5485 - 280.7482	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		985
350	1366.217		236.4312 - 309.6258	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		985
330	1366.372		251.5822 - 324.7677	$3d^4(a^1G)4s - 3d^4(a^1I)4p$	$^2G - ^2I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		985
250	1366.690		261.9940 - 335.1641	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		985
510	1367.028		242.7650 - 315.9167	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		985
160	1367.645		251.7015 - 324.8186	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2F^{\circ}$	$\frac{2}{2} - \frac{2}{2}$		985
530	1368.292		206.1085 - 279.1924	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		985
210	1368.453		244.8667 - 317.9410	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
510	1368.976		251.5822 - 324.6304	$3d^4(a^1G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		985
90	1369.165		276.6088 - 349.6469	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		985
180	1369.295		277.7479 - 350.7782	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
270	1369.426		248.0989 - 321.1222	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		985
560	1371.575		206.9622 - 279.8711	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		985
80	1371.753		238.1062 - 311.0057	$3d^4(a^3P)4s - 3d^4(a^3H)4p$	$^4P - ^2G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		985
270	1371.832		251.5822 - 324.4775	$3d^4(a^1G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		985
70	1372.870		238.1646 - 311.0057	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		985
460	1373.023		277.1924 - 350.0240	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		985
520	1373.168		205.8789 - 278.7035	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
70	1374.077	251.7015 - 324.4775		$3d^4(a^1G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
230	1374.614	238.2591 - 311.0057		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
530	1375.204	206.4760 - 279.1924		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
30	1375.571	261.9940 - 334.6902		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
340	1376.203	268.8858 - 341.5500		$3d^4(a^3F)4s - 3d^4(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
210	1377.168	262.0773 - 334.6902		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
530	1377.500	206.1085 - 278.7035		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
510	1378.770	205.8789 - 278.4070		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{1}{2} - \frac{1}{2}$		985
380	1379.101	236.3531 - 308.8635		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
660	1380.239	242.7650 - 315.2161		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
390	1380.518	252.3319 - 324.7677		$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{13}{2} - \frac{11}{2}$		985
500	1381.546	252.3850 - 324.7677		$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
270	1382.676	207.5485 - 279.8711		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
370	1383.160	206.1085 - 278.4070		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
80	1383.593	244.4854 - 316.7610		$3d^4(a^3P)4s - 3d^4(a^3G)4p$	$^2P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
620	1384.286	252.3319 - 324.5715		$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{13}{2} - \frac{13}{2}$		985
510	1384.489	206.9622 - 279.1924		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
150	1386.270	248.0989 - 320.2345		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
380	1386.734	268.8770 - 340.9895		$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		985
80	1386.899	268.8858 - 340.9895		$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
150	1390.573	248.0989 - 320.0121		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
200	1390.666	241.1741 - 313.0831		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
460	1391.070	238.1062 - 309.9937		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
590	1392.083	243.4552 - 315.2898		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		985
460	1392.430	248.0989 - 319.9157		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
420	1393.305	238.2591 - 310.0311		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
400	1393.507	243.4552 - 315.2161		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		985
680	1393.744							985
250	1394.156	241.5824 - 313.3110		$3d^4(a^3G)4s - 3d^4(a^3P)4p$	$^4G - ^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
580	1394.321	216.8205 - 288.5397		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
590	1394.778	241.5824 - 313.2787		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		985
320	1395.860	238.3903 - 310.0311		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
310	1396.291	241.1741 - 312.7929		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$		985
480	1396.580	238.3903 - 309.9937		$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
330	1397.440	241.5824 - 313.1427		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		985
390	1397.905	248.6982 - 320.2345		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
580	1398.113	235.1999 - 306.7252		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		985
70	1398.355	248.0989 - 319.6119		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
500	1398.623							985
240	1398.893	242.3403 - 313.8258		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		985
300	1399.921	244.8212 - 316.2540		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
280	1400.523	241.8754 - 313.2787		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
290	1400.584	248.0989 - 319.4972		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		985
300	1400.894	244.4854 - 315.8687		$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^2P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
510	1401.190	217.1710 - 288.5397		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
680	1402.220	217.7132 - 289.0290		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
590	1402.613	236.3531 - 307.6492		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		985
720	1402.759							985
240	1403.205	244.8667 - 316.1320		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4H^\circ$	$\frac{5}{2} - \frac{7}{2}$		985
500	1403.779	238.3903 - 309.6258		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4I^\circ$	$\frac{9}{2} - \frac{9}{2}$		985
230	1404.165	248.6982 - 319.9157		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		985
590	1406.553	238.1296 - 309.2254		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		985
480	1407.242	238.1646 - 309.2254		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		985
820	1407.664	218.4072 - 289.4475		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	780	1407.957	217.7132 - 288.7384	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		985
	440	1408.534	255.2925 - 326.2888	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		985
	80	1409.133	238.2591 - 309.2254	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		985
	420	1410.157	248.6982 - 319.6119	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		985
	300	1411.600	283.7367 - 354.5790	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	240	1411.841	262.0773 - 332.9066	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	190	1412.619	244.8667 - 315.6575	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		985
	460	1413.292	238.1062 - 308.8635	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	760	1413.420	236.7460 - 307.4964	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	140	1414.451	238.1646 - 308.8635	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		985
	360	1415.881	283.5921 - 354.2181	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		985
	650	1415.965	218.4072 - 289.0290	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		985
	460	1416.352	238.2591 - 308.8635	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		985
	280	1418.204	244.4854 - 314.9973	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		985
	720	1420.025						985
	400	1420.846	283.7367 - 354.1164	$3d^4(b^3F)4s - 3d^4(a^1F)4p$	$^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	330	1421.010	236.3531 - 306.7252	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		985
	340	1421.256	244.4854 - 314.8455	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^2P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		985
	330	1423.072	244.8212 - 315.0922	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		985
	680	1424.211	236.1580 - 306.3728	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	420	1425.659	283.5921 - 353.7355	$3d^4(b^3F)4s - 3d^4(a^1F)4p$	$^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	320	1426.108	261.9940 - 332.1142	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		985
	290	1426.359	236.7460 - 306.8546	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		985
	780	1426.831	235.9611 - 306.0464	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$		985
	500	1428.080	244.8212 - 314.8455	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		985
	150	1429.027	244.8667 - 314.8455	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	380	1429.766	236.4312 - 306.3728	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{9}{2}$		985
	350	1430.857	236.1580 - 306.0464	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{7}{2}$		985
	500	1435.668						985
	360	1436.707	241.8754 - 311.4796	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		985
	590	1439.010						985
	370	1439.168	238.1646 - 307.6492	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	420	1440.974	244.8212 - 314.2191	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		985
	200	1441.917	244.8667 - 314.2191	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		985
	300	1442.165	244.4854 - 313.8258	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		985
	360	1446.535	241.8754 - 311.0057	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		985
	1470.9		57.0826 - 125.0688	$3d^5 - 3d^5$	$a^2D - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
	1471.9		57.0826 - 125.0227	$3d^5 - 3d^5$	$a^2D - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
	1487.1		57.8232 - 125.0688	$3d^5 - 3d^5$	$a^2D - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
	1488.1		57.8232 - 125.0227	$3d^5 - 3d^5$	$a^2D - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
	1524.1		59.4549 - 125.0688	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,1087
	1525.1		59.4549 - 125.0227	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,1087
	1531.18		242.3403 - 307.6492	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P	375,985
	1542.45		217.1710 - 282.0028	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4P^o$	$\frac{5}{2} - \frac{1}{2}$	P	375,985
	1546.54		244.8212 - 309.4818	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4G^o$	$\frac{7}{2} - \frac{5}{2}$	P	375,985
	1547.63		244.8667 - 309.4818	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4G^o$	$\frac{5}{2} - \frac{3}{2}$	P	375,985
	1549.5		60.5322 - 125.0688	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
	1550.6		60.5322 - 125.0227	$3d^5 - 3d^5$	$a^2F - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
	1552.69		244.8212 - 309.2254	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4G^o$	$\frac{7}{2} - \frac{5}{2}$	P	375,985
	1553.16		242.3403 - 306.7252	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P	375,985
	1553.32		244.4854 - 308.8635	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P	375,985
	1560.32		242.7650 - 306.8546	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4H^o$	$\frac{7}{2} - \frac{11}{2}$	P	375,985
	1563.52		216.8205 - 280.7787	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$	P	375,985
	1568.57		217.1710 - 280.9235	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6P^o$	$\frac{3}{2} - \frac{5}{2}$	P	375,985

CO V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1572.13	242.7650 – 306.3728	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$	P	375,985
		1572.14	217.1710 – 280.7787	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	375,985
		1575.10	217.7132 – 281.2014	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	375,985
		1580.24	242.7650 – 306.0464	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$	P	375,985
		1582.02	217.7132 – 280.9235	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	375,985
		1583.19	244.4854 – 307.6492	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	375,985
		1589.38	243.4552 – 306.3728	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$	P	375,985
		1592.50	218.4072 – 281.2014	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	375,985
		1599.58	218.4072 – 280.9235	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	375,985
		1604.08	218.4072 – 280.7482	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6F^\circ$	$\frac{7}{2} - \frac{9}{2}$	P	375,985
		1606.69	244.4854 – 306.7252	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	375,985
		1608.81	217.7132 – 279.8711	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6F^\circ$	$\frac{5}{2} - \frac{7}{2}$	P	375,985
		1612.35	217.1710 – 279.1924	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6F^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	375,985
		1626.57	217.7132 – 279.1924	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6F^\circ$	$\frac{5}{2} - \frac{5}{2}$	P	375,985
		1626.97	218.4072 – 279.8711	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$	P	375,985
		1650.8	217.1710 – 277.7479	$3d^4(a^5D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1087
		1651.4	216.8205 – 277.3768	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{1}{2} - \frac{3}{2}$	F,P	375,1087
		1652.6	216.8205 – 277.3302	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{1}{2} - \frac{3}{2}$	F,P	375,1087
		1661.0	217.1710 – 277.3768	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,1087
		1661.4	217.1710 – 277.3607	$3d^4(a^3D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{7}{2}$	F,P	375,1087
		1662.3	217.1710 – 277.3302	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1087
		1665.7	217.7132 – 277.7479	$3d^4(a^5D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
		1676.1	217.7132 – 277.3768	$3d^4(a^3D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,1087
		1676.5	217.7132 – 277.3607	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{7}{2}$	F,P	375,1087
		1681.3	217.7132 – 277.1924	$3d^4(a^3D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{5}{2} - \frac{9}{2}$	F,P	375,1087
		1685.2	218.4072 – 277.7479	$3d^4(a^5D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	$\frac{7}{2} - \frac{3}{2}$	F,P	375,1087
		1696.2	218.4072 – 277.3607	$3d^4(a^3D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,1087
		1697.9	217.7132 – 276.6088	$3d^4(a^3D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1087
		1701.1	218.4072 – 277.1924	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	$\frac{7}{2} - \frac{9}{2}$	F,P	375,1087
		1712.7	57.0826 – 115.4685	$3d^5 - 3d^5$	$a^2D - a^2P$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,1087
		1713.7	57.0826 – 115.4371	$3d^5 - 3d^5$	$a^2D - a^2P$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
		1718.2	218.4072 – 276.6088	$3d^4(a^3D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,1087
		1734.7	57.8232 – 115.4685	$3d^5 - 3d^5$	$a^2D - a^2P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1087
		1735.7	57.8232 – 115.4371	$3d^5 - 3d^5$	$a^2D - a^2P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1087
		1832.6	70.5025 – 125.0688	$3d^5 - 3d^5$	$b^2F - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1087
		1834.2	70.5025 – 125.0227	$3d^5 - 3d^5$	$b^2F - c^2D$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,1087
		1837.7	70.6528 – 125.0688	$3d^5 - 3d^5$	$b^2F - c^2D$	$\frac{7}{2} - \frac{3}{2}$	F,P	375,1087
		1839.3	70.6528 – 125.0227	$3d^5 - 3d^5$	$b^2F - c^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,1087

COBALT VI (Co⁵⁺), Z = 27
Ground State $1s^22s^22p^63s^23p^63d^4(^5D_0)$ (22 electrons)
Ionization Potential [823 000] cm^{-1} ; [102] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
80		260.284	28.8059 – 413.0038	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^\circ$	5 - 5		433
430		260.572	29.2338 – 413.0038	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^\circ$	6 - 5		433
300		260.692	28.8059 – 412.4000	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^\circ$	5 - 4		433
230		260.845	28.3766 – 411.7471	$3d^4 - 3d^3(a^2F)4p$	$a^3H - ^3G^\circ$	4 - 3		433
180		261.652	30.8167 – 413.0038	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^\circ$	4 - 5		433
170		261.942	30.6346 – 412.4000	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^\circ$	3 - 4		433

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	262.337	30.5549 - 411.7471	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3G^\circ$	2 - 3		433
	100	263.589	1.1247 - 380.5034	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^\circ$	3 - 4		433
	390	264.046	1.7816 - 380.5034	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^\circ$	4 - 4		433
	130	264.199	0.5890 - 379.0908	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^\circ$	2 - 3		433
	360	264.446	34.8548 - 413.0038	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^\circ$	5 - 5		433
	120	264.574	1.1247 - 379.0908	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^\circ$	3 - 3		433
	210	264.602	34.4746 - 412.4000	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^\circ$	4 - 4		433
	180	264.745	34.0258 - 411.7471	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^\circ$	3 - 3		433
	250	264.866	34.8548 - 412.4000	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^\circ$	5 - 4		433
	320	265.035	1.7816 - 379.0908	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5D^\circ$	4 - 3		433
	190	265.059	34.4746 - 411.7471	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3G^\circ$	4 - 3		433
	30	265.315	30.6346 - 407.5477	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^\circ$	3 - 4		433
	110	265.442	30.8167 - 407.5477	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^\circ$	4 - 4		433
	170	265.561	30.6346 - 407.1950	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^\circ$	3 - 3		433
	130	265.584	30.5549 - 407.0800	$3d^4 - 3d^3(a^2F)4p$	$a^3F - ^3F^\circ$	2 - 2		433
	160	265.954	41.9259 - 417.9262	$3d^4 - 3d^3(a^2F)4p$	$a^1G - ^1F^\circ$	4 - 3		433
	100	266.116	0.5890 - 376.3650	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	2 - 3		433
	450	266.496	1.1247 - 376.3650	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	3 - 3		433
	230	266.635	0.2040 - 375.2490	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	1 - 2		433
	520	266.909	0.5890 - 375.2490	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	2 - 2		433
	800	266.965	1.7816 - 376.3650	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	4 - 3		433
	500	266.978	0.0 - 374.5564	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	0 - 1		433
	480	267.128	0.2040 - 374.5564	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	1 - 1		433
	610	267.291	1.1247 - 375.2490	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	3 - 2		433
	370	267.403	0.5890 - 374.5564	$3d^4 - 3d^3(a^4P)4p$	$ga^5D - ^5P^\circ$	2 - 1		433
	230	267.749	70.1643 - 443.6520	$3d^4 - 3d^3(b^2D)4p$	$b^3P - ^3P^\circ$	2 - 2		433
	90	267.975	34.0258 - 407.1950	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3F^\circ$	3 - 3		433
	480	268.059	34.0258 - 407.0800	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3F^\circ$	3 - 2		433
	640	268.301	34.4746 - 407.1950	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3F^\circ$	4 - 3		433
	650	268.316	34.8548 - 407.5477	$3d^4 - 3d^3(a^2F)4p$	$a^3G - ^3F^\circ$	5 - 4		433
	60	268.659	41.8565 - 414.0756	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^3D^\circ$	2 - 2		433
	90	268.790	71.6242 - 443.6520	$3d^4 - 3d^3(b^2D)4p$	$b^3P - ^3P^\circ$	1 - 2		433
	110	269.390	41.6759 - 412.8850	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^3D^\circ$	3 - 3		433
	440	270.164	70.7984 - 440.9432	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3F^\circ$	4 - 4		433
	50	270.311	70.9984 - 440.9432	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3F^\circ$	3 - 4		433
	200	270.843	70.7984 - 440.0160	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3F^\circ$	4 - 3		433
	220	270.917	70.9256 - 440.0417	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3F^\circ$	2 - 2		433
	160	270.937	70.9256 - 440.0160	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3F^\circ$	2 - 3		433
	210	270.972	70.9984 - 440.0417	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3F^\circ$	3 - 2		433
	330	270.990	70.9984 - 440.0160	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3F^\circ$	3 - 3		433
	400	271.597	28.3766 - 396.5698	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3G^\circ$	4 - 3		433
	50	271.709	28.3766 - 396.4202	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3G^\circ$	4 - 4		433
	510	272.025	28.8059 - 396.4202	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3G^\circ$	5 - 4		433
	5	272.149	28.8059 - 396.2354	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3G^\circ$	5 - 5	Q	48
	500	272.480	29.2338 - 396.2354	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3G^\circ$	6 - 5		433
	100	272.620	28.3766 - 395.1885	$3d^4 - 3d^3(a^2D)4p$	$a^3H - ^1F^\circ$	4 - 3		433
	340	273.319	41.6759 - 407.5477	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^3F^\circ$	3 - 4		433
	300	273.717	41.8565 - 407.1950	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^3F^\circ$	2 - 3		433
	490	273.817	70.7984 - 436.0050	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3D^\circ$	4 - 3		433
	280	273.968	70.9984 - 436.0050	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3D^\circ$	3 - 3		433
	290	273.982	42.0980 - 407.0800	$3d^4 - 3d^3(a^2F)4p$	$a^3D - ^3F^\circ$	1 - 2		433
	70	274.048	27.1662 - 392.0707	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^\circ$	0 - 1		433
	280	274.222	28.4615 - 393.1270	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^\circ$	1 - 2		433
	190	274.260	70.9256 - 435.5400	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3D^\circ$	2 - 2		433

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	640	274.320	70.9984 - 435.5400	$3d^4 - 3d^3(b^2D)4p$	$b^3F - ^3D^o$	3 - 2		433
	220	274.442	30.8167 - 395.1885	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^1F^o$	4 - 3		433
	190	274.498	29.2338 - 393.5346	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^1H^o$	6 - 5		433
	250	274.538	1.7816 - 366.0299	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3G^o$	4 - 5		433
	70	274.757	1.1247 - 365.0848	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3G^o$	3 - 4		433
	610	274.819	29.2338 - 393.1097	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	6 - 7		433
	110	274.990	30.5061 - 394.1590	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3P^o$	2 - 2		433
	160	275.020	28.4615 - 392.0707	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	1 - 1		433
	30	275.085	30.6346 - 394.1590	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3P^o$	3 - 2		433
	370	275.168	30.5061 - 393.9204	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	2 - 3		433
	260	275.403	30.8167 - 393.9204	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	4 - 3		433
	500	275.548	28.8059 - 391.7194	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	5 - 6		433
	140	275.770	30.5061 - 393.1270	$3d^4 - 3d^3(a^2D)4p$	$a^3P - ^3D^o$	2 - 2		433
	480	275.827	34.0258 - 396.5698	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	3 - 3		433
	530	275.869	30.6346 - 393.1270	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	3 - 2		433
	440	275.943	28.3766 - 390.7701	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3I^o$	4 - 5		433
	120	276.171	34.4746 - 396.5698	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	4 - 3		433
	580	276.285	34.4746 - 396.4202	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	4 - 4		433
	30	276.426	34.4746 - 396.2354	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	4 - 5		433
	280	276.575	34.8548 - 396.4202	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	5 - 4		433
	380	276.613	30.5549 - 392.0707	$3d^4 - 3d^3(a^2D)4p$	$a^3F - ^3D^o$	2 - 1		433
	580	276.716	34.8548 - 396.2354	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3G^o$	5 - 5		433
	470	277.080	0.5890 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	2 - 3		433
	430	277.214	52.7395 - 413.4722	$3d^4 - 3d^3(a^2F)4p$	$a^1D - ^1D^o$	2 - 2		433
	110	277.493	1.1247 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	3 - 3		433
	490	277.581	0.2040 - 360.4588	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	1 - 2		433
	420	277.853	0.0 - 359.9029	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	0 - 1		433
	120	277.936	30.6346 - 390.4303	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	3 - 3		433
	350	278.011	0.2040 - 359.9029	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	1 - 1		433
	320	278.038	30.5549 - 390.2175	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	2 - 1		433
	550	278.076	30.8167 - 390.4303	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	4 - 3		433
	350	278.116	30.6346 - 390.1958	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3D^o$	3 - 2		433
	950	278.178	1.7816 - 361.2682	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	4 - 5		433
	880	278.186	1.1247 - 360.5912	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	3 - 4		433
	280	278.300	28.8059 - 388.1278	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	5 - 6		433
	270	278.363	0.5890 - 359.8330	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	2 - 3		433
	790	278.419	28.3766 - 387.5483	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	4 - 4		433
	80	278.569	30.6346 - 389.6103	$3d^4 - 3d^3(a^4P)4p$	$a^3F - ^3F^o$	3 - 3		433
	930	278.636	29.2338 - 388.1278	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	6 - 6		433
	50	278.685	0.2040 - 359.0370	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	1 - 2	Q	48
	840	278.699	1.7816 - 360.5912	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	4 - 4		433
	900	278.739	28.8059 - 387.5647	$3d^4 - 3d^3(a^2H)4p$	$a^3H - ^3H^o$	5 - 5		433
	860	278.778	1.1247 - 359.8330	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	3 - 3		433
	680	278.981	0.5890 - 359.0370	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	2 - 2		433
	280	279.044	0.0 - 358.3665	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	0 - 1		433
	480	279.203	0.2040 - 358.3665	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	1 - 1		433
	450	279.289	1.7816 - 359.8330	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	4 - 3		433
	370	279.327	59.9300 - 417.9262	$3d^4 - 3d^3(a^2F)4p$	$a^1F - ^1F^o$	3 - 3		433
	680	279.398	1.1247 - 359.0370	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5F^o$	3 - 2		433
	920	279.497	0.5890 - 358.3665	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	2 - 1		433
	780	279.523	30.8167 - 388.5647	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	4 - 3		433
	780	279.773	0.5890 - 358.0222	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	2 - 3		433
	510	279.863	30.6346 - 387.9525	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	3 - 2		433
	910	280.007	1.7816 - 358.9150	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	4 - 4		433

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	730	280.058	0.2040 - 357.2725	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	1 - 2		433
	710	280.193	1.1247 - 358.0222	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	3 - 3		433
	520	280.311	0.0 - 356.7464	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	0 - 1		433
	280	280.353	0.5890 - 357.2725	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	2 - 2		433
	390	280.452	29.2338 - 385.8020	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1H^o$	6 - 5		433
	400	280.471	0.2040 - 356.7464	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	1 - 1		433
	330	280.578	28.3766 - 384.7846	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1G^o$	4 - 4		433
	780	280.650	34.8548 - 391.1703	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	5 - 4		433
	500	280.709	1.7816 - 358.0222	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	4 - 3		433
	580	280.767	0.5890 - 356.7464	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^3D^o$	2 - 1		433
	600	280.779	1.1247 - 357.2725	$3d^4 - 3d^3(a^4F)4p$	$ga^5D - ^5D^o$	3 - 2		433
	480	280.918	28.8059 - 384.7846	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^1G^o$	5 - 4		433
	550	280.934	34.4746 - 390.4303	$3d^4 - 3d^3(a^4P)4p$	$a^3G - ^3D^o$	4 - 3		433
	370	281.117	30.5549 - 386.2803	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3D^o$	2 - 1		433
	500	281.533	34.0258 - 389.2245	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	3 - 2		433
	390	281.582	34.4746 - 389.6103	$3d^4 - 3d^3(a^2D)4p$	$a^3G - ^3F^o$	4 - 3		433
	360	281.753	28.3766 - 383.2974	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3F^o$	4 - 3		433
	350	281.786	30.5061 - 385.386	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^1D^o$	2 - 2		433
	280	281.809	30.6346 - 385.4800	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1F^o$	3 - 3		433
	320	281.958	30.8167 - 385.4800	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1F^o$	4 - 3		433
	380	281.972	41.9259 - 396.5698	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^3G^o$	4 - 3		433
	180	282.089	30.5061 - 385.0033	$3d^4 - 3d^3(a^2P)4p$	$a^3P - ^3P^o$	2 - 2		433
	340	282.130	30.5549 - 385.0033	$3d^4 - 3d^3(a^2P)4p$	$a^3F - ^3P^o$	2 - 2		433
	290	282.343	28.3766 - 382.5568	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3F^o$	4 - 4		433
	200	282.414	34.4746 - 388.5647	$3d^4 - 3d^3(a^2P)4p$	$a^3G - ^3D^o$	4 - 3		433
	520	282.511	30.8167 - 384.7846	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^1G^o$	4 - 4		433
	350	282.678	42.7996 - 396.5590	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^1I^o$	6 - 6		433
	270	282.866	34.0258 - 387.5483	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3H^o$	3 - 4		433
	470	282.937	42.7996 - 396.2354	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^3G^o$	6 - 5		433
	860	283.076	41.9259 - 395.1885	$3d^4 - 3d^3(a^2D)4p$	$a^1G - ^1F^o$	4 - 3		433
	88	283.091	29.2338 - 382.4755	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3G^o$	6 - 5		433
	170	283.215	34.4746 - 387.5647	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3H^o$	4 - 5		433
	670	283.406	28.8059 - 381.6556	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3G^o$	5 - 4		433
	170	283.518	34.8548 - 387.5647	$3d^4 - 3d^3(a^2H)4p$	$a^3G - ^3H^o$	5 - 5		433
	590	283.557	30.6346 - 383.2974	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^o$	3 - 3		433
	610	283.700	41.6759 - 394.1590	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^o$	3 - 2		433
	420	283.847	41.8565 - 394.1590	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3P^o$	2 - 2		433
	770	283.881	28.3766 - 380.6365	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3G^o$	4 - 3		433
	580	283.929	30.5549 - 382.7561	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^o$	2 - 2		433
	280	283.992	30.6346 - 382.7561	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^o$	3 - 2		433
	300	284.095	41.9259 - 393.9204	$3d^4 - 3d^3(a^2D)4p$	$a^1G - ^3D^o$	4 - 3		433
	90	284.222	29.2338 - 381.0737	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^o$	6 - 6		433
	490	284.300	30.8167 - 382.5568	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3F^o$	4 - 4		433
	410	284.366	30.8167 - 382.4755	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^o$	4 - 5		433
	150	284.679	41.8565 - 393.1270	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3D^o$	2 - 2		433
	150	284.831	41.9259 - 393.0095	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^1G^o$	4 - 4		433
	510	284.883	30.6346 - 381.6556	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^o$	3 - 4		433
	250	284.919	34.0258 - 385.0033	$3d^4 - 3d^3(a^2P)4p$	$a^3G - ^3P^o$	3 - 2		433
	390	285.031	30.8167 - 381.6556	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^o$	4 - 4		433
	840	285.116	42.7996 - 393.5346	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^1H^o$	6 - 5		433
	330	285.648	30.5549 - 380.6365	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^o$	2 - 3		433
	180	285.713	30.6346 - 380.6365	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^o$	3 - 3		433
	480	285.788	29.2338 - 379.1430	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^o$	6 - 5		433
	250	286.128	41.6759 - 391.1703	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^o$	3 - 4		433

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	280	286.310	34.0258 - 383.2974	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3F^o$	3 - 3		433
	330	286.371	28.8059 - 378.0020	$3d^4 - 3d^3(a^2G)4p$	$a^3H - ^3H^o$	5 - 4		433
	180	286.662	41.9259 - 390.7701	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^3I^o$	4 - 5		433
	120	286.681	34.4746 - 383.2974	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3F^o$	4 - 3		433
	80	286.735	41.6759 - 390.4303	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^o$	3 - 3		433
	290	286.928	41.6759 - 390.1958	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^o$	3 - 2		433
	440	287.064	41.8565 - 390.1958	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^o$	2 - 2		433
	490	287.077	41.8565 - 390.1958	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^o$	2 - 2		433
	410	287.134	52.7395 - 401.0103	$3d^4 - 3d^3(a^2P)4p$	$a^1D - ^1P^o$	2 - 1		433
	230	287.258	42.0980 - 390.2175	$3d^4 - 3d^3(a^4P)4p$	$a^3D - ^3D^o$	1 - 1		433
	380	287.289	34.4746 - 382.5568	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3F^o$	4 - 4		433
	170	287.349	34.4746 - 382.4755	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^o$	4 - 5		433
	460	287.381	42.7996 - 390.7701	$3d^4 - 3d^3(a^2H)4p$	$a^1I - ^3I^o$	6 - 5		433
	520	287.411	41.6759 - 389.6103	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^o$	3 - 3		433
	370	287.559	41.8565 - 389.6103	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^o$	2 - 3		433
	110	287.615	41.9259 - 389.6103	$3d^4 - 3d^3(a^2D)4p$	$a^1G - ^3F^o$	4 - 3		433
	510	287.669	34.8548 - 382.4755	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^o$	5 - 5		433
	270	287.880	41.8565 - 389.2245	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^o$	2 - 2		433
	310	288.034	34.4746 - 381.6556	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^o$	4 - 4		433
	320	288.079	42.0980 - 389.2245	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^3F^o$	1 - 2		433
	440	288.227	42.0980 - 389.0360	$3d^4 - 3d^3(a^2D)4p$	$a^3D - ^1P^o$	1 - 1		433
	80	288.424	41.8565 - 388.5647	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^o$	2 - 3		433
	310	288.507	34.0258 - 380.6365	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^o$	3 - 3		433
	620	288.835	34.8548 - 381.0737	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^o$	5 - 6		433
	190	288.937	41.8565 - 387.9525	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^o$	2 - 2		433
	430	289.335	41.9259 - 387.5483	$3d^4 - 3d^3(a^2H)4p$	$a^1G - ^3H^o$	4 - 4		433
	560	290.134	34.4746 - 379.1430	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^o$	4 - 5		433
	290	290.543	42.0980 - 386.2803	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3D^o$	1 - 1		433
	510	290.718	34.0258 - 378.0020	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3H^o$	3 - 4		433
	370	290.773	70.1643 - 414.0756	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3D^o$	2 - 2		433
	520	290.802	41.9259 - 385.8020	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^1H^o$	4 - 5		433
	250	290.840	70.9256 - 414.7580	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3D^o$	2 - 1		433
	240	291.075	41.9259 - 385.4800	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^1F^o$	4 - 3		433
	250	291.095	41.8565 - 385.386	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^1D^o$	2 - 2		433
	370	291.427	41.8565 - 385.0033	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3P^o$	2 - 2		433
	350	291.453	41.6759 - 384.7846	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^1G^o$	3 - 4		433
	36	291.478	70.9984 - 414.0756	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3D^o$	3 - 2		433
	440	291.543	42.7996 - 385.8020	$3d^4 - 3d^3(a^2G)4p$	$a^1I - ^1H^o$	6 - 5		433
	200	291.625	42.0980 - 385.0033	$3d^4 - 3d^3(a^2P)4p$	$a^3D - ^3P^o$	1 - 2		433
	640	291.666	41.9259 - 384.7846	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^1G^o$	4 - 4		433
	540	291.783	70.1643 - 412.8850	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^3D^o$	2 - 3		433
	480	292.015	52.7395 - 395.1885	$3d^4 - 3d^3(a^2D)4p$	$a^1D - ^1F^o$	2 - 3		433
	330	292.219	70.7984 - 413.0038	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	4 - 5		433
	290	292.321	70.7984 - 412.8850	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3D^o$	4 - 3		433
	20	292.525	71.6242 - 413.4722	$3d^4 - 3d^3(a^2F)4p$	$b^3P - ^1D^o$	1 - 2		433
	280	292.878	41.8565 - 383.2974	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	2 - 3		433
	360	292.912	70.9984 - 412.4000	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	3 - 4		433
	270	293.357	41.6759 - 382.5568	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	3 - 4		433
	190	293.410	70.9256 - 411.7471	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	2 - 3		433
	90	293.472	70.9984 - 411.7471	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3G^o$	3 - 3		433
	490	293.552	42.0980 - 382.7561	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3F^o$	1 - 2		433
	600	293.574	41.9259 - 382.5568	$3d^4 - 3d^3(a^2G)4p$	$a^1G - ^3F^o$	4 - 4		433
	280	294.135	41.6759 - 381.6556	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3G^o$	3 - 4		433
	50	295.176	41.8565 - 380.6365	$3d^4 - 3d^3(a^2G)4p$	$a^3D - ^3G^o$	2 - 3		433

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	120	295.262	30.6346 - 369.3160	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	3 - 4		433
	420	295.423	30.8167 - 369.3160	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	4 - 4		433
	140	295.983	30.5549 - 368.4122	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	2 - 3		433
	340	296.053	30.6346 - 368.4122	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	3 - 3		433
	190	296.212	30.8167 - 368.4122	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	4 - 3		433
	400	296.737	30.5549 - 367.5545	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	2 - 2		433
	680	296.827	81.0381 - 417.9262	$3d^4 - 3d^3(a^2F)4p$	$b^1G - ^1F^o$	4 - 3		433
	880	296.914	29.2338 - 366.0299	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^o$	6 - 5		433
	330	296.955	70.7984 - 407.5477	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	4 - 4		433
	70	297.131	70.9984 - 407.5477	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	3 - 4		433
	820	297.370	28.8059 - 365.0848	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^o$	5 - 4		433
	160	297.444	70.9984 - 407.1950	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	3 - 3		433
	200	297.483	70.9256 - 407.0800	$3d^4 - 3d^3(a^2F)4p$	$b^3F - ^3F^o$	2 - 2		433
	760	297.648	28.3766 - 364.3442	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^o$	4 - 3		433
	360	298.318	30.8167 - 366.0299	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^o$	4 - 5		433
	340	298.649	34.4746 - 369.3160	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^o$	4 - 4		433
	780	298.990	34.8548 - 369.3160	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^o$	5 - 4		433
	340	299.056	34.0258 - 368.4122	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^o$	3 - 3		433
	290	299.161	30.8167 - 365.0848	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^o$	4 - 4		433
	670	299.458	34.4746 - 368.4122	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^o$	4 - 3		433
	310	299.590	30.5549 - 364.3442	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^o$	2 - 3		433
	260	299.662	30.6346 - 364.3442	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^o$	3 - 3		433
	610	299.824	34.0258 - 367.5545	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^o$	3 - 2		433
	620	300.228	59.9300 - 393.0095	$3d^4 - 3d^3(a^2H)4p$	$a^1F - ^1G^o$	3 - 4		433
	630	300.533	52.7395 - 385.4800	$3d^4 - 3d^3(a^2G)4p$	$a^1D - ^1F^o$	2 - 3		433
	630	300.538	27.1662 - 359.9029	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3F^o$	0 - 1		433
	260	301.175	29.2338 - 361.2682	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3F^o$	6 - 5		433
	430	301.208	28.4615 - 360.4588	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^o$	1 - 2		433
	90	301.400	28.8059 - 360.5912	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3F^o$	5 - 4		433
	110	301.609	34.4746 - 366.0299	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^o$	4 - 5		433
	150	301.710	28.4615 - 359.9029	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3F^o$	1 - 1		433
	40	301.784	81.0381 - 412.4000	$3d^4 - 3d^3(a^2F)4p$	$b^1G - ^3G^o$	4 - 4		433
	580	301.954	34.8548 - 366.0299	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^o$	5 - 5		433
	120	302.061	34.0258 - 365.0848	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^o$	3 - 4		433
	610	302.125	30.5061 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^o$	2 - 3		433
	20	302.157	30.5549 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^o$	2 - 3	Q	48
	130	302.254	30.6346 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^o$	3 - 3		433
	510	302.410	30.8167 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^o$	4 - 3		433
	470	302.471	34.4746 - 365.0848	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^o$	4 - 4		433
	360	302.738	34.0258 - 364.3442	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^o$	3 - 3		433
	200	303.073	30.5061 - 360.4588	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^o$	2 - 2		433
	340	303.192	30.6346 - 360.4588	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^o$	3 - 2		433
	300	303.416	27.1662 - 356.7464	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^o$	0 - 1		433
	10	303.565	30.5061 - 359.9029	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3F^o$	2 - 1	Q	48
	320	303.629	30.5549 - 359.9029	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	2 - 1		433
	360	303.687	70.1643 - 399.4519	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3S^o$	2 - 1		433
	20	303.943	106.5315 - 435.5400	$3d^4 - 3d^3(b^2D)4p$	$b^1D - ^3D^o$	2 - 2	Q	48
	230	304.126	28.4615 - 357.2725	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^o$	1 - 2		433
	5	304.374	30.5061 - 359.0370	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3F^o$	2 - 2	Q	48
	20	304.504	30.6346 - 359.0370	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^o$	3 - 2		433
	130	304.615	28.4615 - 356.7464	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^o$	1 - 1		433
	100	304.977	52.7395 - 380.6365	$3d^4 - 3d^3(a^2G)4p$	$a^1D - ^3G^o$	2 - 3		433
	250	305.036	71.6242 - 399.4519	$3d^4 - 3d^3(a^4P)4p$	$b^3P - ^3S^o$	1 - 1		433
	290	305.215	41.6759 - 369.3160	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3F^o$	3 - 4		433

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	170	305.329	30.5061 - 358.0222	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^o$	2 - 3		433
	280	305.614	30.8167 - 358.0222	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^o$	4 - 3		433
	90	306.029	30.5061 - 357.2725	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^5D^o$	2 - 2		433
	170	306.130	30.6346 - 357.2725	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^5D^o$	3 - 2		433
	190	306.225	41.8565 - 368.4122	$3d^4 - 3d^3(a^4F)4p$	$a^3D - ^3F^o$	2 - 3		433
	80	306.360	34.8548 - 361.2682	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^5F^o$	5 - 5		433
	200	306.568	30.5549 - 356.7464	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^o$	2 - 1		433
	310	307.088	70.9256 - 396.5698	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^o$	2 - 3		433
	260	307.104	70.7984 - 396.4202	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^o$	4 - 4		433
	50	307.157	70.9984 - 396.5698	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^o$	3 - 3		433
	390	307.263	59.9300 - 385.386	$3d^4 - 3d^3(a^2P)4p$	$a^1F - ^1D^o$	3 - 2		433
	620	307.287	70.7984 - 396.2354	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^3G^o$	4 - 5		433
	100	308.396	70.9256 - 395.1885	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^1F^o$	2 - 3		433
	210	308.648	70.1643 - 394.1590	$3d^4 - 3d^3(a^2D)4p$	$b^3P - ^3P^o$	2 - 2		433
	240	309.482	70.7984 - 393.9204	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^o$	4 - 3		433
	100	309.851	70.7984 - 393.5346	$3d^4 - 3d^3(a^2H)4p$	$b^3F - ^1H^o$	4 - 5		433
	180	310.438	70.9984 - 393.1270	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^o$	3 - 2		433
	210	311.391	70.9256 - 392.0707	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3D^o$	2 - 1		433
	490	312.865	70.7984 - 390.4303	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3D^o$	4 - 3		433
	340	313.200	70.9256 - 390.2175	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3D^o$	2 - 1		433
	420	313.290	70.9984 - 390.1958	$3d^4 - 3d^3(a^4P)4p$	$b^3F - ^3D^o$	3 - 2		433
	300	313.667	70.7984 - 389.6103	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3F^o$	4 - 3		433
	110	313.868	70.9984 - 389.6103	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3F^o$	3 - 3		433
	90	314.250	70.9984 - 389.2245	$3d^4 - 3d^3(a^2D)4p$	$b^3F - ^3F^o$	3 - 2		433
	70	317.257	81.0381 - 396.2354	$3d^4 - 3d^3(a^2H)4p$	$b^1G - ^3G^o$	4 - 5		433
	20	318.320	81.0381 - 395.1885	$3d^4 - 3d^3(a^2D)4p$	$b^1G - ^1F^o$	4 - 3		433
	280	320.006	81.0381 - 393.5346	$3d^4 - 3d^3(a^2H)4p$	$b^1G - ^1H^o$	4 - 5		433
	210	320.542	81.0381 - 393.0095	$3d^4 - 3d^3(a^2H)4p$	$b^1G - ^1G^o$	4 - 4		433
	160	328.125	81.0381 - 385.8020	$3d^4 - 3d^3(a^2G)4p$	$b^1G - ^1H^o$	4 - 5		433
		334.989	70.7984 - 369.3160	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^o$	4 - 4	P	375,433
	260	335.103						433
	210	336.225	70.9984 - 368.4122	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^o$	3 - 3		433
	230	337.119	70.9256 - 367.5545	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^o$	2 - 2		433
		337.20	70.9984 - 367.5545	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3F^o$	3 - 2	P	375,1087
		338.72	70.7984 - 366.0299	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3G^o$	4 - 5	P	375,1087
		339.58	106.5315 - 401.0103	$3d^4 - 3d^3(a^2P)4p$	$b^1D - ^1P^o$	2 - 1	P	375,1087
		340.04	70.9984 - 365.0848	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3G^o$	3 - 4	P	375,1087
		340.25	1.1247 - 295.0256	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	3 - 3	F,P	375,1087
		340.47	0.2040 - 293.9145	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	1 - 1	F,P	375,1087
		340.51	106.5315 - 400.2053	$3d^4 - 3d^3(a^2D)4p$	$b^1D - ^1D^o$	2 - 2	P	375,1087
		340.55	0.5890 - 294.2295	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	2 - 2	F,P	375,1087
		340.81	70.9256 - 364.3442	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3G^o$	2 - 3	P	375,1087
		340.92	0.5890 - 293.9145	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	2 - 1	F,P	375,1087
		341.01	1.7816 - 295.0256	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	4 - 3	F,P	375,1087
		341.17	1.1247 - 294.2295	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	3 - 2	F,P	375,1087
		341.54	1.1247 - 293.9145	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	3 - 1	F,P	375,1087
		341.94	1.7816 - 294.2295	$3d^4 - 3d^3(a^4P)4s$	$ga^5D - ^5P$	4 - 2	F,P	375,1087
		343.25	70.1643 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$b^3P - ^3D^o$	2 - 3	P	375,1087
		344.00	70.7984 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3D^o$	4 - 3	P	375,1087
		344.15	70.9256 - 361.4951	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3D^o$	2 - 3	P	375,1087
		345.47	70.9984 - 360.4588	$3d^4 - 3d^3(a^4F)4p$	$b^3F - ^3D^o$	3 - 2	P	375,1087
		346.22	71.6242 - 360.4588	$3d^4 - 3d^3(a^4F)4p$	$b^3P - ^3D^o$	1 - 2	P	375,1087
		346.43	106.5315 - 395.1885	$3d^4 - 3d^3(a^2D)4p$	$b^1D - ^1F^o$	2 - 3	P	375,1087
		351.56	72.3027 - 356.7464	$3d^4 - 3d^3(a^4F)4p$	$b^3P - ^3D^o$	0 - 1	P	375,1087

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		353.98	106.5315 - 389.0360	$3d^4 - 3d^3(a^2D)4p$	$b^1D - ^1P^o$	2 - 1	P	375,1087
		358.49	106.5315 - 385.4800	$3d^4 - 3d^3(a^2G)4p$	$b^1D - ^1F^o$	2 - 3	P	375,1087
		358.61	106.5315 - 385.386	$3d^4 - 3d^3(a^2P)4p$	$b^1D - ^1D^o$	2 - 2	P	375,1087
		363.79	1.1247 - 276.0080	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	3 - 5	F,P	375,1087
		364.30	0.5890 - 275.0880	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	2 - 4	F,P	375,1087
		364.66	1.7816 - 276.0080	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	4 - 5	F,P	375,1087
		364.81	0.2040 - 274.3190	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	1 - 3	F,P	375,1087
		365.01	1.1247 - 275.0880	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	3 - 4	F,P	375,1087
		365.32	0.5890 - 274.3190	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	2 - 3	F,P	375,1087
		365.33	0.0 - 273.7277	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	0 - 2	F,P	375,1087
		365.60	0.2040 - 273.7277	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	1 - 2	F,P	375,1087
		365.87	0.0 - 273.3248	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	0 - 1	F,P	375,1087
		365.89	1.7816 - 275.0880	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	4 - 4	F,P	375,1087
		366.04	1.1247 - 274.3190	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	3 - 3	F,P	375,1087
		366.11	0.5890 - 273.7277	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	2 - 2	F,P	375,1087
		366.14	0.2040 - 273.3248	$3d^4 - 3d^3(a^4F)4s$	$ga^3D - ^3F$	1 - 1	F,P	375,1087
		379.66	137.6192 - 401.0103	$3d^4 - 3d^3(a^2P)4p$	$b^1S - ^1P^o$	0 - 1	P	375,1087
		392.72	30.5549 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	2 - 4	F,P	375,1087
		392.84	30.6346 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	3 - 4	F,P	375,1087
		393.12	30.8167 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	4 - 4	F,P	375,1087
		394.62	30.5549 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	2 - 3	F,P	375,1087
		394.75	30.6346 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	3 - 3	F,P	375,1087
		395.03	30.8167 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	4 - 3	F,P	375,1087
		396.21	30.5549 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	2 - 2	F,P	375,1087
		396.33	30.6346 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	3 - 2	F,P	375,1087
		396.62	30.8167 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$a^3F - ^3F$	4 - 2	F,P	375,1087
		397.75	137.6192 - 389.0360	$3d^4 - 3d^3(a^2D)4p$	$b^1S - ^1P^o$	0 - 1	P	375,1087
		398.86	34.4746 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$a^3G - ^3F$	4 - 4	F,P	375,1087
		399.47	34.8548 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$a^3G - ^3F$	5 - 4	F,P	375,1087
		400.10	34.0258 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3G - ^3F$	3 - 3	F,P	375,1087
		400.82	34.4746 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3G - ^3F$	4 - 3	F,P	375,1087
		401.43	34.8548 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3G - ^3F$	5 - 3	F,P	375,1087
		401.73	34.0258 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$a^3G - ^3F$	3 - 2	F,P	375,1087
		402.46	34.4746 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$a^3G - ^3F$	4 - 2	F,P	375,1087
		410.65	41.6759 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$a^3D - ^3F$	3 - 4	F,P	375,1087
		410.96	41.8565 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$a^3D - ^3F$	2 - 4	F,P	375,1087
		412.74	41.6759 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3D - ^3F$	3 - 3	F,P	375,1087
		413.04	41.8565 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3D - ^3F$	2 - 3	F,P	375,1087
		413.46	42.0980 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$a^3D - ^3F$	1 - 3	F,P	375,1087
		414.78	41.8565 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$a^3D - ^3F$	2 - 2	F,P	375,1087
		415.20	42.0980 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$a^3D - ^3F$	1 - 2	F,P	375,1087
		466.44	70.7984 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	4 - 4	F,P	375,1087
		466.72	70.9256 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	2 - 4	F,P	375,1087
		466.87	70.9984 - 285.1890	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	3 - 4	F,P	375,1087
		469.12	70.7984 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	4 - 3	F,P	375,1087
		469.41	70.9256 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	2 - 3	F,P	375,1087
		469.57	70.9984 - 283.9610	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	3 - 3	F,P	375,1087
		471.37	70.7984 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	4 - 2	F,P	375,1087
		471.65	70.9256 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	2 - 2	F,P	375,1087
		471.81	70.9984 - 282.9480	$3d^4 - 3d^3(a^4F)4s$	$b^3F - ^3F$	3 - 2	F,P	375,1087
		916.11	28.4615 - 137.6192	$3d^4 - 3d^4$	$a^3P - b^1S$	1 - 0	F,P	375,1087
		933.59	30.5061 - 137.6192	$3d^4 - 3d^4$	$a^3P - b^1S$	2 - 0	F,P	375,1087
		1033.45	302.6888 - 399.4519	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3S^o$	1 - 1	P	375,1087
		1061.58	295.0256 - 389.2245	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3F^o$	3 - 2	P	375,1087

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1063.01	358.8109 - 452.8830	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^1D - ^1P^o$	2 - 1	P	375,1087
		1078.98	293.9145 - 386.5938	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5S^o$	1 - 2	P	375,1087
		1082.67	294.2295 - 386.5938	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5S^o$	2 - 2	P	375,1087
		1092.08	295.0256 - 386.5938	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5S^o$	3 - 2	P	375,1087
		1106.09	354.7828 - 445.1916	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^o$	1 - 0	P	375,1087
		1107.74	310.7368 - 401.0103	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^1P^o$	1 - 1	P	375,1087
		1110.30	354.5917 - 444.6578	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^o$	2 - 1	P	375,1087
		1119.62	354.3362 - 443.6520	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3P^o$	3 - 2	P	375,1087
		1124.32	307.6270 - 396.5698	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^o$	4 - 3	P	375,1087
		1127.04	307.6920 - 396.4202	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^o$	5 - 4	P	375,1087
		1131.09	306.4392 - 394.8496	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3P^o$	1 - 0	P	375,1087
		1132.64	311.9160 - 400.2053	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^1D^o$	2 - 2	P	375,1087
		1133.71	308.0295 - 396.2354	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3G^o$	6 - 5	P	375,1087
		1138.24	326.9028 - 414.7580	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^o$	2 - 1	P	375,1087
		1142.77	302.6888 - 390.1958	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^o$	1 - 2	P	375,1087
		1144.02	326.6649 - 414.0756	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^o$	3 - 2	P	375,1087
		1148.90	330.8868 - 417.9262	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^1F - ^1F^o$	3 - 3	P	375,1087
		1150.23	330.8868 - 417.8259	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^1F - ^1G^o$	3 - 4	P	375,1087
		1152.72	358.8109 - 445.5621	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^1D - ^1F^o$	2 - 3	P	375,1087
		1153.56	306.4392 - 393.1270	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^o$	1 - 2	P	375,1087
		1153.72	307.4827 - 394.1590	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3P^o$	3 - 2	P	375,1087
		1153.88	307.7200 - 394.3843	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3P^o$	2 - 1	P	375,1087
		1154.47	326.3843 - 413.0038	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3G^o$	4 - 5	P	375,1087
		1154.64	354.3362 - 440.9432	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3F^o$	3 - 4	P	375,1087
		1154.88	303.8409 - 390.4303	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3D^o$	2 - 3	P	375,1087
		1155.03	273.3248 - 359.9029	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	1 - 1	P	375,1087
		1156.06	326.3843 - 412.8850	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3D^o$	4 - 3	P	375,1087
		1156.90	307.4827 - 393.9204	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^o$	3 - 3	P	375,1087
		1159.12	274.3190 - 360.5912	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	3 - 4	P	375,1087
		1160.09	307.7200 - 393.9204	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^o$	2 - 3	P	375,1087
		1160.36	275.0880 - 361.2682	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	4 - 5	P	375,1087
		1160.43	273.7277 - 359.9029	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	2 - 1	P	375,1087
		1160.90	274.3190 - 360.4588	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^o$	3 - 2	P	375,1087
		1161.37	273.7277 - 359.8330	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	2 - 3	P	375,1087
		1166.38	326.6649 - 412.4000	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3G^o$	3 - 4	P	375,1087
		1166.69	273.3248 - 359.0370	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	1 - 2	P	375,1087
		1167.62	307.4827 - 393.1270	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^o$	3 - 2	P	375,1087
		1167.79	306.4392 - 392.0707	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^o$	1 - 1	P	375,1087
		1169.40	274.3190 - 359.8330	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	3 - 3	P	375,1087
		1169.55	275.0880 - 360.5912	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	4 - 4	P	375,1087
		1170.08	282.9480 - 368.4122	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^o$	2 - 3	P	375,1087
		1170.63	354.5917 - 440.0160	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3F^o$	2 - 3	P	375,1087
		1170.86	307.7200 - 393.1270	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^o$	2 - 2	P	375,1087
		1171.58	283.9610 - 369.3160	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^o$	3 - 4	P	375,1087
		1172.20	273.7277 - 359.0370	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	2 - 2	P	375,1087
		1172.88	276.0080 - 361.2682	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	5 - 5	P	375,1087
		1172.90	354.7828 - 440.0417	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3F^o$	1 - 2	P	375,1087
		1178.1	52.7395 - 137.6192	$3d^4 - 3d^4$	$a^1D - b^1S$	2 - 0	F,P	375,1087
		1178.39	294.2295 - 379.0908	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5D^o$	2 - 3	P	375,1087
		1178.63	326.9028 - 411.7471	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3G^o$	2 - 3	P	375,1087
		1179.25	293.9145 - 378.7140	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5D^o$	1 - 2	P	375,1087
		1180.01	275.0880 - 359.8330	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	4 - 3	P	375,1087
		1180.39	274.3190 - 359.0370	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	3 - 2	P	375,1087
		1181.11	273.3248 - 357.9906	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^o$	1 - 0	P	375,1087

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1181.49	273.7277 - 358.3665	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^o$	2 - 1	P	375,1087
		1181.94	282.9480 - 367.5545	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^o$	2 - 2	P	375,1087
		1182.27	276.0080 - 360.5912	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5F^o$	5 - 4	P	375,1087
		1184.12	283.9610 - 368.4122	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^o$	3 - 3	P	375,1087
		1185.53	307.7200 - 392.0707	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^3D - ^3D^o$	2 - 1	P	375,1087
		1185.92	298.9746 - 383.2974	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3F^o$	4 - 3	P	375,1087
		1188.55	298.6202 - 382.7561	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3F^o$	3 - 2	P	375,1087
		1188.68	285.1890 - 369.3160	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^o$	4 - 4	P	375,1087
		1190.09	307.6920 - 391.7194	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3I^o$	5 - 6	P	375,1087
		1190.37	312.5512 - 396.5590	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^1I^o$	5 - 6	P	375,1087
		1196.26	283.9610 - 367.5545	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^o$	3 - 2	P	375,1087
		1197.59	298.9746 - 382.4755	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^o$	4 - 5	P	375,1087
		1200.88	311.9160 - 395.1885	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^1F^o$	2 - 3	P	375,1087
		1201.59	285.1890 - 368.4122	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3F^o$	4 - 3	P	375,1087
		1204.31	298.6202 - 381.6556	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^o$	3 - 4	P	375,1087
		1204.49	299.5340 - 382.5568	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3F^o$	5 - 4	P	375,1087
		1204.55	273.7277 - 356.7464	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^3D^o$	2 - 1	P	375,1087
		1205.49	274.3190 - 357.2725	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^o$	3 - 2	P	375,1087
		1205.67	299.5340 - 382.4755	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^o$	5 - 5	P	375,1087
		1205.77	275.0880 - 358.0222	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^o$	4 - 3	P	375,1087
		1206.08	305.0390 - 387.9525	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^o$	1 - 2	P	375,1087
		1206.17	276.0080 - 358.9150	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5D^o$	5 - 4	P	375,1087
		1209.47	298.9746 - 381.6556	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^o$	4 - 4	P	375,1087
		1210.87	330.8868 - 413.4722	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^1F - ^1D^o$	3 - 2	P	375,1087
		1212.81	276.0080 - 358.4610	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	5 - 6	P	375,1087
		1217.50	294.2295 - 376.3650	$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$^5P - ^5P^o$	2 - 3	P	375,1087
		1217.71	299.5340 - 381.6556	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^o$	5 - 4	P	375,1087
		1219.27	298.6202 - 380.6365	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^o$	3 - 3	P	375,1087
		1219.31	303.7885 - 385.8020	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^1H^o$	4 - 5	P	375,1087
		1223.32	275.0880 - 356.8330	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	4 - 5	P	375,1087
		1224.12	303.7885 - 385.4800	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^1F^o$	4 - 3	P	375,1087
		1224.46	354.3362 - 436.0050	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^o$	3 - 3	P	375,1087
		1224.56	298.9746 - 380.6365	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3G^o$	4 - 3	P	375,1087
		1226.40	299.5340 - 381.0737	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^o$	5 - 6	P	375,1087
		1228.30	354.5917 - 436.0050	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^o$	2 - 3	P	375,1087
		1229.42	295.0256 - 376.3650	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5P^o$	3 - 3	P	375,1087
		1229.49	293.9145 - 375.2490	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5P^o$	1 - 2	P	375,1087
		1231.47	354.3362 - 435.5400	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^o$	3 - 2	P	375,1087
		1231.76	274.3190 - 355.5040	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	3 - 4	P	375,1087
		1232.08	326.3843 - 407.5477	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^o$	4 - 4	P	375,1087
		1232.68	283.9610 - 365.0848	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^o$	3 - 4	P	375,1087
		1234.27	294.2295 - 375.2490	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5P^o$	2 - 2	P	375,1087
		1234.63	303.7885 - 384.7846	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^1G - ^1G^o$	4 - 4	P	375,1087
		1234.82	312.5512 - 393.5346	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^1H^o$	5 - 5	P	375,1087
		1235.36	354.5917 - 435.5400	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^o$	2 - 2	P	375,1087
		1236.36	326.6649 - 407.5477	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^o$	3 - 4	P	375,1087
		1236.47	354.5917 - 435.4668	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^o$	2 - 1	P	375,1087
		1237.00	285.1890 - 366.0299	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3G^o$	4 - 5	P	375,1087
		1237.46	326.3843 - 407.1950	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^o$	4 - 3	P	375,1087
		1237.51	305.4731 - 386.2803	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3D^o$	0 - 1	P	375,1087
		1238.28	354.7828 - 435.5400	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^o$	1 - 2	P	375,1087
		1239.16	273.7277 - 354.4277	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^o$	2 - 3	P	375,1087
		1239.40	354.7828 - 435.4668	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^3D - ^3D^o$	1 - 1	P	375,1087
		1240.05	293.9145 - 374.5564	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5P^o$	1 - 1	P	375,1087

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1241.77	326.6649 - 407.1950	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	3 - 3	P	375,1087
		1242.88	312.5512 - 393.0095	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^1H - ^1G^\circ$	5 - 4	P	375,1087
		1243.23	307.6920 - 388.1278	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	5 - 6	P	375,1087
		1243.55	326.6649 - 407.0800	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	3 - 2	P	375,1087
		1244.91	294.2295 - 374.5564	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^3P^\circ$	2 - 1	P	375,1087
		1245.45	326.9028 - 407.1950	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	2 - 3	P	375,1087
		1245.77	273.3248 - 353.5967	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^5F - ^5G^\circ$	1 - 2	P	375,1087
		1246.52	295.0256 - 375.2490	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^5P - ^5P^\circ$	3 - 2	P	375,1087
		1247.24	326.9028 - 407.0800	$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$^3F - ^3F^\circ$	2 - 2	P	375,1087
		1248.47	308.0295 - 388.1278	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	6 - 6	P	375,1087
		1248.54	304.9099 - 385.0033	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	2 - 2	P	375,1087
		1250.56	305.0390 - 385.0033	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 2	P	375,1087
		1250.97	307.6270 - 387.5647	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	4 - 5	P	375,1087
		1251.23	307.6270 - 387.5483	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	4 - 4	P	375,1087
		1251.99	307.6920 - 387.5647	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	5 - 5	P	375,1087
		1252.25	307.6920 - 387.5483	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	5 - 4	P	375,1087
		1254.50	305.0390 - 384.7520	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 0	P	375,1087
		1257.30	308.0295 - 387.5647	$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$^3H - ^3H^\circ$	6 - 5	P	375,1087
		1259.73	298.6202 - 378.0020	$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$^3G - ^3H^\circ$	3 - 4	P	375,1087
		1260.27	358.8109 - 438.1592	$3d^3(b^2D)4s - 3d^3(b^2D)4p$	$^1D - ^1D^\circ$	2 - 2	P	375,1087
		1263.37	304.9099 - 384.0630	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	2 - 1	P	375,1087
		1265.44	305.0390 - 384.0630	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	1 - 1	P	375,1087
		1272.43	305.4731 - 384.0630	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^3P - ^3P^\circ$	0 - 1	P	375,1087
		1280.9	28.4615 - 106.5315	$3d^4 - 3d^4$	$a^3P - b^1D$	1 - 2	F,P	375,1087
		1296.68	311.9160 - 389.0360	$3d^3(a^2D)4s - 3d^3(a^2D)4p$	$^1D - ^1P^\circ$	2 - 1	P	375,1087
		1307.23	283.9610 - 360.4588	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	3 - 2	P	375,1087
		1310.51	285.1890 - 361.4951	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	4 - 3	P	375,1087
		1314.90	302.6888 - 378.7400	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	1 - 1	P	375,1087
		1315.3	30.5061 - 106.5315	$3d^4 - 3d^4$	$a^3P - b^1D$	2 - 2	F,P	375,1087
		1323.97	302.6888 - 378.2191	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	1 - 0	P	375,1087
		1335.13	303.8409 - 378.7400	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	2 - 1	P	375,1087
		1339.60	310.7368 - 385.386	$3d^3(a^2P)4s - 3d^3(a^2P)4p$	$^1P - ^1D^\circ$	1 - 2	P	375,1087
		1349.45	302.6888 - 376.7930	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	1 - 2	P	375,1087
		1355.04	282.9480 - 356.7464	$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$^3F - ^3D^\circ$	2 - 1	P	375,1087
		1370.76	303.8409 - 376.7930	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$^3P - ^3P^\circ$	2 - 2	P	375,1087
		1387.0	0.2040 - 72.3027	$3d^4 - 3d^4$	$ga^3D - b^3P$	1 - 0	F,P	375,1087
		1394.4	0.5890 - 72.3027	$3d^4 - 3d^4$	$ga^3D - b^3P$	2 - 0	F,P	375,1087
		1400.2	0.2040 - 71.6242	$3d^4 - 3d^4$	$ga^3D - b^3P$	1 - 1	F,P	375,1087
		1407.8	0.5890 - 71.6242	$3d^4 - 3d^4$	$ga^3D - b^3P$	2 - 1	F,P	375,1087
		1409.9	0.0 - 70.9256	$3d^4 - 3d^4$	$ga^3D - b^3F$	0 - 2	F,P	375,1087
		1412.5	0.2040 - 70.9984	$3d^4 - 3d^4$	$ga^3D - b^3F$	1 - 3	F,P	375,1087
		1414.0	0.2040 - 70.9256	$3d^4 - 3d^4$	$ga^3D - b^3F$	1 - 2	F,P	375,1087
		1418.4	1.1247 - 71.6242	$3d^4 - 3d^4$	$ga^3D - b^3P$	3 - 1	F,P	375,1087
		1420.3	0.5890 - 70.9984	$3d^4 - 3d^4$	$ga^3D - b^3F$	2 - 3	F,P	375,1087
		1421.7	0.5890 - 70.9256	$3d^4 - 3d^4$	$ga^3D - b^3F$	2 - 2	F,P	375,1087
		1424.3	0.5890 - 70.7984	$3d^4 - 3d^4$	$ga^3D - b^3F$	2 - 4	F,P	375,1087
		1431.2	1.1247 - 70.9984	$3d^4 - 3d^4$	$ga^3D - b^3F$	3 - 3	F,P	375,1087
		1435.3	1.1247 - 70.7984	$3d^4 - 3d^4$	$ga^3D - b^3F$	3 - 4	F,P	375,1087
		1437.3	0.5890 - 70.1643	$3d^4 - 3d^4$	$ga^3D - b^3P$	2 - 2	F,P	375,1087
		1448.4	1.1247 - 70.1643	$3d^4 - 3d^4$	$a^3D - b^3P$	3 - 2	F,P	375,1087
		1482.5	70.1643 - 137.6192	$3d^4 - 3d^4$	$b^3P - b^1S$	2 - 0	F,P	375,1087
		1541.9	41.6759 - 106.5315	$3d^4 - 3d^4$	$a^3D - b^1D$	3 - 2	F,P	375,1087
		1546.2	41.8565 - 106.5315	$3d^4 - 3d^4$	$a^3D - b^1D$	2 - 2	F,P	375,1087
		1635.1	45.3720 - 106.5315	$3d^4 - 3d^4$	$a^1S - b^1D$	0 - 2	F,P	375,1087

CO VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1859.0	52.7395 - 106.5315	$3d^4 - 3d^4$	$a^1D - b^1D$	2 - 2	F,P	375,1087
		1880.6	273.7277 - 326.9028	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^3F - ^3F$	2 - 2	F,P	375,1087
		1901.7	274.3190 - 326.9028	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^3F - ^3F$	3 - 2	F,P	375,1087
		1910.4	274.3190 - 326.6649	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^5F - ^3F$	3 - 3	F,P	375,1087
		1929.9	275.0880 - 326.9028	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^3F - ^3F$	4 - 2	F,P	375,1087
		1938.8	275.0880 - 326.6649	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^3F - ^3F$	4 - 3	F,P	375,1087
		1949.5	275.0880 - 326.3843	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^3F - ^3F$	4 - 4	F,P	375,1087
		1974.1	276.0080 - 326.6649	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^3F - ^3F$	5 - 3	F,P	375,1087
		1985.1	276.0080 - 326.3843	$3d^3(a^4F)4s - 3d^3(a^2F)4s$	$^5F - ^3F$	5 - 4	F,P	375,1087

COBALT VII (Co⁶⁺), Z = 27
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3(^4F_{3/2})$ (21 electrons)
Ionization Potential [1 040 000] cm^{-1} ; [129] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	70	202.143	32.319 - 527.023	$3d^3 - 3d^2(a^1S)4p$	$a^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	10	210.68	52.379 - 527.023	$3d^3 - 3d^2(a^1S)4p$	$a^2F - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		003
	10	210.71	0.701 - 475.310	$3d^3 - 3d^2(a^1G)4p$	$ga^4F - ^2G^\circ$	$\frac{5}{2} - \frac{3}{2}$		003
	10	211.25	0.701 - 474.096	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		003
	90	211.649	1.620 - 474.096	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	480	212.144	2.718 - 474.096	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	80	212.23	0.701 - 471.912	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		003
	180	212.427	0.0 - 470.750	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	650	212.634	1.620 - 471.912	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	200	212.715	0.0 - 470.113	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	270	212.745	0.701 - 470.750	$3d^3 - 3d^2(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	40	213.868	2.718 - 470.294	$3d^3 - 3d^2(a^1D)4p$	$ga^4F - ^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	40	213.911	23.286 - 490.767	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		1109
	200	214.605	24.206 - 490.180	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		1109
	110	216.403	24.206 - 486.306	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		1109
	20	217.13	23.286 - 483.860	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		003
	40	218.122	32.319 - 490.767	$3d^3 - 3d^2(a^1G)4p$	$a^2D - ^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	30	218.279	32.628 - 490.767	$3d^3 - 3d^2(a^1G)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		1109
	60	218.405	32.319 - 490.180	$3d^3 - 3d^2(a^1G)4p$	$a^2D - ^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	40	218.449	32.404 - 490.180	$3d^3 - 3d^2(a^1G)4p$	$a^2H - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		1109
	50	218.509	29.406 - 487.058	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1109
	100	218.717	29.406 - 486.619	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1109
	70	218.932	29.859 - 486.619	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1109
	120	219.907	32.319 - 487.058	$3d^3 - 3d^2(a^3P)4p$	$a^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	150	219.940	22.203 - 476.872	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	150	220.044	21.011 - 475.466	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		1109
	250	220.052	0.701 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	150	220.34	32.404 - 486.306	$3d^3 - 3d^2(a^1G)4p$	$a^2H - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		003
	150	220.40	21.011 - 474.766	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		003
	150	220.499	1.620 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		1109
	550	220.608	33.012 - 486.306	$3d^3 - 3d^2(a^1G)4p$	$a^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1109
	150	220.622	22.203 - 475.466	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		1109
	80	220.733	21.250 - 474.284	$3d^3 - 3d^2(a^1D)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1109
	40	220.77	29.406 - 482.367	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	20	220.89	1.620 - 454.301	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		003
	200	220.967	0.701 - 453.255	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1109

CO VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
750		221.02	29.859 - 482.367	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		003
30		221.154	23.286 - 475.452	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
140		221.227	23.286 - 475.310	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
170		221.288	22.203 - 474.096	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1109
10		221.37	21.250 - 472.919	$3d^3 - 3d^2(a^1D)4p$	$a^4P - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		003
450		221.431	0.0 - 451.608	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
700		221.442	2.718 - 454.301	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
600		221.505	32.404 - 483.860	$3d^3 - 3d^2(a^1G)4p$	$a^2H - ^2H^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
250		221.606	24.206 - 475.452	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
100		221.677	24.206 - 475.310	$3d^3 - 3d^2(a^1G)4p$	$a^2G - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
500		221.734	1.620 - 452.615	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
120		221.805	33.012 - 483.860	$3d^3 - 3d^2(a^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{2}{2}$		1109
150		221.896	21.250 - 471.912	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1109
560		221.947	0.701 - 451.257	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
60		222.023	1.620 - 452.024	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
130		222.170	0.701 - 450.809	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
140		222.277	24.206 - 474.096	$3d^3 - 3d^2(a^3P)4p$	$a^2G - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
40		222.358	22.203 - 471.912	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
30		222.521	1.620 - 451.014	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
780		222.566	2.718 - 452.024	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
320		222.623	1.620 - 450.809	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
450		222.659	2.718 - 451.835	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{2}{2} - \frac{11}{2}$		1109
160		222.824	0.701 - 449.482	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
80		222.900	23.286 - 471.912	$3d^3 - 3d^2(a^3P)4p$	$a^2G - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
20		222.948	22.203 - 470.750	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
940		223.067	2.718 - 451.014	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
400		223.168	0.0 - 448.093	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{5}{2}$		1109
1000		223.286	1.620 - 449.482	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
430		223.349	1.620 - 449.349	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
850		223.519	0.701 - 448.093	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
960		223.711	0.0 - 447.004	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
960		223.711	23.286 - 470.294	$3d^3 - 3d^2(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
260		223.899	0.701 - 447.330	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
300		223.959	80.516 - 527.023	$3d^3 - 3d^2(a^1S)4p$	$b^2D - ^2P^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
240		223.977	1.620 - 448.093	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
100		224.063	0.701 - 447.004	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
800		224.171	24.206 - 470.294	$3d^3 - 3d^2(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
250		224.319	0.0 - 445.793	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
60		224.488	22.203 - 467.663	$3d^3 - 3d^2(a^1D)4p$	$a^4P - ^2P^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
700		224.705	23.286 - 468.314	$3d^3 - 3d^2(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
70		224.779	29.406 - 474.284	$3d^3 - 3d^2(a^1D)4p$	$a^2P - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
10		224.93	2.718 - 447.330	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		003
80		225.12	1.620 - 445.793	$3d^3 - 3d^2(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		003
160		225.218	21.011 - 465.021	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4S^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
360		225.343	21.250 - 465.021	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4S^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
40		225.473	29.406 - 472.919	$3d^3 - 3d^2(a^1D)4p$	$a^2P - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
140		225.679	80.972 - 524.079	$3d^3 - 3d^2(a^1S)4p$	$b^2D - ^2P^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
100		225.698	29.859 - 472.919	$3d^3 - 3d^2(a^1D)4p$	$a^2P - ^2D^\circ$	$\frac{1}{2} - \frac{2}{2}$		1109
840		225.783	32.404 - 475.310	$3d^3 - 3d^2(a^1G)4p$	$a^2H - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
400		225.826	22.203 - 465.021	$3d^3 - 3d^2(a^3P)4p$	$a^4P - ^4S^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
1000		226.018	33.012 - 475.452	$3d^3 - 3d^2(a^1G)4p$	$a^2H - ^2G^\circ$	$\frac{1}{2} - \frac{2}{2}$		1109
400		226.262	32.319 - 474.284	$3d^3 - 3d^2(a^1D)4p$	$a^2D - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109
20		226.83	29.859 - 470.750	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^4D^\circ$	$\frac{1}{2} - \frac{2}{2}$		003
200		226.964	32.319 - 472.919	$3d^3 - 3d^2(a^1D)4p$	$a^2D - ^2D^\circ$	$\frac{2}{2} - \frac{2}{2}$		1109

CO VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	240	227.122	32.628 - 472.919	$3d^3 - 3d^2(a^1D)4p$	$a^2D - ^2D^o$	1-1		1109
	100	227.445	29.859 - 469.527	$3d^3 - 3d^2(a^1D)4p$	$a^2P - ^2P^o$	1-1		1109
	150	228.109	52.379 - 490.767	$3d^3 - 3d^2(a^1G)4p$	$a^2F - ^2F^o$	1-1		1109
	550	228.148	51.867 - 490.180	$3d^3 - 3d^2(a^1G)4p$	$a^2F - ^2F^o$	1-1		1109
	370	228.177	29.406 - 467.663	$3d^3 - 3d^2(a^1D)4p$	$a^2P - ^2P^o$	1-1		1109
	30	228.318	32.319 - 470.294	$3d^3 - 3d^2(a^1D)4p$	$a^2D - ^2F^o$	1-1		1109
	70	228.412	29.859 - 467.663	$3d^3 - 3d^2(a^1D)4p$	$a^2P - ^2P^o$	1-1		1109
	170	228.886	32.628 - 469.527	$3d^3 - 3d^2(a^1D)4p$	$a^2D - ^2P^o$	1-1		1109
	15	229.115	23.286 - 459.746	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^2G^o$	1-1		1109
	10	229.360	32.319 - 468.314	$3d^3 - 3d^2(a^1D)4p$	$a^2D - ^2F^o$	1-1		1109
	590	229.601	24.206 - 459.746	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^2G^o$	1-1		1109
	150	229.704	32.319 - 467.663	$3d^3 - 3d^2(a^1D)4p$	$a^2D - ^2P^o$	1-1		1109
	540	229.865	23.286 - 458.326	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^2G^o$	1-1		1109
	20	230.054	52.379 - 487.058	$3d^3 - 3d^2(a^3P)4p$	$a^2F - ^2P^o$	1-1		1109
	130	230.351	24.206 - 458.326	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^2G^o$	1-1		1109
	50	230.470	21.250 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^2D^o$	1-1		1109
	25	230.984	22.203 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^2D^o$	1-1		1109
	40	231.353	21.011 - 453.255	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^2D^o$	1-1		1109
	160	231.430	22.203 - 454.301	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4D^o$	1-1		1109
	50	231.480	21.250 - 453.255	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^2D^o$	1-1		1109
	50	231.562	23.286 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^2D^o$	1-1		1109
	140	231.683	29.406 - 461.032	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^2S^o$	1-1		1109
	200	231.823	21.250 - 452.615	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4D^o$	1-1		1109
	90	231.924	29.859 - 461.032	$3d^3 - 3d^2(a^3P)4p$	$a^2P - ^2S^o$	1-1		1109
	600	232.139	51.867 - 482.643	$3d^3 - 3d^2(a^3P)4p$	$a^2F - ^2D^o$	1-1		1109
	130	232.236	21.011 - 451.608	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4D^o$	1-1		1109
	50	232.337	22.203 - 452.615	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4D^o$	1-1		1109
	100	232.426	21.011 - 451.257	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4D^o$	1-1		1109
	200	232.507	24.206 - 454.301	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^4D^o$	1-1		1109
	550	232.565	52.379 - 482.367	$3d^3 - 3d^2(a^3P)4p$	$a^2F - ^2D^o$	1-1		1109
	400	232.655	22.203 - 452.024	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^2F^o$	1-1		1109
	130	232.797	21.250 - 450.809	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^2F^o$	1-1		1109
	190	232.922	23.286 - 452.615	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^4D^o$	1-1		1109
	20	233.06	22.203 - 451.257	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4D^o$	1-1		003
	70	233.314	22.203 - 450.809	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^2F^o$	1-1		1109
	80	233.425	32.628 - 461.032	$3d^3 - 3d^2(a^3P)4p$	$a^2D - ^2S^o$	1-1		1109
	180	233.744	24.206 - 452.024	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^2F^o$	1-1		1109
	180	233.906	23.286 - 450.809	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^2F^o$	1-1		1109
	60	234.004	32.404 - 459.746	$3d^3 - 3d^2(a^3F)4p$	$a^2H - ^2G^o$	1-1		1109
	30	234.037	22.203 - 449.482	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4F^o$	1-1		1109
	20	234.27	21.250 - 448.093	$3d^3 - 3d^2(a^3F)4p$	$a^4P - ^4F^o$	1-1		003
	900	234.339	33.012 - 459.746	$3d^3 - 3d^2(a^3F)4p$	$a^2H - ^2G^o$	1-1		1109
	640	234.785	32.404 - 458.326	$3d^3 - 3d^2(a^3F)4p$	$a^2H - ^2G^o$	1-1		1109
	80	234.891	29.406 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$a^2P - ^2D^o$	1-1		1109
	10	235.13	24.206 - 449.482	$3d^3 - 3d^2(a^3F)4p$	$a^2G - ^4F^o$	1-1		003
	170	235.937	29.406 - 453.255	$3d^3 - 3d^2(a^3F)4p$	$a^2P - ^2D^o$	1-1		1109
	250	236.079	51.867 - 475.452	$3d^3 - 3d^2(a^1G)4p$	$a^2F - ^2G^o$	1-1		1109
	130	236.188	29.859 - 453.255	$3d^3 - 3d^2(a^3F)4p$	$a^2P - ^2D^o$	1-1		1109
	120	236.290	29.406 - 452.615	$3d^3 - 3d^2(a^3F)4p$	$a^2P - ^4D^o$	1-1		1109
	140	236.446	52.379 - 475.310	$3d^3 - 3d^2(a^1G)4p$	$a^2F - ^2G^o$	1-1		1109
	200	236.509	32.319 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^2D^o$	1-1		1109
	270	236.681	32.628 - 455.136	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^2D^o$	1-1		1109
	100	236.733	51.867 - 474.284	$3d^3 - 3d^2(a^1D)4p$	$a^2F - ^2D^o$	1-1		1109
	10	236.82	51.867 - 474.096	$3d^3 - 3d^2(a^3P)4p$	$a^2F - ^4D^o$	1-1		003

CO VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
100		236.978	32.319 - 454.301	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^4D^o$	3/2 - 5/2		1109
50		237.050	29.406 - 451.257	$3d^3 - 3d^2(a^3F)4p$	$a^2P - ^4D^o$	3/2 - 5/2		1109
110		237.302	29.406 - 450.809	$3d^3 - 3d^2(a^3F)4p$	$a^2P - ^2F^o$	3/2 - 5/2		1109
10		237.571	32.319 - 453.255	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^2D^o$	3/2 - 5/2		1109
30		237.743	32.628 - 453.255	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^2D^o$	3/2 - 5/2		1109
20		237.791	52.379 - 472.919	$3d^3 - 3d^2(a^1D)4p$	$a^2F - ^2D^o$	3/2 - 5/2		1109
30		238.102	32.628 - 452.615	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^4D^o$	3/2 - 5/2		1109
70		238.261	32.319 - 452.024	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^2F^o$	3/2 - 5/2		1109
900		238.37	52.379 - 471.912	$3d^3 - 3d^2(a^3P)4p$	$a^2F - ^4D^o$	3/2 - 5/2		003
15		238.874	32.628 - 451.257	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^4D^o$	3/2 - 5/2		1109
80		238.954	32.319 - 450.809	$3d^3 - 3d^2(a^3F)4p$	$a^2D - ^2F^o$	3/2 - 5/2		1109
30		238.986	51.867 - 470.294	$3d^3 - 3d^2(a^1D)4p$	$a^2F - ^2F^o$	3/2 - 5/2		1109
40		240.421	52.379 - 468.314	$3d^3 - 3d^2(a^1D)4p$	$a^2F - ^2F^o$	3/2 - 5/2		1109
60		244.024	80.972 - 490.767	$3d^3 - 3d^2(a^1G)4p$	$b^2D - ^2F^o$	3/2 - 5/2		1109
230		244.101	80.516 - 490.180	$3d^3 - 3d^2(a^1G)4p$	$b^2D - ^2F^o$	3/2 - 5/2		1109
250		245.978	80.516 - 487.058	$3d^3 - 3d^2(a^3P)4p$	$b^2D - ^2P^o$	3/2 - 5/2		1109
90		246.252	80.972 - 487.058	$3d^3 - 3d^2(a^3P)4p$	$b^2D - ^2P^o$	3/2 - 5/2		1109
130		246.521	80.972 - 486.619	$3d^3 - 3d^2(a^3P)4p$	$b^2D - ^2P^o$	3/2 - 5/2		1109
130		248.678	80.516 - 482.643	$3d^3 - 3d^2(a^3P)4p$	$b^2D - ^2D^o$	3/2 - 5/2		1109
60		248.849	80.516 - 482.367	$3d^3 - 3d^2(a^3P)4p$	$b^2D - ^2D^o$	3/2 - 5/2		1109
40		248.962	80.972 - 482.643	$3d^3 - 3d^2(a^3P)4p$	$b^2D - ^2D^o$	3/2 - 5/2		1109
75		249.132	80.972 - 482.367	$3d^3 - 3d^2(a^3P)4p$	$b^2D - ^2D^o$	3/2 - 5/2		1109
60		249.903	51.867 - 452.024	$3d^3 - 3d^2(a^3F)4p$	$a^2F - ^2F^o$	3/2 - 5/2		1109
40		256.556	80.516 - 470.294	$3d^3 - 3d^2(a^1D)4p$	$b^2D - ^2F^o$	3/2 - 5/2		1109
10		258.174	80.972 - 468.314	$3d^3 - 3d^2(a^1D)4p$	$b^2D - ^2F^o$	3/2 - 5/2		1109
1235.			0.0 - 80.972	$3d^3 - 3d^3$	$ga^4F - b^2D$	3/2 - 5/2	F,P	375,1109
1246.			0.701 - 80.972	$3d^3 - 3d^3$	$ga^4F - b^2D$	3/2 - 5/2	F,P	375,1109
1253.			0.701 - 80.516	$3d^3 - 3d^3$	$ga^4F - b^2D$	3/2 - 5/2	F,P	375,1109
1260.			1.620 - 80.972	$3d^3 - 3d^3$	$ga^4F - b^2D$	3/2 - 5/2	F,P	375,1109
1267.			1.620 - 80.516	$3d^3 - 3d^3$	$ga^4F - b^2D$	3/2 - 5/2	F,P	375,1109
1285.			2.718 - 80.516	$3d^3 - 3d^3$	$ga^4F - b^2D$	3/2 - 5/2	F,P	375,1109
1668.			21.011 - 80.972	$3d^3 - 3d^3$	$a^4P - b^2D$	3/2 - 5/2	F,P	375,1109
1674.			21.250 - 80.972	$3d^3 - 3d^3$	$a^4P - b^2D$	3/2 - 5/2	F,P	375,1109
1681.			21.011 - 80.516	$3d^3 - 3d^3$	$a^4P - b^2D$	3/2 - 5/2	F,P	375,1109
1687.			21.250 - 80.516	$3d^3 - 3d^3$	$a^4P - b^2D$	3/2 - 5/2	F,P	375,1109
1715.			22.203 - 80.516	$3d^3 - 3d^3$	$a^4P - b^2D$	3/2 - 5/2	F,P	375,1109
1734.			23.286 - 80.972	$3d^3 - 3d^3$	$a^2G - b^2D$	7/2 - 9/2	F,P	375,1109
1747.			23.286 - 80.516	$3d^3 - 3d^3$	$a^2G - b^2D$	7/2 - 9/2	F,P	375,1109
1776.			24.206 - 80.516	$3d^3 - 3d^3$	$a^2G - b^2D$	7/2 - 9/2	F,P	375,1109
1935.			0.701 - 52.379	$3d^3 - 3d^3$	$ga^4F - a^2F$	3/2 - 5/2	F,P	375,1109
1939.			29.406 - 80.972	$3d^3 - 3d^3$	$a^2P - b^2D$	3/2 - 5/2	F,P	375,1109
1956.			29.859 - 80.972	$3d^3 - 3d^3$	$a^2P - b^2D$	3/2 - 5/2	F,P	375,1109
1957.			29.406 - 80.516	$3d^3 - 3d^3$	$a^2P - b^2D$	3/2 - 5/2	F,P	375,1109
1970.			1.620 - 52.379	$3d^3 - 3d^3$	$ga^4F - a^2F$	3/2 - 5/2	F,P	375,1109
1974.			29.859 - 80.516	$3d^3 - 3d^3$	$a^2P - b^2D$	3/2 - 5/2	F,P	375,1109
1990.			1.620 - 51.867	$3d^3 - 3d^3$	$ga^4F - a^2F$	3/2 - 5/2	F,P	375,1109

COBALT VIII (Co⁷⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁶3d²(³F₂) (20 electrons)
Ionization Potential 1 273 000 cm⁻¹; 157.8 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	50	101.904	1.430 - 982.728	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	g ³ F - ³ G°	3 - 4		1056
	85	102.033	3.144 - 983.219	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	g ³ F - ³ G°	4 - 5		1056
	10	102.086	3.144 - 982.728	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	g ³ F - ³ G°	4 - 4		1056
	30	102.367	1.430 - 978.307	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	g ³ F - ³ F°	3 - 3		1056
	30	102.439	3.144 - 979.360	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	g ³ F - ³ F°	4 - 4		1056
	1	102.480	1.430 - 977.281	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	g ³ F - ³ G°	3 - 4		1056
	10	103.699	19.624 - 983.954	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	¹ D - ¹ F°	2 - 3		1056
	30	103.809	19.624 - 982.933	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	¹ D - ³ D°	2 - 3		1056
	85	104.180	22.839 - 982.716	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	³ P - ³ D°	1 - 2		1056
	120	104.801	32.360 - 986.549	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	¹ G - ¹ H°	4 - 5		1056
	10	105.594	32.360 - 979.360	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d5f	¹ G - ³ F°	4 - 4		1056
	120	122.273	0.0 - 817.839	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ G°	2 - 3		1056
	150	122.320	1.430 - 818.958	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ G°	3 - 4		1056
	200	122.472	3.144 - 819.657	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ G°	4 - 5		1056
	50	122.488	1.430 - 817.839	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ G°	3 - 3		1056
	50	122.577	3.144 - 818.958	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ G°	4 - 4		1056
	30	122.956	0.0 - 813.298	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ F°	2 - 3		1056
	85	123.022	0.0 - 812.862	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ F°	2 - 2		1056
	50	123.045	1.430 - 814.130	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ F°	3 - 4		1056
	85	123.173	1.430 - 813.298	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ F°	3 - 3		1056
	1	123.239	1.430 - 812.862	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ F°	3 - 2		1056
	120	123.307	3.144 - 814.130	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ F°	4 - 4		1056
	10	123.489	1.430 - 811.205	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ G°	3 - 4		1056
	10	123.753	3.144 - 811.205	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	g ³ F - ³ G°	4 - 4		1056
	50	124.649	19.624 - 821.881	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ D - ¹ F°	2 - 3		1056
	1	124.795	22.304 - 823.613	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ³ P°	0 - 1		1056
	10	124.830	22.839 - 823.928	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ³ P°	1 - 0		1056
	50	124.871	19.624 - 820.450	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ D - ³ D°	2 - 3		1056
	50	124.878	22.839 - 823.613	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ³ P°	1 - 1		1056
	10	125.071	24.055 - 823.613	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ³ P°	2 - 1		1056
	85	125.155	19.624 - 818.633	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ D - ¹ D°	2 - 2		1056
	30	125.268	22.304 - 820.599	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ³ D°	0 - 1		1056
	120	125.340	24.055 - 821.881	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ¹ F°	2 - 3		1056
	120	125.350	22.839 - 820.605	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ³ D°	1 - 2		1056
	10	125.566	24.055 - 820.450	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	³ P - ³ D°	2 - 3		1056
	150	125.821	32.360 - 827.140	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ G - ¹ H°	4 - 5		1056
	10	127.916	32.360 - 814.130	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ G - ³ F°	4 - 4		1056
	120	128.397	32.360 - 811.205	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ G - ¹ G°	4 - 4		1056
	50	132.756	74.247 - 827.508	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ S - ¹ P°	0 - 1		1056
	1	133.985	74.247 - 820.599	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁶ 3d4f	¹ S - ³ D°	0 - 1		1056
	10	149.718	19.624 - 687.584	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (² D))	¹ D - ¹ P°	2 - 1		1056
	10	150.701	24.055 - 687.584	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (² D))	³ P - ¹ P°	2 - 1		1056
	10	150.958	19.624 - 682.051	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (² F))	¹ D - ¹ F°	2 - 3		1056
	150	151.944	0.0 - 658.136	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	g ³ F - ³ D°	2 - 1		1056
	30	152.200	0.0 - 657.020	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	g ³ F - ³ D°	2 - 2		1056
	200	152.534	1.430 - 657.020	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	g ³ F - ³ D°	3 - 2		1056
	10	152.597	1.430 - 656.715	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	g ³ F - ³ D°	3 - 3		1056
	50	152.896	24.055 - 678.094	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ P))	³ P - ³ S°	2 - 1		1056
	250	153.005	3.144 - 656.715	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	g ³ F - ³ D°	4 - 3		1056
	200	153.926	32.360 - 682.051	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (² F))	¹ G - ¹ F°	4 - 3		1056
	10	156.958	19.624 - 656.715	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	¹ D - ³ D°	2 - 3		1056
	30	157.266	22.304 - 658.136	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	³ P - ³ D°	0 - 1		1056
	10	157.416	22.839 - 658.136	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	³ P - ³ D°	1 - 1		1056
	30	157.687	22.839 - 657.020	3s ² 3p ⁶ 3d ² - 3s ² 3p ⁵ (3d ³ (⁴ F))	³ P - ³ D°	1 - 2		1056

CO VIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
120	157.773		19.624 - 653.446	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2P))$	$^1D - ^1P^\circ$	2 - 1		1056
10	157.984		24.055 - 657.020	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$^3P - ^3D^\circ$	2 - 2		1056
85	158.066		24.055 - 656.715	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$^3P - ^3D^\circ$	2 - 3		1056
250	158.784		32.360 - 662.151	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2H))$	$^1G - ^1G^\circ$	4 - 4		1056
30	161.479		1.430 - 620.737	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$g^3F - ^3F^\circ$	3 - 4		1056
30	161.733		0.0 - 618.348	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$g^3F - ^3F^\circ$	2 - 3		1056
200	161.917		3.144 - 620.737	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$g^3F - ^3F^\circ$	4 - 4		1056
200	162.095		1.430 - 618.348	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$g^3F - ^3F^\circ$	3 - 3		1056
150	162.337		0.0 - 616.019	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$g^3F - ^3F^\circ$	2 - 2		1056
10	162.55		3.144 - 618.348	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$g^3F - ^3F^\circ$	4 - 3	P	1056
10	162.708		1.430 - 616.019	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$g^3F - ^3F^\circ$	3 - 2		1056
50	164.721		1.430 - 608.501	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2G))$	$g^3F - ^1F^\circ$	3 - 3		1056
10	165.191		3.144 - 608.501	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2G))$	$g^3F - ^1F^\circ$	4 - 3		1056
10	166.275		1.430 - 602.844	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$g^3F - ^3D^\circ$	3 - 3	P	1056
30	167.016		19.624 - 618.348	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$^1D - ^3F^\circ$	2 - 3		1056
10	167.152		1.430 - 599.641	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$g^3F - ^3D^\circ$	3 - 2		1056
30	167.738		22.839 - 619.010	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4P))$	$^3P - ^3P^\circ$	1 - 2		1056
85	168.084		24.055 - 619.010	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4P))$	$^3P - ^3P^\circ$	2 - 2		1056
10	168.921		24.055 - 616.019	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4F))$	$^3P - ^3F^\circ$	2 - 2		1056
85	169.051		22.304 - 613.869	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4P))$	$^3P - ^3P^\circ$	0 - 1		1056
30	169.196		22.839 - 613.869	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4P))$	$^3P - ^3P^\circ$	1 - 1		1056
30	169.537		24.055 - 613.869	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4P))$	$^3P - ^3P^\circ$	2 - 1		1056
30	169.711		22.839 - 612.076	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^4P))$	$^3P - ^3P^\circ$	1 - 0		1056
30	169.819		19.624 - 608.501	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2G))$	$^1D - ^1F^\circ$	2 - 3		1056
10	170.169		3.144 - 590.805	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2H))$	$g^3F - ^1H^\circ$	4 - 5		1056
85	170.589		19.624 - 605.841	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^1D - ^1D^\circ$	2 - 2		1056
50	171.107		24.055 - 608.501	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2G))$	$^3P - ^1F^\circ$	2 - 3		1056
30	171.460		19.624 - 602.844	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^1D - ^3D^\circ$	2 - 3		1056
10	171.522		22.839 - 605.841	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^3P - ^1D^\circ$	1 - 2		1056
50	172.402		19.624 - 599.641	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^1D - ^3D^\circ$	2 - 2		1056
10	172.767		19.624 - 598.440	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^1D - ^3D^\circ$	2 - 1		1056
30	172.776		24.055 - 602.844	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^3P - ^3D^\circ$	2 - 3		1056
30	173.373		22.839 - 599.641	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^3P - ^3D^\circ$	1 - 2		1056
10	173.561		32.360 - 608.501	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2G))$	$^1G - ^1F^\circ$	4 - 3		1056
30	173.742		24.055 - 599.641	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2F))$	$^3P - ^3D^\circ$	2 - 2		1056
250	179.068		32.360 - 590.805	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2H))$	$^1G - ^1H^\circ$	4 - 5		1056
150	179.147		3.144 - 561.346	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2H))$	$g^3F - ^3G^\circ$	4 - 5		1056
120	179.731		1.430 - 557.817	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2H))$	$g^3F - ^3G^\circ$	3 - 4		1056
120	179.949		0.0 - 555.699	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2H))$	$g^3F - ^3G^\circ$	2 - 3		1056
10	180.422		1.430 - 555.699	$3s^2 3p^6 3d^2 - 3s^2 3p^5 (3d^3(^2H))$	$g^3F - ^3G^\circ$	3 - 3		1056
10	181.786		1.430 - 551.524	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3F^\circ$	3 - 4		1056
50	182.355		3.144 - 551.524	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3F^\circ$	4 - 4		1056
50	182.686		1.430 - 548.799	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3F^\circ$	3 - 3		1056
10	183.167		1.430 - 547.400	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3F^\circ$	3 - 2		1056
30	183.266		3.144 - 548.799	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3F^\circ$	4 - 3		1056
10	183.686		1.430 - 545.834	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3D^\circ$	3 - 3		1056
50	183.939		19.624 - 563.271	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1D - ^1P^\circ$	2 - 1		1056
120	184.203		1.430 - 544.314	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3D^\circ$	3 - 2		1056
150	184.265		3.144 - 545.834	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^3D^\circ$	4 - 3		1056
10	184.356		0.0 - 542.430	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^1D^\circ$	2 - 2		1056
10	184.850		1.430 - 542.430	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$g^3F - ^1D^\circ$	3 - 2		1056
10	184.861		22.304 - 563.271	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^1P^\circ$	0 - 1		1056
10	185.041		22.839 - 563.271	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^1P^\circ$	1 - 1		1056
10	185.461		24.055 - 563.271	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^1P^\circ$	2 - 1		1056

CO VIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	185.835	19.624 - 557.736	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1D - ^1F^o$	2 - 3		1056
	10	187.375	24.055 - 557.736	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^1F^o$	2 - 3		1056
	10	187.909	22.839 - 554.998	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3P^o$	1 - 2		1056
	10	188.054	22.304 - 554.082	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3P^o$	0 - 1		1056
	10	188.165	22.839 - 554.287	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3P^o$	1 - 0		1056
	10	188.241	22.839 - 554.082	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3P^o$	1 - 1		1056
	30	188.345	24.055 - 554.998	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3P^o$	2 - 2		1056
	10	188.674	24.055 - 554.082	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3P^o$	2 - 1		1056
	10	189.040	32.360 - 561.346	$3s^2 3p^6 3d^2 - 3s^2 3p^6 (3d^3(^2H))$	$^1G - ^3G^o$	4 - 5		1056
	10	189.472	19.624 - 547.400	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1D - ^3F^o$	2 - 2		1056
	85	190.342	32.360 - 557.736	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1G - ^1F^o$	4 - 3		1056
	10	190.574	24.055 - 548.799	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3F^o$	2 - 3		1056
	50	191.262	19.624 - 542.430	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1D - ^1D^o$	2 - 2		1056
	10	191.645	24.055 - 545.834	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3D^o$	2 - 3		1056
	10	191.757	22.839 - 544.314	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3D^o$	1 - 2		1056
	10	192.332	22.839 - 542.701	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^3P - ^3D^o$	1 - 1		1056
	10	192.619	32.360 - 551.524	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1G - ^3F^o$	4 - 4		1056
		204.49	74.247 - 563.271	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1S - ^1P^o$	0 - 1	P	375,1056
		208.40	74.247 - 554.082	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4p$	$^1S - ^3P^o$	0 - 1	P	375,1056
		212.	0.0 - 472.088 + W	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4s$	$g^2F - ^3D$	2 - 1	F,P	375,1051
		212.	3.144 - 474.558 + W	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4s$	$g^2F - ^3D$	4 - 3	F,P	375,1051
		213.	3.144 - 472.849 + W	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d 4s$	$g^2F - ^3D$	4 - 2	F,P	375,1051
		1831.	19.624 - 74.247	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d^2$	$^1D - ^1S$	2 - 0	F,P	375,1056
		1945.	22.839 - 74.247	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d^2$	$^3P - ^1S$	1 - 0	F,P	375,1056
		1992.	24.055 - 74.247	$3s^2 3p^6 3d^2 - 3s^2 3p^6 3d^2$	$^3P - ^1S$	2 - 0	F,P	375,1056

COBALT IX (Co⁸⁺), Z = 27
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 (^2D_{3/2})$ (19 electrons)
Ionization Potential 1 501 300 cm^{-1} ; 186.13 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	70.928	0.0 - 1409.88	$3p^6 3d - 3p^6 10f$	$g^2D - ^2F^o$	2 - 2		009
	10	71.053	2.451 - 1409.88	$3p^6 3d - 3p^6 10f$	$g^2D - ^2F^o$	2 - 2		009
	10	72.048	0.0 - 1387.96	$3p^6 3d - 3p^6 9f$	$g^2D - ^2F^o$	2 - 2		009
	20	72.177	2.451 - 1387.96	$3p^6 3d - 3p^6 9f$	$g^2D - ^2F^o$	2 - 2		009
	20	73.665	0.0 - 1357.50	$3p^6 3d - 3p^6 8f$	$g^2D - ^2F^o$	2 - 2		009
	30	73.798	2.451 - 1357.53	$3p^6 3d - 3p^6 8f$	$g^2D - ^2F^o$	2 - 2		009
	30	76.160	0.0 - 1313.02	$3p^6 3d - 3p^6 7f$	$g^2D - ^2F^o$	2 - 2		009
	40	76.305	2.451 - 1313.02	$3p^6 3d - 3p^6 7f$	$g^2D - ^2F^o$	2 - 2		009
	50	80.388	0.0 - 1243.97	$3p^6 3d - 3p^6 6f$	$g^2D - ^2F^o$	2 - 2		009
	60	80.544	2.451 - 1244.01	$3p^6 3d - 3p^6 6f$	$g^2D - ^2F^o$	2 - 2		009
	70	88.446	0.0 - 1130.66	$3p^6 3d - 3p^6 5f$	$g^2D - ^2F^o$	2 - 2		009
	80	88.636	2.451 - 1130.69	$3p^6 3d - 3p^6 5f$	$g^2D - ^2F^o$	2 - 2		009
	2	95.852	0.0 - 1043.28	$3p^6 3d - 3p^5 3d (^2D^o) 4s$	$g^2D - ^2D^o$	2 - 2		315
	40	96.076	2.451 - 1043.28	$3p^6 3d - 3p^5 3d (^2D^o) 4s$	$g^2D - ^2D^o$	2 - 2		315
	5	96.305	2.451 - 1040.83	$3p^6 3d - 3p^5 3d (^2D^o) 4s$	$g^2D - ^2D^o$	2 - 2		315
	10	96.541	2.451 - 1038.28	$3p^6 3d - 3p^5 3d (^1F^o) 4s$	$g^2D - ^2F^o$	2 - 2		315
	5	97.355	0.0 - 1027.17	$3p^6 3d - 3p^5 3d (^2D^o) 4s$	$g^2D - ^4D^o$	2 - 2		315
	15	97.587	2.451 - 1027.17	$3p^6 3d - 3p^5 3d (^2D^o) 4s$	$g^2D - ^4D^o$	2 - 2		315

CO IX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
15	97.854	97.854	2.451 - 1024.38	$3p^6 3d - 3p^5 3d(^3D^o)4s$	$g^2D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		315
40	99.042	99.042	0.0 - 1009.67	$3p^6 3d - 3p^5 3d(^3F^o)4s$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		315
1	99.284	99.284	2.451 - 1009.67	$3p^6 3d - 3p^5 3d(^3F^o)4s$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		315
90	99.921	99.921	2.451 - 1003.24	$3p^6 3d - 3p^5 3d(^3F^o)4s$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		315
15	100.210	100.210	0.0 - 997.90	$3p^6 3d - 3p^5 3d(^3F^o)4s$	$g^2D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		315
2	100.636	100.636	2.451 - 996.13	$3p^6 3d - 3p^5 3d(^3F^o)4s$	$g^2D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		315
1	100.856	100.856	0.0 - 991.51	$3p^6 3d - 3p^5 3d(^3P^o)4s$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		315
2	101.107	101.107	2.451 - 991.51	$3p^6 3d - 3p^5 3d(^3P^o)4s$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		315
2	101.410	101.410	0.0 - 986.10	$3p^6 3d - 3p^5 3d(^3P^o)4s$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		315
90	108.390	108.390	0.0 - 922.59	$3p^6 3d - 3p^6 4f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		009
100	108.667	108.667	2.451 - 922.69	$3p^6 3d - 3p^6 4f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		009
130	152.733	152.733	0.0 - 654.735	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1P)$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		1085
300	153.308	153.308	2.451 - 654.735	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1P)$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		1085
180	153.803	153.803	0.0 - 650.182	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1P)$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		1085
350	154.942	154.942	0.0 - 645.408	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^3F)$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1085
90	155.076	155.076	0.0 - 644.843	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^3F)$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1085
100	155.530	155.530	2.451 - 645.408	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^3F)$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1085
500	155.669	155.669	2.451 - 644.843	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^3F)$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		1085
100	158.953	158.953	0.0 - 629.117	$3p^6 3d - 3p^6 4p$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		1085
300	159.575	159.575	2.451 - 629.117	$3p^6 3d - 3p^6 4p$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		1085
250	159.972	159.972	0.0 - 625.109	$3p^6 3d - 3p^6 4p$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		1085
800	170.695	170.695	2.451 - 588.291	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^3F)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
600	172.190	172.190	0.0 - 580.759	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^3F)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
100	172.917	172.917	2.451 - 580.759	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^3F)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
150	200.100	200.100	0.0 - 499.750	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1D)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
20	201.086	201.086	2.451 - 499.750	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1D)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
250	207.180	207.180	2.451 - 485.123	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1D)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
300	212.907	212.907	2.451 - 472.140	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1G)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085
300	213.574	213.574	0.0 - 468.222	$3p^6 3d - 3p^5 (^2P^o) 3d^2 (^1G)$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1085

COBALT X (Co⁹⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁶(¹S₀) (18 electrons)
Ionization Potential 2 221 000 cm⁻¹; 275.4 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		62.332	0.0 - 1604.31	$3s^2 3p^6 - 3s^2 3p^5 (^2P^o) 5s$	$g^1S - ^1P^o$	0 - 1		729
		63.017	0.0 - 1586.87	$3s^2 3p^6 - 3s^2 3p^5 (^2P^o) 5s$	$g^1S - ^3P^o$	0 - 1		729
30	71.488	71.488	0.0 - 1398.80	$3s^2 3p^6 - 3s^2 3p^5 (^2P^o) 4d$	$g^1S - ^1P^o$	0 - 1		9
40	72.454	72.454	0.0 - 1380.19	$3s^2 3p^6 - 3s^2 3p^5 (^2P^o) 4d$	$g^1S - ^3P^o$	0 - 1		9
90	88.994	88.994	0.0 - 1123.67	$3s^2 3p^6 - 3s^2 3p^5 (^2P^o) 4s$	$g^1S - ^1P^o$	0 - 1		9
80	90.474	90.474	0.0 - 1105.29	$3s^2 3p^6 - 3s^2 3p^5 (^2P^o) 4s$	$g^1S - ^3P^o$	0 - 1		9
20	94.431	94.431	423.09 + D - 1482.06 + D	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3P^o - ^3D$	0 - 1		729
30	94.517	94.517	426.00 + D - 1484.01 + D	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3P^o - ^3D$	1 - 2		729
10	94.692	94.692	426.00 + D - 1482.06 + D	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3P^o - ^3D$	1 - 1		729
60	94.789	94.789	432.58 + D - 1487.55 + D	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3P^o - ^3D$	2 - 3		729
20	95.109	95.109	432.58 + D - 1484.01 + D	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3P^o - ^3D$	2 - 2		729
100	96.047	96.047	445.1 + S - 1486.26 + S	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3F^o - ^3G$	4 - 5		729
60	96.215	96.215	449.2 + S - 1488.54 + S	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3F^o - ^3G$	3 - 4		729
50	96.300	96.300	454.6 + S - 1493.02 + S	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3F^o - ^3G$	2 - 3		729
30	97.123	97.123	484.1 + K - 1513.72 + K	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^1D^o - ^1F$	2 - 3		729
50	97.575	97.575	489.0 + L - 1513.85 + L	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3D^o - ^3F$	2 - 3		729
50	97.924	97.924	493.3 + L - 1514.50 + L	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^1F^o - ^3F$	3 - 4		729
80	98.261	98.261	479.7 + L - 1497.36 + L	$3s^2 3p^5 3d - 3s^2 3p^5 4f$	$^3D^o - ^1G$	3 - 4		729

CO X — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	99.596	493.3+L - 1497.36+L	$3s^23p^53d - 3s^23p^54f$	$^1F^\circ - ^1G$	3 - 4		729
	40	111.542	629.43 - 1525.95	$3s^23p^5(^2P)3d - 3s^23p^5(^2P)4f$	$^1P^\circ - ^3D_1^\circ$	1 - 2		729
	900	158.87	0.0 - 629.43	$3s^23p^6 - 3s^23p^5(^2P)3d$	$g^1S - ^1P^\circ$	0 - 1		300,256

COBALT XI (Co¹⁰⁺), Z = 27
Ground State $1s^22s^22p^63s^23p^5(^2P_{3/2})$ (17 electrons)
Ionization Potential 2 462 000 cm^{-1} ; 305.3 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		66.19	0.0 - 1510.8	$3s^23p^5 - 3s^23p^4(^1D)4d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		854
		66.49	19.38 - 1523.4	$3s^23p^5 - 3s^23p^4(^1D)4d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		854
		67.97	0.0 - 1471.2	$3s^23p^5 - 3s^23p^4(^3P)4d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		854
	300	81.507	0.0 - 1226.89	$3s^23p^5 - 3s^23p^4(^1D)4s$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		182
	70	82.527	0.0 - 1211.78	$3s^23p^5 - 3s^23p^4(^3P)4s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		182
	200	82.759	19.38 - 1227.71	$3s^23p^5 - 3s^23p^4(^1D)4s$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		182
	300	83.190	0.0 - 1202.07	$3s^23p^5 - 3s^23p^4(^3P)4s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		182
	100	83.861	19.38 - 1211.78	$3s^23p^5 - 3s^23p^4(^3P)4s$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		182
	200	84.039	0.0 - 1189.92	$3s^23p^5 - 3s^23p^4(^3P)4s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		182
		84.67	0.0 - 1181.10	$3s^23p^5 - 3s^23p^4(^3P)4s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		854
		84.72	430.00+D - 1610.36+D	$3s^23p^4(^3P)3d - 3s^23p^4(^3P)4f$	$^4D - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		854
		86.87	415.72+S - 1566.87+S	$3s^23p^4(^3P)3d - 3s^23p^4(^3P)4f$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		854
		86.95	416.78+S - 1566.87+S	$3s^23p^4(^3P)3d - 3s^23p^4(^3P)4f$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		854
		87.27	421.00+S - 1566.87+S	$3s^23p^4(^3P)3d - 3s^23p^4(^3P)4f$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		854
		87.35	480.00+L - 1624.82+L	$3s^23p^4(^1D)3d - 3s^23p^4(^1D)4f$	$^2G - ^2H^\circ$	$\frac{3}{2} - \frac{1}{2}$		854
		87.49	423.88+S - 1566.87+S	$3s^23p^4(^3P)3d - 3s^23p^4(^3P)4f$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		854
		87.78	520.0+J - 1659.2+J	$3s^23p^4(^1S)3d - 3s^23p^4(^1S)4f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		851
		88.07	430.0+K - 1565.5+K	$3s^23p^4(^3P)3d - 3s^23p^4(^3P)4f$	$^2F - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		851
		88.20	530.0+J - 1663.8+J	$3s^23p^4(^1S)3d - 3s^23p^4(^1S)4f$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		851
		88.52	440.0+K - 1569.7+K	$3s^23p^4(^3P)3d - 3s^23p^4(^3P)4f$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		851
		89.31	500.0+R - 1619.7+R	$3s^23p^4(^1D)3d - 3s^23p^4(^1D)4f$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		851
	1	158.28	0.0 - 631.68	$3s^23p^5 - 3s^23p^4(^3P)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		300
	500	162.56	0.0 - 615.14	$3s^23p^5 - 3s^23p^4(^3P)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		300
	1	163.00	0.0 - 613.48	$3s^23p^5 - 3s^23p^4(^3P)3d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		300
	150	163.32	19.38 - 631.68	$3s^23p^5 - 3s^23p^4(^3P)3d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		300
	120	164.91	0.0 - 606.42	$3s^23p^5 - 3s^23p^4(^3P)3d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		300
	90	168.327	19.38 - 613.48	$3s^23p^5 - 3s^23p^4(^3P)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		300
	2	170.34	19.38 - 606.42	$3s^23p^5 - 3s^23p^4(^3P)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		300
	2	171.67	0.0 - 582.51	$3s^23p^5 - 3s^23p^4(^1D)3d$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		300
	1	177.59	19.38 - 582.51	$3s^23p^5 - 3s^23p^4(^1D)3d$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		300
		318.85	0.0 - 313.64	$3s^23p^5 - 3s3p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		240

COBALT XII (Co¹¹⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [2 710 000] cm⁻¹; [336] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		63.47	42.1232 + X - 1617.7 + X	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)4d	¹ D - ¹ F°	2 - 3		854
		63.60	42.1232 + X - 1614.4 + X	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)4d	¹ D - ¹ D°	2 - 2		854
		63.70	88.8846 + X - 1658.8 + X	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)4d	¹ S - ¹ P°	0 - 1		854
		63.80	0. - 1567.4 + X	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)4d	g ³ P - ³ D°	2 - 3		854
		79.21	1568.6 + D - 2831.0 + D	3s ² 3p ³ (⁴ S°)3d - 3s ² 3p ³ (⁴ S°)4f	⁵ D° - ⁵ F	3 - 4		854
		79.30	1570.0 + D - 2831.0 + D	3s ² 3p ³ (⁴ S°)3d - 3s ² 3p ³ (⁴ S°)4f	⁵ D° - ⁵ F	4 - 5		854
		80.14	1869.2 + L - 3117.0 + L	3s ² 3p ³ (² D°)3d - 3s ² 3p ³ (² D°)4f	³ G° - ³ H	4 - 5		854
		80.19	1870.0 + L - 3117.0 + L	3s ² 3p ³ (² D°)3d - 3s ² 3p ³ (² D°)4f	³ G° - ³ H	5 - 6		854
		165.86	0. - 602.92	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 2		240
		168.34	0. - 594.04	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 3		240
		168.68	15.8192 - 608.66	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	1 - 1		240
		169.04	17.0682 - 608.66	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	0 - 1		240
		169.91	42.1232 + X - 630.67 + X	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	¹ D - ¹ F°	2 - 3		240
		170.33	15.8192 - 602.92	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	1 - 2		240
		172.33	88.8846 + X - 669.16 + X	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	¹ S - ¹ P°	0 - 1		240
		172.41	42.1232 + X - 622.13 + X	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	¹ D - ¹ D°	2 - 2		240
		175.44	0. - 569.99	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	g ³ P - ³ P°	2 - 2		240
		180.45	15.8192 - 569.99	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	g ³ P - ³ P°	1 - 2		240
		286.64	42.1232 + X - 390.99 + X	3s ² 3p ⁴ - 3s3p ⁵	¹ D - ¹ P°	2 - 1		240
		326.17	0. - 306.59	3s ² 3p ⁴ - 3s3p ⁵	g ³ P - ³ P°	2 - 2		240
		343.93	15.8192 - 306.59	3s ² 3p ⁴ - 3s3p ⁵	g ³ P - ³ P°	1 - 2		240
		1125.	0. - 88.8846 + X	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ S	2 - 0	F,P	375,726
		1369.	15.8192 - 88.8846 + X	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ S	1 - 0	F,P	375,726

COBALT XIII (Co¹²⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [3 057 000] cm⁻¹; [379] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		59.53	49.6915 + S - 1729.5 + S	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² D	3/2 - 3/2		851
		59.86	49.6915 + S - 1720.3 + S	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² F	3/2 - 3/2		851
		59.99	43.6538 + S - 1710.6 + S	3s ² 3p ³ - 3s ² 3p ² (¹ D)4d	² D° - ² F	3/2 - 3/2		851
		60.11	88.1741 + S - 1751.8 + S	3s ² 3p ³ - 3s ² 3p ² (¹ S)4d	² P° - ² D	3/2 - 3/2		851
		69.83	0.0 - 1432.0	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	g ⁴ S° - ⁴ P	3/2 - 3/2		851
		70.68	49.6915 + S - 1464.5 + S	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ² D	3/2 - 3/2		851
		71.84	49.6915 + S - 1441.7 + S	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ² F	3/2 - 2		851
		72.02	43.6538 + S - 1432.2 + S	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² D° - ² F	3/2 - 3/2		851
		72.56	88.1741 + S - 1466.4 + S	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² P° - ² D	3/2 - 3/2		851
		72.66	88.1741 + S - 1464.5 + S	3s ² 3p ³ - 3s ² 3p ² (³ P)4d	² P° - ² D	3/2 - 3/2		851
		73.58	500.0 + D - 1859.1 + D	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	3/2 - 2		854
		73.66	500.0 + D - 1857.6 + D	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	3/2 - 1/2		854
		73.86	500.0 + R - 1853.9 + R	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ D - ⁴ F°	3/2 - 3/2		854
		74.03	800.0 + K - 2150.8 + K	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4f	² G - ² H°	3/2 - 3/2		854
		74.38	806.4 + K - 2150.8 + K	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4f	² G - ² H°	3/2 - 1/2		854
		174.82	49.6915 + S - 621.71 + S	3s ² 3p ³ - 3s ² 3p ² (¹ D)3d	² D° - ² F	3/2 - 2		240
		175.77	79.4563 + S - 648.39 + S	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² P° - ² D	3/2 - 2		240
		178.98	88.1741 + S - 646.89 + S	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² P° - ² D	3/2 - 3/2		240

CO XIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		179.59	0.0 - 556.82	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		240
		180.87	0.0 - 552.88	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		240
		182.09	43.6538 + S - 592.83 + S	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		240
		182.52	0.0 - 547.89	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		240
		183.65	49.6915 + S - 594.20 + S	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		240
		185.39	79.4563 + S - 618.88 + S	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		240
		188.42	88.1741 + S - 618.88 + S	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		240
		188.89	79.4563 + S - 608.87 + S	$3s^2 3p^3 - 3s^2 3p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		240
		205.38	49.6915 + S - 536.59 + S	$3s^2 3p^3 - 3s^2 3p^2(^3P)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		240
		263.41	43.6538 + S - 423.29 + S	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		240
		271.16	49.6915 + S - 418.48 + S	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		240
		313.95	49.6915 + S - 368.21 + S	$3s^2 3p^3 - 3s3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		240
		325.70	0.0 - 307.03	$3s^2 3p^3 - 3s3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		240
		338.82	0.0 - 295.14	$3s^2 3p^3 - 3s3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		240
		1134.	0.0 - 88.1741 + S	$3s^2 3p^3 - 3s^2 3p^3$	$g^4S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,726
		1259.	0.0 - 79.4563 + S	$3s^2 3p^3 - 3s^2 3p^3$	$g^4S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,726

COBALT XIV (Co¹³⁺), Z = 27
Ground State $1s^2 2s^2 2p^6 3s^2 3p^2(^3P_0)$ (14 electrons)
Ionization Potential [3 315 000] cm^{-1} ; [411] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		55.10	22.6646 - 1837.0	$3s^2 3p^2 - 3s^2 3p4d$	$g^3P - ^1F^\circ$	2 - 3		970
		55.42	0.0 - 1804.5	$3s^2 3p^2 - 3s^2 3p4d$	$g^3P - ^3D^\circ$	0 - 1		970
		55.431	22.6646 - 1826.7	$3s^2 3p^2 - 3s^2 3p4d$	$g^3P - ^3F^\circ$	2 - 3		970
		55.762	11.8439 - 1805.2	$3s^2 3p^2 - 3s^2 3p4d$	$g^3P - ^3D^\circ$	1 - 2		970
		55.782	11.8439 - 1804.5	$3s^2 3p^2 - 3s^2 3p4d$	$g^3P - ^3D^\circ$	1 - 1		854
		56.021	22.6646 - 1807.7	$3s^2 3p^2 - 3s^2 3p4d$	$g^3P - ^3D^\circ$	2 - 3		970
		56.115	54.9171 - 1837.0	$3s^2 3p^2 - 3s^2 3p4d$	$^1D - ^1F^\circ$	2 - 3		970
		56.138						854
		56.900	101.0778 + E - 1858.5	$3s^2 3p^2 - 3s^2 3p4d$	$^1S - ^1P^\circ$	0 - 1		970
		65.585	11.8439 - 1536.60	$3s^2 3p^2 - 3s^2 3p4s$	$g^3P - ^3P^\circ$	1 - 2		854
		65.712	391.98 - 1913.9	$3s3p^3 - 3s^2 3p4f$	$^1D^\circ - ^1F$	2 - 3		970
		66.050	22.6646 - 1536.60	$3s^2 3p^2 - 3s^2 3p4s$	$g^3P - ^3P^\circ$	2 - 2		854
		66.195	391.98 - 1902.7	$3s3p^3 - 3s^2 3p4f$	$^1D^\circ - ^3G$	2 - 3		970
		67.069	54.9171 - 1545.92	$3s^2 3p^2 - 3s^2 3p4s$	$^1D - ^1P^\circ$	2 - 1		854
		68.807	450.9 + D - 1904.2 + D	$3s^2 3p3d - 3s^2 3p4f$	$^3F^\circ - ^3G$	4 - 5		970
		69.017	454.7 + D - 1903.6 + D	$3s^2 3p3d - 3s^2 3p4f$	$^3F^\circ - ^3G$	3 - 4		970
		70.698	535.0 + K - 1949.5 + K	$3s^2 3p3d - 3s^2 3p4f$	$^3P^\circ - ^3D$	0 - 1		970
		71.493	546.72 - 1945.6	$3s^2 3p3d - 3s^2 3p4f$	$^3D^\circ - ^3F$	3 - 4		970
		73.402	597.19 - 1959.6	$3s^2 3p3d - 3s^2 3p4f$	$^1F^\circ - ^1G$	3 - 4		970
		74.379	612.17 + E - 1956.6 + E	$3s^2 3p3d - 3s^2 3p4f$	$^1P^\circ - ^1D$	1 - 2		970
		184.41	54.9171 - 597.19	$3s^2 3p^2 - 3s^2 3p3d$	$^1D - ^1F^\circ$	2 - 3		240
		186.79	11.8439 - 547.20	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^3D^\circ$	1 - 2		240
		187.89	11.8439 - 544.07	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^3D^\circ$	1 - 1		240
		188.60	0.0 - 530.25	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^3P^\circ$	0 - 1		240
		190.65	22.6646 - 547.20	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^3D^\circ$	2 - 2		240
		190.75	11.8439 - 536.03	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^1D^\circ$	1 - 2		240
		190.82	22.6646 - 546.72	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^3D^\circ$	2 - 3		240
		191.76	22.6646 - 544.07	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^3D^\circ$	2 - 1		240
		195.66	101.0778 + E - 612.17 + E	$3s^2 3p^2 - 3s^2 3p3d$	$^1S - ^1P^\circ$	0 - 1		240
		196.48	11.8439 - 520.80	$3s^2 3p^2 - 3s^2 3p3d$	$g^3P - ^3P^\circ$	1 - 2		240

CO XIV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		197.01	22.6646 - 530.25	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3P^o$	2 - 1		240
		200.75	22.6646 - 520.80	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3P^o$	2 - 2		240
		207.85	54.9171 - 536.03	$3s^23p^2 - 3s^23p3d$	$^1D - ^1D^o$	2 - 2		240
		224.15	0.0 - 446.12	$3s^23p^2 - 3s3p^3$	$g^3P - ^3S^o$	0 - 1	P	240
		230.27	11.8439 - 446.12	$3s^23p^2 - 3s3p^3$	$g^3P - ^3S^o$	1 - 1	P	240
		236.15	22.6646 - 446.12	$3s^23p^2 - 3s3p^3$	$g^3P - ^3S^o$	2 - 1	P	240
		239.33	54.9171 - 472.75	$3s^23p^2 - 3s3p^3$	$^1D - ^1P^o$	2 - 1		240
		296.68	54.9171 - 391.98	$3s^23p^2 - 3s3p^3$	$^1D - ^1D^o$	2 - 2		240
		298.38	22.6646 - 357.81	$3s^23p^2 - 3s3p^3$	$g^3P - ^3P^o$	2 - 2		240
		334.22	11.8439 - 311.05	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^o$	1 - 2		240
		342.25	22.6646 - 314.85	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^o$	2 - 3		240
		1120.6	11.8439 - 101.0778	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1S$	1 - 0	F,P	375,726
		1275.3	22.6646 - 101.0778	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1S$	2 - 0	F,P	375,726
		1820.9	0. - 54.9171	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1D$	0 - 2	F,P	375,726

COBALT XV (Co¹⁴⁺), Z = 27
Ground State $1s^22s^22p^63s^23p^2(^2P_{1/2})$ (13 electrons)
Ionization Potential [3 581 000] cm^{-1} ; [444] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	52.583	0.0 - 1901.75	$3s^23p - 3s^24d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		180
	200	53.173	22.986 - 1903.6	$3s^23p - 3s^24d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		180
		64.229	1443.1 + S - 3000.0 + S	$3s3p3d - 3s3p4f$	$^4F^o - ^4G$	$\frac{9}{2} - \frac{11}{2}$		854
		64.356	1446.1 + S - 3000.0 + S	$3s3p3d - 3s3p4f$	$^4F^o - ^4G$	$\frac{5}{2} - \frac{7}{2}$		854
		64.480	1449.1 + S - 3000.0 + S	$3s3p3d - 3s3p4f$	$^4F^o - ^4G$	$\frac{7}{2} - \frac{9}{2}$		854
		66.819	506.23 - 2002.8	$3s^23d - 3s^24f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		854
		66.913	508.76 - 2003.2	$3s^23d - 3s^24f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		854
		197.54	0.0 - 506.23	$3s^23p - 3s^23d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		240
		205.85	22.986 - 508.76	$3s^23p - 3s^23d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		240
		206.94	22.986 - 506.23	$3s^23p - 3s^23d$	$g^2P^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$		240
		234.41	0.0 - 426.59	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		240
		239.42	0.0 - 417.69	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		240
		247.76	22.986 - 426.59	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{5}{2} - \frac{3}{2}$		240
		253.34	22.986 - 417.69	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{7}{2} - \frac{1}{2}$		240
		255.88	0.0 - 390.81	$3s^23p - 3s3p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		240
		270.43	280.00 + K - 649.78 + K	$3s3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{5}{2} - \frac{3}{2}$		240
		310.69	0.0 - 321.86	$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		240
		330.25	22.986 - 325.79	$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$		240

COBALT XVI (Co¹⁵⁺), Z = 27
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential 4 129 200 cm⁻¹; 511.96 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	30	14.080	0.0 - 7102.3	2p ⁶ 3s ² - 2p ⁵ 3s ² 3d	g ¹ S - ¹ P°	0 - 1		716
	3	37.070	249.90+X - 2948.0+X	3s3p - 3s5d	³ P° - ³ D	0 - 1		237
	6	37.165	257.40+X - 2948.1+X	3s3p - 3s5d	³ P° - ³ D	1 - 2		237
	10	37.401	274.30+X - 2948.5+X	3s3p - 3s5d	³ P° - ³ D	2 - 3		237
		38.84	274.30+X - 2849.00+X	3s3p - 3s5s	³ P° - ³ S	2 - 1		851
		44.253	728.96+X - 2989.2+X	3s3d - 3s5f	³ D - ³ F°	3 - 4		851
		46.433	274.30+X - 2428.4+X	3s3p - 3p4p	³ P° - ³ D	2 - 3		851
		46.522	274.30+X - 2424.3+X	3s3p - 3p4p	³ P° - ³ P	2 - 1		851
	100	47.483	0.0 - 2106.02	3s ² - 3s4p	g ¹ S - ¹ P°	0 - 1		180
	100	49.808	249.90+X - 2257.9+X	3s3p - 3s4d	³ P° - ³ D	0 - 1		180
	100	49.958	257.40+X - 2259.0+X	3s3p - 3s4d	³ P° - ³ D	1 - 2		180
	20	49.979	257.40+X - 2257.9+X	3s3p - 3s4d	³ P° - ³ D	1 - 1		180
	200	50.357	274.30+X - 2260.1+X	3s3p - 3s4d	³ P° - ³ D	2 - 3		180
	20	50.393	274.30+X - 2259.0+X	3s3p - 3s4d	³ P° - ³ D	2 - 2		180
		50.94	592.45+X - 2555.5+X	3p ² - 3p4d	³ P - ³ D°	0 - 1		851
		51.007	604.66+X - 2565.7+X	3p ² - 3p4d	³ P - ³ D°	1 - 2		851
		51.239	625.89+X - 2578.0+X	3p ² - 3p4d	³ P - ³ D°	2 - 3		851
		51.279	597.10 - 2547.2	3p ² - 3p4d	¹ D - ¹ F°	2 - 3		851
		53.043	376.31 - 2261.6	3s3p - 3s4d	¹ P° - ¹ D	1 - 2		854
		56.83	597.10 - 2356.7	3p ² - 3s4f	¹ D - ¹ F°	2 - 3		854
		58.127	249.90+X - 1970.47+X	3s3p - 3s4s	³ P° - ³ S	0 - 1		851
		58.365	257.40+X - 1970.47+X	3s3p - 3s4s	³ P° - ³ S	1 - 1		851
		58.96	274.30+X - 1970.47+X	3s3p - 3s4s	³ P° - ³ S	2 - 1		851
		59.625	625.89+X - 2303.0+X	3p ² - 3p4s	³ P - ³ P°	2 - 2		851
		61.005	1017.20+B - 2656.4+B	3p3d - 3p4f	³ F° - ³ G	4 - 5		854
		61.025	991.60+B - 2630.3+B	3p3d - 3p4f	³ F° - ³ G	2 - 3		970
		61.192	1003.30+B - 2637.5+B	3p3d - 3p4f	³ F° - ³ G	3 - 4		854
		61.621	1027.0+X - 2649.8+X	3p3d - 3p4f	¹ D° - ¹ F	2 - 3		970
	100	61.875	725.57+X - 2341.7+X	3s3d - 3s4f	³ D - ³ F°	1 - 2		180
	200	61.916	727.37+X - 2342.5+X	3s3d - 3s4f	³ D - ³ F°	2 - 3		180
	200	61.982	728.96+X - 2342.3+X	3s3d - 3s4f	³ D - ³ F°	3 - 4		180
		62.131	1062.5+L - 2672.0+L	3p3d - 3p4f	³ P° - ³ D	0 - 1		970
		62.334	1062.7+R - 2667.0+R	3p3d - 3p4f	³ P° - ³ D	1 - 2		970
		62.412	1054.5+Y - 2656.8+Y	3p3d - 3p4f	³ D° - ³ D	2 - 3		970
		62.805	1054.5+W - 2646.7+W	3p3d - 3p4f	³ D° - ³ F	3 - 4		970
		63.017	1062.44+X - 2649.8+X	3p3d - 3p4f	³ P° - ¹ F	2 - 3		970
		64.540	1800.0+S - 3349.4+S	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		854
		64.773	812.85 - 2356.7	3s3d - 3s4f	¹ D - ¹ F°	2 - 3		854
		210.23	249.90+X - 725.57+X	3s3p - 3s3d	³ P° - ³ D	0 - 1		240
		212.78	257.40+X - 727.37+X	3s3p - 3s3d	³ P° - ³ D	1 - 2		240
		213.60	257.40+X - 725.57+X	3s3p - 3s3d	³ P° - ³ D	1 - 1	P	375
		219.94	274.30+X - 728.96+X	3s3p - 3s3d	³ P° - ³ D	2 - 3		240
		220.72	274.30+X - 727.37+X	3s3p - 3s3d	³ P° - ³ D	2 - 2	P	375
		229.07	625.89+X - 1062.44+X	3p ² - 3p3d	³ P - ³ P°	2 - 2		240
	85	265.74	0.0 - 376.31	3s ² - 3s3p	g ¹ S - ¹ P°	0 - 1		240,437
		271.38	257.40+X - 625.89+X	3s3p - 3p ²	³ P° - ³ P	1 - 2		240
		281.88	249.90+X - 604.66+X	3s3p - 3p ²	³ P° - ³ P	0 - 1		240
		284.42	274.30+X - 625.89+X	3s3p - 3p ²	³ P° - ³ P	2 - 2		240
		287.97	257.40+X - 604.66+X	3s3p - 3p ²	³ P° - ³ P	1 - 1	P	375
		298.46	257.40+X - 592.45+X	3s3p - 3p ²	³ P° - ³ P	1 - 0		854
		302.69	274.30+X - 604.66+X	3s3p - 3p ²	³ P° - ³ P	2 - 1		240
		388.5	0.0 - 257.40+X	3s ² - 3s3p	g ¹ S - ³ P°	0 - 1	P	375

COBALT XVII (Co¹⁶⁺), Z = 27
Ground State 1s²2s²2p⁶3s(²S_{1/2}) (11 electrons)
Ionization Potential 4 408 500 cm⁻¹; 546.59 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		15.551	0.0 - 6430.5	2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		265
		15.828	0.0 - 6317.9	2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		265
	3	27.902	319.957 - 3903.9	2p ⁶ 3p - 2p ⁶ 8d	² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		237
		28.85	0.0 - 3466.2	2p ⁶ 3s - 2p ⁶ 6p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		237
	6	28.874	0.0 - 3463.32	2p ⁶ 3s - 2p ⁶ 6p	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		237
	6	28.960	294.556 - 3747.52	2p ⁶ 3p - 2p ⁶ 7d	² P ^o - ² D	$\frac{1}{2} - \frac{1}{2}$		237
	10	29.171	319.957 - 3747.99	2p ⁶ 3p - 2p ⁶ 7d	² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		237
	20	31.142	294.556 - 3505.58	2p ⁶ 3p - 2p ⁶ 6d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		237
	35	31.386	319.957 - 3506.06	2p ⁶ 3p - 2p ⁶ 6d	² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		237
	6	32.910	720.224 - 3758.76	2p ⁶ 3d - 2p ⁶ 7f	² D - ² F ^o	$\frac{3}{2} - \frac{5}{2}$		237
	6	32.951	723.932 - 3758.7	2p ⁶ 3d - 2p ⁶ 7f	² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$		237
	35	32.995	0.0 - 3030.76	2p ⁶ 3s - 2p ⁶ 5p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		237
	20	33.046	0.0 - 3026.09	2p ⁶ 3s - 2p ⁶ 5p	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		237
	6	35.617	294.556 - 3102.13	2p ⁶ 3p - 2p ⁶ 5d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		237
	10	35.660	720.224 - 3524.43	2p ⁶ 3d - 2p ⁶ 6f	² D - ² F ^o	$\frac{3}{2} - \frac{5}{2}$		237
	20	35.707	723.932 - 3524.46	2p ⁶ 3d - 2p ⁶ 6f	² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$		237
	20	35.932	319.957 - 3102.97	2p ⁶ 3p - 2p ⁶ 5d	² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		237
		37.768	319.957 - 2967.70	2p ⁶ 3p - 2p ⁶ 5s	² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		851
	10	41.404	720.224 - 3135.2	2p ⁶ 3d - 2p ⁶ 5f	² D - ² F ^o	$\frac{3}{2} - \frac{5}{2}$		237
	10	41.462	723.932 - 3135.3	2p ⁶ 3d - 2p ⁶ 5f	² D - ² F ^o	$\frac{5}{2} - \frac{7}{2}$		237
		45.319	0.0 - 2206.58	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		178
		45.527	0.0 - 2196.50	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		178
		48.564	294.556 - 2353.69	2p ⁶ 3p - 2p ⁶ 4d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		178
		49.133	319.957 - 2355.25	2p ⁶ 3p - 2p ⁶ 4d	² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		178
		49.171	319.957 - 2353.69	2p ⁶ 3p - 2p ⁶ 4d	² P ^o - ² D	$\frac{3}{2} - \frac{1}{2}$		178
		56.021	294.556 - 2079.55	2p ⁶ 3p - 2p ⁶ 4s	² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$		178
		56.833	319.957 - 2079.55	2p ⁶ 3p - 2p ⁶ 4s	² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		178
		58.842	720.224 - 2419.69	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F ^o	$\frac{3}{2} - \frac{5}{2}$		178
		58.948	723.932 - 2420.34	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F ^o	$\frac{5}{2} - \frac{7}{2}$		178
	30	127.96	2353.69 - 3135.2	2p ⁶ 4d - 2p ⁶ 5f	² D - ² F ^o	$\frac{3}{2} - \frac{5}{2}$		1091
	50	128.20	2355.25 - 3135.3	2p ⁶ 4d - 2p ⁶ 5f	² D - ² F ^o	$\frac{5}{2} - \frac{7}{2}$		1091
	80	138.97	2419.69 - 3139.3	2p ⁶ 4f - 2p ⁶ 5g	² F ^o - ² G	$\frac{5}{2} - \frac{7}{2}$		1091
	80	139.04	2420.34 - 3139.6	2p ⁶ 4f - 2p ⁶ 5g	² F ^o - ² G	$\frac{7}{2} - \frac{9}{2}$		1091
	55	234.925	294.556 - 720.224	2p ⁶ 3p - 2p ⁶ 3d	² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$	P	753,987
	50	247.540	319.957 - 723.932	2p ⁶ 3p - 2p ⁶ 3d	² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$	P	753,987
	10	249.84	319.957 - 720.224	2p ⁶ 3p - 2p ⁶ 3d	² P ^o - ² D	$\frac{3}{2} - \frac{1}{2}$		854
	300	312.542	0.0 - 319.957	2p ⁶ 3s - 2p ⁶ 3p	g ² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		753,437
	120	339.494	0.0 - 294.556	2p ⁶ 3s - 2p ⁶ 3p	g ² S - ² P ^o	$\frac{1}{2} - \frac{1}{2}$		753,437

COBALT XVIII (Co¹⁷⁺), Z = 27
Ground State 1s²2s²2p⁶(¹S₀) (10 electrons)
Ionization Potential 11 269 000 cm⁻¹; 1397.2 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		9.347	0.0 - 10699.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2} ^o)(8d(² D _{3/2}))	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$) ^o	0 - 1		643
		9.371	0.0 - 10671.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2} ^o)(7d(² D _{3/2}))	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$) ^o	0 - 1		643
		9.501	0.0 - 10525.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2} ^o)(7d(² D _{3/2}))	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$) ^o	0 - 1		643

CO XVIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	9.609	0.0 - 10407.	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{1/2})(6d(^2D_{3/2}))$	$g^1S - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0 - 1		643, 716
		9.633	0.0 - 10381.	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{3/2})(6d(^2D_{3/2}))$	$g^1S - (\frac{3}{2}, \frac{3}{2})^{\circ}$	0 - 1		1094
	20	9.736	0.0 - 10271.	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{3/2})(6d(^2D_{5/2}))$	$g^1S - (\frac{3}{2}, \frac{5}{2})^{\circ}$	0 - 1		643, 716
		10.030	0.0 - 9970.1	$2s^2 2p^6 -$ $2s 2p^6(^2S_{1/2})(4p(^2P_{3/2}))$	$g^1S - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0 - 1		1094
	30	10.053	0.0 - 9947.3	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{1/2})(5d(^2D_{3/2}))$	$g^1S - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0 - 1		643
	50	10.066	0.0 - 9934.4	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{3/2})(5d(^2D_{3/2}))$	$g^1S - (\frac{3}{2}, \frac{3}{2})^{\circ}$	0 - 1		643, 1094
	40	10.182	0.0 - 9821.2	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{3/2})(5d(^2D_{5/2}))$	$g^1S - (\frac{3}{2}, \frac{5}{2})^{\circ}$	0 - 1		643
	4	10.234	0.0 - 9771.4	$2s^2 2p^6 - 2s^2 2p^5 5d$	$g^1S - ^1P^{\circ}$	0 - 1		1089
	50	10.975	0.0 - 9111.6	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{1/2})(4d(^2D_{3/2}))$	$g^1S - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0 - 1		643, 716
	70	11.106	0.0 - 9004.1	$2s^2 2p^6 -$ $2s^2 2p^5(^2P_{3/2})(4d(^2D_{5/2}))$	$g^1S - (\frac{3}{2}, \frac{5}{2})^{\circ}$	0 - 1		643, 716
	50	11.330	0.0 - 8826.1	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})4s$	$g^1S - (\frac{1}{2}, \frac{1}{2})^{\circ}$	0 - 1		643, 716
	70	11.456	0.0 - 8729.0	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})4s$	$g^1S - (\frac{3}{2}, \frac{3}{2})^{\circ}$	0 - 1		643, 716
	90	12.596	0.0 - 7939.0	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^{\circ}$	0 - 1		643
	60	12.654	0.0 - 7902.6	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^{\circ}$	0 - 1		643
	150	13.631	0.0 - 7336.2	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ})3d$	$g^1S - ^1P^{\circ}$	0 - 1		643
	120	13.862	0.0 - 7214.0	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ})3d$	$g^1S - ^3D^{\circ}$	0 - 1		643
	50	14.038	0.0 - 7123.5	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ})3d$	$g^1S - ^3P^{\circ}$	0 - 1		643
	80	15.170	0.0 - 6592.0	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})3s$	$g^1S - (\frac{1}{2}, \frac{1}{2})^{\circ}$	0 - 1		643
	100	15.439	0.0 - 6477.1	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})3s$	$g^1S - (\frac{3}{2}, \frac{3}{2})^{\circ}$	0 - 1		643
		44.869	6768.3 + C - 8997.0 + C	$2s^2 2p^5 3p - 2s^2 2p^5 4d$	$^1P - ^1D^{\circ}$	1 - 2		395
		44.959	6741.0 + C - 8965.2 + C	$2s^2 2p^5 3p - 2s^2 2p^5 4d$	$^3D - ^3D^{\circ}$	2 - 3		395
		45.35	6759.9 + C - 8964.9 + C	$2s^2 2p^5 3p - 2s^2 2p^5 4d$	$^3D - ^3F^{\circ}$	3 - 4		395
		45.454	6904.8 + C - 9104.8 + C	$2s^2 2p^5 3p - 2s^2 2p^5 4d$	$^1D - ^1F^{\circ}$	2 - 3		395
		45.640	6784.4 + C - 8975.5 + C	$2s^2 2p^5 3p - 2s^2 2p^5 4d$	$^3P - ^3F^{\circ}$	2 - 3		395

COBALT XIX (Co¹⁸⁺), Z = 27
Ground State $1s^2 2s^2 2p^5(^2P_{3/2}^{\circ})$ (9 electrons)
Ionization Potential 12 135 000 cm⁻¹; 1504.6 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	10.206	121.954 - 9920.1	$2s^2 2p^5 - 2s^2 2p^4(^1S)4d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
		10.275	0.0 - 9731.8	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1094
	40	10.290	0.0 - 9718.2	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{5}{2}$		1094, 716
	20	10.373	0.0 - 9640.4	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094, 716
	40	10.406	0.0 - 9609.8	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$		1094, 716
	20	10.428	121.954 - 9718.2	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	Q	643
	40	10.477	0.0 - 9544.7	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$		1094, 716
		10.568	0.0 - 9462.5	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
	30	10.583	0.0 - 9449.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$		716
	30	10.645	0.0 - 9394.1	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094, 716
	40	10.704	121.954 - 9464.3	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$		1094, 716
		10.776	0.0 - 9279.9	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094

CO XIX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	11.002						1089
	20	11.712	0.0 - 8531.0	$2s^2 2p^5 - 2s 2p^5(^1P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	Q	716
	30	11.744	0.0 - 8515.0	$2s^2 2p^5 - 2s 2p^5(^1P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	20	11.892	121.954 - 8531.0	$2s^2 2p^5 - 2s 2p^5(^1P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
		11.906	121.954 - 8521.1	$2s^2 2p^5 - 2s 2p^5(^1P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094
		11.954	121.954 - 8487.4	$2s^2 2p^5 - 2s 2p^5(^1P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		12.015	0.0 - 8323.1	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		1094
		12.155	0.0 - 8227.1	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		1094
		12.168	0.0 - 8218.3	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094
	30	12.193	121.954 - 8323.1	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
		12.212	0.0 - 8188.7	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		12.224	121.954 - 8302.6	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		12.238	0.0 - 8171.3	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^4 D$	$\frac{1}{2} - \frac{3}{2}$		1094
	30	12.281	0.0 - 8142.7	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^4 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
		12.300	121.954 - 8252.0	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		1094
		12.338	121.954 - 8227.1	$2s^2 2p^5 - 2s 2p^5(^3P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	Q	634
	300	12.700	0.0 - 7874.0	$2s^2 2p^5 - 2s^2 2p^4(^1S) 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		850
	4	12.828	121.954 - 7917.4	$2s^2 2p^5 - 2s^2 2p^4(^1S) 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	7	12.876	0.0 - 7764.9	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3d$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		964
	6	12.890	0.0 - 7757.5	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	10	12.942	0.0 - 7726.5	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	40	12.985	0.0 - 7701.6	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3d$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	50	13.084	0.0 - 7642.9	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	12	13.097	121.954 - 7757.5	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	20	13.123	0.0 - 7620.2	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^4 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	6	13.151	121.954 - 7726.5	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3d$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	40	13.183	0.0 - 7584.4	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		716
	6	13.192	121.954 - 7701.6	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3d$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	40	13.240	0.0 - 7552.9	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^2 F$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	7	13.258	0.0 - 7542.6	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	6	13.289	0.0 - 7525.0	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	5	13.314	121.954 - 7632.8	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	300	13.468	121.954 - 7542.6	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3d$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		850
	100	13.847						850
	50	14.041	121.954 - 7243.9	$2s^2 2p^5 - 2s^2 2p^4(^1S) 3s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	30	14.184	0.0 - 7050.2	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3s$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	4	14.303	0.0 - 6991.5	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3s$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	20	14.355	0.0 - 6966.2	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3s$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	20	14.423	121.954 - 7055.3	$2s^2 2p^5 - 2s^2 2p^4(^1D) 3s$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	20	14.534	0.0 - 6880.8	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3s$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	5	14.557	121.954 - 6991.5	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3s$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 964
	10	14.594	0.0 - 6852.1	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3s$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 716
	100	14.794	121.954 - 6880.8	$2s^2 2p^5 - 2s^2 2p^4(^3P) 3s$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094, 850
	300	88.339	0.0 - 1132.002	$2s^2 2p^5 - 2s 2p^6$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$	P	1104, 1091
	250	99.005	121.954 - 1132.002	$2s^2 2p^5 - 2s 2p^6$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$	P	1104, 1091
		820.01	0.0 - 121.954	$2s^2 2p^5 - 2s^2 2p^5$	$g^2 P^o - g^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	F, P	375, 1104

COBALT XX (Co¹⁹⁺), Z = 27
Ground State 1s²2s²2p⁴(³P₂) (8 electrons)
Ionization Potential [12 930 000] cm⁻¹; [1603] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
20		9.633	107.514 - 10488.	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)4d	g ³ P - ³ P°	1 - 1		1094
		9.681	0.0 - 10330.	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ S°	2 - 1		1094
		9.694	0.0 - 10316.	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ D°	2 - 3		1094
		9.742	0.0 - 10265.	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ F°	2 - 3		1094
		9.828	107.514 - 10282.	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	g ³ P - ³ D°	1 - 2		1094,716
		9.856	0.0 - 10146.	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)4d	g ³ P - ³ D°	2 - 3		1094
		9.900	189.230 - 10282.	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)4d	¹ D - ³ D°	2 - 2	Q	716
		9.924	84.053 - 10161.	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)4d	g ³ P - ³ D°	0 - 1		1094
		10.020	189.230 - 10161.	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)4d	¹ D - ³ D°	2 - 1	Q	1089
		11.995	0.0 - 8330.7	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	2 - 1	Q	716
		12.067	0.0 - 8287.7	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	2 - 2	Q	716
		12.144	0.0 - 8237.6	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	2 - 1	Q	716
		12.238	107.514 - 8278.8	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	1 - 2		1094,716
		12.258	0.0 - 8156.7	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ F°	2 - 3		634
		12.281	107.514 - 8249.5	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	1 - 0		1094,716
		12.300	107.514 - 8237.6	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	1 - 1		1094
		12.331	0.0 - 8109.0	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ D°	2 - 2		1094
		12.348	0.0 - 8098.5	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ D°	2 - 3		1094
		12.382	107.514 - 8180.9	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	1 - 2		634
	12.42	189.230 - 8237.6	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	¹ D - ³ P°	2 - 1	Q	716	
	12.493	107.514 - 8109.0	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ D°	1 - 2	Q	634,716	
	12.513	189.230 - 8180.9	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	¹ D - ³ P°	2 - 2		1094	
	12.551	363.241 - 8330.7	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	¹ S - ³ P°	0 - 1		1094,716	
	12.606	0.0 - 7932.7	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 3		1094	
	12.628	0.0 - 7918.9	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 2		634	
	13.157	0.0 - 7599.	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	g ³ P - ³ P°	2 - 1	Q	964	
	13.240	107.514 - 7660.4	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	g ³ P - ³ P°	1 - 2		1094	
	13.314	0.0 - 7509.3	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	2 - 2	Q	1094	
	13.356	0.0 - 7487.3	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	2 - 3		1094	
	13.372	107.514 - 7585.8	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	g ³ P - ³ P°	1 - 0		1094	
	13.425	0.0 - 7448.8	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	2 - 2		1094	
	13.496	189.230 - 7599.	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	¹ D - ³ P°	2 - 1		1094,716	
	13.517	107.514 - 7509.3	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	1 - 2	Q	1094	
	13.634	107.514 - 7442.1	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	1 - 1		1094,716	
	13.661	189.230 - 7509.3	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	¹ D - ³ D°	2 - 2		1094	
	13.676	363.241 - 7675.3	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	¹ S - ³ P°	0 - 1		1094	
	13.705	189.230 - 7487.3	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	¹ D - ³ D°	2 - 3		716	
	13.775	189.230 - 7448.8	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	¹ D - ³ D°	2 - 2		1094,716	
	13.786	84.053 - 7337.7	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3s	g ³ P - ³ S°	0 - 1		1094	
	13.825	107.514 - 7337.7	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3s	g ³ P - ³ S°	1 - 1		1094,716	
	74.10	0.0 - 1349.5016	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ¹ P°	2 - 1		1091	
	79.01	84.053 - 1349.5016	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ¹ P°	0 - 1		1091	
	80.51	107.514 - 1349.5016	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ¹ P°	1 - 1		1091	
	82.48	1053.460 - 2265.959	2s2p ⁵ - 2p ⁶	³ P° - ¹ S	1 - 0		1091	
	86.19	189.230 - 1349.5016	2s ² 2p ⁴ - 2s2p ⁵	¹ D - ¹ P°	2 - 1		1091	
	94.94	0.0 - 1053.460	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	2 - 1		1091	
	99.89	107.514 - 1108.695	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1 - 0		1091	
	101.39	363.241 - 1349.5016	2s ² 2p ⁴ - 2s2p ⁵	¹ S - ¹ P°	0 - 1		1091	
	101.88	0.0 - 981.578	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	2 - 2		1091	
	103.16	84.053 - 1053.460	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	0 - 1		1091	
	105.72	107.514 - 1053.460	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1 - 1		1091	
	109.14	1349.5016 - 2265.959	2s2p ⁵ - 2p ⁶	¹ P° - ¹ S	1 - 0		1091	
	114.40	107.514 - 981.578	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1 - 2		1091	
	115.71	189.230 - 1053.460	2s ² 2p ⁴ - 2s2p ⁵	¹ D - ³ P°	2 - 1	P	375,1104	

CO XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	126.22	189.230 - 981.578	$2s^2 2p^4 - 2s 2p^5$	$^1D - ^3P^o$	2 - 2		1091
		275.30	0.0 - 363.241	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1104
		391.04	107.514 - 363.241	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1104
		528.46	0.0 - 189.230	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F,P	375,1104
		574.68	189.230 - 363.241	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1104
		930.11	0.0 - 107.514	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F,P	375,1104
		950.78	84.053 - 189.230	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1104
	1190.	0.0 - 84.053	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1104	
	1224.	107.514 - 189.230	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 2	F,P	375,1104	

COBALT XXI (Co²⁰⁺), Z = 27
Ground State $1s^2 2s^2 2p^3 (^4S_{3/2})$ (7 electrons)
Ionization Potential [13 990 000] cm⁻¹; [1735] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	75.87	0.0 - 1318.04	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	75.90	879.51 - 2197.08	$2s 2p^4 - 2p^5$	$^4P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	77.69	147.08 - 1434.25	$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	78.71	799.04 - 2069.56	$2s 2p^4 - 2p^5$	$^4P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	78.90	0.0 - 1267.47	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	84.03	879.51 - 2069.56	$2s 2p^4 - 2p^5$	$^4P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	85.40	147.08 - 1318.04	$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	86.66	280.26 - 1434.25	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1091
	250	88.77	191.53 - 1318.04	$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1091
	150	89.25	147.08 - 1267.47	$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1091
	30	90.31	0.0 - 1107.33	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	91.76	1107.33 - 2197.08	$2s 2p^4 - 2p^5$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	300	93.00	359.03 - 1434.25	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1091
	30	96.36	280.26 - 1318.04	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1091
	110	101.30	280.26 - 1267.47	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	103.93	1107.33 - 2069.56	$2s 2p^4 - 2p^5$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	250	104.14	147.08 - 1107.33	$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	104.27	359.03 - 1318.04	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1091
	200	106.23	1128.17 - 2069.56	$2s 2p^4 - 2p^5$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	300	106.76	191.53 - 1128.17	$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$		1091
	110	110.08	359.03 - 1267.47	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1091
	200	110.71	0.0 - 903.26	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1091
	250	113.70	0.0 - 879.51	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1091
	110	113.76	1318.04 - 2197.08	$2s 2p^4 - 2p^5$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	120.91	280.26 - 1107.33	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1091
	30	124.67	1267.47 - 2069.56	$2s 2p^4 - 2p^5$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		1091
	250	125.15	0.0 - 799.04	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	130.02	359.03 - 1128.17	$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$		1091
	30	131.09	1434.25 - 2197.08	$2s 2p^4 - 2p^5$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		1091
	110	133.06	1318.04 - 2069.56	$2s 2p^4 - 2p^5$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		1091
		278.5	0.0 - 359.03	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^o - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091
		356.8	0.0 - 280.26	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^o - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		471.8	147.08 - 359.03	$2s^2 2p^3 - 2s^2 2p^3$	$^2D^o - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		522.1	0.0 - 191.53	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^o - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091
		597.0	191.53 - 359.03	$2s^2 2p^3 - 2s^2 2p^3$	$^2D^o - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		679.9	0.0 - 147.08	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^o - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,1091

CO XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		750.9	147.08 - 280.26	$2s^22p^3 - 2s^22p^3$	$^3D^\circ - ^3P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		1127.	191.53 - 280.26	$2s^22p^3 - 2s^22p^3$	$^3D^\circ - ^3P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		1270.	280.26 - 359.03	$2s^22p^3 - 2s^22p^3$	$^3P^\circ - ^3P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,1091

COBALT XXII (Co²¹⁺), Z = 27
Ground State $1s^22s^22p^2(^3P_0)$ (6 electrons)
Ionization Potential [14 890 000] cm^{-1} ; [1846] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	78.98	90.740 - 1356.88	$2s^22p^2 - 2s2p^3$	$g^3P - ^1P^\circ$	1 - 1		1091
	4	82.09	534.43 - 1752.61	$2s2p^3 - 2p^4$	$^3S^\circ - ^3P$	2 - 2		1091
	80	85.43	0.0 - 1170.52	$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^\circ$	0 - 1		1091
	110	92.61	90.740 - 1170.52	$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^\circ$	1 - 1		1091
	100	93.00	869.52 - 1944.81	$2s2p^3 - 2p^4$	$^3D^\circ - ^1D$	3 - 2		1091
	200	93.02	281.83 - 1356.88	$2s^22p^2 - 2s2p^3$	$^1D - ^1P^\circ$	2 - 1		1091
	50	93.12	138.261 - 1212.14	$2s^22p^2 - 2s2p^3$	$g^3P - ^1D^\circ$	2 - 2		1091
	200	96.88	138.261 - 1170.52	$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^\circ$	2 - 1		1091
	200	96.93	833.87 - 1865.55	$2s2p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 1		1091
	80	97.16	836.29 - 1865.55	$2s2p^3 - 2p^4$	$^3D^\circ - ^3P$	2 - 1		1091
	10	98.07	833.87 - 1853.57	$2s2p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 0		1091
	10	100.14	0.0 - 998.66	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^\circ$	0 - 1		1091
	200	106.23	415.53 - 1356.88	$2s^22p^2 - 2s2p^3$	$^1S - ^1P^\circ$	0 - 1		1091
	300	107.49	281.83 - 1212.14	$2s^22p^2 - 2s2p^3$	$^1D - ^1D^\circ$	2 - 2		1091
	30	107.58	90.740 - 1020.30	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^\circ$	1 - 2		1091
	30	108.16	1020.30 - 1944.81	$2s2p^3 - 2p^4$	$^3P^\circ - ^1D$	2 - 2		1091
	10	108.84	833.87 - 1752.61	$2s2p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 2		1091
	250	109.14	836.29 - 1752.61	$2s2p^3 - 2p^4$	$^3D^\circ - ^3P$	2 - 2		1091
	80	110.14	90.740 - 998.66	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^\circ$	1 - 1		1091
	50	111.47	90.740 - 987.84	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^\circ$	1 - 0		1091
	200	113.24	869.52 - 1752.61	$2s2p^3 - 2p^4$	$^3D^\circ - ^3P$	3 - 2		1091
	250	113.37	138.261 - 1020.30	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^\circ$	2 - 2		1091
	10	113.93	987.84 - 1865.55	$2s2p^3 - 2p^4$	$^3P^\circ - ^3P$	0 - 1		1091
	4	116.22	138.261 - 998.66	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^\circ$	2 - 1		1091
	4	116.97	998.66 - 1853.57	$2s2p^3 - 2p^4$	$^3P^\circ - ^3P$	1 - 0		1091
	50	118.31	1020.30 - 1865.55	$2s2p^3 - 2p^4$	$^3P^\circ - ^3P$	2 - 1		1091
	50	119.55	1356.88 - 2193.36	$2s2p^3 - 2p^4$	$^1P^\circ - ^1S$	1 - 0		1091
	80	119.92	0.0 - 833.87	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^\circ$	0 - 1		1091
	10	132.63	998.66 - 1752.61	$2s2p^3 - 2p^4$	$^3P^\circ - ^3P$	1 - 2		1091
	80	134.13	90.740 - 836.29	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^\circ$	1 - 2		1091
	4	134.57	90.740 - 833.87	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^\circ$	1 - 1		1091
	200	136.49	1212.14 - 1944.81	$2s2p^3 - 2p^4$	$^1D^\circ - ^1D$	2 - 2		1091
	110	136.56	1020.30 - 1752.61	$2s2p^3 - 2p^4$	$^3P^\circ - ^3P$	2 - 2		1091
	80	136.75	138.261 - 869.52	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^\circ$	2 - 3		1091
	30	143.87	1170.52 - 1865.55	$2s2p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 1		1091
	4	146.40	1170.52 - 1853.57	$2s2p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 0		1091
	10	170.09	1356.88 - 1944.81	$2s2p^3 - 2p^4$	$^1P^\circ - ^1D$	1 - 2		1091
	10	171.79	1170.52 - 1752.61	$2s2p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 2		1091
		252.4	138.261 - 534.43	$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^\circ$	2 - 2	P	375,1091
		307.9	90.740 - 415.53	$2s^22p^2 - 2s^22p^2$	$g^3P - ^1S$	1 - 0	F,P	375,1091
		354.8	0.0 - 281.83	$2s^22p^2 - 2s^22p^2$	$g^3P - ^1D$	0 - 2	F,P	375,1091
		360.7	138.261 - 415.53	$2s^22p^2 - 2s^22p^2$	$g^3P - ^1S$	2 - 0	F,P	375,1091

CO XXII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		523.3	90.740 - 281.83	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - ^1 D$	1 - 2	F,P	375,1091
		696.5	138.261 - 281.83	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - ^1 D$	2 - 2	F,P	375,1091
		723.3	0.0 - 138.261	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - g^3 P$	0 - 2	F,P	375,1091
		748.0	281.83 - 415.53	$2s^2 2p^2 - 2s^2 2p^2$	$^1 D - ^1 S$	2 - 0	F,P	375,1091
		1102.	0.0 - 90.740	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - g^3 P$	0 - 1	F,P	375,1091

COBALT XXIII (Co²²⁺), Z = 27
Ground State $1s^2 2s^2 2p(^2P_{1/2}^o)$ (5 electrons)
Ionization Potential [15 820 000] cm^{-1} ; [1962] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	8	10.790	499.32 + L - 9755. + L	$2s 2p^2 - 2s 2p(^3P^o) 3p$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{1}{2}$		1089
	3	10.875	559.80 + L - 9755. + L	$2s 2p^2 - 2s 2p(^3P^o) 3p$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{1}{2}$		1089
	40	10.974	559.80 + L - 9672. + L	$2s 2p^2 - 2s 2p(^3P^o) 3p$	$^4 P - ^4 F^o$	$\frac{3}{2} - \frac{1}{2}$		1089
	30	93.90	0.0 - 1064.94	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	95.16	0.0 - 1050.89	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	103.80	559.80 + L - 1523.16	$2s 2p^2 - 2p^3$	$^4 P - ^2 D^o$	$\frac{3}{2} - \frac{1}{2}$	Q	1091
	10	104.45	788.49 - 1745.85	$2s 2p^2 - 2p^3$	$^2 D - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	107.91	819.16 - 1745.85	$2s 2p^2 - 2p^3$	$^2 D - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	300	108.03	139.31 - 1064.94	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1091
	110	109.70	139.31 - 1050.89	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	110.23	431.58 + L - 1338.78 + L	$2s 2p^2 - 2p^3$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	200	110.71	0.0 - 903.25	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	113.17	788.49 - 1672.11	$2s 2p^2 - 2p^3$	$^2 D - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	118.68	903.25 - 1745.85	$2s 2p^2 - 2p^3$	$^2 S - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	119.12	499.32 + L - 1338.78 + L	$2s 2p^2 - 2p^3$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	126.82	0.0 - 788.49	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{1}{2}$		1091
	110	128.37	559.80 + L - 1338.78 + L	$2s 2p^2 - 2p^3$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	130.06	903.25 - 1672.11	$2s 2p^2 - 2p^3$	$^2 S - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	30	136.12	788.49 - 1523.16	$2s 2p^2 - 2p^3$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	142.05	819.16 - 1523.16	$2s 2p^2 - 2p^3$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	30	143.30	788.49 - 1486.34	$2s 2p^2 - 2p^3$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	30	143.89	1050.89 - 1745.85	$2s 2p^2 - 2p^3$	$^2 P - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	80	146.86	1064.94 - 1745.85	$2s 2p^2 - 2p^3$	$^2 P - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	50	147.09	139.31 - 819.16	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{1}{2}$		1091
	10	149.88	819.16 - 1486.34	$2s 2p^2 - 2p^3$	$^2 D - ^2 D^o$	$\frac{5}{2} - \frac{3}{2}$		1091
	10	160.97	1050.89 - 1672.11	$2s 2p^2 - 2p^3$	$^2 P - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091
	4	171.50	903.25 - 1486.34	$2s 2p^2 - 2p^3$	$^2 S - ^2 D^o$	$\frac{3}{2} - \frac{1}{2}$		1091
		717.8	0.0 - 139.31	$2s^2 2p - 2s^2 2p$	$g^2 P^o - g^2 P^o$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091

COBALT XXIV (Co²³⁺), Z = 27
Ground State 1s²2s²(¹S₀) (4 electrons)
Ionization Potential [17 090 000] cm⁻¹; [2119] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	9.974	398.74 - 10425.	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	1 - 2		643
	30	10.053	509.24 - 10456.	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ S	2 - 1		643
	50	10.066	509.24 - 10444.	1s ² 2s2p - 1s ² 2p3s	³ P° - ³ D	2 - 3		643
		10.080	398.74 - 10320.	1s ² 2s2p - 1s ² 2p3p	³ P° - ¹ P	1 - 1	P	619
	30	10.115	0.0 - 9886.	1s ² 2s ² - 1s ² 2s3p	g ¹ S - ³ P°	0 - 1		643
	40	10.156	398.74 - 10245.	1s ² 2s2p - 1s ² 2p3s	³ P° - ³ D	1 - 1		643
	40	10.182	799.04 - 10620.	1s ² 2s2p - 1s ² 2s3s	¹ P° - ¹ S	1 - 0		643
	20	10.265	799.04 - 10541.	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ D	1 - 2		643
	10	10.445	398.74 - 9971.	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	1 - 2		643
	20	10.503	799.04 - 10320.	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ P	1 - 1		643
	20	10.543	1089.21 - 10574.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ P°	1 - 0		643
	10	10.552	509.24 - 9986.	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	2 - 3		643
	80	10.571	509.24 - 9971.	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	2 - 2		643
	5	10.582	1089.21 - 10539.	1s ² 2p ² - 1s ² 2p3d	³ P - ¹ D°	1 - 2	Q	1089
	30	10.593	1138.18 - 10578.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ P°	2 - 2		643
	10	10.674	1289.00 - 10658.	1s ² 2p ² - 1s ² 2p3d	¹ D - ¹ F°	2 - 3		643
	1	10.686	1089.21 - 10449.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	1 - 1	Q	1089
	0	10.709	1089.21 - 10430.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	1 - 2		643
	40	10.743	1138.18 - 10449.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	2 - 1		643
	10	10.760	1138.18 - 10430.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	2 - 2		643
	40	10.800	799.04 - 10058.	1s ² 2s2p - 1s ² 2s3d	¹ P° - ¹ D	1 - 2		643
	10	10.811	1289.00 - 10539.	1s ² 2p ² - 1s ² 2p3d	¹ D - ¹ D°	2 - 2		643
	2	10.919	509.24 - 9668.	1s ² 2s2p - 1s ² 2s3s	³ P° - ³ S	2 - 1	Q	1089
	40	10.933	1514.34 - 10661.	1s ² 2p ² - 1s ² 2p3d	¹ S - ¹ P°	0 - 1		643
	20	11.141	1289.00 - 10264.	1s ² 2p ² - 1s ² 2p3s	¹ D - ¹ P°	2 - 1		643
	50	11.257	1002.06 - 9886.	1s ² 2p ² - 1s ² 2s3p	³ P - ³ P°	0 - 1	Q	716
	60	11.430	1514.34 - 10264.	1s ² 2p ² - 1s ² 2p3s	¹ S - ¹ P°	0 - 1		643
	250	125.15	0.0 - 799.04	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ¹ P°	0 - 1		1091
	50	128.24	509.24 - 1289.00	1s ² 2s2p - 1s ² 2p ²	³ P° - ¹ D	2 - 2		1091
	50	135.24	398.74 - 1138.18	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	1 - 2		1091
	30	137.73	363.16 - 1089.21	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	0 - 1		1091
	30	139.80	799.04 - 1514.34	1s ² 2s2p - 1s ² 2p ²	¹ P° - ¹ S	1 - 0		1091
	10	144.83	398.74 - 1089.21	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	1 - 1		1091
	50	159.00	509.24 - 1138.18	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	2 - 2		1091
	4	165.75	398.74 - 1002.06	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	1 - 0		1091
	300	172.42	509.24 - 1089.21	1s ² 2s2p - 1s ² 2p ²	³ P° - ³ P	2 - 1		1091
	4	204.10	799.04 - 1289.00	1s ² 2s2p - 1s ² 2p ²	¹ P° - ¹ D	1 - 2		1091
		250.79	0.0 - 398.74	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ³ P°	0 - 1	P	375,1091

COBALT XXV (Co²⁴⁺), Z = 27
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential 17 897 000 cm⁻¹; 2219.0 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		7.364	0.0 - 13579.6	1s ² 2s - 1s ² 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	977
		7.374	0.0 - 13561.2	1s ² 2s - 1s ² 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	977
		7.583	409.52 - 13596.5	1s ² 2p - 1s ² 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	P	977
		7.629	409.52 - 13517.6	1s ² 2p - 1s ² 4s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$	P	977
		7.667	561.17 - 13604.2	1s ² 2p - 1s ² 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	977
		7.718	561.17 - 13517.6	1s ² 2p - 1s ² 4s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	P	977

CO XXV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
	25	9.795	0.0 - 10209.3	$1s^2 2s - 1s^2 3p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	977	
		9.838	0.0 - 10164.7	$1s^2 2s - 1s^2 3p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	977, 1089	
	8	10.159	409.52 - 10253.0	$1s^2 2p - 1s^2 3d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	P	977, 1089	
		10.303	561.17 - 10267.1	$1s^2 2p - 1s^2 3d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	P	977, 1089	
	30	10.367	409.52 - 10055.3	$1s^2 2p - 1s^2 3s$	$^2 P^\circ - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	P	977	
		10.533	561.17 - 10055.3	$1s^2 2p - 1s^2 3s$	$^2 P^\circ - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	P	977	
			178.199	0.0 - 561.17	$1s^2 2s - 1s^2 2p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	977
			244.190	0.0 - 409.52	$1s^2 2s - 1s^2 2p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	977

COBALT XXVI (Co^{25+}), Z = 27
Ground State $1s^2(^1S_0)$ (2 electrons)
Ionization Potential 76 984 000 cm^{-1} ; 9544.83 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
		1.351	0.0 - 74009.38	$1s^2 - 1s5p$	$g^1 S - ^1 P^\circ$	0 - 1	P	728	
		1.352	0.0 - 73991.93	$1s^2 - 1s5p$	$g^1 S - ^3 P^\circ$	0 - 1	P	728	
		1.382	0.0 - 72335.40	$1s^2 - 1s4p$	$g^1 S - ^1 P^\circ$	0 - 1	P	728	
		1.383	0.0 - 72301.12	$1s^2 - 1s4p$	$g^1 S - ^3 P^\circ$	0 - 1	P	728	
		1.455	0.0 - 68720.22	$1s^2 - 1s3p$	$g^1 S - ^1 P^\circ$	0 - 1	P	728	
		1.457	0.0 - 68637.66	$1s^2 - 1s3p$	$g^1 S - ^3 P^\circ$	0 - 1	P	728	
			1.712	0.0 - 58416.55	$1s^2 - 1s2p$	$g^1 S - ^1 P^\circ$	0 - 1	P	728
			1.720	0.0 - 58128.18	$1s^2 - 1s2p$	$g^1 S - ^3 P^\circ$	0 - 1	P	728
			1.728	0.0 - 57864.74	$1s^2 - 1s2s$	$g^1 S - ^3 S$	0 - 1	F,P	1105

COBALT XXVII (Co^{26+}), Z = 27
Ground State $1s(^2S_{1/2})$ (1 electron)
Ionization Potential 80 752 200 cm^{-1} ; 10012.07 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
		1.290	0.0 - 77543.5710	$1s - 5p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	1042	
		1.320	0.0 - 75737.1350	$1s - 4p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	1042	
		1.392	0.0 - 71834.7380	$1s - 3p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	1042	
		1.393	0.0 - 71775.6400	$1s - 3p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	1042	
		1.647	0.0 - 60704.2600	$1s - 2p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	1042	
		1.653	0.0 - 60504.9400	$1s - 2p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	1042	
			5.871	60510.3300 - 77543.5710	$2s - 5p$	$^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	1042
			5.937	60704.2600 - 77547.7294	$2p - 5d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	P	1042
			6.567	60510.3300 - 75737.1350	$2s - 4p$	$^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	1042
			6.649	60704.2600 - 75745.2571	$2p - 4d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	P	1042
		8.831	60510.3300 - 71834.7380	$2s - 3p$	$^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	1042	
		8.969	60704.2600 - 71853.9758	$2p - 3d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	P	1042	

NICKEL, Z = 28
Unclassified Lines

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	8.516						716
	30	8.549						716
	30	8.605						716
	20	8.649						716
	20	8.694						716
	3	9.135						1089
	10	9.482						1089
	20	10.215						716
	10	10.500						716
	10	10.580						716
	20	10.762						716
	20	10.902						716
	20	11.636						716
	20	12.250						716
	0	12.315						716
	30	12.552						716
	30	12.581						716
	20	12.759						716
	10	13.120						716
	10	13.658						716
	20	139.55						256
	20	140.52						256
	30	140.83						256
	50	141.06						256
	60	141.35						256
	30	141.70						256
	60	141.87						256
	40	142.22						256
	50	142.42						256
	50	143.80						256
	70	147.00						256
	50	148.62						256
	40	148.83						256
	30	149.21						256
	50	149.47						256
	40	149.97						256
	40	150.56						256
	30	151.70						256
	30	151.85						256
	30	155.62						256
	30	156.30						256
	40	156.68						256
	40	157.24						256
	40	158.00						256
	50	158.54						256
	30	160.38						256
	30	161.94						256
	40	162.16						256
	50	162.90						256
	70	165.43						256
	30	165.69						256
	40	165.81						256
	50	166.08						256
	50	166.29						256

NI UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	166.46						256

NICKEL I (NI⁰⁺), Z = 28
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 4s^2 (^3F_4)$ (28 electrons)
Ionization Potential 61 600 cm^{-1} ; 7.638 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
47	50	1963.85	0.204786 - 51.1248	$3d^9(a^2D)4s - 3d^8(a^1G)4s4p(^3P^o)$	$a^3D - u^3F^o$	3 - 3		602
23	50	1968.90	0.0 - 50.7895	$3d^8 4s^2 - 3d^8(a^1G)4s4p(^3P^o)$	$ga^3F - u^3F^o$	4 - 4		602
47	150	1976.87	0.204786 - 50.7895	$3d^9(a^2D)4s - 3d^8(a^1G)4s4p(^3P^o)$	$a^3D - u^3F^o$	3 - 4		602
47	100	1981.61	0.879813 - 51.34380	$3d^9(a^2D)4s - 3d^8(a^1G)4s4p(^3P^o)$	$a^3D - u^3F^o$	2 - 2		602
47	200	1990.25	0.879813 - 51.1248	$3d^9(a^2D)4s - 3d^8(a^1G)4s4p(^3P^o)$	$a^3D - u^3F^o$	2 - 3		602
	100	1994.29	0.0 - 50.1428	$3d^8 4s^2 - 3d^9(a^2D)5p$	$ga^3F - 5^o$	4 - 3		602
23	0	1999.53	1.332153 - 51.34380	$3d^8 4s^2 - 3d^8(a^1G)4s4p(^3P^o)$	$ga^3F - u^3F^o$	3 - 2		602

NICKEL II (NI¹⁺), Z = 28
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 (^2D_{5/2})$ (27 electrons)
Ionization Potential 146 541.56 cm^{-1} ; 18.16898 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	727.100	0.0 - 137.53596	$3d^9 - 3d^8(a^3F_4)7f$	$g^2D - 4[4]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	5	737.300	0.0 - 135.62940	$3d^9 - 3d^8(a^3F_3)6f$	$g^2D - 3[4]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	2	738.201	0.0 - 135.46486	$3d^9 - 3d^8(a^3P)4f$	$g^2D - ^2G^o$	$\frac{3}{2} - \frac{7}{2}$		835
	1	738.548	0.0 - 135.40067	$3d^9 - 3d^8(a^3P_2)4f$	$g^2D - 2[4]^o$	$\frac{3}{2} - \frac{7}{2}$		835
	2	744.636	0.0 - 134.29499	$3d^9 - 3d^8(a^3F_4)6f$	$g^2D - 4[3]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	5	744.867	0.0 - 134.25285	$3d^9 - 3d^8(a^3F_4)6f$	$g^2D - 4[3]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	1	745.640	1.50694 - 135.61991	$3d^9 - 3d^8(a^3F_3)6f$	$g^2D - 3[1]^o$	$\frac{3}{2} - \frac{7}{2}$		835
	5	746.241	1.50694 - 135.51292	$3d^9 - 3d^8(a^3P_2)4f$	$g^2D - 2[2]^o$	$\frac{3}{2} - \frac{7}{2}$		835
	0	746.525	1.50694 - 135.46155	$3d^9 - 3d^8(a^3P_2)4f$	$g^2D - 2[3]^o$	$\frac{3}{2} - \frac{7}{2}$		835
	0	752.403						835
	4	752.626	0.0 - 132.86916	$3d^9 - 3d^8(a^1D_2)4f$	$g^2D - 2[3]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	1	767.898	0.0 - 130.22587	$3d^9 - 3d^8(a^3F_3)5f$	$g^2D - 3[4]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	1	771.626	1.50694 - 131.10318	$3d^9 - 3d^8(a^3F_3)5f$	$g^2D - 2[2]^o$	$\frac{3}{2} - \frac{7}{2}$		835
	3	776.000	0.0 - 128.86700	$3d^9 - 3d^8(a^3F_4)5f$	$g^2D - 4[4]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	5	776.078	0.0 - 128.85387	$3d^9 - 3d^8(a^3F_4)5f$	$g^2D - 4[3]^o$	$\frac{5}{2} - \frac{7}{2}$		835
	10	795.506	8.39390 - 134.10016	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4G^o$	$\frac{9}{2} - \frac{11}{2}$		835
	200	797.074	8.39390 - 133.85304	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{9}{2} - \frac{11}{2}$		835
	150	797.088	8.39390 - 133.85083	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - s^4D^o$	$\frac{9}{2} - \frac{11}{2}$		835
	30	798.518	1.50694 - 126.73882	$3d^9 - 3d^7(a^4P)4s4p(^1P^o)$	$g^2D - x^4S^o$	$\frac{3}{2} - \frac{7}{2}$		835
	2	799.145	8.39390 - 133.52802	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{9}{2} - \frac{11}{2}$		835
	100	802.292	9.33004 - 133.97333	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - s^4D^o$	$\frac{9}{2} - \frac{11}{2}$		835
	15	803.064	9.33004 - 133.85304	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{9}{2} - \frac{11}{2}$		835
	150	805.168	9.33004 - 133.52802	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{9}{2} - \frac{11}{2}$		835
	30	806.188	10.11566 - 134.15628	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - s^4D^o$	$\frac{9}{2} - \frac{11}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
0	807.391		10.11566 - 133.97333	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - s^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
5	808.933		10.66389 - 134.28376	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - s^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
0	809.772		10.66389 - 134.15628	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - s^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
20	810.292		10.11566 - 133.52802	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	811.389							835
100	812.388		10.11566 - 133.20930	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	813.602							835
5	814.050		13.55039 - 136.39285	$3d^8(a^3F)4s - 3d^8(^1D)6p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		835
5	815.570		10.11566 - 132.72948	$3d^8(a^3F)4s - 3d^8(a^1D_2)4f$	$^4F - 2[3]^o$	$\frac{3}{2} - \frac{3}{2}$		835
8	816.024		10.66389 - 133.20930	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
30	816.150		10.66389 - 133.19019	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4F - v^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
150	816.156		13.55039 - 136.07626	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2F - v^2G^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	816.864							835
1	817.884		8.39390 - 130.66132	$3d^8(a^3F)4s - 3d^8(a^3F_4)7p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$		835
5	819.090		8.39390 - 130.48055	$3d^8(a^3F)4s - 3d^8(a^3F_4)7p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	821.612		13.55039 - 135.26199	$3d^8(a^3F)4s - 3d^8(a^3F_4)8p$	$^2F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$		835
20	821.634		13.55039 - 135.25892	$3d^8(a^3F)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^2F - v^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	821.875							835
3	823.277		14.99557 - 136.46110	$3d^8(a^3F)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^2F - v^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	824.856		13.55039 - 134.78314	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2F - w^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
10	828.152		14.99557 - 135.74606	$3d^8(a^3F)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2F - v^2G^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	828.786		9.33004 - 129.98805	$3d^8(a^3F)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^4F - t^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	830.677							835
2	831.475		0.0 - 120.26881	$3d^9 - 3d^8(a^3F_3)4f$	$g^2D - 3[4]^o$	$\frac{3}{2} - \frac{3}{2}$		835
100	834.059		13.55039 - 133.44575	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2F - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$		835
0	835.739		1.50694 - 121.16181	$3d^9 - 3d^8(a^3F_2)4f$	$g^2D - 2[2]^o$	$\frac{3}{2} - \frac{3}{2}$		835
75	835.983		13.55039 - 133.16992	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2F - w^2F^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	836.954		13.55039 - 133.03100	$3d^8(a^3F)4s - 3d^8(a^1D_2)4f$	$^2F - 2[5]^o$	$\frac{3}{2} - \frac{3}{2}$		835
50	837.624		14.99557 - 134.38082	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2F - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$		835
10	838.224		14.99557 - 134.29499	$3d^8(a^3F)4s - 3d^8(a^3F_4)6f$	$^2F - 4[3]^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	838.524		14.99557 - 134.25285	$3d^8(a^3F)4s - 3d^8(a^3F_4)6f$	$^2F - 4[3]^o$	$\frac{3}{2} - \frac{3}{2}$		835
50	838.834		14.99557 - 134.20830	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2F - w^2F^o$	$\frac{3}{2} - \frac{3}{2}$		835
5	840.878		0.0 - 118.92320	$3d^9 - 3d^8(a^3F_4)4f$	$g^2D - 4[4]^o$	$\frac{3}{2} - \frac{3}{2}$		835
10	841.056		0.0 - 118.89794	$3d^9 - 3d^8(a^3F_4)4f$	$g^2D - 4[3]^o$	$\frac{3}{2} - \frac{3}{2}$		835
0	841.205		0.0 - 118.87709	$3d^9 - 3d^8(a^3F_4)4f$	$g^2D - 4[2]^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	844.748		13.55039 - 131.92877	$3d^8(a^3F)4s - 3d^8(a^3F_3)7p$	$^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		835
3	845.033							835
5	849.086							835
5	849.398							835
3	854.604							835
5	855.282		13.55039 - 130.47090	$3d^8(a^3F)4s - 3d^8(a^3F_4)7p$	$^2F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	858.562							835
0	876.829		8.39390 - 122.44122	$3d^8(a^3F)4s - 3d^8(a^3F_4)6p$	$^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	881.608		8.39390 - 121.82297	$3d^8(a^3F)4s - 3d^8(a^3F_4)6p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	882.337							835
5	888.818		8.39390 - 120.90320	$3d^8(a^3F)4s - 3d^8(a^3P)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
3	893.630							835
2	894.004		23.10828 - 134.96478	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - w^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	895.093		9.33004 - 121.05066	$3d^8(a^3F)4s - 3d^8(a^3P)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
15	895.458		23.10828 - 134.78314	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - w^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
5	896.168		23.79618 - 135.38253	$3d^8(a^1D)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^2D - w^2P^o$	$\frac{3}{2} - \frac{3}{2}$		835
2	898.716		10.11566 - 121.38580	$3d^8(a^3F)4s - 3d^8(a^3P)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
5	898.821		23.79618 - 135.05314	$3d^8(a^1D)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^2D - w^2P^o$	$\frac{3}{2} - \frac{3}{2}$		835
0	900.510		23.10828 - 134.15628	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - s^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	901.007	23.79618 - 134.78314	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - w^2D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	2	901.737	10.66389 - 121.56106	$3d^8(a^3F)4s - 3d^8(a^3P)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	50	901.999	23.10828 - 133.97333	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	1	902.687						835
	75	902.996	23.10828 - 133.85083	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	2	904.205	24.78820 - 135.38253	$3d^8(a^3P)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^4P - w^2P^o$	$\frac{3}{2} - \frac{5}{2}$		835
	1	904.986	8.39390 - 118.89299	$3d^8(a^3F)4s - 3d^8(a^3F_4)4f$	$^4F - 4[\frac{11}{2}]^o$	$\frac{3}{2} - \frac{11}{2}$		835
	100	905.634	23.10828 - 133.52802	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - v^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	3	905.696	23.79618 - 134.20830	$3d^8(a^1D)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2D - w^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	15	906.123	23.79618 - 134.15628	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	2	906.237	25.03638 - 135.38253	$3d^8(a^3P)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^4P - w^2P^o$	$\frac{3}{2} - \frac{5}{2}$		835
	1	906.730						835
	1	906.906	24.78820 - 135.05314	$3d^8(a^3P)4s - 3d^7(a^2P)4s4p(^1P^o)$	$^4P - w^2P^o$	$\frac{3}{2} - \frac{5}{2}$		835
	50	907.630	23.79618 - 133.97333	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	10	907.692	8.39390 - 118.56339	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^4F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	40	908.258	23.10828 - 133.20930	$3d^8(a^1D)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^2D - v^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	20	908.584	23.10828 - 133.16992	$3d^8(a^1D)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2D - w^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	10	909.683	25.03638 - 134.96478	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - w^2D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	15	911.187	25.03638 - 134.78314	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - w^2D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	2	913.187	24.78820 - 134.29499	$3d^8(a^3P)4s - 3d^8(a^3F_4)6f$	$^4P - 4[3]^o$	$\frac{3}{2} - \frac{5}{2}$		835
	3	913.279	24.78820 - 134.28376	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	75	913.678	24.83593 - 134.28376	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	15	913.909	24.78820 - 134.20830	$3d^8(a^3P)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^4P - w^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	50	914.343	24.78820 - 134.15628	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	40	914.743	24.83593 - 134.15628	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	1	915.471	9.33004 - 118.56339	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^4F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	75	915.877	24.78820 - 133.97333	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	30	915.920	8.39390 - 117.57368	$3d^8(a^3F)4s - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	1	916.449	23.10828 - 132.22515	$3d^8(a^1D)4s - 3d^7(a^4P)4s4p(^1P^o)$	$^2D - v^4P^o$	$\frac{3}{2} - \frac{5}{2}$		835
	10	917.017	9.33004 - 118.37911	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^4F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	15	917.962	25.03638 - 133.97333	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	3	918.022						835
	4	918.946						835
	150	918.994	25.03638 - 133.85083	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - s^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	10	920.451	9.33004 - 117.97247	$3d^8(a^3F)4s - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	2	921.228						835
	1	921.299	9.33004 - 117.87278	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^4F - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	75	921.730	25.03638 - 133.52802	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - v^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	5	922.176						835
	15	922.331	24.78820 - 133.20930	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^o)$	$^4P - v^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	1	922.571						835
	1	924.710	13.55039 - 121.69255	$3d^8(a^3F)4s - 3d^7(a^2H)4s4p(^3P^o)$	$^2F - x^2G^o$	$\frac{3}{2} - \frac{9}{2}$		835
	10	924.783	25.03638 - 133.16992	$3d^8(a^3P)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^4P - w^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	20	924.912	8.39390 - 116.51206	$3d^8(a^3F)4s - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - v^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	2	925.100						835
	3	925.544						835
	1	925.578	23.79618 - 131.83494	$3d^8(a^1D)4s - 3d^7(a^4P)4s4p(^1P^o)$	$^2D - v^4P^o$	$\frac{3}{2} - \frac{5}{2}$		835
	5	927.820	10.66389 - 118.44281	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^4F - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		835
	3	928.953	10.11566 - 117.76391	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^4F - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
	1	929.586	13.55039 - 121.12541	$3d^8(a^3F)4s - 3d^8(a^3F_2)4f$	$^2F - 2[5]^o$	$\frac{3}{2} - \frac{3}{2}$		835
	3	929.681	9.33004 - 116.89398	$3d^8(a^3F)4s - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - v^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	5	929.831	10.11566 - 117.66211	$3d^8(a^3F)4s - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - v^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	10	930.351						835
	3	930.707	29.07093 - 136.51720	$3d^8(a^3P)4s - 3d^8(a^3F_2)6f$	$^2P - 2[1]^o$	$\frac{3}{2} - \frac{1}{2}$		835

Ni II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	931.191	24.83593 - 132.22515	$3d^8(a^3P)4s - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - v^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	2	931.501	13.55039 - 120.90320	$3d^8(a^3F)4s - 3d^8(a^3P)5p$	$^2F - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	2	932.321				$\frac{1}{2} - \frac{3}{2}$		835
	2	933.339	0.0 - 107.14221	$3d^9 - 3d^8(a^3F_2)5p$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	933.421				$\frac{3}{2} - \frac{5}{2}$		835
	1	933.866	0.0 - 107.08221	$3d^9 - 3d^8(a^3F_2)5p$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	2	935.085						835
	1	935.200						835
	1	936.188	8.39390 - 115.20985	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	15	936.704				$\frac{3}{2} - \frac{7}{2}$		835
	30	939.276	8.39390 - 114.85888	$3d^8(a^3F)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^4F - w^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		835
	20	940.886	9.33004 - 115.61288	$3d^8(a^3F)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^4F - w^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		835
	10	941.972	10.11566 - 116.27581	$3d^8(a^3F)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^4F - w^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	4	941.996				$\frac{3}{2} - \frac{7}{2}$		835
	2	942.360				$\frac{3}{2} - \frac{7}{2}$		835
	5	942.587	10.66389 - 116.75493	$3d^8(a^3F)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^4F - w^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	1	944.343	29.07093 - 134.96478	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - w^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	30	944.634	0.0 - 105.86119	$3d^9 - 3d^8(a^3F_3)5p$	$g^2D - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	10	944.842	0.0 - 105.83806	$3d^9 - 3d^8(a^3F_3)5p$	$g^2D - ^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	75	945.965	29.07093 - 134.78314	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - w^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	15	946.657	1.50694 - 107.14221	$3d^9 - 3d^8(a^3F_2)5p$	$g^2D - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	3	946.769	32.49953 - 138.12188	$3d^8(a^1G)4s - 3d^8(a^3F_4)9p$	$^2G - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	2	947.195	1.50694 - 107.08221	$3d^9 - 3d^8(a^3F_2)5p$	$g^2D - ^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	0	949.024	29.59346 - 134.96478	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - w^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	1	949.137	8.39390 - 113.75304	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	1	952.027	32.52354 - 137.56274	$3d^8(a^1G)4s - 3d^8(a^3F_2)8p$	$^2G - ^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	8	952.266	13.55039 - 118.56339	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^2F - ^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	1	952.340	10.11566 - 115.12000	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	10	953.033	8.39390 - 113.32195	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	2	953.937	13.55039 - 118.37911	$3d^8(a^3F)4s - 3d^8(a^1D)5p$	$^2F - ^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	1	954.911	9.33004 - 114.05204	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	10	955.601	0.0 - 104.64652	$3d^9 - 3d^8(a^3F_4)5p$	$g^2D - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	3	956.912	0.0 - 104.50322	$3d^9 - 3d^8(a^3F_4)5p$	$g^2D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	5	959.931	32.49953 - 136.67364	$3d^8(a^1G)4s - 3d^8(a^3F_3)8p$	$^2G - ^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	5	960.261	29.07093 - 133.20930	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - v^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	5	960.269	29.07093 - 133.20930	$3d^8(a^3P)4s - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - v^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	1	961.516	32.52354 - 136.52442	$3d^8(a^1G)4s - 3d^8(a^3F_2)6f$	$^2G - 2[5]$	$\frac{1}{2} - \frac{3}{2}$		835
	1	962.526	32.49953 - 136.39285	$3d^8(a^1G)4s - 3d^8(^1D)6p$	$^2G - ^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	1	962.750	32.52354 - 136.39285	$3d^8(a^1G)4s - 3d^8(^1D)6p$	$^2G - ^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	15	963.855				$\frac{1}{2} - \frac{3}{2}$		835
	20	965.470	32.49953 - 136.07626	$3d^8(a^1G)4s - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2G - v^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	20	968.784	32.52354 - 135.74606	$3d^8(a^1G)4s - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2G - v^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	50	971.415	32.52354 - 135.46486	$3d^8(a^1G)4s - 3d^8(a^3P)4f$	$^2G - ^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	1	973.121	32.49953 - 135.26199	$3d^8(a^1G)4s - 3d^8(a^3F_4)8p$	$^2G - ^4G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	10	977.276				$\frac{1}{2} - \frac{3}{2}$		835
	25	978.108				$\frac{1}{2} - \frac{3}{2}$		835
	3	980.290				$\frac{1}{2} - \frac{3}{2}$		835
	50	981.768	32.52354 - 134.38082	$3d^8(a^1G)4s - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	3	983.004	32.52354 - 134.25285	$3d^8(a^1G)4s - 3d^8(a^3F_4)6f$	$^2G - 4[3]$	$\frac{1}{2} - \frac{3}{2}$		835
	1	983.431	32.52354 - 134.20830	$3d^8(a^1G)4s - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2F^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	2	983.592	10.11566 - 111.78379	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^3P^\circ)$	$^4F - y^4G^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	10	985.918				$\frac{1}{2} - \frac{3}{2}$		835
	2	986.992				$\frac{1}{2} - \frac{3}{2}$		835
	4	987.339				$\frac{1}{2} - \frac{3}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10		988.338						835
100		990.626	32.49953 - 133.44575	$3d^8(a^1G)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2G - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$		835
20		992.516	8.39390 - 109.14805	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
15		993.128	9.33004 - 110.02192	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$		835
1		993.341	32.49953 - 133.16992	$3d^8(a^1G)4s - 3d^7(a^2G)4s4p(^1P^o)$	$^2G - w^2F^o$	$\frac{3}{2} - \frac{3}{2}$		835
10		994.867	9.33004 - 109.84600	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
30		995.256						835
4		995.445	10.11566 - 110.57336	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
3		995.453	10.66389 - 111.12054	$3d^8(a^3F)4s - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
1		997.974	13.55039 - 113.75304	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^1P^o)$	$^2F - x^4G^o$	$\frac{3}{2} - \frac{3}{2}$		835
5		1004.170						835
8		1005.021						835
1		1006.712						835
10		1008.218						835
20		1016.622						835
8		1016.677						835
5		1019.067						835
5		1021.060						835
3		1023.961	23.79618 - 121.45632	$3d^8(a^1D)4s - 3d^8(a^3P)5p$	$^2D - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$		835
15		1023.999						835
50		1024.720	8.39390 - 105.98150	$3d^8(a^3F)4s - 3d^7(a^4P)4s4p(^3P^o)$	$^4F - y^6D^o$	$\frac{3}{2} - \frac{1}{2}$		835
2		1025.591						835
5		1025.641						835
5		1026.981						835
20		1028.208						835
1		1031.306	24.83593 - 121.80034	$3d^8(a^3P)4s - 3d^8(a^3P)5p$	$^4P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		835
2		1032.749						835
10		1033.443	25.03638 - 121.80034	$3d^8(a^3P)4s - 3d^8(a^3P)5p$	$^4P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
15		1034.155						835
10		1034.249	23.10828 - 119.79698	$3d^8(a^1D)4s - 3d^8(a^3P)5p$	$^2D - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$		835
2		1036.182	9.33004 - 105.83806	$3d^8(a^3F)4s - 3d^8(a^3F_3)5p$	$^4F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		835
5		1038.866	9.33004 - 105.58889	$3d^8(a^3F)4s - 3d^8(a^3F_3)5p$	$^4F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		835
1		1040.668						835
2		1042.704	8.39390 - 104.29823	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^4F - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		835
30		1044.349	8.39390 - 104.14729	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^4F - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		835
2		1044.871	10.66389 - 106.36930	$3d^8(a^3F)4s - 3d^8(a^3F_2)5p$	$^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
15		1045.073	8.39390 - 104.08104	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^4F - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		835
5		1045.813	10.66389 - 106.28316	$3d^8(a^3F)4s - 3d^8(a^3F_2)5p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$		835
8		1046.537	10.11566 - 105.66878	$3d^8(a^3F)4s - 3d^8(a^3F_3)5p$	$^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
1		1047.497						835
6		1048.400	10.11566 - 105.49905	$3d^8(a^3F)4s - 3d^8(a^3F_3)5p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{7}{2}$		835
1		1048.936	23.10828 - 118.44281	$3d^8(a^1D)4s - 3d^8(a^1D)5p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		835
3		1048.982	24.83593 - 120.16652	$3d^8(a^3P)4s - 3d^8(a^3P)5p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		835
1		1049.051	10.11566 - 105.43985	$3d^8(a^3F)4s - 3d^8(a^3F_3)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
8		1049.137	9.33004 - 104.64652	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
100		1049.755	8.39390 - 103.65303	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
3		1050.718	9.33004 - 104.50322	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
10		1052.534	24.78820 - 119.79698	$3d^8(a^3P)4s - 3d^8(a^3P)5p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		835
2		1052.983	9.33004 - 104.29823	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		835
15		1053.729						835
15		1055.246	23.10828 - 117.87278	$3d^8(a^1D)4s - 3d^8(a^1D)5p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
30		1055.291	25.03638 - 119.79698	$3d^8(a^3P)4s - 3d^8(a^3P)5p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		835
2		1056.837						835
1		1062.243						835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	1062.965		23.79618 - 117.87278	$3d^8(a^1D)4s - 3d^8(a^1D)5p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
1	1066.476							835
10	1070.590		25.03638 - 118.44281	$3d^8(a^3P)4s - 3d^8(a^1D)5p$	$^4P - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
1	1074.224							835
3	1075.551		24.78820 - 117.76391	$3d^8(a^3P)4s - 3d^8(a^1D)5p$	$^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
2	1076.006		25.03638 - 117.97247	$3d^8(a^3P)4s - 3d^7(a^2D)4s4p(^3P^\circ)$	$^4P - w^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
4	1077.163		25.03638 - 117.87278	$3d^8(a^3P)4s - 3d^8(a^1D)5p$	$^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
200	1081.035		32.49953 - 125.00344	$3d^8(a^1G)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^2G - y^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		835
150	1085.441		32.52354 - 124.65200	$3d^8(a^1G)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^2G - y^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		835
4	1086.503		13.55039 - 105.58889	$3d^8(a^3F)4s - 3d^8(a^3F_3)5p$	$^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
4	1091.407		14.99557 - 106.62053	$3d^8(a^3F)4s - 3d^8(a^3F_2)5p$	$^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
1	1099.471		13.55039 - 104.50322	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^2F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
2	1101.893							835
5	1101.956		13.55039 - 104.29823	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^2F - ^4G^\circ$	$\frac{3}{2} - \frac{9}{2}$		835
1	1104.602		13.55039 - 104.08104	$3d^8(a^3F)4s - 3d^8(a^3F_4)5p$	$^2F - ^4F^\circ$	$\frac{3}{2} - \frac{9}{2}$		835
1	1105.315							835
30	1108.729							835
1	1109.022							835
2	1114.260							835
40	1116.557		29.07093 - 118.63195	$3d^8(a^3P)4s - 3d^8(a^1D)5p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
20	1118.404							835
25	1118.547							835
10	1118.921		29.07093 - 118.44281	$3d^8(a^3P)4s - 3d^8(a^1D)5p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
75	1119.330		32.52354 - 121.86257	$3d^8(a^1G)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^2G - x^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
125	1121.162		32.49953 - 121.69255	$3d^8(a^1G)4s - 3d^7(a^2H)4s4p(^3P^\circ)$	$^2G - x^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
2	1123.113		29.59346 - 118.63195	$3d^8(a^3P)4s - 3d^8(a^1D)5p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
4	1127.112							835
5	1127.486		29.07093 - 117.76391	$3d^8(a^3P)4s - 3d^8(a^1D)5p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
75	1133.730		13.55039 - 101.75480	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
150	1134.533		8.39390 - 96.53587	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
1	1135.412							835
1	1136.360							835
100	1137.091		9.33004 - 97.27383	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
10	1138.547							835
3	1139.009		51.04546 - 138.84100	$3d^74s^2 - 3d^8(a^3P)6p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
75	1139.638		14.99557 - 102.74274	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
75	1140.459		10.11566 - 97.79966	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
2	1141.579							835
1	1141.891							835
50	1143.397		10.66389 - 98.12263	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
5	1144.874							835
1	1147.633		10.66389 - 97.79966	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
1	1149.239							835
2	1153.439							835
150	1154.416		8.39390 - 95.01771	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
2	1156.319							835
1	1157.132		10.11566 - 96.53587	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
100	1158.830		13.55039 - 99.84413	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2F - z^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
150	1159.510		9.33004 - 95.57339	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
2	1160.776		51.55785 - 137.70726	$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^4D^\circ - ^4D$	$\frac{7}{2} - \frac{7}{2}$		835
1	1160.823							835
15	1161.297							835
1	1161.927		32.49953 - 118.56339	$3d^8(a^1G)4s - 3d^8(a^1D)5p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
1	1162.361							835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
8	1162.492							835
1	1162.601							835
150	1162.748	8.39390 - 94.39674		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4G^o$	$\frac{9}{2} - \frac{11}{2}$		835
50	1163.645	10.11566 - 96.05248		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4G^o$	$\frac{3}{2} - \frac{5}{2}$		835
8	1163.729	23.10828 - 109.03884		$3d^8(a^1D)4s - 3d^7(a^4P)4s4p(^3P^o)$	$^2D - z^6P^o$	$\frac{5}{2} - \frac{3}{2}$		835
4	1163.880							835
150	1164.279	8.39390 - 94.28394		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{9}{2} - \frac{9}{2}$		835
100	1164.574	13.55039 - 99.41861		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2F - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$		835
5	1165.646							835
12	1165.798	10.11566 - 95.89376		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$		835
25	1167.030	9.33004 - 95.01771		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4G^o$	$\frac{7}{2} - \frac{9}{2}$		835
10	1167.803	51.55785 - 137.18858		$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4D^o - ^4F$	$\frac{7}{2} - \frac{9}{2}$		835
75	1168.040	14.99557 - 100.60901		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2F - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$		835
3	1169.919							835
20	1170.169	10.11566 - 95.57339		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$		835
15	1171.117	10.66389 - 96.05248		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4G^o$	$\frac{3}{2} - \frac{5}{2}$		835
100	1171.291	9.33004 - 94.70593		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$		835
1	1173.121	23.79618 - 109.03884		$3d^8(a^1D)4s - 3d^7(a^4P)4s4p(^3P^o)$	$^2D - z^6P^o$	$\frac{3}{2} - \frac{3}{2}$		835
50	1173.298	10.66389 - 95.89376		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		835
75	1173.477	10.11566 - 95.33253		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{5}{2} - \frac{5}{2}$		835
1	1177.006	51.55785 - 136.51928		$3d^8(a^3F)4p - 3d^8(a^3P)5d$	$^4D^o - ^4F$	$\frac{7}{2} - \frac{9}{2}$		835
50	1177.109	9.33004 - 94.28394		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{7}{2} - \frac{9}{2}$		835
8	1178.224							835
30	1178.571	14.99557 - 99.84413		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2F - z^2G^o$	$\frac{5}{2} - \frac{7}{2}$		835
150	1180.271	13.55039 - 98.27670		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2F - z^2G^o$	$\frac{7}{2} - \frac{9}{2}$		835
30	1181.075	10.66389 - 95.33253		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
15	1181.620	23.10828 - 107.73781		$3d^8(a^1D)4s - 3d^7(a^4P)4s4p(^3P^o)$	$^2D - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$		835
75	1182.169	10.11566 - 94.70593		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4F - z^4F^o$	$\frac{5}{2} - \frac{7}{2}$		835
20	1184.512	14.99557 - 99.41861		$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2F - z^2F^o$	$\frac{5}{2} - \frac{7}{2}$		835
3	1184.980	53.36517 - 137.75478		$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^4G^o - ^4G$	$\frac{9}{2} - \frac{11}{2}$		835
2	1185.146	53.36517 - 137.74295		$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^4G^o - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835
1	1186.347	51.04546 - 135.33801		$3d^74s^2 - 3d^8(a^3F_4)8p$	$^4F - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		835
8	1186.933	24.78820 - 109.03884		$3d^8(a^3P)4s - 3d^7(a^4P)4s4p(^3P^o)$	$^4P - z^6P^o$	$\frac{3}{2} - \frac{3}{2}$		835
1	1186.993	53.49649 - 137.74295		$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^4G^o - ^4H$	$\frac{11}{2} - \frac{11}{2}$		835
20	1187.102	53.49649 - 137.73522		$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^4G^o - ^4H$	$\frac{11}{2} - \frac{11}{2}$		835
15	1187.608	24.83593 - 109.03884		$3d^8(a^3P)4s - 3d^7(a^4P)4s4p(^3P^o)$	$^4P - z^6P^o$	$\frac{1}{2} - \frac{3}{2}$		835
1	1190.442	25.03638 - 109.03884		$3d^8(a^3P)4s - 3d^7(a^4P)4s4p(^3P^o)$	$^4P - z^6P^o$	$\frac{5}{2} - \frac{3}{2}$		835
5	1192.306	53.36517 - 137.23628		$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4G^o - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835
0	1192.596	52.73845 - 136.58935		$3d^8(a^3F)4p - 3d^8(a^3P)5d$	$^4D^o - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835
3	1192.983	53.36517 - 137.18858		$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4G^o - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835
2	1193.028							835
5	1193.267	55.29965 - 139.10305		$3d^8(a^3F)4p - 3d^8(a^3F_3)8d$	$^2G^o - ^2H$	$\frac{9}{2} - \frac{11}{2}$		835
15	1194.857	53.49649 - 137.18858		$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4G^o - ^4F$	$\frac{11}{2} - \frac{9}{2}$		835
1	1200.077							835
1	1200.307	52.73845 - 136.05053		$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4D^o - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
3	1201.002	55.29965 - 138.56371		$3d^8(a^3F)4p - 3d^8(a^3F_3)9s$	$^2G^o - ^2F$	$\frac{9}{2} - \frac{7}{2}$		835
8	1201.119	52.20595 - 135.46155		$3d^74s^2 - 3d^8(a^3P_2)4f$	$^4F - 2[3]^o$	$\frac{7}{2} - \frac{5}{2}$		835
5	1201.838	52.73845 - 135.94440		$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4D^o - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
3	1201.957	54.55705 - 137.75478		$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^4F^o - ^4G$	$\frac{9}{2} - \frac{11}{2}$		835
8	1202.452	52.73845 - 135.90196		$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4D^o - ^4F$	$\frac{7}{2} - \frac{5}{2}$		835
10	1202.511							835
3	1202.911	53.63462 - 136.76649		$3d^8(a^3F)4p - 3d^8(a^3P)5d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
30	1204.102	51.55785 - 134.60737		$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4D^o - ^4F$	$\frac{7}{2} - \frac{5}{2}$		835
15	1205.088	51.55785 - 134.53937		$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4D^o - ^4P$	$\frac{7}{2} - \frac{5}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1205.201	54.26263 - 137.23628	$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4G^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	20	1205.266	51.55785 - 134.52724	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4D^\circ - ^4D$	$\frac{7}{2} - \frac{7}{2}$		835
	8	1205.314				$\frac{7}{2} - \frac{7}{2}$		835
	10	1205.552	24.78820 - 107.73781	$3d^8(a^3P)4s - 3d^7(a^4P)4s4p(^3P^\circ)$	$^4P - z^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	7	1206.246	24.83593 - 107.73781	$3d^8(a^3P)4s - 3d^7(a^4P)4s4p(^3P^\circ)$	$^4P - z^4S^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	0	1207.567	53.03793 - 135.84941	$3d^74s^2 - 3d^8(a^3P_1)4f$	$^4F - 1[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	4	1207.620	51.04546 - 133.85304	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4F - v^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	3	1207.654	51.04546 - 133.85083	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4F - s^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
	1	1208.433	23.10828 - 105.86119	$3d^8(a^1D)4s - 3d^8(a^3F_3)5p$	$^2D - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	7	1209.170	25.03638 - 107.73781	$3d^8(a^3P)4s - 3d^7(a^4P)4s4p(^3P^\circ)$	$^4P - z^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1209.492	54.55705 - 137.23628	$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4F^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835
	10	1210.192	54.55705 - 137.18858	$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4F^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835
	3	1210.729	53.36517 - 135.96008	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4G^\circ - ^4H$	$\frac{9}{2} - \frac{9}{2}$		835
	1	1210.790	53.36517 - 135.95601	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4G^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		835
	1	1211.403	54.17626 - 136.72533	$3d^8(a^3F)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		835
	0	1212.959	55.29965 - 137.74295	$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^2G^\circ - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835
	7	1213.149				$\frac{7}{2} - \frac{7}{2}$		835
	7	1213.361	53.63462 - 136.05053	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4D^\circ - ^2F$	$\frac{1}{2} - \frac{5}{2}$		835
	3	1214.104	55.41783 - 137.78250	$3d^8(a^3F)4p - 3d^8(a^3F_4)8d$	$^4F^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		835
	40	1214.153	52.73845 - 135.10045	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1214.350	53.63462 - 135.98322	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4D^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
	100	1217.180	51.55785 - 133.71513	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4D^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		835
	1	1217.692				$\frac{7}{2} - \frac{7}{2}$		835
	3	1220.530	52.73845 - 134.67007	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4D^\circ - ^4P$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1220.950	52.73845 - 134.64209	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4D^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1221.213	51.55785 - 133.44389	$3d^8(a^3F)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{7}{2} - \frac{7}{2}$		835
	1	1221.289	55.01871 - 136.89934	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^4G^\circ - ^4G$	$\frac{5}{2} - \frac{5}{2}$		835
	40	1221.992	55.01871 - 136.85244	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^4G^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1222.220	55.41783 - 137.23628	$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^4F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	20	1222.395	54.17626 - 135.98322	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4D^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		835
	1	1222.678	54.26263 - 136.05053	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4G^\circ - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
	1	1222.989	52.20595 - 133.97333	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4F - s^4D^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	2	1223.466	53.36517 - 135.10045	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4G^\circ - ^2F$	$\frac{9}{2} - \frac{7}{2}$		835
	5	1223.643	54.26263 - 135.98606	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4G^\circ - ^4G$	$\frac{9}{2} - \frac{9}{2}$		835
	1	1223.775	55.01871 - 136.73274	$3d^8(a^3F)4p - 3d^8(a^3P)5d$	$^4G^\circ - ^4F$	$\frac{5}{2} - \frac{3}{2}$		835
	75	1224.033	54.26263 - 135.96008	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4G^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		835
	1	1224.268	54.26263 - 135.94440	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4G^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	2	1224.839	23.79618 - 105.43985	$3d^8(a^1D)4s - 3d^8(a^3F_3)5p$	$^2D - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	25	1226.628	8.39390 - 89.91847	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1227.267	53.63462 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4D^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
	5	1227.491	13.55039 - 95.01771	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2F - z^4G^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	0	1228.581	23.10828 - 104.50322	$3d^8(a^1D)4s - 3d^8(a^3F_4)5p$	$^2D - ^4D^\circ$	$\frac{1}{2} - \frac{5}{2}$		835
	10	1229.684	52.20595 - 133.52802	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4F - v^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	8	1230.116	53.36517 - 134.65860	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4G$	$\frac{9}{2} - \frac{9}{2}$		835
	1	1230.367	53.36517 - 134.64209	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835
	40	1230.782	53.36517 - 134.61455	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4G$	$\frac{9}{2} - \frac{11}{2}$		835
	50	1230.869	53.36517 - 134.60737	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835
	25	1230.889	53.36517 - 134.60737	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835
	100	1231.041	53.36517 - 134.59743	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835
	1	1232.107	53.49649 - 134.65860	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4G$	$\frac{11}{2} - \frac{9}{2}$		835
	2	1232.773	53.49649 - 134.61455	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4G$	$\frac{11}{2} - \frac{11}{2}$		835
	3	1232.886	53.49649 - 134.60737	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4F$	$\frac{11}{2} - \frac{9}{2}$		835
	15	1233.036	53.49649 - 134.59743	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4H$	$\frac{11}{2} - \frac{11}{2}$		835
	150	1233.250	53.49649 - 134.58307	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4H$	$\frac{11}{2} - \frac{11}{2}$		835

Ni II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10	1233.484		52.73845 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4D^\circ - ^4F$	3/2-1/2		835
100	1233.557		8.39390 - 89.46035	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6G^\circ$	3/2-1/2		835
0	1234.092		55.01871 - 136.05053	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4G^\circ - ^2F$	3/2-1/2		835
4	1234.375		55.01871 - 136.03143	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4G^\circ - ^2D$	3/2-1/2		835
1	1234.659							835
6	1235.069		55.01871 - 135.98606	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4G^\circ - ^4G$	3/2-1/2		835
20	1235.112		55.01871 - 135.98322	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4G^\circ - ^4F$	3/2-1/2		835
10	1235.405		9.33004 - 90.27530	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6G^\circ$	3/2-1/2		835
0	1236.474		52.73845 - 133.61399	$3d^8(a^3F)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	3/2-1/2		835
25	1236.799		54.26263 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4G^\circ - ^4F$	3/2-1/2		835
10	1237.049		54.26263 - 135.10045	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4G^\circ - ^2F$	3/2-1/2		835
1	1237.247		25.03638 - 105.86119	$3d^8(a^3P)4s - 3d^8(a^3F_3)5p$	$^4P - ^2D^\circ$	3/2-1/2		835
1	1237.260		56.07526 - 136.89934	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^4F^\circ - ^4G$	3/2-1/2		835
4	1237.961		56.07526 - 136.85244	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^4F^\circ - ^4F$	3/2-1/2		835
8	1237.976		56.07526 - 136.85244	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^4F^\circ - ^4F$	3/2-1/2		835
1	1238.919		54.26263 - 134.97847	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4D$	3/2-1/2		835
25	1239.061		8.39390 - 89.10049	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6D^\circ$	3/2-1/2		835
12	1239.506		55.29965 - 135.97731	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2G^\circ - ^2G$	3/2-1/2		835
60	1239.832		55.29965 - 135.95601	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2G^\circ - ^2H$	3/2-1/2		835
1	1240.012		55.29965 - 135.94440	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2G^\circ - ^2F$	3/2-1/2		835
2	1240.029							835
50	1240.877		9.33004 - 89.91847	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6G^\circ$	3/2-1/2		835
1	1241.189		55.41783 - 135.98606	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4F^\circ - ^4G$	3/2-1/2		835
2	1241.233		53.36517 - 133.92988	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^4G^\circ - ^2G$	3/2-1/2		835
10	1241.320		55.41783 - 135.97731	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4F^\circ - ^2G$	3/2-1/2		835
3	1241.548		23.10828 - 103.65303	$3d^8(a^1D)4s - 3d^8(a^3F_4)5p$	$^2D - ^4D^\circ$	3/2-1/2		835
10	1241.588		55.41783 - 135.96008	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4F^\circ - ^4H$	3/2-1/2		835
1	1241.827		55.41783 - 135.94440	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4F^\circ - ^2F$	3/2-1/2		835
30	1242.099		56.37141 - 136.88056	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^2G^\circ - ^2H$	3/2-1/2		835
6	1242.627		56.42449 - 136.89934	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^4F^\circ - ^4G$	3/2-1/2		835
75	1243.093		53.36517 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4G^\circ - ^4F$	3/2-1/2		835
6	1243.126							835
1	1243.345		56.42449 - 136.85244	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^4F^\circ - ^4F$	3/2-1/2		835
3	1243.622		10.11566 - 90.52618	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6G^\circ$	3/2-1/2		835
5	1243.848		54.26263 - 134.65860	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4G$	3/2-1/2		835
3	1244.104		54.26263 - 134.64209	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4G^\circ - ^4F$	3/2-1/2		835
5	1244.255		53.36517 - 133.73498	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^4G^\circ - ^2F$	3/2-1/2		835
50	1244.560		53.36517 - 133.71513	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4G^\circ - ^4F$	3/2-1/2		835
100	1244.811							835
1	1245.977							835
150	1246.598		53.49649 - 133.71513	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4G^\circ - ^4F$	3/2-1/2		835
20	1247.333		53.03793 - 133.20930	$3d^8(a^3F)4p - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4F - v^4F^\circ$	3/2-1/2		835
6	1247.509		10.11566 - 90.27530	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6G^\circ$	3/2-1/2		835
1	1247.568		57.08055 - 137.23628	$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^2F^\circ - ^4F$	3/2-1/2		835
9	1248.413		54.55705 - 134.65860	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4G$	3/2-1/2		835
10	1248.467		55.01871 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4G^\circ - ^4F$	3/2-1/2		835
4	1248.844		54.26263 - 134.33668	$3d^8(a^3F)4p - 3d^8(a^3F_4)6g$	$^4G^\circ - 4[5]^\circ$	3/2-1/2		835
100	1249.101		54.55705 - 134.61455	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4G$	3/2-1/2		835
8	1249.213		54.55705 - 134.60737	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4F$	3/2-1/2		835
3	1249.369		54.55705 - 134.59743	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4H$	3/2-1/2		835
6	1250.467		54.55705 - 134.52724	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4D$	3/2-1/2		835
4	1250.685		56.07526 - 136.03143	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4F^\circ - ^2D$	3/2-1/2		835
1	1250.901							835
10	1251.394		56.07526 - 135.98606	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^4F^\circ - ^4G$	3/2-1/2		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
16	1251.438	56.07526 - 135.98322	56.07526 - 135.98322	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1252.879	57.42016 - 137.23628	57.42016 - 137.23628	$3d^8(a^3F)4p - 3d^8(a^3F_4)9s$	$^2D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
50	1253.122	55.29965 - 135.10045	55.29965 - 135.10045	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^2G^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
75	1253.477	8.39390 - 88.17188	8.39390 - 88.17188	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
4	1253.599	9.33004 - 89.10049	9.33004 - 89.10049	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
2	1254.290	54.17626 - 133.90300	54.17626 - 133.90300	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^4D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		835
0	1254.346	52.20595 - 131.92877	52.20595 - 131.92877	$3d^74s^2 - 3d^8(a^3F_3)7p$	$^4F - ^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
1	1254.471	24.78820 - 104.50322	24.78820 - 104.50322	$3d^8(a^3P)4s - 3d^8(a^3F_4)5p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
50	1254.721	55.41783 - 135.11672	55.41783 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
7	1254.978	55.41783 - 135.10045	55.41783 - 135.10045	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
8	1255.034	56.37141 - 136.05053	56.37141 - 136.05053	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^2G^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
6	1255.335	56.37141 - 136.03143	56.37141 - 136.03143	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2G^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		835
5	1256.029	51.04546 - 130.66132	51.04546 - 130.66132	$3d^74s^2 - 3d^8(a^3F_4)7p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$	II	835
6	1256.187	56.37141 - 135.97731	56.37141 - 135.97731	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2G^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		835
0	1256.459	53.60119 - 133.19019	53.60119 - 133.19019	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4F - v^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
1	1256.708	56.37141 - 135.94440	56.37141 - 135.94440	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2G^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1256.764							835
6	1256.905	55.41783 - 134.97847	55.41783 - 134.97847	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		835
40	1256.930	56.42449 - 135.98322	56.42449 - 135.98322	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
8	1257.116	54.26263 - 133.80976	54.26263 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4G^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
2	1257.829							835
0	1258.303	54.26263 - 133.73498	54.26263 - 133.73498	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^4G^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1259.506							835
1	1259.886	54.55705 - 133.92988	54.55705 - 133.92988	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^4F^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		835
1	1261.068	55.29965 - 134.59743	55.29965 - 134.59743	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^2G^\circ - ^4H$	$\frac{3}{2} - \frac{5}{2}$	II	835
12	1261.786	54.55705 - 133.80976	54.55705 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
10	1261.975	55.41783 - 134.65860	55.41783 - 134.65860	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		835
8	1262.239	55.41783 - 134.64209	55.41783 - 134.64209	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
2	1262.979	54.55705 - 133.73498	54.55705 - 133.73498	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^4F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
100	1263.294	54.55705 - 133.71513	54.55705 - 133.71513	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
14	1265.157	56.07526 - 135.11672	56.07526 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1266.065	10.11566 - 89.10049	10.11566 - 89.10049	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
8	1266.608	57.08055 - 136.03143	57.08055 - 136.03143	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2F^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		835
6	1267.478	57.08055 - 135.97731	57.08055 - 135.97731	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		835
8	1268.007	57.08055 - 135.94440	57.08055 - 135.94440	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
2	1268.359	9.33004 - 88.17188	9.33004 - 88.17188	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
1	1269.059	9.33004 - 88.12856	9.33004 - 88.12856	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
2	1269.917	56.37141 - 135.11672	56.37141 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^2G^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1270.061	51.04546 - 129.78207	51.04546 - 129.78207	$3d^74s^2 - 3d^7(a^3P)4s4p(^1P^\circ)$	$^4F - t^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
15	1270.180	56.37141 - 135.10045	56.37141 - 135.10045	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^2G^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1271.993	25.03638 - 103.65303	25.03638 - 103.65303	$3d^8(a^3P)4s - 3d^8(a^3F_4)5p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
1	1272.080	57.42016 - 136.03143	57.42016 - 136.03143	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		835
2	1272.634							835
2	1273.488	57.42016 - 135.94440	57.42016 - 135.94440	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1273.717	55.29965 - 133.80976	55.29965 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^2G^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
2	1274.180	57.42016 - 135.90196	57.42016 - 135.90196	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$^2D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
100	1274.270	8.39390 - 86.87003	8.39390 - 86.87003	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4F - z^6F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
10	1274.802	58.49321 - 136.93682	58.49321 - 136.93682	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		835
10	1275.640	55.41783 - 133.80976	55.41783 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
2	1276.602							835
1	1276.859	55.41783 - 133.73526	55.41783 - 133.73526	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^4F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
1	1277.086							835
20	1277.243	52.73845 - 131.03201	52.73845 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		835
1	1277.344	56.37141 - 134.65860	56.37141 - 134.65860	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$^2G^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	1277.617	56.37141 - 134.64209	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$2G^\circ - 4F$	$\frac{7}{2} - \frac{7}{2}$		835	
2	1277.725	52.20595 - 130.47090	$3d^74s^2 - 3d^8(a^3F_4)7p$	$4F - 4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		835	
18	1277.967	58.70595 - 136.95528	$3d^8(a^3F)4p - 3d^8(a^3F_2)7d$	$2D^\circ - 2P$	$\frac{3}{2} - \frac{1}{2}$		835	
100	1278.637	9.33004 - 87.53809	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$4F - z^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		835	
1	1279.400	53.63462 - 131.79626	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$4D^\circ - 2F$	$\frac{3}{2} - \frac{5}{2}$		835	
1	1281.056	58.70595 - 136.76649	$3d^8(a^3F)4p - 3d^8(a^3P)5d$	$2D^\circ - 4F$	$\frac{3}{2} - \frac{5}{2}$		835	
5	1281.609	52.73845 - 130.76526	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4D^\circ - 2F$	$\frac{5}{2} - \frac{7}{2}$		835	
4	1281.704	53.63462 - 131.65583	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$4D^\circ - 2P$	$\frac{3}{2} - \frac{1}{2}$		835	
12	1281.723	52.20595 - 130.22587	$3d^74s^2 - 3d^8(a^3F_3)5f$	$4F - 3[4]^\circ$	$\frac{7}{2} - \frac{7}{2}$		835	
50	1281.834	10.11566 - 88.12856	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$4F - z^6F^\circ$	$\frac{5}{2} - \frac{5}{2}$		835	
2	1282.179	52.73845 - 130.73053	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4D^\circ - 4F$	$\frac{3}{2} - \frac{5}{2}$		835	
1	1282.732	23.79618 - 101.75480	$3d^8(a^1D)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$2D - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
10	1282.825	52.73845 - 130.69135	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4D^\circ - 2P$	$\frac{5}{2} - \frac{3}{2}$		835	
12	1283.399	10.66389 - 88.58201	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$4F - z^6F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
3	1283.731	57.08055 - 134.97847	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$2F^\circ - 4D$	$\frac{7}{2} - \frac{5}{2}$		835	
25	1284.327	51.55785 - 129.41958	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$4D^\circ - 4F$	$\frac{7}{2} - \frac{9}{2}$		835	
50	1286.338	51.55785 - 129.29791	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$4D^\circ - 4D$	$\frac{7}{2} - \frac{7}{2}$		835	
3	1286.396	51.55785 - 129.29451	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$4D^\circ - 4F$	$\frac{7}{2} - \frac{5}{2}$		835	
50	1286.561	51.55785 - 129.28450	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$4D^\circ - 4P$	$\frac{7}{2} - \frac{5}{2}$		835	
15	1287.329	57.42016 - 135.10045	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$2D^\circ - 2F$	$\frac{5}{2} - \frac{7}{2}$		835	
8	1287.432						835	
9	1289.024	57.08055 - 134.65860	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$2F^\circ - 4G$	$\frac{7}{2} - \frac{9}{2}$		835	
3	1289.298	57.08055 - 134.64209	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$2F^\circ - 4F$	$\frac{7}{2} - \frac{7}{2}$		835	
7	1289.354	56.37141 - 133.92988	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$2G^\circ - 2G$	$\frac{7}{2} - \frac{7}{2}$		835	
11	1289.369	58.49321 - 136.05053	$3d^8(a^3F)4p - 3d^8(a^3F_2)8s$	$2F^\circ - 2F$	$\frac{5}{2} - \frac{5}{2}$		835	
2	1289.513	29.59346 - 107.14221	$3d^8(a^3P)4s - 3d^8(a^3F_2)5p$	$2P - 2D^\circ$	$\frac{1}{2} - \frac{1}{2}$		835	
6	1289.656	9.33004 - 86.87003	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$4F - z^6F^\circ$	$\frac{7}{2} - \frac{9}{2}$		835	
1	1289.682	56.07526 - 133.61399	$3d^8(a^3F)4p - 3d^8(a^3P)6s$	$4F^\circ - 4P$	$\frac{5}{2} - \frac{3}{2}$		835	
1	1290.442	58.49321 - 135.98606	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$2F^\circ - 4G$	$\frac{5}{2} - \frac{7}{2}$		835	
4	1290.908	10.66389 - 88.12856	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$4F - z^6F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
10	1291.251	54.17626 - 131.62045	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$4D^\circ - 4F$	$\frac{1}{2} - \frac{3}{2}$		835	
10	1291.614	10.11566 - 87.53809	$3d^8(a^3F)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$4F - z^6F^\circ$	$\frac{3}{2} - \frac{7}{2}$		835	
2	1292.033	53.63462 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4D^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$		835	
2	1292.224	53.36517 - 130.75103	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4G^\circ - 2H$	$\frac{9}{2} - \frac{11}{2}$		835	
6	1292.331						835	
5	1292.669						835	
5	1293.232	58.70595 - 136.03143	$3d^8(a^3F)4p - 3d^8(a^3F_3)7d$	$2D^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$		835	
6	1293.533	53.63462 - 130.94230	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4D^\circ - 4D$	$\frac{3}{2} - \frac{3}{2}$		835	
10	1294.500	57.42016 - 134.67007	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$2D^\circ - 4P$	$\frac{3}{2} - \frac{3}{2}$		835	
2	1294.968	57.42016 - 134.64209	$3d^8(a^3F)4p - 3d^8(a^3F_4)7d$	$2D^\circ - 4F$	$\frac{3}{2} - \frac{7}{2}$		835	
1	1296.126						835	
13	1296.950	52.73845 - 129.84233	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$4D^\circ - 4D$	$\frac{5}{2} - \frac{5}{2}$		835	
2	1297.087	53.63462 - 130.73053	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4D^\circ - 4F$	$\frac{3}{2} - \frac{5}{2}$		835	
3	1297.417	53.63462 - 130.71085	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4D^\circ - 4P$	$\frac{3}{2} - \frac{1}{2}$		835	
1	1297.442						835	
10	1302.246	29.07093 - 105.86119	$3d^8(a^3P)4s - 3d^8(a^3F_3)5p$	$2P - 2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835	
1	1302.603	54.26263 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$4G^\circ - 2D$	$\frac{7}{2} - \frac{5}{2}$		835	
4	1303.078	52.73845 - 129.47973	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$4D^\circ - 4P$	$\frac{5}{2} - \frac{3}{2}$		835	
2	1303.170	52.73845 - 129.47427	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$4D^\circ - 4F$	$\frac{5}{2} - \frac{7}{2}$		835	
0	1303.237	55.01871 - 131.75073	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$4G^\circ - 2G$	$\frac{5}{2} - \frac{7}{2}$		835	
5	1303.283	57.08055 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$2F^\circ - 4F$	$\frac{7}{2} - \frac{7}{2}$		835	
1	1304.555	57.08055 - 133.73498	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$2F^\circ - 2F$	$\frac{7}{2} - \frac{7}{2}$		835	
10	1304.594	55.01871 - 131.67087	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$4G^\circ - 4G$	$\frac{5}{2} - \frac{5}{2}$		835	
6	1305.083	58.49321 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$2F^\circ - 4F$	$\frac{5}{2} - \frac{5}{2}$		835	

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
	25	1305.169	55.01871 - 131.63710	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4G^\circ - ^4H$	$\frac{5}{2} - \frac{7}{2}$		835	
	4	1306.279	54.26263 - 130.81591	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4G^\circ - ^4G$	$\frac{7}{2} - \frac{7}{2}$		835	
	1	1306.528	54.26263 - 130.80133	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4G^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835	
	6	1306.621	52.73845 - 129.27172	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^4D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835	
	10	1307.146	54.26263 - 130.76526	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4G^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835	
	50	1307.276	54.26263 - 130.75751	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4G^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		835	
	10	8	1308.714	58.70595 - 135.11672	$3d^8(a^3F)4p - 3d^8(a^3F_3)8s$	$^2D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
		16	1308.869	0.0 - 76.40203	$3d^9 - 3d^8(a^1G)4p$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
		0	1309.079	57.42016 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^2D^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835
		1	1310.358	57.42016 - 133.73498	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
15		1310.457	51.55785 - 127.86713	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4D^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		835	
1		1311.152	55.41783 - 131.68656	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4F^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		835	
5		1311.365						835	
7		1313.403	53.36517 - 129.50324	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4G$	$\frac{9}{2} - \frac{9}{2}$		835	
2		1313.903	53.36517 - 129.47427	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835	
12		1314.771	53.36517 - 129.42403	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4G$	$\frac{10}{2} - \frac{11}{2}$		835	
12	1314.847	53.36517 - 129.41958	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4F$	$\frac{10}{2} - \frac{9}{2}$		835		
70	1315.255	53.36517 - 129.39604	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835		
10	3	1315.558	55.01871 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4G^\circ - ^2D$	$\frac{5}{2} - \frac{5}{2}$		835	
	4	1316.502	54.17626 - 130.13519	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^4D^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		835	
	6	1317.045	53.49649 - 129.42403	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4G$	$\frac{11}{2} - \frac{11}{2}$		835	
	10	1317.122	53.49649 - 129.41958	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4F$	$\frac{11}{2} - \frac{9}{2}$		835	
	500	1317.220	0.0 - 75.91763	$3d^9 - 3d^8(a^1G)4p$	$g^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		835	
	15	1317.531	53.49649 - 129.39604	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4H$	$\frac{11}{2} - \frac{11}{2}$		835	
	100	1318.017	53.49649 - 129.36791	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4H$	$\frac{11}{2} - \frac{11}{2}$		835	
	8	1319.310	55.01871 - 130.81591	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4G^\circ - ^4G$	$\frac{5}{2} - \frac{7}{2}$		835	
	0	1320.799	55.01871 - 130.73053	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4G^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835	
	3	1321.432	56.07526 - 131.75073	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4F^\circ - ^2G$	$\frac{5}{2} - \frac{7}{2}$		835	
2	1321.704	53.63462 - 129.29451	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835		
2	1322.825	56.07526 - 131.67087	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4F^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		835		
	1	1323.107	54.26263 - 129.84233	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4D$	$\frac{7}{2} - \frac{5}{2}$		835	
	25	1323.417	56.07526 - 131.63710	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4F^\circ - ^4H$	$\frac{5}{2} - \frac{7}{2}$		835	
	25	1324.475	55.29965 - 130.80133	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2G^\circ - ^2G$	$\frac{9}{2} - \frac{9}{2}$		835	
	1	1325.105	55.29965 - 130.76526	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2G^\circ - ^2F$	$\frac{10}{2} - \frac{12}{2}$		835	
	1	1325.242	55.29965 - 130.75751	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2G^\circ - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835	
	100	1325.359	55.29965 - 130.75103	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2G^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		835	
	4	1325.691	29.07093 - 104.50322	$3d^8(a^3P)4s - 3d^8(a^3F_4)5p$	$^2P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835	
	7	1326.292	55.41783 - 130.81591	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4F^\circ - ^4G$	$\frac{7}{2} - \frac{7}{2}$		835	
	11	1326.548	55.41783 - 130.80133	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4F^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835	
	12	1326.623	56.37141 - 131.75073	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2G^\circ - ^2G$	$\frac{5}{2} - \frac{5}{2}$		835	
3	1327.187	58.70595 - 134.05305	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		835		
20	1327.319	55.41783 - 130.75751	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4F^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		835		
	8	1327.730	58.49321 - 133.80976	$3d^8(a^3F)4p - 3d^8(a^3F_4)8s$	$^2F^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835	
	50	1327.755	56.37141 - 131.68656	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2G^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		835	
	3	1328.847	52.73845 - 127.99156	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4D^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835	
	25	1328.964	56.42449 - 131.67087	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4F^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		835	
	13	1329.857	56.42449 - 131.62045	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835	
	9	1331.264	55.01871 - 130.13519	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^4G^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835	
	1	1332.706	54.26263 - 129.29791	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4G^\circ - ^4D$	$\frac{7}{2} - \frac{7}{2}$		835	
	6	1332.766	54.26263 - 129.29451	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^4G^\circ - ^4F$	$\frac{7}{2} - \frac{5}{2}$		835	
	7	1332.808	58.70595 - 133.73526	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835	
	3	1333.171	54.26263 - 129.27172	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^4G^\circ - ^2F$	$\frac{3}{2} - \frac{7}{2}$		835	
10	1334.101	56.07526 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^4F^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		835		
12	1334.287	54.55705 - 129.50324	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4F^\circ - ^4G$	$\frac{10}{2} - \frac{9}{2}$		835		

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10	7	1334.320						835
	1	1334.656						835
	1	1334.689						835
	400	1335.203	1.50694 - 76.40203	$3d^9 - 3d^8(a^1G)4p$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	18	1335.779	54.55705 - 129.41958	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4F^o - ^4F$	$\frac{3}{2} - \frac{9}{2}$		835
	2	1336.201	54.55705 - 129.39604	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4F^o - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835
	15	1337.958	54.55705 - 129.29791	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4F^o - ^4D$	$\frac{9}{2} - \frac{7}{2}$		835
	10	1338.195						835
	1	1338.402	57.08055 - 131.79626	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^o - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
	3	1339.221	57.08055 - 131.75073	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^o - ^2G$	$\frac{7}{2} - \frac{7}{2}$		835
	1	1339.394	56.37141 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2G^o - ^2D$	$\frac{7}{2} - \frac{5}{2}$		835
	3	1339.487	56.07526 - 130.73053	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^4F^o - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1340.007	53.36517 - 127.99156	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4G^o - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835
	20	1340.374	57.08055 - 131.68656	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^o - ^2H$	$\frac{7}{2} - \frac{9}{2}$		835
	0	1341.226	32.52354 - 107.08221	$3d^8(a^1G)4s - 3d^8(a^3F_2)5p$	$^2G - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		835
	20	1342.242	53.36517 - 127.86713	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4G^o - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835
	10	1343.544	56.37141 - 130.80133	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2G^o - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835
	2	1343.642	55.41783 - 129.84233	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4F^o - ^4D$	$\frac{9}{2} - \frac{7}{2}$		835
	2	1344.196	56.37141 - 130.76526	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2G^o - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	1	1344.334	56.37141 - 130.75751	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2G^o - ^4H$	$\frac{7}{2} - \frac{9}{2}$		835
	50	1344.614	53.49649 - 127.86713	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4G^o - ^4F$	$\frac{11}{2} - \frac{9}{2}$		835
	50	1345.882	0.0 - 74.30093	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4S^o$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1346.334	55.01871 - 129.29451	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^4G^o - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835
	30	1348.333	23.10828 - 97.27383	$3d^8(a^1D)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2D - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	0	1349.594	55.29965 - 129.39604	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^2G^o - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835
	12	1349.791	55.41783 - 129.50324	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4F^o - ^4G$	$\frac{7}{2} - \frac{9}{2}$		835
	5	1350.256	56.07526 - 130.13519	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^4F^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
	10	1350.321	55.41783 - 129.47427	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^4F^o - ^4F$	$\frac{3}{2} - \frac{7}{2}$		835
	10	1351.287	23.79618 - 97.79966	$3d^8(a^1D)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		835
	35	1351.862	55.29965 - 129.27172	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^2G^o - ^2F$	$\frac{9}{2} - \frac{7}{2}$		835
	10	1352.237	57.08055 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^o - ^2D$	$\frac{7}{2} - \frac{5}{2}$		835
	8	1353.606	55.41783 - 129.29451	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^4F^o - ^4F$	$\frac{7}{2} - \frac{3}{2}$		835
	15	1353.821	56.37141 - 130.23626	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^2G^o - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
	2	1354.023	55.41783 - 129.27172	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^4F^o - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	10	1355.849						835
	5	1356.318	54.26263 - 127.99156	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4G^o - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	20	1356.469	57.08055 - 130.80133	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^o - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835
	9	1356.653	56.42449 - 130.13519	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^4F^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
	11	1357.132	57.08055 - 130.76526	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^o - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	5	1357.371	29.07093 - 102.74274	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
	25	1358.475	57.42016 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1358.992						835
	14	1360.956	23.79618 - 97.27383	$3d^8(a^1D)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2D - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	5	1361.757	54.55705 - 127.99156	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4F^o - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835
	50	1361.885	23.10828 - 96.53587	$3d^8(a^1D)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^2D - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$		835
20	1362.926						835	
3	1363.421	57.42016 - 130.76526	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2D^o - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835	
2	1363.540	32.49953 - 105.83806	$3d^8(a^1G)4s - 3d^8(a^3F_2)5p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		835	
2	1363.617	24.78820 - 98.12263	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4P - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		835	
1	1363.861						835	
25	1364.067	54.55705 - 127.86713	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4F^o - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835	
25	1364.202	58.49321 - 131.79626	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^o - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835	
1	1364.440						835	
20	1364.505	24.83593 - 98.12263	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$		835	

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
9	2	1364.793	57.42016 - 130.69135	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	25	1365.048	58.49321 - 131.75073	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{3}{2}$		835
	4	1365.760	56.07526 - 129.29451	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^4F^\circ - ^4F$	$\frac{5}{2} - \frac{3}{2}$		835
	5	1366.947	57.08055 - 130.23626	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^2F^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		835
	20	1367.067	29.59346 - 102.74274	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2P - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	1	1367.394	56.37141 - 129.50324	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^2G^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		835
	10	1368.171	58.70595 - 131.79626	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1369.560						835
	20	1369.651	24.78820 - 97.79966	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4P - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	500	1370.136	0.0 - 72.98565	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	25	1370.549	24.83593 - 97.79966	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4P - z^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	4	1370.804	58.70595 - 131.65583	$3d^8(a^3F)4p - 3d^8(a^3F_2)6d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1371.733	56.37141 - 129.27172	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^2G^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	4	1373.746	1.50694 - 74.30093	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	150	1374.075	1.50694 - 74.28333	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2S^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	50	1375.822	29.07093 - 101.75480	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2P - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	10	1377.001						835
	7	1377.912	55.41783 - 127.99156	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^4F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	1	1378.578	58.49321 - 131.03201	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2F^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		835
	50	1379.586	24.78820 - 97.27383	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4P - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	12	1379.980	23.10828 - 95.57339	$3d^8(a^3D)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2D - z^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	2	1380.440						835
	20	1380.793	57.42016 - 129.84233	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^2D^\circ - ^4D$	$\frac{5}{2} - \frac{5}{2}$		835
	200	1381.295	1.50694 - 73.90325	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	6	1381.423	51.04546 - 123.43460	$3d^74s^2 - 3d^8(a^3F_4)6p$	$^4F - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
4	1381.694	0.0 - 72.37542	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
2	1382.695	58.49321 - 130.81591	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2F^\circ - ^4G$	$\frac{3}{2} - \frac{7}{2}$		835	
1	1383.356						835	
0	1383.966	23.79618 - 96.05248	$3d^8(a^3D)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2D - z^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
12	1384.327	25.03638 - 97.27383	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4P - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
1	1385.179						835	
6	1385.216	57.08055 - 129.27172	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^2F^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835	
1	1386.063	32.49953 - 104.64652	$3d^8(a^3G)4s - 3d^8(a^3F_4)5p$	$^2G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
10	1387.745	57.42016 - 129.47973	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835	
5	1387.851	57.42016 - 129.47427	$3d^8(a^3F)4p - 3d^8(a^3F_4)6d$	$^2D^\circ - ^4F$	$\frac{3}{2} - \frac{1}{2}$		835	
1	1388.796	58.70595 - 130.71085	$3d^8(a^3F)4p - 3d^8(a^3F_3)6d$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835	
2	1391.761	57.42016 - 129.27172	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{7}{2}$		835	
100	1393.330	0.0 - 71.77083	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
12	1393.867	58.49321 - 130.23626	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^2F^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		835	
10	1396.695	23.10828 - 94.70593	$3d^8(a^3D)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2D - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
14	1396.790						835	
2	1397.480	32.52354 - 104.08104	$3d^8(a^3G)4s - 3d^8(a^3F_4)5p$	$^2G - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		835	
2	1397.858	29.07093 - 100.60901	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2P - z^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835	
3	1398.009	58.70595 - 130.23626	$3d^8(a^3F)4p - 3d^8(a^3F_2)7s$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		835	
40	1398.612	25.03638 - 96.53587	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^4P - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
16	1398.758	57.42016 - 128.91281	$3d^8(a^3F)4p - 3d^8(a^3F_4)5g$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835	
80	1399.026	1.50694 - 72.98565	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		835	
12	1399.361						835	
30	1400.644	51.04546 - 122.44122	$3d^74s^2 - 3d^8(a^3F_4)6p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		835	
20	1402.379						835	
7	1406.970	51.04546 - 122.12057	$3d^74s^2 - 3d^8(a^3F_4)6p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		835	
10	1408.796						835	
15	1409.612						835	
4	1410.219	57.08055 - 127.99156	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^2F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835	

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	1411.071	1.50694 - 72.37542	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	30	1412.868	0.0 - 70.77812	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4D^o$	$\frac{3}{2} - \frac{7}{2}$		835
	10	1413.679						835
	15	1414.299	0.0 - 70.70677	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1414.444	66.57971 - 137.27822	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	20	1415.728	0.0 - 70.63546	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1415.846						835
	12	1416.060	51.55785 - 122.17542	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4D^o - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
	0	1416.660	58.70595 - 129.29451	$3d^8(a^3F)4p - 3d^8(a^3F_3)7s$	$^2D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
	10	1417.007	57.42016 - 127.99156	$3d^8(a^3F)4p - 3d^8(a^3F_4)7s$	$^2D^o - ^4F$	$\frac{3}{2} - \frac{7}{2}$		835
	1	1417.553	24.78820 - 95.33253	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4P - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		835
	10	1417.699	25.03638 - 95.57339	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4P - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$		835
	5	1420.674	66.57134 - 136.96075	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
	18	1420.843	66.57971 - 136.96075	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1421.913	66.57134 - 136.89934	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
	8	1422.320						835
7	16	1423.212	1.50694 - 71.77083	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	11	1423.786	52.20595 - 122.44122	$3d^74s^2 - 3d^8(a^3F_4)6p$	$^4F - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		835
	1	1423.994						835
	3	1424.890	67.03102 - 137.21193	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	10	1425.025						835
	6	1425.579	51.04546 - 121.19232	$3d^74s^2 - 3d^8(a^3F_2)4f$	$^4F - 2[3]^o$	$\frac{9}{2} - \frac{7}{2}$		835
	3	1425.604	66.57971 - 136.72533	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
	5	1426.783						835
	1	1427.448						835
	10	1427.782						835
	8	1431.270	67.03102 - 136.89934	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$		835
	25	1431.492	51.04546 - 120.90320	$3d^74s^2 - 3d^8(a^3P)5p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{7}{2}$		835
	1	1433.745	66.57971 - 136.32755	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
	1	1433.893						835
	1	1434.317						835
	12	1434.373	66.57134 - 136.28860	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4D$	$\frac{5}{2} - \frac{5}{2}$		835
	14	1434.493	66.57971 - 136.29083	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
	12	1434.546	66.57971 - 136.28860	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1434.688	67.03102 - 136.73274	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4F$	$\frac{1}{2} - \frac{1}{2}$		835
	1	1434.837	67.03102 - 136.72533	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$		835
	5	1435.348	25.03638 - 94.70593	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4P - z^4F^o$	$\frac{5}{2} - \frac{7}{2}$		835
	50	1436.165	66.57134 - 136.20146	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{7}{2}$		835
	8	1439.094						835
	1	1439.283	66.57134 - 136.05053	$3d^8(a^3P)4p - 3d^8(a^3F_2)8s$	$^4P^o - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
	8	1439.352	66.57971 - 136.05450	$3d^8(a^3P)4p - 3d^8(a^3F_3)7d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
	13	1443.080	67.03102 - 136.32755	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		835
	10	1443.838	67.03102 - 136.29083	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		835
	1	1444.940						835
	13	1445.098	1.50694 - 70.70677	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
	14	1445.460						835
	20	1446.589	1.50694 - 70.63546	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		835
8	14	1450.005	0.0 - 68.96565	$3d^9 - 3d^8(a^1D)4p$	$g^2D - ^2P^o$	$\frac{5}{2} - \frac{1}{2}$		835
	15	1452.558	52.20595 - 121.05066	$3d^74s^2 - 3d^8(a^3P)5p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		835
	15	1453.359	68.15431 - 136.96075	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	2	1454.292	53.03793 - 121.80034	$3d^74s^2 - 3d^8(a^3P)5p$	$^4F - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		835
7	200	1454.852	0.0 - 68.73598	$3d^9 - 3d^8(a^1D)4p$	$g^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		835
	16	1456.913						835
	5	1457.359	68.28162 - 136.89934	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		835

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	4	1457.863	67.69464 - 136.28860	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2F^\circ - ^4D$	$\frac{5}{2} - \frac{5}{2}$		835
	4	1458.170	52.73845 - 121.31789	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4D^\circ - ^4G$	$\frac{5}{2} - \frac{5}{2}$		835
	4	1458.342	68.15431 - 136.72533	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
	4	1459.459						835
	1	1459.611						835
	1	1459.640	53.63462 - 122.14499	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4D^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		835
	12	1459.715	67.69464 - 136.20146	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2F^\circ - ^4D$	$\frac{5}{2} - \frac{7}{2}$		835
	9	1459.809	52.73845 - 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835
	6	1460.078	52.73845 - 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4D^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1460.136	51.55785 - 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4D^\circ - ^4G$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1460.312	53.63462 - 122.11294	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4D^\circ - ^2P$	$\frac{5}{2} - \frac{1}{2}$		835
	2	1460.408	68.13121 - 136.60479	$3d^8(a^1D)4p - 3d^8(a^3F_2)6g$	$^2F^\circ - 2[4]^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	8	1461.840	66.57134 - 134.97847	$3d^8(a^3P)4p - 3d^8(a^3F_4)7d$	$^4P^\circ - ^4D$	$\frac{5}{2} - \frac{5}{2}$		835
	8	1462.482	52.73845 - 121.11559	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4D^\circ - ^2P$	$\frac{5}{2} - \frac{3}{2}$		835
	20	1462.944	51.55785 - 119.91333	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4D^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	14	1463.113	53.03793 - 121.38580	$3d^74s^2 - 3d^8(a^3P)5p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	8	1464.301	67.69464 - 135.98606	$3d^8(a^1D)4p - 3d^8(a^3F_3)7d$	$^2F^\circ - ^4G$	$\frac{5}{2} - \frac{7}{2}$		835
	10	1464.369	67.69464 - 135.98322	$3d^8(a^1D)4p - 3d^8(a^3F_2)8s$	$^2F^\circ - ^4F$	$\frac{5}{2} - \frac{3}{2}$		835
7	60	1467.265	0.0 - 68.15431	$3d^9 - 3d^8(a^1D)4p$	$g^2D - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	10	1467.637	68.15431 - 136.29083	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
	10	1467.694	68.15431 - 136.28860	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
6	100	1467.762	0.0 - 68.13121	$3d^9 - 3d^8(a^1D)4p$	$g^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	30	1468.268	51.55785 - 119.66529	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4D^\circ - ^4P$	$\frac{5}{2} - \frac{3}{2}$		835
	25	1468.465	51.55785 - 119.65625	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4D^\circ - ^4D$	$\frac{5}{2} - \frac{7}{2}$		835
	10	1469.200	53.63462 - 121.69902	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4D^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
	3	1469.601	68.28162 - 136.32755	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
	1	1469.847						835
	1	1470.322	53.03793 - 121.05066	$3d^74s^2 - 3d^8(a^3P)5p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	2	1470.386	68.28162 - 136.29083	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
	5	1470.666	68.73598 - 136.73274	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2D^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
	10	1471.466	66.57971 - 134.53937	$3d^8(a^3P)4p - 3d^8(a^3F_4)7d$	$^4P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1471.961	54.17626 - 122.11294	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4D^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	10	1472.571	54.17626 - 122.08479	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4D^\circ - ^4F$	$\frac{1}{2} - \frac{1}{2}$		835
	5	1472.835	68.15431 - 136.05053	$3d^8(a^1D)4p - 3d^8(a^3F_2)8s$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	2	1472.889	51.04546 - 118.93953	$3d^74s^2 - 3d^8(a^3F_4)4f$	$^4F - 4[5]^\circ$	$\frac{9}{2} - \frac{11}{2}$		835
	1	1473.249	68.15431 - 136.03143	$3d^8(a^1D)4p - 3d^8(a^3F_3)7d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		835
	1	1474.312	51.04546 - 118.87411	$3d^74s^2 - 3d^8(a^3F_4)4f$	$^4F - 4[3]^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
	4	1474.597	53.36517 - 121.18055	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4G^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		835
	2	1474.901						835
	1	1474.910	68.96565 - 136.76649	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2P^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
	3	1475.270	53.60119 - 121.38580	$3d^74s^2 - 3d^8(a^3P)5p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1475.645	68.96565 - 136.73274	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
	3	1475.734	70.35894 - 138.12188	$3d^74s^2 - 3d^8(a^3F_4)9p$	$^2G - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	2	1475.801	68.96565 - 136.72533	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
	25	1476.043	54.17626 - 121.92516	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4D^\circ - ^4D$	$\frac{1}{2} - \frac{1}{2}$		835
	1	1477.063	68.28162 - 135.98322	$3d^8(a^1D)4p - 3d^8(a^3F_3)8s$	$^2P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		835
6	4	1477.227	0.0 - 67.69464	$3d^9 - 3d^8(a^1D)4p$	$g^2D - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1477.264	68.15657 - 135.84941	$3d^74s^2 - 3d^8(a^3P_1)4f$	$^4P - 1[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	10	1479.443	53.63462 - 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
	4	1480.274						835
	30	1480.331	68.73598 - 136.28860	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$^2D^\circ - ^4D$	$\frac{5}{2} - \frac{5}{2}$		835
	75	1481.091	51.04546 - 118.56339	$3d^74s^2 - 3d^8(a^1D)5p$	$^4F - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
	9	1481.210						835
	15	1481.560	66.57134 - 134.06776	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^4P^\circ - ^2P$	$\frac{5}{2} - \frac{3}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	1481.744	66.57971 - 134.06776	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2P$	$\frac{3}{2} - \frac{1}{2}$		835
	12	1481.883	66.57134 - 134.05305	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2D$	$\frac{5}{2} - \frac{3}{2}$		835
	4	1481.898	53.63462 - 121.11559	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4D^\circ - 2P$	$\frac{3}{2} - \frac{1}{2}$		835
	10	1481.982	53.63462 - 121.11190	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4D^\circ - 4P$	$\frac{3}{2} - \frac{1}{2}$		835
	100	1482.240	68.73598 - 136.20146	$3d^8(a^1D)4p - 3d^8(a^3P)5d$	$2D^\circ - 4D$	$\frac{5}{2} - \frac{3}{2}$		835
	8	1482.393	1.50694 - 68.96565	$3d^9 - 3d^8(a^1D)4p$	$g^2D - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	40	1483.277	23.10828 - 90.52618	$3d^8(a^1D)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$2D - z^6G^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	15	1483.554	52.73845 - 120.14417	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4D^\circ - 4D$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1483.760						835
	25	1484.227	66.57971 - 133.95485	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2P$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1484.592	66.57134 - 133.92988	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2G$	$\frac{5}{2} - \frac{3}{2}$		835
	10	1485.185	66.57134 - 133.90300	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		835
	60	1485.375	66.57971 - 133.90300	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		835
	2	1485.987	68.73598 - 136.03143	$3d^8(a^1D)4p - 3d^8(a^3F_3)7d$	$2D^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		835
	5	1486.372	66.57971 - 133.85773	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 4P$	$\frac{3}{2} - \frac{1}{2}$		835
	7	1486.668	52.73845 - 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4D^\circ - 4F$	$\frac{5}{2} - \frac{3}{2}$		835
	50	1487.242	66.57134 - 133.80976	$3d^8(a^3P)4p - 3d^8(a^3F_3)8s$	$4P^\circ - 4F$	$\frac{3}{2} - \frac{1}{2}$		835
	5	1487.438	1.50694 - 68.73598	$3d^9 - 3d^8(a^1D)4p$	$g^2D - 2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
7	6	1487.455	1.50694 - 68.73598	$3d^9 - 3d^8(a^1D)4p$	$g^2D - 2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	5	1487.778						835
	2	1487.970						835
	1	1488.109						835
	16	1488.730	52.73845 - 119.90972	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4D^\circ - 4P$	$\frac{5}{2} - \frac{3}{2}$		835
	5	1488.845	68.73598 - 135.90196	$3d^8(a^1D)4p - 3d^8(a^3F_3)7d$	$2D^\circ - 4F$	$\frac{3}{2} - \frac{1}{2}$		835
	100	1488.896	66.57134 - 133.73498	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2F$	$\frac{5}{2} - \frac{3}{2}$		835
	35	1489.079	66.57971 - 133.73526	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2F$	$\frac{5}{2} - \frac{3}{2}$		835
	5	1489.729	55.01871 - 122.14499	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4G$	$\frac{5}{2} - \frac{3}{2}$		835
	7	1490.262	68.15657 - 135.25892	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$4P - v^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	5	1491.176	55.01871 - 122.08025	$3d^8(a^3F)4p - 3d^8(a^1G)4d$	$4G^\circ - 2F$	$\frac{5}{2} - \frac{3}{2}$		835
	4	1491.308	54.26263 - 121.31789	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4G$	$\frac{5}{2} - \frac{3}{2}$		835
	4	1491.588	66.57134 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 4P$	$\frac{5}{2} - \frac{3}{2}$		835
	6	1491.776	66.57971 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 4P$	$\frac{5}{2} - \frac{3}{2}$		835
	3	1491.823	54.26263 - 121.29467	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 2G$	$\frac{5}{2} - \frac{3}{2}$		835
	40	1491.899	55.01871 - 122.04729	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4H$	$\frac{5}{2} - \frac{3}{2}$		835
	15	1493.022	54.26263 - 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 2F$	$\frac{5}{2} - \frac{3}{2}$		835
	2	1493.315	54.26263 - 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4F$	$\frac{5}{2} - \frac{3}{2}$		835
	50	1494.151	54.26263 - 121.19034	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4H$	$\frac{7}{2} - \frac{5}{2}$		835
	6	1494.236	67.03102 - 133.95485	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$4P^\circ - 2P$	$\frac{1}{2} - \frac{1}{2}$		835
	10	1494.701	67.88016 - 134.78314	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$4P - w^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	40	1495.383	66.57134 - 133.44389	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 4P$	$\frac{3}{2} - \frac{1}{2}$		835
	20	1495.570	66.57971 - 133.44389	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 4P$	$\frac{3}{2} - \frac{1}{2}$		835
	10	1496.308	67.03102 - 133.86221	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 2P$	$\frac{1}{2} - \frac{1}{2}$		835
	2	1496.409	67.03102 - 133.85773	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 4P$	$\frac{1}{2} - \frac{1}{2}$		835
	1	1496.463	68.15431 - 134.97847	$3d^8(a^1D)4p - 3d^8(a^3F_3)7d$	$2D^\circ - 4D$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1498.734	55.41783 - 122.14071	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4F^\circ - 2H$	$\frac{3}{2} - \frac{1}{2}$		835
	15	1499.704	53.36517 - 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4G$	$\frac{5}{2} - \frac{3}{2}$		835
7	200	1500.437	1.50694 - 68.15431	$3d^9 - 3d^8(a^1D)4p$	$g^2D - 2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	7	1500.651	53.36517 - 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4F$	$\frac{5}{2} - \frac{3}{2}$		835
	20	1501.885	67.03102 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$4P^\circ - 4P$	$\frac{1}{2} - \frac{1}{2}$		835
	6	1501.962	0.0 - 66.57971	$3d^9 - 3d^8(a^3P)4p$	$g^2D - 4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	75	1502.150	0.0 - 66.57134	$3d^9 - 3d^8(a^3P)4p$	$g^2D - 4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	20	1502.669	53.49649 - 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4G$	$\frac{5}{2} - \frac{3}{2}$		835
	7	1503.123	51.04546 - 117.57368	$3d^7 4s^2 - 3d^7(a^2D)4s4p(^3P^\circ)$	$4F - w^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	12	1503.209	53.36517 - 119.88947	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4G^\circ - 4G$	$\frac{5}{2} - \frac{3}{2}$		835

Ni II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	75	1504.485	53.36517 - 119.83300	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^\circ - ^4H$	$\frac{9}{2} - \frac{11}{2}$		835
	5	1504.590	70.74870 - 137.21193	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	13	1505.642	53.49649 - 119.91333	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^\circ - ^4F$	$\frac{11}{2} - \frac{9}{2}$		835
	16	1506.184	53.49649 - 119.88947	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^\circ - ^4G$	$\frac{11}{2} - \frac{11}{2}$		835
	25	1506.585	67.88016 - 134.25605	$3d^74s^2 - 3d^8(a^3F_4)6f$	$^4P - 4[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	7	1506.851						835
	10	1506.968	67.69464 - 134.05305	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2F^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		835
	5	1506.995	52.20595 - 118.56339	$3d^74s^2 - 3d^8(a^1D)5p$	$^4F - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	18	1507.465	53.49649 - 119.83300	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^\circ - ^4H$	$\frac{11}{2} - \frac{11}{2}$		835
	15	1507.961	70.35894 - 136.67364	$3d^74s^2 - 3d^8(a^3F_3)8p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	10	1508.249						835
	7	1508.262	70.63546 - 136.93682	$3d^8(a^3P)4p - 3d^8(a^3F_2)7d$	$^4D^\circ - ^2G$	$\frac{5}{2} - \frac{7}{2}$		835
	10	1508.315	55.01871 - 121.31789	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4G^\circ - ^4G$	$\frac{5}{2} - \frac{7}{2}$		835
	7	1508.352						835
	4	1508.498	53.36517 - 119.65625	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^\circ - ^4D$	$\frac{9}{2} - \frac{7}{2}$		835
	100	1508.816	53.49649 - 119.77360	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^\circ - ^4H$	$\frac{11}{2} - \frac{13}{2}$		835
	1	1509.113	70.63546 - 136.89934	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
	12	1509.308	68.70976 - 134.96478	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - w^3D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	8	1509.345	70.70677 - 136.96075	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	4	1509.602	68.73598 - 134.97847	$3d^8(a^1D)4p - 3d^8(a^3F_4)7d$	$^2D^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
	100	1509.767	67.69464 - 133.92988	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{7}{2}$		835
	1	1510.067	55.01871 - 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4G^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835
	16	1510.232						835
	4	1510.366	55.01871 - 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4G^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	3	1510.690	56.07526 - 122.27005	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4F^\circ - ^2G$	$\frac{5}{2} - \frac{7}{2}$		835
	5	1510.741	70.70677 - 136.89934	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
	75	1510.859	1.50694 - 67.69464	$3d^9 - 3d^8(a^1D)4p$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	8	1511.185	52.20595 - 118.37911	$3d^74s^2 - 3d^8(a^1D)5p$	$^4F - ^2F^\circ$	$\frac{7}{2} - \frac{3}{2}$		835
	3	1511.314	67.69464 - 133.86221	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2F^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	10	1511.467						835
	1	1512.237	68.15657 - 134.28376	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - s^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	11	1512.742	71.45774 - 137.56274	$3d^74s^2 - 3d^8(a^3F_2)8p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	11	1513.016	67.88016 - 133.97333	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - s^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	1	1513.550	56.07526 - 122.14499	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4F^\circ - ^4G$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1513.783	70.70677 - 136.76649	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
	50	1514.222	67.69464 - 133.73526	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2F^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		835
	10	1514.336						835
	80	1514.372	70.35894 - 136.39285	$3d^74s^2 - 3d^8(^1D)6p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
	17	1514.411						835
	5	1514.552	70.70677 - 136.73274	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
	6	1514.633						835
	2	1514.644						835
	8	1514.856	68.96565 - 134.97847	$3d^8(a^1D)4p - 3d^8(a^3F_4)7d$	$^2P^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		835
	15	1515.157	68.15657 - 134.15628	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - s^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	25	1515.269	55.29965 - 121.29467	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^\circ - ^2G$	$\frac{9}{2} - \frac{9}{2}$		835
	8	1515.329	23.10828 - 89.10049	$3d^8(a^1D)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2D - z^3D^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	5	1515.518	70.74870 - 136.73274	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		835
	1	1515.692	70.74870 - 136.72533	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		835
	30	1515.791	56.07526 - 122.04729	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4F^\circ - ^4H$	$\frac{5}{2} - \frac{7}{2}$		835
	40	1515.825	67.88016 - 133.85083	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - s^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	17	1516.048	68.28162 - 134.24196	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	50	1516.215	70.63546 - 136.58935	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835
	3	1516.503	55.29965 - 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^\circ - ^2F$	$\frac{9}{2} - \frac{7}{2}$		835
	25	1517.449	55.41783 - 121.31789	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^\circ - ^4G$	$\frac{7}{2} - \frac{7}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	1517.480	56.37141 - 122.27005	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^2G^\circ - ^2G$	$\frac{7}{2} - \frac{7}{2}$		835
	100	1517.894	55.29965 - 121.18055	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		835
	15	1517.984	55.41783 - 121.29467	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835
	40	1519.371	68.15657 - 133.97333	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - s^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	15	1519.513	55.41783 - 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^\circ - ^4F$	$\frac{7}{2} - \frac{5}{2}$		835
	4	1519.745	68.15431 - 133.95485	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	100	1519.935	68.13121 - 133.92291	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2F^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835
	2	1520.008						835
	4	1520.077	68.28162 - 134.06776	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	14	1520.168	54.26263 - 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		835
	10	1520.294	32.49953 - 98.27670	$3d^8(a^3G)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2G - z^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	30	1520.392	55.41783 - 121.19034	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		835
	40	1520.467	56.37141 - 122.14071	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^2G^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		835
	10	1520.932	67.69464 - 133.44389	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2F^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
	20	1520.944	68.15431 - 133.90300	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		835
	100	1521.119	70.77812 - 136.51928	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		835
	15	1521.596	56.42449 - 122.14499	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4F^\circ - ^4G$	$\frac{7}{2} - \frac{5}{2}$		835
	18	1521.673	70.35894 - 136.07626	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2G - v^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	12	1521.889	68.15431 - 133.86221	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	10	1521.992	68.15431 - 133.85773	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
	2	1522.506	53.63462 - 119.31544	$3d^8(a^3F)4p - 3d^8(a^3F_2)6s$	$^4D^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
	0	1522.517	53.63462 - 119.31544	$3d^8(a^3F)4p - 3d^8(a^3F_2)6s$	$^4D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	30	1522.569	68.13121 - 133.80976	$3d^8(a^1D)4p - 3d^8(a^3F_4)8s$	$^2F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	10	1522.691	68.28162 - 133.95485	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	12	1522.846	52.20595 - 117.87278	$3d^74s^2 - 3d^8(a^1D)5p$	$^4F - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
	11	1522.990	56.42449 - 122.08479	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^4F^\circ - ^4F$	$\frac{9}{2} - \frac{5}{2}$		835
	3	1523.102	56.42449 - 122.08025	$3d^8(a^3F)4p - 3d^8(a^1G)4d$	$^4F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	6	1523.160	70.63546 - 136.28860	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4D$	$\frac{5}{2} - \frac{5}{2}$		835
	30	1523.278	67.88016 - 133.52802	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - v^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	15	1523.897	70.70677 - 136.32755	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
	50	1524.302	68.13121 - 133.73498	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2F^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	4	1524.758	70.70677 - 136.29083	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
	22	1524.834	68.15431 - 133.73526	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2F$	$\frac{1}{2} - \frac{5}{2}$		835
	14	1524.996	68.96565 - 134.53937	$3d^8(a^1D)4p - 3d^8(a^3F_4)7d$	$^2P^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
	8	1525.422	52.73845 - 118.29417	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835
	4	1526.480	70.77812 - 136.28860	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4D$	$\frac{7}{2} - \frac{5}{2}$		835
	20	1526.999	54.55705 - 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4F^\circ - ^4G$	$\frac{9}{2} - \frac{9}{2}$		835
	15	1527.497	51.04546 - 116.51206	$3d^74s^2 - 3d^7(a^2D)4s4p(^3P^\circ)$	$^4F - v^4D^\circ$	$\frac{10}{2} - \frac{7}{2}$		835
	1	1527.661	68.15431 - 133.61399	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	18	1527.968	68.70976 - 134.15628	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^4P - s^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	3	1528.158						835
	22	1528.508	70.77812 - 136.20146	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4D^\circ - ^4D$	$\frac{7}{2} - \frac{7}{2}$		835
	1	1528.703	70.63546 - 136.05053	$3d^8(a^3P)4p - 3d^8(a^3F_2)8s$	$^4D^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
	4	1529.148	70.63546 - 136.03143	$3d^8(a^3P)4p - 3d^8(a^3F_3)7d$	$^4D^\circ - ^2D$	$\frac{5}{2} - \frac{5}{2}$		835
	0	1529.812	52.20595 - 117.57368	$3d^74s^2 - 3d^7(a^2D)4s4p(^3P^\circ)$	$^4F - w^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	18	1530.080	54.55705 - 119.91333	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4F^\circ - ^4F$	$\frac{10}{2} - \frac{10}{2}$		835
	10	1530.428	53.03793 - 118.37911	$3d^74s^2 - 3d^8(a^1D)5p$	$^4F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
	75	1530.636	54.55705 - 119.88947	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4F^\circ - ^4G$	$\frac{9}{2} - \frac{11}{2}$		835
	30	1530.663	68.73598 - 134.06776	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2P$	$\frac{5}{2} - \frac{3}{2}$		835
	16	1530.995	68.73598 - 134.05305	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2D$	$\frac{5}{2} - \frac{5}{2}$		835
	3	1531.288						835
	1	1531.336						835
	14	1531.408						835
	18	1531.640	68.15431 - 133.44389	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1531.720	70.35894 - 135.64510	$3d^7 4s^2 - 3d^8(a^3F_3)6f$	$^2G - 3[5]^o$	$\frac{9}{2} - \frac{11}{2}$		835
	16	1531.952	54.55705 - 119.83300	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4F^o - ^4H$	$\frac{3}{2} - \frac{11}{2}$		835
	20	1531.972	51.55785 - 116.83315	$3d^8(a^3F)4p - 3d^8(a^3F_4)6s$	$^4D^o - ^4F$	$\frac{7}{2} - \frac{9}{2}$		835
	14	1532.741	56.07526 - 121.31789	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^o - ^4G$	$\frac{5}{2} - \frac{7}{2}$		835
	17	1533.669						835
	12	1533.885	68.73598 - 133.92988	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2D^o - ^2G$	$\frac{5}{2} - \frac{7}{2}$		835
	20	1533.991	57.08055 - 122.27005	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^2F^o - ^2G$	$\frac{7}{2} - \frac{7}{2}$		835
	5	1534.424						835
	12	1534.484						835
	11	1534.546	56.07526 - 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^o - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1534.628						835
	10	1534.861	56.07526 - 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^o - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	2	1535.083						835
	12	1535.477	68.73598 - 133.86221	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2D^o - ^2P$	$\frac{5}{2} - \frac{1}{2}$		835
	15	1535.961	70.35894 - 135.46486	$3d^7 4s^2 - 3d^8(a^3P)4f$	$^2G - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		835
	30	1536.051	68.96565 - 134.06776	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	15	1536.118	54.55705 - 119.65625	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4F^o - ^4D$	$\frac{10}{2} - \frac{7}{2}$		835
	1	1536.367	71.45774 - 136.54650	$3d^7 4s^2 - 3d^8(a^3F_2)6f$	$^2G - 2[4]^o$	$\frac{7}{2} - \frac{9}{2}$		835
	20	1536.398	68.96565 - 134.05305	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{5}{2}$		835
	15	1536.717	68.73598 - 133.80976	$3d^8(a^1D)4p - 3d^8(a^3F_4)8s$	$^2D^o - ^4F$	$\frac{3}{2} - \frac{7}{2}$		835
	25	1536.746	1.50694 - 66.57971	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		835
	10	1536.779						835
	12	1536.944	1.50694 - 66.57134	$3d^9 - 3d^8(a^3P)4p$	$g^2D - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$		835
	12	1537.038	57.08055 - 122.14071	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^2F^o - ^2H$	$\frac{7}{2} - \frac{9}{2}$		835
	20	1537.216	54.26263 - 119.31544	$3d^8(a^3F)4p - 3d^8(a^3F_4)6s$	$^4G^o - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
	2	1537.322	67.88016 - 132.92797	$3d^7 4s^2 - 3d^8(a^1D_2)4f$	$^4P - 2[2]^o$	$\frac{5}{2} - \frac{3}{2}$		835
	15	1537.477	70.35894 - 135.40067	$3d^7 4s^2 - 3d^8(a^3P_2)4f$	$^2G - 2[4]^o$	$\frac{10}{2} - \frac{7}{2}$		835
	1	1537.776	72.98565 - 138.01453	$3d^8(a^3P)4p - 3d^8(a^3F_4)8d$	$^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
	25	1537.859						835
	6	1538.022						835
	30	1538.388						835
	30	1538.483	68.73598 - 133.73498	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2D^o - ^2F$	$\frac{5}{2} - \frac{1}{2}$		835
	4	1538.567	71.77083 - 136.76649	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
	0	1538.722	68.96565 - 133.95485	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	3	1538.831	55.01871 - 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^4G^o - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1538.956	70.35894 - 135.33801	$3d^7 4s^2 - 3d^8(a^3F_4)8p$	$^2G - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		835
	15	1539.649						835
	1	1539.731	56.37141 - 121.31789	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^o - ^4G$	$\frac{7}{2} - \frac{7}{2}$		835
	2	1539.949	68.96565 - 133.90300	$3d^8(a^1D)4p - 3d^8(a^1D)5d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		835
	1	1540.015	53.03793 - 117.97247	$3d^7 4s^2 - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{5}{2} - \frac{7}{2}$		835
	25	1540.281	56.37141 - 121.29467	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^o - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835
	1	1540.656						835
	35	1540.760	72.37542 - 137.27822	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	4	1540.908	68.96565 - 133.86221	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	14	1541.324						835
	11	1541.356	68.73598 - 133.61399	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$^2D^o - ^4P$	$\frac{5}{2} - \frac{3}{2}$		835
	4	1541.560	56.37141 - 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^o - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	2	1541.801	75.14948 - 140.00876	$3d^8(a^1G)4p - 3d^8(a^1G)6s$	$^2H^o - ^2G$	$\frac{10}{2} - \frac{7}{2}$		835
	1	1542.024	57.42016 - 122.27005	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^2D^o - ^2G$	$\frac{5}{2} - \frac{7}{2}$		835
	18	1542.208	53.60119 - 118.44281	$3d^7 4s^2 - 3d^8(a^1D)5p$	$^4F - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		835
	2	1542.238	53.60119 - 118.44281	$3d^7 4s^2 - 3d^8(a^1D)5p$	$^4F - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		835
	3	1542.263						835
	1	1542.388	53.03793 - 117.87278	$3d^7 4s^2 - 3d^8(a^1D)5p$	$^4F - ^2D^o$	$\frac{1}{2} - \frac{5}{2}$		835
	3	1542.401	71.77083 - 136.60479	$3d^8(a^3P)4p - 3d^8(a^3F_2)6g$	$^2D^o - 2[4]^o$	$\frac{7}{2} - \frac{7}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
15	1542.773		71.77083 – 136.58935	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$2D^\circ - 4F$	$\frac{5}{2} - \frac{7}{2}$		835
1	1543.132		56.42449 – 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$4F^\circ - 4F$	$\frac{3}{2} - \frac{5}{2}$		835
3	1543.806							835
3	1544.273		57.42016 – 122.17542	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$2D^\circ - 2F$	$\frac{5}{2} - \frac{5}{2}$		835
5	1544.968		55.41783 – 120.14417	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$4F^\circ - 4D$	$\frac{3}{2} - \frac{5}{2}$		835
10	1544.980		53.03793 – 117.76391	$3d^7 4s^2 - 3d^8(a^1D)5p$	$4F - 2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
30	1545.408		68.73598 – 133.44389	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$2D^\circ - 4P$	$\frac{5}{2} - \frac{5}{2}$		835
12	1545.453							835
16	1545.717							835
5	1545.881		52.20595 – 116.89398	$3d^7 4s^2 - 3d^7(a^2D)4s4p(^3P^\circ)$	$4F - v^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
1	1546.053		53.63462 – 118.31482	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$4D^\circ - 4F$	$\frac{3}{2} - \frac{5}{2}$		835
4	1546.070		53.63462 – 118.31482	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$4D^\circ - 4F$	$\frac{3}{2} - \frac{5}{2}$		835
15	1547.337		55.41783 – 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$4F^\circ - 4G$	$\frac{7}{2} - \frac{9}{2}$		835
13	1547.407		53.03793 – 117.66211	$3d^7 4s^2 - 3d^7(a^2D)4s4p(^3P^\circ)$	$4F - v^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
5	1547.513							835
3	1547.547		71.45774 – 136.07626	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$2G - v^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
16	1548.344		55.41783 – 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$4F^\circ - 4F$	$\frac{7}{2} - \frac{7}{2}$		835
7	1548.416							835
1	1549.588		55.29965 – 119.83300	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$2G^\circ - 4H$	$\frac{9}{2} - \frac{11}{2}$		835
0	1549.818		72.37542 – 136.89934	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$2D^\circ - 4P$	$\frac{3}{2} - \frac{5}{2}$		835
4	1549.964		71.77083 – 136.28860	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$2D^\circ - 4D$	$\frac{3}{2} - \frac{5}{2}$		835
3	1550.479		71.45774 – 135.95409	$3d^7 4s^2 - 3d^8(a^3P_0)4f$	$2G - 0[3]^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
2	1550.495		55.41783 – 119.91333	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$4F^\circ - 4F$	$\frac{7}{2} - \frac{9}{2}$		835
10	1550.912		68.96565 – 133.44389	$3d^8(a^1D)4p - 3d^8(a^3P)6s$	$2P^\circ - 4P$	$\frac{3}{2} - \frac{5}{2}$		835
5	1552.276							835
0	1553.012		72.37542 – 136.76649	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$2D^\circ - 4F$	$\frac{3}{2} - \frac{5}{2}$		835
4	1553.346							835
5	1554.108							835
50	1554.124		67.88016 – 132.22515	$3d^7 4s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$4P - v^4P^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
8	1554.293		70.77812 – 135.11672	$3d^8(a^3P)4p - 3d^8(a^3F_3)8s$	$4D^\circ - 4F$	$\frac{7}{2} - \frac{7}{2}$		835
8	1554.332		52.73845 – 117.07470	$3d^8(a^3F)4p - 3d^8(a^3F_4)6s$	$4D^\circ - 4F$	$\frac{5}{2} - \frac{7}{2}$		835
6	1554.509		66.57134 – 130.90065	$3d^8(a^3P)4p - 3d^8(a^1D)6s$	$4P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$		835
2	1555.062		52.20595 – 116.51206	$3d^7 4s^2 - 3d^7(a^2D)4s4p(^3P^\circ)$	$4F - v^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
16	1555.398		72.98565 – 137.27822	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$2P^\circ - 2P$	$\frac{3}{2} - \frac{5}{2}$		835
30	1555.496		71.45774 – 135.74606	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$2G - v^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
8	1555.585		75.72168 – 140.00617	$3d^8(a^1G)4p - 3d^8(a^1G)6s$	$2H^\circ - 2G$	$\frac{11}{2} - \frac{9}{2}$		835
13	1555.957		51.55785 – 115.82712	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$4D^\circ - 4F$	$\frac{7}{2} - \frac{7}{2}$		835
7	1556.350							835
10	1556.766							835
4	1556.997		72.98565 – 137.21193	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$2P^\circ - 2P$	$\frac{3}{2} - \frac{5}{2}$		835
1	1557.194		68.70976 – 132.92797	$3d^7 4s^2 - 3d^8(a^1D_2)4f$	$4P - 2[2]^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
12	1557.290		57.08055 – 121.29467	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$2F^\circ - 2G$	$\frac{7}{2} - \frac{9}{2}$		835
1	1557.380							835
10	1558.087		51.55785 – 115.73915	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$4D^\circ - 4F$	$\frac{7}{2} - \frac{9}{2}$		835
12	1558.443							835
2	1558.501		51.04546 – 115.20985	$3d^7 4s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$4F - x^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
5	1558.544		53.60119 – 117.76391	$3d^7 4s^2 - 3d^8(a^1D)5p$	$4F - 2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
15	1558.597		57.08055 – 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$2F^\circ - 2F$	$\frac{7}{2} - \frac{7}{2}$		835
40	1558.655							835
18	1559.159							835
1	1559.822		57.08055 – 121.19034	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$2F^\circ - 4H$	$\frac{7}{2} - \frac{9}{2}$		835
6	1560.341		75.91763 – 140.00617	$3d^8(a^1G)4p - 3d^8(a^1G)6s$	$2F^\circ - 2G$	$\frac{7}{2} - \frac{9}{2}$		835
25	1560.459							835
10	1560.517		55.01871 – 119.10006	$3d^8(a^3F)4p - 3d^8(a^3F_2)6s$	$4G^\circ - 4F$	$\frac{5}{2} - \frac{7}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	4	1560.562						835
	5	1560.796	52.20595 - 116.27581	$3d^7 4s^2 - 3d^7(a^2H)4s4p(^3P^o)$	$^4F - w^4G^o$	$\frac{7}{2} - \frac{7}{2}$		835
	15	1560.831	68.15657 - 132.22515	$3d^7 4s^2 - 3d^7(a^4P)4s4p(^1P^o)$	$^4P - v^4P^o$	$\frac{1}{2} - \frac{1}{2}$		835
	4	1560.935	25.03638 - 89.10049	$3d^8(a^3P)4s - 3d^7(a^4F)4s4p(^3P^o)$	$^4P - z^6D^o$	$\frac{5}{2} - \frac{7}{2}$		835
	4	1561.015	53.60119 - 117.66211	$3d^7 4s^2 - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - v^4D^o$	$\frac{7}{2} - \frac{7}{2}$		835
	15	1561.229	54.26263 - 118.31482	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4G^o - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	2	1561.733	54.26263 - 118.29417	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4G^o - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	11	1561.968	70.35894 - 134.38082	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^1P^o)$	$^2G - w^2G^o$	$\frac{9}{2} - \frac{7}{2}$		835
	18	1562.329	70.63546 - 134.64209	$3d^8(a^3P)4p - 3d^8(a^3F_3)7d$	$^4D^o - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835
	7	1563.111	72.98565 - 136.96075	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	50	1563.376	68.15657 - 132.12070	$3d^7 4s^2 - 3d^7(a^4P)4s4p(^1P^o)$	$^4P - v^4P^o$	$\frac{1}{2} - \frac{1}{2}$		835
	120	1563.604	51.04546 - 115.00025	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^3P^o)$	$^4F - w^4D^o$	$\frac{9}{2} - \frac{7}{2}$		835
	1	1563.837						835
	15	1564.273	56.07526 - 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^4F^o - ^4F$	$\frac{5}{2} - \frac{7}{2}$		835
	8	1564.389	70.35894 - 134.28166	$3d^7 4s^2 - 3d^8(a^3F_3)6f$	$^2G - 4[5]^o$	$\frac{7}{2} - \frac{11}{2}$		835
	1	1565.001	55.41783 - 119.31544	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4F^o - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
	20	1565.399						835
	3	1565.970						835
	7	1566.019	53.03793 - 116.89398	$3d^7 4s^2 - 3d^7(a^2D)4s4p(^3P^o)$	$^4F - v^4D^o$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1566.890	57.42016 - 121.24090	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{7}{2}$		835
	15	1567.069	51.04546 - 114.85888	$3d^7 4s^2 - 3d^7(a^2H)4s4p(^3P^o)$	$^4F - w^4G^o$	$\frac{9}{2} - \frac{11}{2}$		835
	10	1567.220	57.42016 - 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2D^o - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	3	1567.298	71.45774 - 135.26199	$3d^7 4s^2 - 3d^8(a^3F_3)8p$	$^2G - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		835
	10	1567.323						835
	12	1567.336						835
	3	1567.370	71.45774 - 135.25892	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^o)$	$^2G - v^2D^o$	$\frac{7}{2} - \frac{5}{2}$		835
	1	1567.872	72.98565 - 136.76649	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2P^o - ^4F$	$\frac{1}{2} - \frac{5}{2}$		835
	4	1567.966	58.49321 - 122.27005	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2F^o - ^2G$	$\frac{3}{2} - \frac{7}{2}$		835
	1	1568.698	72.98565 - 136.73274	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$		835
	16	1569.172	66.57971 - 130.30697	$3d^8(a^3P)4p - 3d^8(a^3F_3)5g$	$^4P^o - 3[2]^o$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1569.415						835
	13	1569.624	53.36517 - 117.07470	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4G^o - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835
	2	1569.972	57.42016 - 121.11559	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	10	1570.302	58.49321 - 122.17542	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2F^o - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
	60	1570.392	68.15657 - 131.83494	$3d^7 4s^2 - 3d^7(a^4P)4s4p(^1P^o)$	$^4P - v^4P^o$	$\frac{1}{2} - \frac{5}{2}$		835
	3	1570.512	56.37141 - 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^o - ^4G$	$\frac{7}{2} - \frac{9}{2}$		835
	1	1570.701	68.13121 - 131.79626	$3d^8(a^3D)4p - 3d^8(a^3F_3)6d$	$^2F^o - ^2F$	$\frac{7}{2} - \frac{5}{2}$		835
	1	1570.879						835
	12	1571.145						835
	12	1571.162						835
	10	1571.257						835
	2	1571.532	56.37141 - 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^o - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	2	1571.550	56.37141 - 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2G^o - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	4	1572.018						835
	4	1572.062						835
	25	1572.540	58.49321 - 122.08479	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2F^o - ^4F$	$\frac{5}{2} - \frac{3}{2}$		835
	4	1572.646	58.49321 - 122.08025	$3d^8(a^3F)4p - 3d^8(a^1G)4d$	$^2F^o - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1572.993						835
	10	1573.071						835
	18	1574.202	51.55785 - 115.08136	$3d^8(a^3F)4p - 3d^8(a^1G)5s$	$^4D^o - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835
	100	1574.423	68.70976 - 132.22515	$3d^7 4s^2 - 3d^7(a^4P)4s4p(^1P^o)$	$^4P - v^4P^o$	$\frac{1}{2} - \frac{5}{2}$		835
	20	1574.942	70.35894 - 133.85304	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^o)$	$^2G - v^4F^o$	$\frac{9}{2} - \frac{9}{2}$		835
	5	1574.976	70.74870 - 134.24196	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	16	1575.003	70.35894 - 133.85083	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^o)$	$^2G - s^4D^o$	$\frac{9}{2} - \frac{7}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
15	1575.090							835
1	1575.559		58.70595 - 122.17542	$3d^8(a^3F)4p - 3d^8(a^3F_2)5d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		835
9	1575.597		53.36517 - 116.83315	$3d^8(a^3F)4p - 3d^8(a^3F_4)6s$	$^4G^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
1	1576.747							835
30	1577.015		68.70976 - 132.12070	$3d^74s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - v^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
16	1577.115		52.20595 - 115.61288	$3d^74s^2 - 3d^7(a^2H)4s4p(^3P^\circ)$	$^4F - w^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
7	1577.210							835
14	1577.933		58.70595 - 122.08025	$3d^8(a^3F)4p - 3d^8(a^1G)4d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		835
20	1578.865		53.49649 - 116.83315	$3d^8(a^3F)4p - 3d^8(a^3F_4)6s$	$^4G^\circ - ^4F$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$		835
60	1578.990							835
18	1579.073							835
18	1579.563		73.90325 - 137.21193	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
17	1579.791							835
2	1579.877		55.01871 - 118.31482	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4G^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
3	1579.959		53.60119 - 116.89398	$3d^74s^2 - 3d^7(a^2D)4s4p(^1P^\circ)$	$^4F - v^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
8	1580.588		70.63546 - 133.90300	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^4D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
1	1580.674							835
2	1580.698		66.57971 - 129.84233	$3d^8(a^3P)4p - 3d^8(a^3F_4)6d$	$^4P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
6	1581.085		67.69464 - 130.94236	$3d^8(a^1D)4p - 3d^8(a^1D)6s$	$^2F^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		835
25	1581.334		53.03793 - 116.27581	$3d^74s^2 - 3d^7(a^2H)4s4p(^3P^\circ)$	$^4F - w^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
10	1581.704		67.88016 - 131.10318	$3d^74s^2 - 3d^7(a^3F_2)5f$	$^4P - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
6	1581.826		52.73845 - 115.95671	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4D^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
2	1582.135		67.69464 - 130.90065	$3d^8(a^1D)4p - 3d^8(a^1D)6s$	$^2F^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		835
0	1582.373		70.70677 - 133.90300	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^4D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
2	1582.571							835
10	1582.689							835
17	1583.051		70.35894 - 133.52802	$3d^74s^2 - 3d^7(a^2F)4s4p(^1P^\circ)$	$^2G - v^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
1	1583.398		70.70677 - 133.86221	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
10	1583.436		53.60119 - 116.75493	$3d^74s^2 - 3d^7(a^2H)4s4p(^3P^\circ)$	$^4F - w^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
15	1583.509		70.70677 - 133.85773	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
10	1584.530							835
16	1584.563		70.74870 - 133.85773	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
1	1584.761		68.13121 - 131.23283	$3d^8(a^1D)4p - 3d^8(a^3F_2)5g$	$^2F^\circ - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
200	1585.117		70.35894 - 133.44575	$3d^74s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
4	1585.702		57.08055 - 120.14417	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^2F^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		835
4	1586.677		56.07526 - 119.10006	$3d^8(a^3F)4p - 3d^8(a^3F_2)6s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
3	1587.138		51.04546 - 114.05204	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
8	1587.207		52.20595 - 115.20985	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
18	1587.443		55.29965 - 118.29417	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^2G^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		835
35	1587.845		70.63546 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
10	1588.200		57.08055 - 120.04495	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^2F^\circ - ^4G$	$\frac{3}{2} - \frac{3}{2}$		835
15	1588.369		70.77812 - 133.73526	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^4D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
10	1588.464		68.15657 - 131.11019	$3d^74s^2 - 3d^7(a^3F_2)5f$	$^4P - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
9	1588.715		56.37141 - 119.31544	$3d^8(a^3F)4p - 3d^8(a^3F_2)6s$	$^2G^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
20	1588.798							835
40	1589.061		68.28162 - 131.21185	$3d^8(a^1D)4p - 3d^8(a^3F_2)5g$	$^2P^\circ - 2[2]^\circ$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$		835
80	1589.116		74.28333 - 137.21193	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2S^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{3}{2}$		835
200	1589.246		71.45774 - 134.38082	$3d^74s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
5	1589.474		52.20595 - 115.12000	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
1	1589.547		74.30093 - 137.21193	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4S^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
3	1589.563		74.30093 - 137.21193	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4S^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
20	1589.644		70.70677 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
80	1589.772		52.20595 - 115.10809	$3d^74s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^4F - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835
8	1589.903		55.41783 - 118.31482	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
7	1589.948							835
0	1590.422		55.41783 – 118.29417	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4F^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
10	1590.529							835
1	1590.703		70.74870 – 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		835
50	1591.041		13.55039 – 76.40203	$3d^8(a^3F)4s - 3d^8(a^1G)4p$	$^2F - ^2F^\circ$	$\frac{2}{2} - \frac{2}{2}$		835
16	1591.099							835
10	1591.350							835
80	1591.415		71.45774 – 134.29499	$3d^74s^2 - 3d^8(a^3F_4)6f$	$^2G - 4[3]^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
2	1591.732		58.49321 – 121.31789	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2F^\circ - ^4G$	$\frac{3}{2} - \frac{7}{2}$		835
200	1592.080		70.35894 – 133.16992	$3d^74s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
15	1592.144		70.63546 – 133.44389	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
25	1592.248		71.45774 – 134.26207	$3d^74s^2 - 3d^8(a^3F_4)6f$	$^2G - 4[4]^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
50	1592.479		71.45774 – 134.25285	$3d^74s^2 - 3d^8(a^3F_4)6f$	$^2G - 4[3]^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
15	1592.502		52.20595 – 115.00025	$3d^74s^2 - 3d^7(a^2P)4s4p(^3P^\circ)$	$^4F - w^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
1	1592.662		68.15431 – 130.94236	$3d^8(a^1D)4p - 3d^8(a^1D)6s$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		835
1	1593.132		68.13121 – 130.90065	$3d^8(a^1D)4p - 3d^8(a^1D)6s$	$^2F^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		835
15	1593.200							835
15	1593.522							835
150	1593.611		71.45774 – 134.20830	$3d^74s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
40	1593.698		53.03793 – 115.78506	$3d^74s^2 - 3d^7(a^2P)4s4p(^3P^\circ)$	$^4F - t^2D^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
1	1594.019		58.49321 – 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2F^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
6	1594.287		57.42016 – 120.14417	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^2D^\circ - ^4D$	$\frac{3}{2} - \frac{7}{2}$		835
35	1594.346							835
1	1594.575		66.57134 – 129.28450	$3d^8(a^3P)4p - 3d^8(a^3F_4)6d$	$^4P^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
12	1594.703		51.04546 – 113.75304	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
1	1595.332							835
8	1595.519		56.42449 – 119.10006	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4F^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835
70	1595.608		74.28333 – 136.95528	$3d^8(a^3P)4p - 3d^8(a^3F_2)7d$	$^2S^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
70	1595.768		70.77812 – 133.44389	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^4D^\circ - ^4P$	$\frac{7}{2} - \frac{5}{2}$		835
15	1595.919		74.30093 – 136.96075	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
60	1596.074		74.30093 – 136.95528	$3d^8(a^3P)4p - 3d^8(a^3F_2)7d$	$^4S^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
1	1596.874		58.49321 – 121.11559	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2F^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
1	1597.031		74.28333 – 136.89934	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
25	1597.101							835
9	1597.484		74.30093 – 136.89934	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
7	1597.886		57.42016 – 120.00286	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^2D^\circ - ^4F$	$\frac{3}{2} - \frac{7}{2}$		835
40	1598.282		73.89373 – 136.46110	$3d^74s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2P - v^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
4	1598.315							835
30	1598.371		71.77083 – 134.33446	$3d^8(a^3P)4p - 3d^8(a^3F_4)6g$	$^2D^\circ - 4[2]^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
18	1598.860							835
40	1599.251							835
12	1599.282		53.03793 – 115.56598	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
1	1599.439		58.70595 – 121.22780	$3d^8(a^3F)4p - 3d^8(a^3F_3)5d$	$^2D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		835
10	1599.549		54.55705 – 117.07470	$3d^8(a^3F)4p - 3d^8(a^3F_4)6s$	$^4F^\circ - ^4F$	$\frac{9}{2} - \frac{7}{2}$		835
25	1599.603		71.45774 – 133.97333	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2G - s^4D^\circ$	$\frac{7}{2} - \frac{3}{2}$		835
10	1600.268		57.42016 – 119.90972	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^2D^\circ - ^4P$	$\frac{5}{2} - \frac{3}{2}$		835
18	1600.565							835
3	1600.753		54.26263 – 116.73251	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4G^\circ - ^4P$	$\frac{7}{2} - \frac{5}{2}$		835
16	1601.045		70.35894 – 132.81816	$3d^74s^2 - 3d^8(a^1D_2)4f$	$^2G - 2[4]^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
10	1601.240		67.88016 – 130.33178	$3d^74s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - t^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
8	1601.288		74.28333 – 136.73274	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^2S^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		835
3	1601.400							835
1	1601.518		9.33004 – 71.77083	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
4	1601.742		74.30093 – 136.73274	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4S^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	1601.928	74.30093 - 136.72533	$3d^8(a^3P)4p - 3d^8(a^3P)5d$	$^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
	12	1602.209	68.15657 - 130.57042	$3d^74s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - t^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1602.679	71.45774 - 133.85304	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2G - v^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	20	1602.973	8.39390 - 70.77812	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
	1	1603.224	53.36517 - 115.73915	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4G^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		835
	20	1603.410	13.55039 - 75.91763	$3d^8(a^3F)4s - 3d^8(a^1G)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	25	1603.555						835
	16	1603.728	68.70976 - 131.06385	$3d^74s^2 - 3d^8(a^3F_3)5f$	$^4P - 2[1]^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	5	1603.917	52.73845 - 115.08536	$3d^8(a^3F)4p - 3d^8(a^1G)5s$	$^4D^\circ - ^2G$	$\frac{5}{2} - \frac{7}{2}$		835
	2	1604.394	67.88016 - 130.20889	$3d^74s^2 - 3d^8(a^3F_3)5f$	$^4P - 3[3]^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	18	1604.482						835
	5	1604.570	53.63462 - 115.95671	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4D^\circ - ^4F$	$\frac{1}{2} - \frac{5}{2}$		835
	3	1604.696	67.88016 - 130.19723	$3d^74s^2 - 3d^8(a^3F_3)5f$	$^4P - 3[2]^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	9	1605.027	67.88016 - 130.18439	$3d^74s^2 - 3d^8(a^3F_3)5f$	$^4P - 3[2]^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	4	1605.217	71.77083 - 134.06776	$3d^8(a^3F)4p - 3d^8(a^1D)5d$	$^3D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	35	1605.744	51.04546 - 113.32195	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	3	1605.795						835
	60	1605.910						835
	12	1606.280						835
	30	1606.469						835
	8	1606.695	56.07526 - 118.31482	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^4F^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1606.729						835
	18	1606.902						835
	1	1607.477						835
	20	1607.849						835
	3	1607.987	68.13121 - 130.32094	$3d^8(a^1D)4p - 3d^8(a^3F_3)5g$	$^2F^\circ - 3[4]^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	60	1608.134	53.60119 - 115.78506	$3d^74s^2 - 3d^7(a^2P)4s4p(^3P^\circ)$	$^4F - t^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	80	1608.177	32.52354 - 94.70593	$3d^8(a^3G)4s - 3d^7(a^4F)4s4p(^3P^\circ)$	$^2G - z^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	4	1608.244						835
	30	1608.358	68.15657 - 130.33178	$3d^74s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - t^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	25	1608.442	53.03793 - 115.20985	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1608.708	76.40203 - 138.56371	$3d^8(a^1G)4p - 3d^8(a^3F_3)9s$	$^2F^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835
	1	1609.343	52.73845 - 114.87488	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4D^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		835
	12	1609.474	71.77083 - 133.90300	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^3D^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		835
	20	1610.102	67.88016 - 129.98805	$3d^74s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - t^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	18	1610.532	71.77083 - 133.86221	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^3D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	8	1611.061	68.15657 - 130.22752	$3d^74s^2 - 3d^8(a^3F_3)5f$	$^4P - 3[3]^\circ$	$\frac{1}{2} - \frac{5}{2}$		835
	6	1611.079	53.03793 - 115.10809	$3d^74s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^4F - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	2	1611.238						835
	25	1611.390						835
	2	1611.927						835
	1	1612.163	68.15657 - 130.18439	$3d^74s^2 - 3d^8(a^3F_3)5f$	$^4P - 3[2]^\circ$	$\frac{1}{2} - \frac{5}{2}$		835
	20	1612.450	68.15657 - 130.17403	$3d^74s^2 - 3d^8(a^3F_3)5f$	$^4P - 3[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	2	1613.132	53.60119 - 115.59225	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	60	1613.216	71.45774 - 133.44575	$3d^74s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	20	1613.820	53.60119 - 115.56598	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	1	1613.949						835
	2	1614.218						835
	10	1614.495						835
	30	1614.824						835
	90	1614.911	56.37141 - 118.29417	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^2G^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	120	1615.459	67.88016 - 129.78207	$3d^74s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - t^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	9	1615.704						835
	15	1616.387	72.37542 - 134.24196	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^3D^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1616.456						835
	25	1616.536	68.70976 - 130.57042	$3d^7 4s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - t^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	25	1616.917	52.20595 - 114.05204	$3d^7 4s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	2	1616.993	71.77083 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
	50	1617.088						835
	40	1617.144						835
	40	1617.299	53.03793 - 114.86935	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^3P^\circ)$	$^4F - w^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	20	1618.950	76.72736 - 138.49584	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^1P^\circ)$	$^2H - w^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		835
	1	1619.193	73.89373 - 135.65293	$3d^7 4s^2 - 3d^7(a^3P_2)4f$	$^2P - 2[1]^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	6	1619.395	71.45774 - 133.20930	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2G - v^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
	7	1619.607						835
	20	1619.857						835
	6	1619.964	73.89373 - 135.62359	$3d^7 4s^2 - 3d^8(a^3F_3)6f$	$^2P - 3[2]^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	5	1619.989						835
	18	1620.331	53.36517 - 115.08136	$3d^8(a^3F)4p - 3d^8(a^1G)5s$	$^4G^\circ - ^2G$	$\frac{9}{2} - \frac{9}{2}$		835
	1	1620.428	71.45774 - 133.16992	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - w^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	3	1620.842						835
	1	1620.946	72.37542 - 134.06776	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	40	1621.460	71.77083 - 133.44389	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
	6	1621.880	55.41783 - 117.07470	$3d^8(a^3F)4p - 3d^8(a^3F_4)6s$	$^4F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		835
	18	1621.926	10.11566 - 71.77083	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	80	1622.106						835
	2	1622.164						835
	20	1622.796	68.70976 - 130.33178	$3d^7 4s^2 - 3d^7(a^4P)4s4p(^1P^\circ)$	$^4P - t^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	1	1622.923						835
	1	1622.981	51.55785 - 113.17296	$3d^8(a^3F)4p - 3d^8(a^1D)4d$	$^4D^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		835
	60	1624.084	71.45774 - 133.03100	$3d^7 4s^2 - 3d^8(a^1D_2)4f$	$^2G - 2[5]^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	20	1624.172	70.35894 - 131.92877	$3d^7 4s^2 - 3d^8(a^3F_3)7p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	0	1624.435						835
	16	1624.773	52.20595 - 113.75304	$3d^7 4s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	25	1625.233						835
	2	1625.288	72.37542 - 133.90300	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		835
	12	1626.161						835
	20	1626.309	73.89373 - 135.38253	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2P - w^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		835
	15	1626.320	73.89373 - 135.38253	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2P - w^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	6	1626.366	72.37542 - 133.86221	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	12	1626.961	68.70976 - 130.17403	$3d^7 4s^2 - 3d^8(a^3F_3)5f$	$^4P - 3[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	12	1627.396	9.33004 - 70.77812	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	4	1627.656	58.70595 - 120.14417	$3d^8(a^3F)4p - 3d^8(a^3F_4)5d$	$^2D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
	15	1628.126	66.57134 - 127.99156	$3d^8(a^3P)4p - 3d^8(a^3F_4)7s$	$^4P^\circ - ^4F$	$\frac{5}{2} - \frac{1}{2}$		835
	10	1628.497	14.99557 - 76.40203	$3d^8(a^3F)4s - 3d^8(a^1G)4p$	$^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1628.726						835
	20	1628.810	76.72736 - 138.12188	$3d^7 4s^2 - 3d^8(a^3F_4)9p$	$^2H - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		835
	100	1629.282	51.04546 - 112.42219	$3d^7 4s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{7}{2} - \frac{11}{2}$		835
	11	1629.445						835
	70	1629.591	73.89373 - 135.25892	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2P - v^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		835
	1	1629.718	71.45774 - 132.81816	$3d^7 4s^2 - 3d^8(a^1D_2)4f$	$^2G - 2[4]^\circ$	$\frac{3}{2} - \frac{9}{2}$		835
	20	1630.130						835
	10	1630.356	53.63462 - 114.97019	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		835
	25	1631.024						835
	12	1631.182	9.33004 - 70.63546	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{7}{2} - \frac{3}{2}$		835
	15	1632.152	53.60119 - 114.86935	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^3P^\circ)$	$^4F - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	30	1632.171	53.60119 - 114.86935	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^3P^\circ)$	$^4F - w^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1632.416						835

Ni II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	6	1632.488	72.98565 - 134.24196	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	2	1632.960	72.37542 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
	4	1633.189						835
	10	1633.625	57.08055 - 118.29417	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^2F^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		835
	35	1633.988						835
	30	1635.070	73.89373 - 135.05314	$3d^74s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2P - w^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	100	1635.340	55.01871 - 116.16776	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4G^\circ - ^4F$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1636.068						835
	4	1636.231	52.20595 - 113.32195	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	3	1636.488	10.66389 - 71.77083	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	20	1637.072						835
	2	1637.140	72.98565 - 134.06776	$3d^8(a^3P)4p - 3d^8(a^1D)5d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	10	1637.267						835
	100	1637.439	73.89373 - 134.96478	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - w^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	20	1637.509	72.37542 - 133.44389	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	300	1637.589	70.35894 - 131.42432	$3d^74s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - x^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		835
	4	1638.963	53.03793 - 114.05204	$3d^74s^2 - 3d^7(a^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		835
	8	1639.987						835
	7	1640.769	67.88016 - 128.82715	$3d^74s^2 - 3d^8(a^3F_4)5f$	$^4P - 4[3]^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	10	1641.418	67.88016 - 128.80323	$3d^74s^2 - 3d^8(a^3F_4)5f$	$^4P - 4[2]^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	20	1642.299						835
	40	1642.324	73.89373 - 134.78314	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - w^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	15	1642.351						835
	5	1642.670	72.98565 - 133.86221	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		835
	2	1642.739	57.42016 - 118.29417	$3d^8(a^3F)4p - 3d^8(a^3F_3)6s$	$^2D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		835
	2	1642.792	70.74870 - 131.62045	$3d^8(a^3P)4p - 3d^8(a^3F_2)6d$	$^4D^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		835
	80	1643.271	71.45774 - 132.31198	$3d^74s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2G - x^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	20	1643.334	67.88016 - 128.73203	$3d^74s^2 - 3d^8(a^3F_4)5f$	$^4P - 4[1]^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	14	1644.040						835
	6	1644.137	58.49321 - 119.31544	$3d^8(a^3F)4p - 3d^8(a^3F_2)6s$	$^2F^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
	0	1645.654	54.17626 - 114.94242	$3d^8(a^3F)4p - 3d^8(a^3P)4d$	$^4D^\circ - ^4D$	$\frac{1}{2} - \frac{1}{2}$		835
	10	1647.637						835
	3	1648.353						835
	1	1648.381	68.15657 - 128.82223	$3d^74s^2 - 3d^8(a^3F_4)5f$	$^4P - 4[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	13	1649.396	72.98565 - 133.61399	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
	3	1649.905	58.70595 - 119.31544	$3d^8(a^3F)4p - 3d^8(a^3F_2)6s$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	14	1650.412	10.11566 - 70.70677	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	4	1650.636						835
	10	1650.835	68.15657 - 128.73203	$3d^74s^2 - 3d^8(a^3F_4)5f$	$^4P - 4[1]^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	13	1652.270						835
	3	1652.355	10.11566 - 70.63546	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	3	1652.477						835
	10	1652.726						835
	15	1652.839						835
	18	1653.369						835
	10	1653.687	71.45774 - 131.92877	$3d^74s^2 - 3d^8(a^3F_3)7p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	10	1653.779						835
	1	1654.667						835
	1	1655.749						835
	0	1655.903	73.89373 - 134.28376	$3d^74s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2P - s^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	3	1656.840	73.89373 - 134.24972	$3d^74s^2 - 3d^8(a^3F_4)6f$	$^2P - 4[1]^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	2	1657.273						835
	10	1657.313	73.90325 - 134.24196	$3d^8(a^3P)4p - 3d^8(a^3P)6s$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		835
	20	1661.018	77.33247 - 137.53596	$3d^74s^2 - 3d^8(a^3F_4)7f$	$^2D - 4[4]^\circ$	$\frac{5}{2} - \frac{7}{2}$		835

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1662.063						835
	20	1662.423						835
	25	1662.892						835
	16	1663.563	70.35894 - 130.47090	$3d^7 4s^2 - 3d^6(a^3F_4)7p$	$^2G - ^4F^o$	$\frac{3}{2} - \frac{9}{2}$		835
	10	1664.316	10.66389 - 70.74870	$3d^6(a^3F_4)4s - 3d^6(a^3P)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		835
	2	1664.384	79.92388 - 140.00617	$3d^6(a^1G)4p - 3d^6(a^1G)6s$	$^2G^o - ^2G$	$\frac{3}{2} - \frac{9}{2}$		835
	8	1664.459	73.89373 - 133.97333	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^o)$	$^2P - s^4D^o$	$\frac{1}{2} - \frac{5}{2}$		835
	4	1665.477	10.66389 - 70.70677	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1665.860						835
	0	1666.045	68.70976 - 128.73203	$3d^7 4s^2 - 3d^6(a^3F_4)5f$	$^4P - 4[1]^o$	$\frac{1}{2} - \frac{3}{2}$		835
	4	1666.828	57.08055 - 117.07470	$3d^6(a^3F)4p - 3d^6(a^3F_4)6s$	$^2F^o - ^4F$	$\frac{2}{2} - \frac{7}{2}$		835
	4	1667.930	73.90325 - 133.85773	$3d^6(a^3P)4p - 3d^6(a^3P)6s$	$^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$		835
	1	1668.122	52.73845 - 112.68630	$3d^6(a^3F)4p - 3d^6(a^1D)4d$	$^4D^o - ^2F$	$\frac{5}{2} - \frac{5}{2}$		835
	7	1670.935	70.35894 - 130.20562	$3d^7 4s^2 - 3d^6(a^3F_3)5f$	$^2G - 3[5]^o$	$\frac{3}{2} - \frac{11}{2}$		835
	12	1671.514	77.73679 - 137.56274	$3d^7 4s^2 - 3d^6(a^3F_2)8p$	$^2H - ^2G^o$	$\frac{3}{2} - \frac{7}{2}$		835
	10	1674.000	8.39390 - 68.13121	$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$^4F - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		835
	3	1676.317	57.42016 - 117.07470	$3d^6(a^3F)4p - 3d^6(a^3F_4)6s$	$^2D^o - ^4F$	$\frac{3}{2} - \frac{7}{2}$		835
	2	1676.671						835
	1	1677.297	74.28333 - 133.90300	$3d^6(a^3P)4p - 3d^6(a^1D)5d$	$^2S^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		835
	5	1678.447	74.28333 - 133.86221	$3d^6(a^3P)4p - 3d^6(a^3P)6s$	$^2S^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		835
	10	1678.476	52.20595 - 111.78379	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4G^o$	$\frac{2}{2} - \frac{7}{2}$		835
	1	1678.941	74.30093 - 133.86221	$3d^6(a^3P)4p - 3d^6(a^3P)6s$	$^4S^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		835
	7	1679.068	74.30093 - 133.85773	$3d^6(a^3P)4p - 3d^6(a^3P)6s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		835
	70	1684.952	76.72736 - 136.07626	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^o)$	$^2H - v^2G^o$	$\frac{11}{2} - \frac{9}{2}$		835
	8	1685.465	74.28333 - 133.61399	$3d^6(a^3P)4p - 3d^6(a^3P)6s$	$^2S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		835
	9	1685.965	74.30093 - 133.61399	$3d^6(a^3P)4p - 3d^6(a^3P)6s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		835
	9	1686.934						835
	12	1690.814	74.30093 - 133.44389	$3d^6(a^3P)4p - 3d^6(a^3P)6s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		835
	11	1691.231	77.33247 - 136.46110	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^o)$	$^2D - v^2D^o$	$\frac{5}{2} - \frac{3}{2}$		835
	10	1693.177	77.33247 - 136.39285	$3d^7 4s^2 - 3d^6(^1D)6p$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		835
	2	1694.384	73.89373 - 132.91215	$3d^7 4s^2 - 3d^6(a^1D_2)4f$	$^2P - 2[2]^o$	$\frac{3}{2} - \frac{5}{2}$		835
	8	1695.594	51.04546 - 110.02192	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4G^o$	$\frac{3}{2} - \frac{9}{2}$		835
	1	1695.897						835
	2	1696.527						835
	4	1698.400	76.72736 - 135.60630	$3d^7 4s^2 - 3d^6(a^3F_3)6f$	$^2H - 3[6]^o$	$\frac{11}{2} - \frac{13}{2}$		835
	2	1699.772	76.72736 - 135.55880	$3d^7 4s^2 - 3d^6(a^3P)4f$	$^2H - ^4G^o$	$\frac{11}{2} - \frac{9}{2}$		835
	1	1700.665	51.04546 - 109.84600	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4F^o$	$\frac{3}{2} - \frac{7}{2}$		835
	2	1701.504	57.42016 - 116.19147	$3d^6(a^3F)4p - 3d^6(a^3P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1702.150	71.45774 - 130.20690	$3d^7 4s^2 - 3d^6(a^3F_3)5f$	$^2G - 3[5]^o$	$\frac{2}{2} - \frac{9}{2}$		835
	7	1702.265	53.03793 - 111.78379	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4G^o$	$\frac{3}{2} - \frac{7}{2}$		835
5	25	1703.408	0.0 - 58.70595	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2D^o$	$\frac{2}{2} - \frac{2}{2}$		835
	100	1704.54						089
	11	1705.581						835
	8	1705.739						835
	2	1706.170	76.72736 - 135.33801	$3d^7 4s^2 - 3d^6(a^3F_4)8p$	$^2H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		835
	25	1708.386	76.72736 - 135.26199	$3d^7 4s^2 - 3d^6(a^3F_4)8p$	$^2H - ^4G^o$	$\frac{11}{2} - \frac{9}{2}$		835
	1	1708.570						835
4	200	1709.598	0.0 - 58.49321	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		835
	3	1710.032	70.35894 - 128.83711	$3d^7 4s^2 - 3d^6(a^3F_4)5f$	$^2G - 4[6]^o$	$\frac{3}{2} - \frac{11}{2}$		835
	2	1713.285	52.20595 - 110.57336	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4F^o$	$\frac{2}{2} - \frac{5}{2}$		835
	1	1716.148						835
	3	1717.700	77.73679 - 135.95409	$3d^7 4s^2 - 3d^6(a^3P_0)4f$	$^2H - 0[3]^o$	$\frac{3}{2} - \frac{7}{2}$		835
	5	1719.906						835
	15	1721.092	51.04546 - 109.14805	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^o)$	$^4F - y^4F^o$	$\frac{3}{2} - \frac{9}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1722.113	77.33247 - 135.40067	$3d^7 4s^2 - 3d^8(a^3P_2)4f$	$^2D - 2[4]^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	2	1722.646	77.33247 - 135.38253	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2D - w^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	20	1723.859	77.73679 - 135.74606	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2H - v^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1723.957						835
	1	1724.818						835
	4	1726.324	77.33247 - 135.25892	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2D - v^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1728.022	77.73679 - 135.60620	$3d^7 4s^2 - 3d^8(a^3F_3)6f$	$^2H - 3[\frac{11}{2}]^\circ$	$\frac{9}{2} - \frac{11}{2}$		835
	2	1728.133						835
	6	1728.625						835
	1	1732.620						835
	8	1734.904	52.20595 - 109.84600	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^\circ)$	$^4F - y^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	5	1735.135	77.33247 - 134.96478	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2D - w^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	3	1738.059	53.03793 - 110.57336	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^\circ)$	$^4F - y^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	12	1738.311	70.35894 - 127.88586	$3d^7 4s^2 - 3d^8(a^1G)5p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1738.549	53.60119 - 111.12054	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^3P^\circ)$	$^4F - y^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	4	1738.793	76.72736 - 134.23844	$3d^7 4s^2 - 3d^8(a^3F_4)6f$	$^2H - 4[\frac{13}{2}]^\circ$	$\frac{11}{2} - \frac{13}{2}$		835
	30	1740.619	77.33247 - 134.78314	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2D - w^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
5	1000	1741.547	0.0 - 57.42016	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1746.989	9.33004 - 66.57134	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^4F - ^4P^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	500	1748.285	1.50694 - 58.70595	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	300	1751.911	0.0 - 57.08055	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	50	1754.808	1.50694 - 58.49321	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	2	1756.829	77.33247 - 134.25285	$3d^7 4s^2 - 3d^8(a^3F_4)6f$	$^2D - 4[3]^\circ$	$\frac{11}{2} - \frac{13}{2}$		835
	1	1763.097	76.72736 - 133.44575	$3d^7 4s^2 - 3d^7(a^2G)4s4p(^1P^\circ)$	$^2H - w^2G^\circ$	$\frac{11}{2} - \frac{13}{2}$		835
	2	1769.940	70.35894 - 126.85797	$3d^7 4s^2 - 3d^8(a^1G)5p$	$^2G - ^2H^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	4	1771.865	71.45774 - 127.89533	$3d^7 4s^2 - 3d^8(a^1G)5p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1772.197	78.95545 - 135.38253	$3d^7 4s^2 - 3d^7(a^2P)4s4p(^1P^\circ)$	$^2D - w^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	25	1773.949	0.0 - 56.37141	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
2	1	1783.317	0.0 - 56.07526	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
5	100	1788.485	1.50694 - 57.42016	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1789.640	77.33247 - 133.20930	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2D - v^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1791.219	78.95545 - 134.78314	$3d^7 4s^2 - 3d^7(a^2F)4s4p(^3P^\circ)$	$^2D - w^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1804.451						835
2	30	1804.473	0.0 - 55.41783	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	2	1808.330	57.42016 - 112.71975	$3d^8(a^3F)4p - 3d^8(a^1D)4d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	30	1812.065	13.55039 - 68.73598	$3d^8(a^3F)4s - 3d^8(a^1D)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1817.112						835
2	1	1820.916	1.50694 - 56.42449	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1825.068	51.04546 - 105.83806	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1832.144	13.55039 - 68.13121	$3d^8(a^3F)4s - 3d^8(a^1D)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
2	1	1832.566	1.50694 - 56.07526	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	5	1833.403	51.04546 - 105.58889	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	1	1837.744	52.20595 - 106.62053	$3d^7 4s^2 - 3d^8(a^3F_2)5p$	$^4F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	2	1837.985	75.91763 - 130.32472	$3d^8(a^1G)4p - 3d^8(a^3F_3)5g$	$^2F^\circ - 3[5]^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	1	1842.889	0.0 - 54.26263	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	2	1852.522	58.70595 - 112.68630	$3d^8(a^3F)4p - 3d^8(a^1D)4d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		835
	2	1852.875	14.99557 - 68.96565	$3d^8(a^3F)4s - 3d^8(a^1D)4p$	$^2F - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	6	1857.587						835
	1	1860.689	76.72736 - 130.47090	$3d^7 4s^2 - 3d^8(a^3F_4)7p$	$^2H - ^4F^\circ$	$\frac{11}{2} - \frac{13}{2}$		835
	1	1860.796	14.99557 - 68.73598	$3d^8(a^3F)4s - 3d^8(a^1D)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	6	1864.558	52.20595 - 105.83806	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	5	1865.637	51.04546 - 104.64652	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	5	1866.499	67.88016 - 121.45632	$3d^7 4s^2 - 3d^8(a^3P)5p$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	8	1870.460	52.20595 - 105.66878	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835

NI II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	3	1875.069	53.03793 - 106.36930	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1876.180	68.15657 - 121.45632	$3d^7 4s^2 - 3d^8(a^3P)5p$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	2	1876.418	52.20595 - 105.49905	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		835
	40	1877.838	51.04546 - 104.29823	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		835
	2	1878.103	53.03793 - 106.28316	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	25	1881.155	14.99557 - 68.15431	$3d^8(a^3F)4s - 3d^8(a^1D)4p$	$^2F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	4	1883.170	51.04546 - 104.14729	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		835
	20	1885.525	51.04546 - 104.08104	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		835
	12	1886.043	13.55039 - 66.57134	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^2F - ^4P^\circ$	$\frac{7}{2} - \frac{3}{2}$		835
	1	1893.600	23.10828 - 75.91763	$3d^8(a^1D)4s - 3d^8(a^1G)4p$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	6	1895.082	53.60119 - 106.36930	$3d^7 4s^2 - 3d^8(a^3F_2)5p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	2	1896.147	0.0 - 52.73845	$3d^9 - 3d^8(a^3F)4p$	$g^2D - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
	4	1900.025	53.03793 - 105.66878	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1900.865	51.04546 - 103.65303	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		835
	2	1900.921	23.79618 - 76.40203	$3d^8(a^1D)4s - 3d^8(a^1G)4p$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1907.612	53.60119 - 106.02279	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		835
	1	1908.326	53.03793 - 105.43985	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	2	1912.146	52.20595 - 104.50322	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
	1	1920.582	53.60119 - 105.66878	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		835
	2	1927.707	52.20595 - 104.08104	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		835
	1	1929.063	53.60119 - 105.43985	$3d^7 4s^2 - 3d^8(a^3F_3)5p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	1	1930.493						835
	1	1937.661	53.03793 - 104.64652	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		835
	2	1938.579	14.99557 - 66.57971	$3d^8(a^3F)4s - 3d^8(a^3P)4p$	$^2F - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	10	1939.901						835
	2	1943.060	53.03793 - 104.50322	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		835
	2	1943.744	52.20595 - 103.65303	$3d^7 4s^2 - 3d^8(a^3F_4)5p$	$^4F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		835
	40	1953.407	23.10828 - 74.30093	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$^2D - ^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		835
	1	1954.709	76.72736 - 127.88586	$3d^7 4s^2 - 3d^8(a^1G)5p$	$^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		835
	8	1965.357	25.03638 - 75.91763	$3d^8(a^3P)4s - 3d^8(a^1G)4p$	$^4P - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		835
	15	1980.010	23.79618 - 74.30093	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$^2D - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	3	1980.699	23.79618 - 74.28333	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$^2D - ^2S^\circ$	$\frac{3}{2} - \frac{3}{2}$		835
	2	1993.570	66.57134 - 116.73251	$3d^8(a^3P)4p - 3d^8(a^3P)4d$	$^4P^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
	1	1993.906	66.57971 - 116.73251	$3d^8(a^3P)4p - 3d^8(a^3P)4d$	$^4P^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		835
	15	1995.723	23.79618 - 73.90325	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		835

NICKEL III (Ni²⁺), Z = 28
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8(^3F_4)$ (26 electrons)
Ionization Potential 284 900 cm^{-1} ; 35.32 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
0	615.164							661
5	615.554		14.0316 - 176.48710	$3d^8 - 3d^7(b^2D)4p$	$a^1D - ^3P^\circ$	2 - 2		661
15	625.306		16.6616 - 176.58320	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	2 - 1		661
100	625.682		16.6616 - 176.48710	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	2 - 2		661
15	625.938		16.9778 - 176.73640	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	1 - 0		661
10	626.548		16.9778 - 176.58320	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	1 - 1		661
30	626.923		16.9778 - 176.48710	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	1 - 2		661
15	627.541		17.2307 - 176.58320	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	0 - 1		661
500	630.711		23.1087 - 181.6584	$3d^8 - 3d^7(b^2D)4p$	$a^1G - ^1F^\circ$	4 - 3		661
1	635.406		0.0 - 157.37542	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^1G^\circ$	4 - 4		661
15	637.057		0.0 - 156.97208	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	4 - 4		661
200	637.535		0.0 - 156.85300	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	4 - 3		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	637.703	0.0 - 156.80870	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	4 - 5		661
	10	639.338	0.0 - 156.41120	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	4 - 3		661
	5	641.689	0.0 - 155.84140	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	4 - 4		661
	100	641.866	1.3607 - 157.15427	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	3 - 2		661
	1	642.611	1.3607 - 156.97208	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	3 - 4		661
	0	644.488	1.3607 - 156.52287	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	3 - 2		661
	20	644.948	1.3607 - 156.41120	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	3 - 3		661
	30	645.305	2.2696 - 157.23516	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	2 - 1		661
	2	645.632	2.2696 - 157.15427	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	2 - 2		661
	1	646.890	2.2696 - 156.85300	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	2 - 3		661
	0	647.319	1.3607 - 155.84140	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	3 - 4		661
	3	648.271	2.2696 - 156.52287	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	2 - 2		661
	2	648.745	2.2696 - 156.41120	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	2 - 3		661
	2	649.006	1.3607 - 155.44330	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	3 - 3		661
	2	650.701	53.70393 - 207.38210	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^5F - ^5F^\circ$	5 - 4		661
	30	652.652	53.70393 - 206.92518	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^5F - ^5F^\circ$	5 - 5		661
	1	652.837	2.2696 - 155.44330	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	2 - 3		661
	10	653.496						661
	10	654.445	2.2696 - 155.07100	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^1D^\circ$	2 - 2		661
	5	654.768	54.65783 - 207.38210	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^5F - ^5F^\circ$	4 - 4		661
	0	655.120	61.33858 - 213.97967	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3F^\circ$	4 - 3		661
	1	656.431	55.40629 - 207.74430	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5F^\circ$	3 - 3		661
	1	656.724	54.65783 - 206.92518	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5F^\circ$	4 - 5		661
	1	657.304	62.60558 - 214.7440	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3F^\circ$	3 - 2		661
	0	657.668	55.95221 - 208.0057	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5F^\circ$	2 - 2		661
	0	657.998	55.40629 - 207.38210	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5F^\circ$	3 - 4		661
	0	658.810	55.95221 - 207.74430	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5F^\circ$	2 - 3		661
	30	660.079	61.33858 - 212.8377	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3F^\circ$	4 - 4		661
	10	660.620	62.60558 - 213.97967	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3F^\circ$	3 - 3		661
	5	661.061	63.47193 - 214.7440	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3F^\circ$	2 - 2		661
	200	662.366	61.33858 - 212.3125	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3D^\circ$	4 - 3		661
	150	663.568	53.70393 - 204.40412	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	5 - 4		661
	100	664.851	62.60558 - 213.0168	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3D^\circ$	3 - 2		661
	50	666.417	54.65783 - 204.71493	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	4 - 3		661
	30	666.585	63.47193 - 213.4900	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3D^\circ$	2 - 1		661
	5	667.783	54.65783 - 204.40412	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	4 - 4		661
	1	667.976	62.60558 - 212.3125	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3D^\circ$	3 - 3		661
	10	668.195	55.40629 - 205.06251	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	3 - 2		661
	1	668.697	63.47193 - 213.0168	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^3D^\circ$	2 - 2		661
	5	669.458	55.95221 - 205.32700	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	2 - 1		661
	5	669.755	55.40629 - 204.71493	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	3 - 3		661
	0	670.440	56.30824 - 205.46600	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	1 - 0		661
	2	670.640	55.95221 - 205.06251	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	2 - 2		661
	0	671.065	56.30824 - 205.32700	$3d^7(a^4F)4s - 3d^6(a^5D)4s4p$	$^3F - ^5D^\circ$	1 - 1		661
	500	676.941	14.0316 - 161.75489	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^1F^\circ$	2 - 3		661
	5	682.947	55.40629 - 201.82946	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$^5F - ^5D^\circ$	3 - 3		661
	10	683.186	53.70393 - 200.07635	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$^5F - ^5F^\circ$	5 - 4		661
	10	683.455	55.40629 - 201.72523	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$^5F - ^5F^\circ$	3 - 2		661
	10	683.590						661
	10	683.918	53.70393 - 199.91908	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$^5F - ^5F^\circ$	5 - 5		661
	100	689.210	16.6616 - 161.75489	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^1F^\circ$	2 - 3		661
	200	700.168	14.0316 - 156.85300	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^3D^\circ$	2 - 3		661
	1	701.361	0.0 - 142.57560	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3H^\circ$	4 - 5		661
	100	701.778	14.0316 - 156.52287	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^3F^\circ$	2 - 2		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	705.991	1.3607 - 143.00270	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3H^o$	3 - 4		661
	0	707.754	2.2696 - 143.56016	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3P^o$	2 - 2		661
	5	708.853	1.3607 - 142.43395	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^1D^o$	3 - 2		661
	100	709.027	14.0316 - 155.07100	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^1D^o$	2 - 2		661
	20	711.518	0.0 - 140.54452	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^o$	4 - 3		661
	100	711.772	16.6616 - 157.15427	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^o$	2 - 2		661
	100	712.976	16.9778 - 157.23516	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^o$	1 - 1		661
	300	713.332	0.0 - 140.18465	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^o$	4 - 4		661
	300	713.385	16.9778 - 157.15427	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^o$	1 - 2		661
	100	714.254	17.2307 - 157.23516	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^o$	0 - 1		661
	1	714.965						661
	100	715.563	16.6616 - 156.41120	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3F^o$	2 - 3		661
	20	716.608	16.9778 - 156.52287	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3F^o$	1 - 2		661
	2	717.318						661
	10	718.287	62.60558 - 201.82946	$3d^7(a^4F)4s - 3d^7(a^4F)5p$	$^3F - ^5D^o$	3 - 3		661
	500	718.480	1.3607 - 140.54452	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^o$	3 - 3		661
	100	718.674	2.2696 - 141.41410	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^1P^o$	2 - 1		661
	15	720.337	1.3607 - 140.18465	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^o$	3 - 4		661
	200	721.259	23.1087 - 161.75489	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^1F^o$	4 - 3		661
	100	721.418	2.2696 - 140.88540	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^o$	2 - 2		661
12	300	722.094	0.0 - 138.48740	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^o$	4 - 3		661
	3	724.155	16.9778 - 155.07100	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^1D^o$	1 - 2		661
	20	724.471	0.0 - 138.03090	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3G^o$	4 - 4		661
12	250	725.196	1.3607 - 139.25370	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^o$	3 - 2		661
	2	725.806						661
	15	727.313	1.3607 - 138.85220	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3G^o$	3 - 3		661
12	100	729.249	1.3607 - 138.48740	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^o$	3 - 3		661
	500	729.820	0.0 - 137.02020	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3G^o$	4 - 5		661
	50	730.014	2.2696 - 139.25370	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^o$	2 - 2		661
11	250	730.109	0.0 - 136.96700	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^o$	4 - 3		661
	150	731.481	2.2696 - 138.97920	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^o$	2 - 1		661
	400	731.696	1.3607 - 138.03090	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3G^o$	3 - 4		661
	300	732.158	2.2696 - 138.85220	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3G^o$	2 - 3		661
	20	733.807						661
12	5	734.100	2.2696 - 138.48740	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^o$	2 - 3		661
11	50	737.419	1.3607 - 136.96700	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^o$	3 - 3		661
	200	738.258	1.3607 - 136.81320	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^o$	3 - 2		661
11	100	740.235	2.2696 - 137.36236	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^o$	2 - 1		661
	30	740.620	0.0 - 135.02320	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1F^o$	4 - 3		661
11	3	742.391	2.2696 - 136.96700	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^o$	2 - 3		661
11	2	743.275	2.2696 - 136.81320	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^o$	2 - 2		661
	100	743.955	0.0 - 134.41477	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^o$	4 - 4		661
	5	744.400	0.0 - 134.33479	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^o$	4 - 3		661
	100	744.784	23.1087 - 157.37542	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^1G^o$	4 - 4		661
	40	745.058	0.0 - 134.21760	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1H^o$	4 - 5		661
	50	746.319	1.3607 - 135.35033	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3P^o$	3 - 2		661
	30	747.015	23.1087 - 156.97208	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^3F^o$	4 - 4		661
	20	747.213	2.2696 - 136.09870	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3P^o$	2 - 1		661
	3	747.697	23.1087 - 156.85300	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^3D^o$	4 - 3		661
9	300	747.989	0.0 - 133.69200	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^o$	4 - 5		661
6	200	749.677	0.0 - 133.39094	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^o$	4 - 3		661
	300	750.053	0.0 - 133.32470	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1G^o$	4 - 4		661
4	150	750.983	0.0 - 133.15850	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^o$	4 - 3		661
8	150	751.333	0.0 - 133.09589	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3P^o$	4 - 3		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
9	150	751.573	1.3607 - 134.41477	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	3 - 4		661
9	200	752.023	1.3607 - 134.33479	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	3 - 3		661
4	100	752.603	1.3607 - 134.23190	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	3 - 2		661
	30	753.252	2.2696 - 135.02320	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1F^\circ$	2 - 3		661
	10	753.378	23.1087 - 155.84140	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^3G^\circ$	4 - 4		661
5	100	756.687	0.0 - 132.15650	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3H^\circ$	4 - 4		661
9	50	757.201	2.2696 - 134.33479	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	2 - 3		661
6	5	757.397	1.3607 - 133.39094	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3D^\circ$	3 - 3		661
	10	757.689	71.38410 - 203.36052	$3d^7(a^4P)4s - 3d^7(a^4F)5p$	$^5P - ^3F^\circ$	2 - 3		661
4	300	757.795	2.2696 - 134.23190	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	2 - 2		661
	150	758.039	14.0316 - 145.95015	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^1P^\circ$	2 - 1		661
4	250	758.733	1.3607 - 133.15850	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	3 - 3		661
4	250	758.773	0.0 - 131.79202	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	4 - 4		661
8	100	759.098	1.3607 - 133.09589	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^5P^\circ$	3 - 3		661
	15	760.024						661
	10	760.452	0.0 - 131.50050	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3H^\circ$	4 - 5		661
8	5	760.684	1.3607 - 132.81826	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3P^\circ$	3 - 2		661
8	5	762.951	2.2696 - 133.33970	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3P^\circ$	2 - 1		661
	2	763.313	2.2696 - 133.27670	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3P^\circ$	2 - 1		661
4	100	764.014	2.2696 - 133.15850	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	2 - 3		661
8	50	764.354	2.2696 - 133.09589	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3P^\circ$	2 - 3		661
	50	765.726	14.0316 - 144.62455	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3P^\circ$	2 - 1		661
8	5	766.000	2.2696 - 132.81826	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3P^\circ$	2 - 2		661
4	100	766.693	1.3607 - 131.79202	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	3 - 4		661
	5	767.400	0.0 - 130.31230	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^5D^\circ$	4 - 4		661
	2	767.901	115.27226 - 245.49536	$3d^7(a^4F)4p - 3d^7(a^4F_{7/2})5g$	$^3G^\circ - ^3H^\circ$	5 - 6		661
400		770.216	14.0316 - 143.86480	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^1F^\circ$	2 - 3		661
200		772.040	14.0316 - 143.56016	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3P^\circ$	2 - 2		661
100		773.464	16.6616 - 145.95015	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1P^\circ$	2 - 1		661
	5	775.364	16.9778 - 145.95015	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1P^\circ$	1 - 1		661
	5	776.884	17.2307 - 145.95015	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1P^\circ$	0 - 1		661
100		777.181	52.5320 - 181.2034	$3d^8 - 3d^7(b^2D)4p$	$a^1S - ^1P^\circ$	0 - 1		661
500		778.806	14.0316 - 142.43395	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^1D^\circ$	2 - 2		661
	30	780.572	16.9778 - 145.08845	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^\circ$	1 - 0		661
	50	781.486	16.6616 - 144.62455	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^\circ$	2 - 1		661
	30	783.419	2.2696 - 129.91310	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^5D^\circ$	2 - 2		661
200		785.020	14.0316 - 141.41410	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^1P^\circ$	2 - 1		661
20		786.145	16.6616 - 143.86480	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1F^\circ$	2 - 3		661
300		788.039	16.6616 - 143.56016	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^\circ$	2 - 2		661
200		788.298	14.0316 - 140.88540	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3F^\circ$	2 - 2		661
	20	790.000	16.9778 - 143.56016	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^\circ$	1 - 2		661
	20	790.450	14.0316 - 140.54452	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3F^\circ$	2 - 3		661
	30	797.092	16.9778 - 142.43395	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1D^\circ$	1 - 2		661
	2	798.572	14.0316 - 139.25370	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3D^\circ$	2 - 2		661
100		800.332	14.0316 - 138.97920	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3D^\circ$	2 - 1		661
	20	801.145	14.0316 - 138.85220	$3d^8 - 3d^7(a^2H)4p$	$a^1D - ^3G^\circ$	2 - 3		661
100		801.591	16.6616 - 141.41410	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1P^\circ$	2 - 1		661
	20	803.490	14.0316 - 138.48740	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3D^\circ$	2 - 3		661
	3	803.612	16.9778 - 141.41410	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1P^\circ$	1 - 1		661
200		805.007	16.6616 - 140.88515	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3S^\circ$	2 - 1		661
	20	805.263	17.2307 - 141.41410	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1P^\circ$	0 - 1		661
100		807.055	16.9778 - 140.88515	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3S^\circ$	1 - 1		661
	30	807.213	16.6616 - 140.54452	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3F^\circ$	2 - 3		661
	10	808.711	17.2307 - 140.88515	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3S^\circ$	0 - 1		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	500	811.568	23.1087 - 146.32580	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^1H^\circ$	4 - 5		661
	10	813.426	14.0316 - 136.96700	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^3D^\circ$	2 - 3		661
	5	815.718	16.6616 - 139.25370	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3D^\circ$	2 - 2		661
	5	817.544	16.6616 - 138.97920	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3D^\circ$	2 - 1		661
	20	817.833	16.9778 - 139.25370	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3D^\circ$	1 - 2		661
	1	818.389	16.6616 - 138.85220	$3d^8 - 3d^7(a^2H)4p$	$a^3P - ^3G^\circ$	2 - 3		661
	10	819.237	14.0316 - 136.09870	$3d^8 - 3d^7(a^4P)4p$	$a^1D - ^3P^\circ$	2 - 1		661
	5	819.665	16.9778 - 138.97920	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3D^\circ$	1 - 1		661
	50	820.851	16.6616 - 138.48740	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3D^\circ$	2 - 3		661
	15	821.373	17.2307 - 138.97920	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3D^\circ$	0 - 1		661
	20	824.292	14.0316 - 135.35033	$3d^8 - 3d^7(a^4P)4p$	$a^1D - ^3P^\circ$	2 - 2		661
	3	824.850						661
	10	825.300	16.9778 - 138.14648	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1S^\circ$	1 - 0		661
	500	826.138	23.1087 - 144.15300	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^1G^\circ$	4 - 4		661
	200	826.501	14.0316 - 135.02320	$3d^8 - 3d^7(a^2G)4p$	$a^1D - ^1F^\circ$	2 - 3		661
	2	827.792	82.27726 - 203.07846	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$^3D - ^5D^\circ$	1 - 0		661
	100	828.109	23.1087 - 143.86480	$3d^8 - 3d^7(a^2D)4p$	$a^1G - ^1F^\circ$	4 - 3		661
	3	828.491	16.6616 - 137.36236	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3D^\circ$	2 - 1		661
	10	830.666	16.9778 - 137.36236	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3D^\circ$	1 - 1		661
	100	831.229	16.6616 - 136.96700	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3D^\circ$	2 - 3		661
	5	831.487						661
	5	832.284	16.6616 - 136.81320	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3D^\circ$	2 - 2		661
	20	834.058	23.1087 - 143.00270	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^3H^\circ$	4 - 4		661
	20	837.025	14.0316 - 133.50097	$3d^8 - 3d^7(a^4P)4p$	$a^1D - ^3D^\circ$	2 - 2		661
	50	837.266	16.6616 - 136.09870	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	2 - 1		661
	5	839.478	16.9778 - 136.09870	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	1 - 1		661
	20	841.256	17.2307 - 136.09870	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	0 - 1		661
	2	841.825	82.17260 - 200.96297	$3d^7(a^2D)4s - 3d^7(a^4F)5p$	$^3D - ^5F^\circ$	3 - 3		661
3	500	842.142	0.0 - 118.74525	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^\circ$	4 - 3		661
	50	842.546	16.6616 - 135.35033	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	2 - 2		661
	50	844.787	16.9778 - 135.35033	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	1 - 2		661
	100	844.859	16.6616 - 135.02320	$3d^8 - 3d^7(a^2G)4p$	$a^3P - ^1F^\circ$	2 - 3		661
3	400	845.242	1.3607 - 119.66954	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^\circ$	3 - 2		661
3	300	847.433	2.2696 - 120.27232	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^\circ$	2 - 1		661
	5	849.810	16.6616 - 134.33479	$3d^8 - 3d^7(a^2G)4p$	$a^3P - ^3G^\circ$	2 - 3		661
	15	851.521	23.1087 - 140.54452	$3d^8 - 3d^7(a^2D)4p$	$a^1G - ^3F^\circ$	4 - 3		661
3	15	851.788	2.2696 - 119.66954	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^\circ$	2 - 2		661
2	10	852.867	0.0 - 117.25080	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^\circ$	4 - 3		661
	5	853.398	16.6616 - 133.83954	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^\circ$	2 - 1		661
	2	855.719	16.9778 - 133.83954	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^\circ$	1 - 1		661
	100	855.922	14.0316 - 130.86350	$3d^8 - 3d^7(a^4P)4p$	$a^1D - ^3S^\circ$	2 - 1		661
2	50	856.506	1.3607 - 118.11495	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^\circ$	3 - 2		661
	50	856.684	16.6616 - 133.39094	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^\circ$	2 - 3		661
1	200	857.087	0.0 - 116.67439	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^\circ$	4 - 4		661
	50	857.550	17.2307 - 133.83954	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^\circ$	0 - 1		661
	20	858.198	16.9778 - 133.50097	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^\circ$	1 - 2		661
	20	858.861	16.6616 - 133.09589	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	2 - 3		661
	20	859.387	16.9778 - 133.33970	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	1 - 1		661
	50	859.854	16.9778 - 133.27670	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3P^\circ$	1 - 1		661
1	150	860.238	1.3607 - 117.60635	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^\circ$	3 - 3		661
2	300	860.642	0.0 - 116.19193	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^\circ$	4 - 4		661
	10	860.905	16.6616 - 132.81826	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^\circ$	2 - 2		661
2	300	862.882	1.3607 - 117.25080	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^\circ$	3 - 3		661
2	300	863.217	2.2696 - 118.11495	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^\circ$	2 - 2		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	50	867.023	2.2696 - 117.60635	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^\circ$	2 - 3		661
1	100	867.194	1.3607 - 116.67439	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^\circ$	3 - 4		661
1	300	867.508	0.0 - 115.27226	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^\circ$	4 - 5		661
2	200	869.702	2.2696 - 117.25080	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^\circ$	2 - 3		661
	10	869.926	23.1087 - 138.06040	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^3I^\circ$	4 - 5		661
2	200	870.845	1.3607 - 116.19193	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^\circ$	3 - 4		661
	150	875.641	16.6616 - 130.86350	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3S^\circ$	2 - 1		661
		877.852	23.1087 - 137.02020	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^3G^\circ$	4 - 5		661
	30	878.078	16.9778 - 130.86350	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3S^\circ$	1 - 1		661
	50	879.471	0.0 - 113.70512	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5G^\circ$	4 - 4		661
	20	880.028	17.2307 - 130.86350	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3S^\circ$	0 - 1		661
	20	882.642	16.6616 - 129.95795	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5D^\circ$	2 - 1		661
	50	883.849	0.0 - 113.14092	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5G^\circ$	4 - 5		661
	3	885.103	16.9778 - 129.95795	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5D^\circ$	1 - 1		661
	2	885.455	0.0 - 112.93543	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5D^\circ$	4 - 3		661
	10	886.924	1.3607 - 114.11020	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5G^\circ$	3 - 3		661
	5	890.131	1.3607 - 113.70512	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5G^\circ$	3 - 4		661
	3	892.041	2.2696 - 114.37101	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5G^\circ$	2 - 2		661
	50	893.533	23.1087 - 135.02320	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^1F^\circ$	4 - 3		661
	100	900.008	23.1087 - 134.21760	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^1H^\circ$	4 - 5		661
	50	904.294	23.1087 - 133.69200	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^3G^\circ$	4 - 5		661
13	20	968.100	16.9778 - 120.27232	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^\circ$	1 - 1		661
13	50	970.478	17.2307 - 120.27232	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^\circ$	0 - 1		661
13	20	970.790	16.6616 - 119.66954	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 2		661
13	300	973.786	16.9778 - 119.66954	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^\circ$	1 - 2		661
13	400	979.589	16.6616 - 118.74525	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 3		661
	100	1305.344	53.70393 - 130.31230	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	5 - 4		661
	3	1315.085						661
	10	1321.804	54.65783 - 130.31230	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	4 - 4		661
		1321.94	0.0 - 75.64661	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - ^3G$	4 - 4	F,P	375,1108
	75	1328.084	54.65783 - 129.95400	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	4 - 3		661
	2	1330.787						661
		1331.14	0.0 - 75.12365	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - ^3G$	4 - 5	F,P	375,1108
	3	1331.153	81.68680 - 156.80870	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$^3H - ^3G^\circ$	6 - 5		661
		1335.53	1.3607 - 76.23725	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - ^3G$	3 - 3	F,P	375,1108
	10	1341.421	55.40629 - 129.95400	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	3 - 3		661
	50	1342.148	55.40629 - 129.91310	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	3 - 2		661
		1346.15	1.3607 - 75.64661	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - ^3G$	3 - 4	F,P	375,1108
	30	1351.256	55.95221 - 129.95795	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	2 - 1		661
		1351.94	2.2696 - 76.23725	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - ^3G$	2 - 3	F,P	375,1108
	20	1352.052	55.95221 - 129.91310	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	2 - 2		661
	20	1353.512	56.30824 - 130.19005	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	1 - 0		661
		1355.69	1.3607 - 75.12365	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - ^3G$	3 - 5	F,P	375,1108
	50	1357.802	56.30824 - 129.95795	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^5F - ^5D^\circ$	1 - 1		661
	3	1362.783						661
		1362.82	2.2696 - 75.64661	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - ^3G$	2 - 4	F,P	375,1108
	10	1365.151	110.21280 - 183.46488	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5F^\circ - ^5D$	5 - 4		661
	5	1374.491						661
	10	1374.660	112.40165 - 185.14723	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5F^\circ - ^5D$	1 - 0		661
	15	1376.183	112.40165 - 185.06715	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5F^\circ - ^5D$	1 - 2		661
	15	1377.077	82.82640 - 155.44330	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$^3H - ^3G^\circ$	4 - 3		661
	10	1382.077	111.22120 - 183.57558	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5F^\circ - ^5P$	3 - 2		661
	3	1387.870	61.33858 - 133.39094	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$^3F - ^3D^\circ$	4 - 3		661
	5	1388.629						661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1389.149	61.33858 - 133.32470	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$^3F - ^1G^\circ$	4 - 4		661
	20	1389.735	110.37135 - 182.32713	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3G$	4 - 5		661
	30	1392.377	111.22120 - 183.04145	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3G$	3 - 4		661
	10	1395.459	111.91453 - 183.57558	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3P$	2 - 2		661
	15	1401.214	111.22120 - 182.58783	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	3 - 2		661
	15	1403.113	110.21280 - 181.48295	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	5 - 4		661
	10	1405.279	116.19193 - 187.35188	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	4 - 4		661
	10	1405.421	111.89865 - 183.05220	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^3G$	4 - 5		661
	3	1406.061	111.91453 - 183.03525	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	2 - 1		661
	50	1406.250	110.37135 - 181.48295	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	4 - 4		661
	15	1409.000	114.09560 - 185.06715	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^5D$	1 - 2		661
	2	1409.471						661
	5	1409.974	112.93543 - 183.85972	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^3G$	3 - 4		661
	10	1410.126	157.37542 - 228.29097	$3d^7(a^2F)4p - 3d^7(a^4F)6s$	$^1G^\circ - ^3F$	4 - 3		661
	15	1410.344	112.93543 - 183.83947	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^3D$	3 - 3		661
	3	1410.446	111.89865 - 182.79820	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^5D^\circ - ^3F$	4 - 4		661
	5	1410.642	117.25080 - 188.14054	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	3 - 3		661
	50	1412.304	110.21280 - 181.01908	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	5 - 5		661
	5	1413.211	63.47193 - 134.23190	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$^3F - ^3F^\circ$	2 - 2		661
	3	1413.938	113.65147 - 184.37568	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^3P$	2 - 1		661
	20	1414.389	112.93543 - 183.63776	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^3G$	3 - 3		661
	15	1414.916	155.44330 - 226.11880	$3d^7(a^2F)4p - 3d^7(a^4F)5d$	$^3G^\circ - ^3F$	3 - 4		661
	3	1415.467	110.37135 - 181.01908	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	4 - 5		661
	5	1415.909	111.89865 - 182.52469	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^3P$	4 - 3		661
	75	1416.956	114.37101 - 184.94495	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^3H$	2 - 3		661
	2	1417.249						661
	2	1417.387	62.60558 - 133.15850	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$^3F - ^3F^\circ$	3 - 3		661
	20	1417.736	117.60635 - 188.14054	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3F$	3 - 3		661
	10	1417.841	112.93543 - 183.46488	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^3D$	3 - 4		661
	3	1418.105						661
	5	1418.292	118.11495 - 188.62287	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3F$	2 - 2		661
	10	1419.382	61.33858 - 131.79202	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$^3F - ^3F^\circ$	4 - 4		661
	75	1420.448	114.11020 - 184.51075	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^3H$	3 - 4		661
	10	1421.082						661
	2	1422.143	156.97208 - 227.28870	$3d^7(a^2F)4p - 3d^7(a^4F)6s$	$^3F^\circ - ^3F$	4 - 4		661
	10	1423.722	114.37101 - 184.60957	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^5G^\circ - ^3F$	2 - 1		661
	100	1424.511	113.70512 - 183.90488	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^3H$	4 - 5		661
	5	1425.737						661
	5	1427.087	153.25635 - 223.32977	$3d^64s^2 - 3d^7(a^4F_{5/2})4f$	$^5D - \frac{3}{2}^3P^\circ$	4 - 3		661
	20	1427.639						661
	3	1427.914						661
	200	1428.870	113.14092 - 183.12619	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^3H$	5 - 6		661
	10	1430.438	113.70512 - 183.61267	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^5G^\circ - ^3F$	4 - 3		661
	10	1430.630						661
	30	1434.133	114.11020 - 183.83947	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^3D$	3 - 3		661
	200	1434.306	112.78785 - 182.50830	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^3H$	6 - 7		661
	2	1434.446						661
	10	1435.609	113.14092 - 182.79820	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^5G^\circ - ^3F$	5 - 4		661
	2	1438.152	115.27226 - 184.80562	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3H$	5 - 5		661
	20	1439.809						661
	3	1439.938	116.19193 - 185.63913	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3H$	4 - 4		661
	2	1441.159						661
	5	1442.235	113.70512 - 183.04145	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^3G$	4 - 4		661
	40	1445.374	62.60558 - 131.79202	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$^3F - ^3F^\circ$	3 - 4		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
35	2	1446.154						661
	15	1446.748	111.89865 - 181.01908	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5D^\circ - ^5F$	4 - 5		661
	30	1448.175	112.78785 - 181.84000	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^5G$	6 - 6		661
	200	1451.504	115.27226 - 184.16657	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3H$	5 - 6		661
	20	1452.532						661
	2	1453.603						661
	50	1453.882						661
	10	1457.430	116.19193 - 184.80562	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3H$	4 - 5		661
	10	1457.575	118.74525 - 187.35188	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3D^\circ - ^3F$	3 - 4		661
	50	1457.829						661
	5	1458.284	116.67439 - 185.24815	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^3G^\circ - ^3F$	4 - 3		661
	10	1461.649	161.75489 - 230.16990	$3d^7(a^2F)4p - 3d^7(a^4F)5d$	$^1F^\circ - ^3F$	3 - 4		661
	5	1462.239	117.25080 - 185.63913	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3H$	3 - 4		661
	2	1464.778	120.27232 - 188.54282	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3D^\circ - ^3P$	1 - 1		661
	5	1464.989						661
36	10	1465.606	112.78785 - 181.01908	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^5G^\circ - ^5F$	6 - 5		661
	5	1466.027						661
	5	1466.156						661
	3	1469.836						661
	2	1470.642	117.25080 - 185.24815	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^3F^\circ - ^3F$	3 - 3		661
	2	1471.468	118.11495 - 186.07340	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^3F^\circ - ^3F$	2 - 2		661
	5	1473.939	116.19193 - 184.03762	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^3F^\circ - ^3F$	4 - 4		661
	5	1474.402	119.66954 - 187.49338	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3D^\circ - ^3P$	2 - 2		661
	15	1475.368	115.27226 - 183.05220	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3G$	5 - 5		661
	5	1475.662						661
37	3	1476.527						661
	10	1477.801	116.19193 - 183.85972	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3G$	4 - 4		661
	10	1478.252	116.19193 - 183.83947	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3D$	4 - 3		661
	10	1478.854						661
	5	1481.923						661
	10	1483.044	118.11495 - 185.54370	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3D$	2 - 1		661
	3	1484.268	117.25080 - 184.62354	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3D$	3 - 2		661
	3	1486.456						661
	3	1488.424	116.67439 - 183.85972	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3G$	4 - 4		661
	1	1491.111	75.12365 - 142.18780	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$^3G - ^3H^\circ$	5 - 6		661
38	2	1491.309	115.27226 - 182.32713	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3G$	5 - 5		661
	10	1491.899						661
	30	1492.622						661
	30	1492.990						661
	20	1495.641	116.19193 - 183.05220	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3G$	4 - 5		661
	5	1498.338	117.60635 - 184.34650	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3G$	3 - 3		661
	3	1501.063						661
	5	1501.311	117.25080 - 183.85972	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3G$	3 - 4		661
	2	1503.850						661
	5	1505.165						661
37	1	1506.518	116.67439 - 183.05220	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3G^\circ - ^3G$	4 - 5		661
	10	1512.046	116.19193 - 182.32713	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^5G$	4 - 5		661
	2	1524.891	119.66954 - 185.24815	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$^3D^\circ - ^3F$	2 - 3		661
	5	1526.305						661
	3	1529.096	119.66954 - 185.06715	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3D^\circ - ^5D$	2 - 2		661
	5	1536.246	118.74525 - 183.83947	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$^3D^\circ - ^3D$	3 - 3		661
	50	1540.759	79.25011 - 144.15300	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$^1G - ^1G^\circ$	4 - 4		661
	20	1547.641	79.25011 - 143.86480	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$^1G - ^1F^\circ$	4 - 3		661
	10	1552.365	79.14301 - 143.56016	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^3P - ^3P^\circ$	2 - 2		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1555.598	71.06735 - 135.35033	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3P^\circ$	3 - 2		661
	3	1568.269						661
	5	1568.569	79.25011 - 143.00270	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$^1G - ^3H^\circ$	4 - 4		661
		1575.50	0.0 - 63.47193	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	4 - 2	F,P	375,1108
	15	1579.999	79.14301 - 142.43395	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^3P - ^1D^\circ$	2 - 2		661
	1	1586.909	76.23725 - 139.25370	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$^3G - ^3D^\circ$	3 - 2		661
	2	1589.625	75.12365 - 138.03090	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$^3G - ^3G^\circ$	5 - 4		661
	3	1597.077	76.23725 - 138.85220	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$^3G - ^3G^\circ$	3 - 3		661
		1597.30	0.0 - 62.60558	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	4 - 3	F,P	375,1108
	3	1597.899	78.30354 - 140.88515	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3S^\circ$	2 - 1		661
	15	1598.073	71.06735 - 133.64258	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^5P - ^3P^\circ$	3 - 2		661
	10	1600.294	53.70393 - 116.19193	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3F^\circ$	5 - 4		661
	2	1601.025	121.41160 - 183.87200	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^3D^\circ$	2 - 2		661
	15	1602.505	78.48243 - 140.88515	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$^3P - ^3S^\circ$	1 - 1		661
	300	1604.537	71.06735 - 133.39094	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3D^\circ$	3 - 3		661
	5	1607.000	78.65755 - 140.88515	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3S^\circ$	0 - 1		661
	100	1609.876	71.38410 - 133.50097	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3D^\circ$	2 - 2		661
		1610.01	1.3607 - 63.47193	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	3 - 2	F,P	375,1108
	20	1610.534	71.06735 - 133.15850	$3d^7(a^4P)4s - 3d^7(a^2G)4p$	$^5P - ^3F^\circ$	3 - 3		661
	30	1612.165	71.06735 - 133.09589	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3P^\circ$	3 - 3		661
17	10	1612.474	54.65783 - 116.67439	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3G^\circ$	4 - 4		661
	30	1612.730	71.38410 - 133.39094	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3D^\circ$	2 - 3		661
	1	1612.966	71.84242 - 133.83954	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3D^\circ$	1 - 1		661
	2	1615.597	75.12365 - 137.02020	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$^3G - ^3G^\circ$	5 - 5		661
	15	1618.127	71.84242 - 133.64258	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$^5P - ^3P^\circ$	1 - 2		661
	20	1618.801	71.38410 - 133.15850	$3d^7(a^2P)4s - 3d^7(a^2G)4p$	$^5P - ^3F^\circ$	2 - 3		661
	20	1619.414	71.06735 - 132.81826	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3P^\circ$	3 - 2		661
	30	1619.642	79.14301 - 140.88515	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3S^\circ$	2 - 1		661
	100	1620.443	71.38410 - 133.09589	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^5P - ^3P^\circ$	2 - 3		661
	50	1621.830	71.84242 - 133.50097	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3D^\circ$	1 - 2		661
17	50	1621.942	55.95221 - 117.60635	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3G^\circ$	2 - 3		661
	35	1623.622	83.03345 - 144.62455	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3P^\circ$	2 - 1		661
17	20	1624.220	53.70393 - 115.27226	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3G^\circ$	5 - 5		661
	100	1626.096	71.84242 - 133.33970	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^5P - ^3P^\circ$	1 - 1		661
	3	1627.751	71.38410 - 132.81826	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3P^\circ$	2 - 2		661
	25	1629.000	82.17260 - 143.56016	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3P^\circ$	3 - 2		661
	3	1630.120	84.60410 - 145.95015	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^1P - ^1P^\circ$	1 - 1		661
		1630.30	0.0 - 61.33858	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	4 - 4	F,P	375,1108
	5	1630.602	82.82640 - 144.15300	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3G^\circ$	4 - 4		661
	2	1631.479	79.25011 - 140.54452	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$^1G - ^3F^\circ$	4 - 3		661
	2	1631.754	82.27726 - 143.56016	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3P^\circ$	1 - 2		661
17	100	1632.166	55.40629 - 116.67439	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3G^\circ$	3 - 4		661
		1632.79	1.3607 - 62.60558	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	3 - 3	F,P	375,1108
		1633.92	2.2696 - 63.47193	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	2 - 2	F,P	375,1108
	5	1635.717	79.74922 - 140.88515	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3S^\circ$	1 - 1		661
	25	1639.996	71.84242 - 132.81826	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3P^\circ$	1 - 2		661
	1	1644.466						661
	1	1647.484						661
17	100	1649.771	54.65783 - 115.27226	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3G^\circ$	4 - 5		661
	300	1652.866	81.68680 - 142.18780	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3H^\circ$	6 - 6		661
	200	1653.119	85.83420 - 146.32580	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^1H - ^1H^\circ$	5 - 5		661
	250	1656.126	82.19380 - 142.57560	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3H^\circ$	5 - 5		661
		1657.39	2.2696 - 62.60558	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	2 - 3	F,P	375,1108
	10	1659.438	82.17260 - 142.43395	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3D^\circ$	3 - 2		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
16	200	1661.786	82.82640 - 143.00270	$3d^7(a^3H)4s - 3d^7(a^3H)4p$	$^3H - ^3H^o$	4 - 4		661	
	1	1662.311	82.27726 - 142.43395	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^1D^o$	1 - 2		661	
	20	1665.859						661	
	20	1666.102	84.60410 - 144.62455	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^1P - ^3P^o$	1 - 1		661	
	20	1666.828	82.19380 - 142.18780	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3H^o$	5 - 6		661	
		1667.28	1.3607 - 61.33858	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	3 - 4	F,P	375,1108	
	50	1672.213						661	
	10	1673.659	82.82640 - 142.57560	$3d^7(a^3H)4s - 3d^7(a^3H)4p$	$^3H - ^3H^o$	4 - 5		661	
	1	1676.054	78.48243 - 138.14648	$3d^7(a^4P)4s - 3d^7(a^3P)4p$	$^3P - ^1S^o$	1 - 0		661	
	10	1680.532	79.74922 - 139.25370	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^3P - ^3D^o$	1 - 2		661	
16	10	1682.029	54.65783 - 114.11020	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5G^o$	4 - 3		661	
16	1	1682.443	53.70393 - 113.14092	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5G^o$	5 - 5		661	
25	2	1683.471	83.03345 - 142.43395	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^1D^o$	2 - 2		661	
	30	1683.688	97.84160 - 157.23516	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3D^o$	2 - 1		661	
	1	1684.515						661	
	5	1685.085	79.14301 - 138.48740	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^3P - ^3D^o$	2 - 3		661	
	3	1685.546	78.30354 - 137.63160	$3d^7(a^4P)4s - 3d^7(a^3P)4p$	$^3P - ^1D^o$	2 - 2		661	
	5	1685.977	97.84160 - 157.15427	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3D^o$	2 - 2		661	
	75	1686.216	86.64588 - 145.95015	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^1D - ^1P^o$	2 - 1		661	
	400	1687.897	71.06735 - 130.31230	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^5D^o$	3 - 4		661	
	5	1689.121						661	
	1	1689.596						661	
16	20	1690.372	97.99581 - 157.15427	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3D^o$	3 - 2		661	
	5	1690.634	78.48243 - 137.63160	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^1D^o$	1 - 2		661	
	15	1690.974	98.23793 - 157.37542	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^1G^o$	4 - 4		661	
	1	1691.275						661	
	3	1692.219	75.12365 - 134.21760	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^1H^o$	5 - 5		661	
	1000	1692.514	53.70393 - 112.78785	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5G^o$	5 - 6		661	
		1692.94	2.2696 - 61.33858	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^3F$	2 - 4	F,P	375,1108	
	3	1693.559	54.65783 - 113.70512	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5G^o$	4 - 4		661	
	5	1694.307	71.84242 - 130.86350	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^3S^o$	1 - 1		661	
	2	1694.582	97.84160 - 156.85300	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3D^o$	2 - 3		661	
16	30	1695.599	97.99581 - 156.97208	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3F^o$	3 - 4		661	
	5	1695.910	55.40629 - 114.37101	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^5F - ^3G^o$	3 - 2		661	
	5	1696.195	84.60410 - 143.56016	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^1P - ^3P^o$	1 - 2		661	
	50	1698.176	71.06735 - 129.95400	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^5D^o$	3 - 3		661	
	5	1698.381	78.48243 - 137.36236	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$^3P - ^3D^o$	1 - 1		661	
	10	1699.024	97.99581 - 156.85300	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3D^o$	3 - 3		661	
	8	1699.349	71.06735 - 129.91310	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^5P - ^5D^o$	3 - 2		661	
	10	1701.081	76.23725 - 135.02320	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^1F^o$	3 - 3		661	
	60	1701.599	75.64661 - 134.41477	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3G^o$	4 - 4		661	
	10	1702.591	98.23793 - 156.97208	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^1F^o$	4 - 4		661	
16	50	1703.467	55.40629 - 114.11020	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5G^o$	3 - 3		661	
	3	1703.925	75.64661 - 134.33479	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3G^o$	4 - 3		661	
	10	1704.128	97.84160 - 156.52287	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3F^o$	2 - 2		661	
	60	1704.641	78.30354 - 136.96700	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$^3P - ^3D^o$	2 - 3		661	
	10	1706.041	98.23793 - 156.85300	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3D^o$	4 - 3		661	
	15	1706.246	82.27726 - 140.88540	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3F^o$	1 - 2		661	
	25	10	1707.242	71.38410 - 129.95795	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^5D^o$	2 - 1		661
	25	200	1707.346	71.38410 - 129.95400	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^5D^o$	2 - 3		661
	30	200	1707.426	75.12365 - 133.69200	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3G^o$	5 - 5		661
	25	50	1708.552	71.38410 - 129.91310	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^o$	2 - 2		661
16	800	1709.901	54.65783 - 113.14092	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5G^o$	4 - 5		661	
16	10	1711.779	55.95221 - 114.37101	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5G^o$	2 - 2		661	

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	1712.893	83.03345 - 141.41410	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$^3D - ^1P^\circ$	2 - 1		661
	10	1713.864	71.84242 - 130.19005	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^5D^\circ$	1 - 0		661
	100	1714.698	85.83420 - 144.15300	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^1H - ^1G^\circ$	5 - 4		661
16	650	1715.303	55.40629 - 113.70512	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5G^\circ$	3 - 4		661
15	100	1715.931	54.65783 - 112.93543	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	4 - 3		661
15	75	1716.886	55.40629 - 113.65147	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	3 - 2		661
	20	1718.184	75.12365 - 133.32470	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^1G^\circ$	5 - 4		661
	150	1718.365	53.70393 - 111.89865	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	5 - 4		661
	30	20	1718.873	76.23725 - 134.41477	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^1G^\circ$	3 - 4	
	20	1719.008	98.23793 - 156.41120	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3F^\circ$	4 - 3		661
	16	500	1719.458	55.95221 - 114.11020	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5G^\circ$	2 - 3	
15	50	1719.892	55.95221 - 114.09560	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	2 - 1		661
	20	1720.708	71.84242 - 129.95795	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^5D^\circ$	1 - 1		661
	30	200	1721.256	76.23725 - 134.33479	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3G^\circ$	3 - 3	
	0	1721.799						661
	15	1722.038	71.84242 - 129.91310	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^5D^\circ$	1 - 2		661
16	400	1722.283	56.30824 - 114.37101	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5G^\circ$	1 - 2		661
30	20	1722.790	75.64661 - 133.69200	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3G^\circ$	4 - 5		661
	150	1723.793	82.17260 - 140.18465	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3F^\circ$	3 - 4		661
	28	75	1724.291	76.23725 - 134.23190	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3F^\circ$	3 - 2	
15	50	1724.523	56.30824 - 114.29545	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	1 - 0		661
	20	1727.640	79.74922 - 137.63160	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^1D^\circ$	1 - 2		661
	1	1728.127						661
	20	1728.738	97.99581 - 155.84140	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3G^\circ$	3 - 4		661
	2	1729.219	84.60410 - 142.43395	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^1P - ^1D^\circ$	1 - 2		661
	20	1729.384	79.14301 - 136.96700	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3D^\circ$	2 - 3		661
	10	1730.255	78.30354 - 136.09870	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^\circ$	2 - 1		661
15	75	1730.483	56.30824 - 114.09560	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	1 - 1		661
	2	1731.733						661
	15	250	1733.129	55.95221 - 113.65147	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	2 - 2	
	50	1733.762	75.64661 - 133.32470	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^1G^\circ$	4 - 4		661
	2	1735.628	78.48243 - 136.09870	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^\circ$	1 - 1		661
	5	1735.713	79.74922 - 137.36236	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3D^\circ$	1 - 1		661
	50	1736.011	98.23793 - 155.84140	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3G^\circ$	4 - 4		661
	50	1736.051	97.84160 - 155.44330	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3G^\circ$	2 - 3		661
	2	1736.569						661
15	500	1738.252	55.40629 - 112.93543	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	3 - 3		661
28	300	1738.785	75.64661 - 133.15850	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3F^\circ$	4 - 3		661
	5	1739.747	121.80245 - 179.28200	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^3F^\circ$	3 - 4		661
	1	1739.979						661
	15	1740.671	75.64661 - 133.09589	$3d^7(a^2G)4s - 3d^7(a^4P)4p$	$^3G - ^5P^\circ$	4 - 3		661
	10	1740.718	97.99581 - 155.44330	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^3G^\circ$	3 - 3		661
	30	1740.944	82.19380 - 139.63390	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^1I^\circ$	5 - 6		661
	300	1741.963	61.33858 - 118.74525	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3D^\circ$	4 - 3		661
15	1	1743.903	56.30824 - 113.65147	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	1 - 2		661
	1	1745.436						661
	15	550	1747.011	54.65783 - 111.89865	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	4 - 4	
	1	1747.356	97.84160 - 155.07100	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^3F - ^1D^\circ$	2 - 2		661
	50	1747.680	86.64588 - 143.86480	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^1D - ^1F^\circ$	2 - 3		661
	1	1749.203	85.83420 - 143.00270	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^1H - ^3H^\circ$	5 - 4		661
	300	1752.427	62.60558 - 119.66954	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3D^\circ$	3 - 2		661
	400	1753.011	75.12365 - 132.16860	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3H^\circ$	5 - 6		661
	3	1753.150	121.41160 - 178.45150	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^3F^\circ$	2 - 3		661
29	10	1753.377	75.12365 - 132.15650	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3H^\circ$	5 - 4		661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
21	1	1755.757	79.14301 - 136.09870	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^o$	2 - 1		661	
	1	1756.151						661	
	2	1756.801	76.23725 - 133.15850	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3F^o$	3 - 3		661	
	25	1757.034	86.64588 - 143.56016	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^1D - ^3P^o$	2 - 2		661	
	10	1758.468	78.48243 - 135.35033	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^o$	1 - 2		661	
	3	1758.940	78.48243 - 135.33490	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^o$	1 - 0		661	
	20	1760.260	84.60410 - 141.41410	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^1P - ^1P^o$	1 - 1		661	
	150	1760.560	63.47193 - 120.27232	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3D^o$	2 - 1		661	
	20	1762.394	80.62110 - 137.36236	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3D^o$	0 - 1		661	
	2	1763.069	78.30354 - 135.02320	$3d^7(a^4P)4s - 3d^7(a^2G)4p$	$^3P - ^1F^o$	2 - 3		661	
	20	1763.607	82.27726 - 138.97920	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3D^o$	1 - 1		661	
	14	800	1764.688	53.70393 - 110.37135	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	5 - 4		661
	1	1765.229							661
	10	1766.387	121.19293 - 177.80560	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^3F^o$	1 - 2		661	
	14	500	1767.938	54.65783 - 111.22120	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	4 - 3		661
	14	1000	1769.634	53.70393 - 110.21280	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	5 - 5	P	661
	14	200	1769.653	55.40629 - 111.91453	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	3 - 2	P	661
	1	1770.153	55.40629 - 111.89865	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5D^o$	3 - 4		661	
	14	100	1771.492	55.95221 - 112.40165	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	2 - 1		661
1	1772.499							661	
27	40	1773.788	75.12365 - 131.50050	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3H^o$	5 - 5		661	
10	1774.640	79.74922 - 136.09870	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^o$	1 - 1		661		
2	1774.992							661	
150	1775.750	82.17260 - 138.48740	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3D^o$	3 - 3		661		
400	1776.068	81.68680 - 137.99140	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3I^o$	6 - 7		661		
30	1776.802	84.60410 - 140.88515	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^1P - ^3S^o$	1 - 1		661		
10	1777.227	61.33858 - 117.60635	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3G^o$	4 - 3		661		
10	1778.583	125.43355 - 181.6584	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^1D - ^1F^o$	2 - 3		661		
30	1778.730	83.03345 - 139.25370	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3D^o$	2 - 2		661		
20	1779.127	79.14301 - 135.35033	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^o$	2 - 2		661		
21	30	1779.442	63.47193 - 119.66954	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3D^o$	2 - 2		661	
1	1779.607							661	
15	1781.088	75.64661 - 131.79202	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3F^o$	4 - 4		661		
21	50	1781.279	62.60558 - 118.74525	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3D^o$	3 - 3		661	
14	60	1782.747	56.30824 - 112.40165	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	1 - 1		661	
75	1784.882	82.82640 - 138.85220	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3G^o$	4 - 3		661		
14	60	1786.927	55.95221 - 111.91453	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	2 - 2		661	
2	1787.456	83.03345 - 138.97920	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3D^o$	2 - 1		661		
27	200	1788.301	76.23725 - 132.15650	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3H^o$	3 - 4		661	
150	1788.502	61.33858 - 117.25080	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3F^o$	4 - 3		661		
3	1789.888	82.27726 - 138.14648	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$^3D - ^1S^o$	1 - 0		661		
5	1789.983	82.19380 - 138.06040	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3I^o$	5 - 5		661		
27	250	1790.402	75.64661 - 131.50050	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^3G - ^3H^o$	4 - 5		661	
200	1790.934	82.19380 - 138.03090	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3G^o$	5 - 4		661		
14	200	1791.644	55.40629 - 111.22120	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	3 - 3		661	
25	1792.513	86.64588 - 142.43395	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^1D - ^1D^o$	2 - 2		661		
100	1792.994	79.25011 - 135.02320	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^1F^o$	4 - 3		661		
1	1793.972							661	
14	200	1794.904	54.65783 - 110.37135	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	4 - 4		661	
20	1795.192	81.68680 - 137.39130	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3I^o$	6 - 6		661		
14	20	1798.366	56.30824 - 111.91453	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	1 - 2		661	
5	1799.023	79.74922 - 135.33490	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^o$	1 - 0		661		
14	20	1800.031	54.65783 - 110.21280	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^5F^o$	4 - 5		661	
1	1800.404	121.19293 - 176.73640	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^3P^o$	1 - 0		661		

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
20	50	1801.506	62.60558 - 118.11495	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3F^\circ$	3 - 2		661	
	2	1802.546	80.62110 - 136.09870	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3P^\circ$	0 - 1		661	
	1	1803.615						661	
	30	1804.394	101.95490 - 157.37542	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^1F - ^1G^\circ$	3 - 4		661	
	30	1806.457	78.48243 - 133.83954	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	1 - 1		661	
	30	1806.550	82.27726 - 137.63160	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$^3D - ^1D^\circ$	1 - 2		661	
	14	50	1807.056	78.30354 - 133.64258	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$^3P - ^3P^\circ$	2 - 2		661
300		1807.245	81.68680 - 137.02020	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3G^\circ$	6 - 5		661	
5		1809.200	63.47193 - 118.74525	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3D^\circ$	2 - 3		661	
15		1809.335	55.95221 - 111.22120	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3F^\circ$	2 - 3		661	
150		1810.489	82.82640 - 138.06040	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^1I^\circ$	4 - 5		661	
200		1811.689	78.30354 - 133.50097	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	2 - 2		661	
10		1812.190	78.65755 - 133.83954	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	0 - 1		661	
3		1812.539	121.41160 - 176.58320	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^3P^\circ$	2 - 1		661	
20		1812.769	79.25011 - 134.41477	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^3G^\circ$	4 - 4		661	
1		1814.082						661	
14	20	1815.307	78.30354 - 133.39094	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	2 - 3		661	
	15	1815.398	79.25011 - 134.33479	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^3G^\circ$	4 - 3		661	
	2	1815.650						661	
	1	1816.990	78.30354 - 133.33970	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^\circ$	2 - 1		661	
	15	1817.598	101.95490 - 156.97208	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^1F - ^3F^\circ$	3 - 4		661	
	300	1819.275	79.25011 - 134.21760	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^3H^\circ$	4 - 5		661	
	3	1819.325	55.40629 - 110.37135	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^5F - ^3F^\circ$	3 - 4		661	
	25	1822.918	78.48243 - 133.33970	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^\circ$	1 - 1		661	
	20	800	1823.061	61.33858 - 116.19193	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3F^\circ$	4 - 4		661
		1	1823.936	82.19380 - 137.02020	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^3H - ^3G^\circ$	5 - 5		661
20		1825.084	78.30354 - 133.09589	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^\circ$	2 - 3		661	
15		1828.279	129.91310 - 184.60957	$3d^7(a^4P)4p - 3d^7(a^4F)5s$	$^5D^\circ - ^5F$	2 - 1		661	
15		1828.672	121.80245 - 176.48710	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^3P^\circ$	3 - 2		661	
		1829.56	0.0 - 54.65783	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^5F$	4 - 4	F,P	375,1108	
20		400	1830.006	62.60558 - 117.25080	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3F^\circ$	3 - 3		661
	200	1830.075	63.47193 - 118.11495	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3F^\circ$	2 - 2		661	
	15	1830.859	78.65755 - 133.27670	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$^3P - ^3P^\circ$	0 - 1		661	
	5	1831.578	83.03345 - 137.63160	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$^3D - ^1D^\circ$	2 - 2		661	
	1	1831.850						661	
	20	1833.669	82.27726 - 136.81320	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$^3D - ^3D^\circ$	1 - 2		661	
	15	1834.381	78.30354 - 132.81826	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^\circ$	2 - 2		661	
	20	1834.890	79.14301 - 133.64258	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3P^\circ$	2 - 2		661	
	30	1836.843	79.25011 - 133.69200	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^3G^\circ$	4 - 5		661	
	1	1839.092	84.60410 - 138.97920	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$^1P - ^3D^\circ$	1 - 1		661	
34	40	1840.421	133.15850 - 187.49338	$3d^7(a^2G)4p - 3d^7(a^4F)4d$	$^3F^\circ - ^3P$	3 - 2		661	
	15	1841.866						661	
	50	1843.406	79.14301 - 133.39094	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	2 - 3		661	
	1	1843.689	86.64588 - 140.88540	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^1D - ^3F^\circ$	2 - 2		661	
	15	1845.141	79.14301 - 133.33970	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^5P^\circ$	2 - 1		661	
	650	1847.275	63.47193 - 117.60635	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3G^\circ$	2 - 3		661	
	100	1849.319	79.25011 - 133.32470	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^1G^\circ$	4 - 4		661	
	50	1849.473	62.60558 - 116.67439	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3G^\circ$	3 - 4		661	
	19	75	1849.540						661
			1850.29	1.3607 - 55.40629	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^5F$	3 - 3	F,P	375,1108
19	30	1853.480	79.14301 - 133.09589	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^5P^\circ$	2 - 3		661	
	800	1854.149	61.33858 - 115.27226	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3G^\circ$	4 - 5		661	
	1	1855.525	79.74922 - 133.64258	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3P^\circ$	1 - 2		661	
	1	1855.755	101.95490 - 155.84140	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$^1F - ^3G^\circ$	3 - 4		661	

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1857.158	79.25011 - 133.09589	$3d^7(a^2G)4s - 3d^7(a^4P)4p$	$^1G - ^5P^\circ$	4 - 3		661
	300	1858.750	85.83420 - 139.63390	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^1H - ^1I^\circ$	5 - 6		661
	2	1859.480	63.47193 - 117.25080	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3F^\circ$	2 - 3		661
		1862.06	0.0 - 53.70393	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^5F$	4 - 5	F,P	375,1108
		1862.80	2.2696 - 55.95221	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^5F$	2 - 2	F,P	375,1108
	3	1866.008	79.74922 - 133.33970	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3P^\circ$	1 - 1		661
	5	1866.163	62.60558 - 116.19193	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^3F^\circ$	3 - 4		661
	3	1867.706						661
	20	1868.201	79.74922 - 133.27670	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3P^\circ$	1 - 1		661
		1876.27	1.3607 - 54.65783	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^5F$	3 - 4	F,P	375,1108
	5	1879.063	80.62110 - 133.83954	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	0 - 1		661
	5	1880.498	82.17260 - 135.35033	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$^3D - ^3P^\circ$	3 - 2		661
		1881.94	2.2696 - 55.40629	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - ^5F$	2 - 3	F,P	375,1108
	25	1882.686	79.74922 - 132.8648	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3P^\circ$	1 - 0		661
	1	1884.723	82.27726 - 135.33490	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$^3D - ^3P^\circ$	1 - 0		661
	10	1885.864						661
	15	1890.155	79.25011 - 132.15650	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^3H^\circ$	4 - 4		661
	5	1895.479						661
	1	1899.098						661
	50	1902.607	78.30354 - 130.86350	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3S^\circ$	2 - 1		661
	15	1903.262	79.25011 - 131.79202	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$^1G - ^3F^\circ$	4 - 4		661
	5	1909.091	78.48243 - 130.86350	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3S^\circ$	1 - 1		661
	30	1913.890						661
	3	1914.076						661
	1	1914.75	85.83420 - 138.06040	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^1H - ^3I^\circ$	5 - 5		661
	1	1914.919	82.19380 - 134.41477	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$^3H - ^3G^\circ$	5 - 4		661
	5	1915.409						661
	5	1915.497	78.65755 - 130.86350	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3S^\circ$	0 - 1		661
	2	1915.834	85.83420 - 138.03090	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^1H - ^3G^\circ$	5 - 4		661
	1	1922.91						661
18	5	1923.463	83.03345 - 135.02320	$3d^7(a^2D)4s - 3d^7(a^2G)4p$	$^3D - ^1F^\circ$	2 - 3		661
	200	1930.431	61.33858 - 113.14092	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5G^\circ$	4 - 5		661
		1933.47	79.14301 - 130.86350	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$^3P - ^3S^\circ$	2 - 1	P	375
	5	1935.947	78.30354 - 129.95795	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	2 - 1		661
	2	1936.10	78.30354 - 129.95400	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^3D^\circ$	2 - 3		661
	3	1939.40	82.27726 - 133.83954	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$^3D - ^3D^\circ$	1 - 1		661
	100	1939.588	85.83420 - 137.39130	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$^1H - ^3I^\circ$	5 - 6		661
18	0	1941.41	82.82640 - 134.33479	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$^3H - ^3G^\circ$	4 - 3		661
	0	1941.58	62.60558 - 114.11020	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5G^\circ$	3 - 3		661
	0	1942.64	176.48710 - 227.96302	$3d^7(b^2D)4p - 3d^7(a^4F)5d$	$^3P^\circ - ^5G$	2 - 3		661
	10	1942.886	82.17260 - 133.64258	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$^3D - ^3P^\circ$	3 - 2		661
	2	1944.36	78.48243 - 129.91310	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^5D^\circ$	1 - 2		661
	3	1946.81						661
	0	1950.90						661
24	200	1952.540	71.06735 - 122.28240	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^5P - ^5S^\circ$	3 - 2		661
	0	1955.74	82.19380 - 133.32470	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$^3H - ^1G^\circ$	5 - 4		661
	3	1956.402	79.74922 - 130.86350	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$^3P - ^3S^\circ$	1 - 1		661
18	20	1956.964	62.60558 - 113.70512	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5G^\circ$	3 - 4		661
	5	1961.324	86.64588 - 137.63160	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$^1D - ^1D^\circ$	2 - 2		661
	2	1963.73	82.17260 - 133.09589	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$^3D - ^5P^\circ$	3 - 3		661
24	100	1964.689	71.38410 - 122.28240	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^5S^\circ$	2 - 2		661
	3	1968.053						661
	0	1969.62						661
	0	1970.54						661

NI III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
18	15	1974.493	82.17260 – 132.81826	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$^3D - ^5P^\circ$	3 - 2		661
	15	1974.780	63.47193 – 114.11020	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5G^\circ$	2 - 3		661
	1	1977.84	61.33858 – 111.89865	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$^3F - ^5D^\circ$	4 - 4		661
24	2	1980.248	82.82640 – 133.32470	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$^3H - ^1G^\circ$	4 - 4		661
	50	1982.538	71.84242 – 122.28240	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$^3P - ^5S^\circ$	1 - 2		661
	1	1987.83	83.03345 – 133.33970	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$^3D - ^5P^\circ$	2 - 1		661
	10	1993.362						661

NICKEL IV (Ni³⁺), Z = 28
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7(^4F_{9/2})$ (25 electrons)
Ionization Potential [443 000] cm^{-1} ; [54.9] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	330	392.680	0. – 254.6634	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	320	393.236	0. – 254.3000	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		903
	120	394.526	1.1897 – 254.6634	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		903
	20	395.087	1.1897 – 254.3000	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		903
	130	395.369	1.1897 – 254.1237	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	200	396.127	1.1897 – 253.6391	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		903
	40	397.557	2.0425 – 253.5793	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	140	397.967	2.0425 – 253.3262	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	60	398.473	2.6211 – 253.5793	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	120	398.521	2.0425 – 252.9754	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	50	398.886	2.6211 – 253.3262	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	110	399.444	2.6211 – 252.9754	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	80	399.487	2.0425 – 252.3540	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	230	401.299						903
	20	407.035	2.0425 – 247.7317	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$	Q	903
	20	407.967						903
	60	412.460	19.8296 – 262.2755	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		903
	240	413.331	0. – 241.9390	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	140	415.588	1.1897 – 241.8179	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	110	417.547	2.0425 – 241.5400	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	90	418.703	19.8296 – 258.6728	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$	Q	903
	230	418.785	43.8586 – 282.6452	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	180	418.866	43.4375 – 282.1795	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	60	419.198	2.6211 – 241.1724	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	120	421.543						903
	50	421.608	19.8296 – 257.0180	$3d^7 - 3d^6(b^3F)4p$	$a^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	250	422.747	18.1186 – 254.6634	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	60	422.924	20.9476 – 257.4064	$3d^7 - 3d^6(b^3F)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$	Q	903
	80	423.713	18.1186 – 254.1237	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	80	423.765						903
	60	423.806						903
	60	423.921						903
	40	424.122						903
	100	424.158	18.3668 – 254.1237	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	490	424.405	26.6491 – 262.2755	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	120	424.583	18.1186 – 253.6391	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
100	425.148		18.3668 - 253.5793	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
20	425.197							903
40	425.593		18.3668 - 253.3262	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
380	425.782		27.6776 - 262.5387	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
110	426.230		18.9584 - 253.5793	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
70	426.924		18.1186 - 252.3540	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
50	427.308		18.9584 - 252.9754	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
170	427.372		18.3668 - 252.3540	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
230	428.420		26.6491 - 260.0651	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
40	429.017							903
150	429.775		27.6776 - 260.3555	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2F^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
60	430.994		26.6491 - 258.6728	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
410	432.880		18.1186 - 249.1300	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
200	432.912		27.6776 - 258.6728	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
260	433.345		18.3668 - 249.1300	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
140	434.461		18.9584 - 249.1300	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
60	434.938		27.0965 - 257.0180	$3d^7 - 3d^6(b^3F)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
80	438.185							903
150	439.261		26.6491 - 254.3000	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
100	442.552		27.6776 - 253.6391	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4F^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
190	444.178		0. - 225.1369	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
570	444.208		26.6491 - 251.7736	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
540	444.747		27.6776 - 252.5230	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
120	446.281		0. - 224.0753	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
610	446.778		18.1186 - 241.9390	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
180	447.029		18.1186 - 241.8179	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
460	447.523		1.1897 - 224.6457	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
180	448.079		18.3668 - 241.5400	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
70	448.779		1.1897 - 224.0213	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
20	448.821		18.3668 - 241.1724	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
20	449.238		2.0425 - 224.6457	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
160	449.273		18.9584 - 241.5400	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
180	450.017		18.9584 - 241.1724	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
120	450.183		2.0425 - 224.1740	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
30	451.009		18.3668 - 240.0942	$3d^7 - 3d^6(a^1F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
20	451.363		2.6211 - 224.1740	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
210	451.500							903
40	451.690		2.6211 - 224.0213	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	903
50	452.157		2.6211 - 223.7854	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
40	452.212		1.1897 - 222.3333	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
200	452.464							903
30	452.714		18.1186 - 239.0087	$3d^7 - 3d^6(a^1F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
80	453.227		18.3668 - 239.0087	$3d^7 - 3d^6(a^1F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
70	454.432		27.6776 - 247.7317	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
60	456.361		19.8296 - 238.9578	$3d^7 - 3d^6(a^1F)4p$	$a^2G - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
190	456.419		43.4375 - 262.5387	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
50	456.913		0. - 218.8606	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
120	457.293		43.8586 - 262.5387	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
350	457.850		43.8586 - 262.2755	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
170	458.356		23.6489 - 241.8179	$3d^7 - 3d^6(b^3F)4p$	$a^2P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
260	459.164		43.4375 - 261.2263	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2F^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
210	461.010		43.4375 - 260.3555	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2F^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
110	461.061		24.6514 - 241.5400	$3d^7 - 3d^6(b^3F)4p$	$a^2P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
120	461.082		24.6514 - 241.5400	$3d^7 - 3d^6(b^3F)4p$	$a^2P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	Q	903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
60	461.764							903
80	461.832		20.9476 - 237.4803	$3d^7 - 3d^6(a^1F)4p$	$a^2G - ^3G^{\circ}$			903
150	461.907		43.8586 - 260.3555	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2F^{\circ}$			903
340	462.009		27.0965 - 243.5420	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2F^{\circ}$			903
120	462.058		27.0965 - 243.5201	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2F^{\circ}$			903
80	463.527		0. - 215.7361	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4H^{\circ}$			903
70	463.588							903
20	463.708		18.3668 - 234.0195	$3d^7 - 3d^6(a^1S)4p$	$a^4P - ^2P^{\circ}$			903
110	464.160		24.6514 - 240.0942	$3d^7 - 3d^6(a^1F)4p$	$a^2P - ^2D^{\circ}$			903
210	464.309		2.0425 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2D^{\circ}$			903
250	464.334		23.6489 - 239.0087	$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^2D^{\circ}$			903
160	464.423		2.6211 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2D^{\circ}$			903
80	464.483		0. - 215.2929	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^{\circ}$			903
440	465.307		0. - 214.9105	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^{\circ}$			903
180	465.504		67.3600 - 282.1795	$3d^7 - 3d^6(b^1D)4p$	$b^2D - ^2D^{\circ}$			903
220	465.673		28.7777 - 243.5201	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2F^{\circ}$			903
210	465.862		67.9898 - 282.6452	$3d^7 - 3d^6(b^1D)4p$	$b^2D - ^2D^{\circ}$			903
310	466.009		0. - 214.5874	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2H^{\circ}$			903
110	466.124		1.1897 - 215.7245	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4H^{\circ}$		Q	903
220	466.572		1.1897 - 215.5168	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
560	467.061		0. - 214.1010	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
300	467.373		43.4375 - 257.4064	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2F^{\circ}$			903
30	467.495		18.3668 - 232.2727	$3d^7 - 3d^6(a^1D)4p$	$a^4P - ^2F^{\circ}$			903
280	467.856		0. - 213.7397	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2G^{\circ}$			903
130	468.149		0. - 213.6069	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^2H^{\circ}$			903
230	468.318		1.1897 - 214.7181	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^{\circ}$			903
380	468.395		2.0425 - 215.5413	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
560	468.437		2.0425 - 215.5168	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
630	468.586		0. - 213.4086	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
200	468.931		2.0425 - 215.2929	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^{\circ}$			903
420	469.133		43.8586 - 257.0180	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2F^{\circ}$			903
20	469.193		0. - 213.1311	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2F^{\circ}$			903
30	469.492		27.0965 - 240.0942	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2D^{\circ}$			903
670	469.669		1.1897 - 214.1010	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
360	469.706		2.6211 - 215.5168	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
70	470.000		28.7777 - 241.5400	$3d^7 - 3d^6(b^3F)4p$	$a^2D - ^2D^{\circ}$			903
20	470.084		18.3668 - 231.0918	$3d^7 - 3d^6(a^1D)4p$	$a^4P - ^2D^{\circ}$			903
140	470.124		19.8296 - 232.5395	$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2F^{\circ}$			903
440	470.194		2.0425 - 214.7181	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^{\circ}$			903
20	470.301							903
340	470.407		2.0425 - 214.6228	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2G^{\circ}$			903
230	470.473		1.1897 - 213.7397	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2G^{\circ}$			903
530	471.016		26.6491 - 238.9578	$3d^7 - 3d^6(a^1F)4p$	$a^3H - ^2G^{\circ}$			903
140	471.071		0. - 212.2818	$3d^7 - 3d^6(a^1F)4p$	$ga^4F - ^4G^{\circ}$			903
630	471.211		1.1897 - 213.4086	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
650	471.236		0. - 212.2070	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^{\circ}$			903
520	471.360		0. - 212.1509	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^{\circ}$			903
490	471.476		2.6211 - 214.7181	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^{\circ}$			903
510	471.565		2.0425 - 214.1010	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^{\circ}$			903
210	471.825		1.1897 - 213.1311	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2F^{\circ}$			903
410	471.894		27.0965 - 239.0087	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2D^{\circ}$			903
140	472.538		43.4375 - 255.0640	$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^2D^{\circ}$			903
20	472.608		20.9476 - 232.5395	$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2F^{\circ}$			903
350	473.104		2.0425 - 213.4121	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^{\circ}$			903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
410	473.225	28.7777 - 240.0942		$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2D^{\circ}$	2-2		903
40	473.308	27.6776 - 238.9578		$3d^7 - 3d^6(a^1F)4p$	$a^2H - ^2G^{\circ}$	2-2		903
560	473.727	1.1897 - 212.2818		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^{\circ}$	2-2		903
320	473.963	0. - 210.9875		$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2I^{\circ}$	2-2		903
580	474.017	1.1897 - 212.1509		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2G^{\circ}$	2-2		903
350	474.399	2.6211 - 213.4121		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^{\circ}$	2-2		903
440	475.351	23.6489 - 234.0195		$3d^7 - 3d^6(a^1S)4p$	$a^2P - ^2P^{\circ}$	2-2		903
580	475.649	2.0425 - 212.2818		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^{\circ}$	2-2		903
80	475.855	20.9476 - 231.0918		$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2D^{\circ}$	2-2		903
530	475.912	0. - 210.1218		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
480	476.640	27.6776 - 237.4803		$3d^7 - 3d^6(a^1F)4p$	$a^2H - ^2G^{\circ}$	2-2		903
530	476.970	2.6211 - 212.2759		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2F^{\circ}$	2-2		903
50	477.240	43.4375 - 252.9754		$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^4D^{\circ}$	2-2		903
60	477.395	43.8586 - 253.3262		$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^4D^{\circ}$	2-2		903
60	477.475	18.1186 - 227.5494		$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^2D^{\circ}$	2-2		903
620	477.550	1.1897 - 210.5906		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
460	477.573	0. - 209.3914		$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2G^{\circ}$	2-2		903
100	477.623	24.6514 - 234.0195		$3d^7 - 3d^6(a^1S)4p$	$a^2P - ^2P^{\circ}$	2-2		903
170	477.897	23.6489 - 232.8970		$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2P^{\circ}$	2-2		903
240	477.998	2.0425 - 211.2468		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
20	478.162	0. - 209.1319		$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2G^{\circ}$	2-2	Q	903
580	478.501	2.0425 - 211.0276		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
420	478.618	0. - 208.9336		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^{\circ}$	2-2		903
570	478.668	0. - 208.9121		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
450	479.088	2.6211 - 211.3517		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
580	479.175	19.8296 - 228.5185		$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2F^{\circ}$	2-2		903
320	479.331	2.6211 - 211.2468		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
260	479.504	2.0425 - 210.5906		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
260	479.828	2.6211 - 211.0276		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
630	480.003	0. - 208.3307		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^{\circ}$	2-2		903
610	480.026	20.9476 - 229.2695		$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2F^{\circ}$	2-2		903
300	480.197	24.6514 - 232.8970		$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2P^{\circ}$	2-2		903
310	480.908	1.1897 - 209.1319		$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2G^{\circ}$	2-2		903
420	481.151	43.8586 - 251.6943		$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2D^{\circ}$	2-2		903
460	481.359	1.1897 - 208.9336		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^{\circ}$	2-2		903
40	481.410	1.1897 - 208.9121		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
390	481.485	2.6211 - 210.3133		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^{\circ}$	2-2		903
100	481.756	20.9476 - 228.5185		$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2F^{\circ}$	2-2		903
360	481.907	43.4375 - 250.9510		$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2D^{\circ}$	2-2		903
340	482.055	23.6489 - 231.0918		$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2D^{\circ}$	2-2		903
160	482.123	1.1897 - 208.6057		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^{\circ}$	2-2		903
300	482.279	2.0425 - 209.3914		$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2G^{\circ}$	2-2		903
430	482.765	1.1897 - 208.3307		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^{\circ}$	2-2		903
320	482.877	24.6514 - 231.7420		$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2D^{\circ}$	2-2		903
330	483.043	18.1186 - 225.1369		$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^{\circ}$	2-2		903
220	483.276	27.0965 - 234.0195		$3d^7 - 3d^6(a^1S)4p$	$a^2D - ^2P^{\circ}$	2-2		903
70	483.388	19.8296 - 226.7025		$3d^7 - 3d^6(a^1I)4p$	$a^2G - ^2I^{\circ}$	2-2		903
190	483.515	18.1186 - 224.9369		$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^2P^{\circ}$	2-2		903
30	483.699	0. - 206.7407		$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4I^{\circ}$	2-2		903
50	483.774	18.1186 - 224.8249		$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4F^{\circ}$	2-2		903
40	484.020	20.9476 - 227.5494		$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2D^{\circ}$	2-2		903
300	484.114	2.0425 - 208.6057		$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^{\circ}$	2-2		903
330	484.201	18.1186 - 224.6457		$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^{\circ}$	2-2		903
340	484.456	2.0425 - 208.4610		$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^{\circ}$	2-2		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
470	484.637		0. - 206.3409	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
270	484.759		2.0425 - 208.3307	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
260	484.778		18.3668 - 224.6457	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
330	485.091		2.6211 - 208.7669	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
190	485.310		18.1186 - 224.1740	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
50	485.350		18.9584 - 224.9965	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
650	485.425		0. - 206.0053	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		903
360	485.472		2.6211 - 208.6057	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
310	485.536		18.1186 - 224.0753	$3d^7 - 3d^6(a^3G)4p$	$a^4P - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
20	485.604		19.8296 - 225.7585	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		903
100	485.670		18.1186 - 224.0213	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
30	485.814		2.6211 - 208.4610	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
290	485.892		18.3668 - 224.1740	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
20	486.117							903
100	486.204		1.1897 - 206.8655	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4H^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
80	486.254		18.3668 - 224.0213	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
530	486.725		1.1897 - 206.6457	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
330	486.758		27.0965 - 232.5395	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
330	486.812		18.3668 - 223.7854	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
480	487.014		1.1897 - 206.5232	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
470	487.071		19.8296 - 225.1369	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
250	487.170		19.8296 - 225.0964	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
270	487.234		28.7777 - 234.0195	$3d^7 - 3d^6(a^3S)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
90	487.270		2.6211 - 207.8462	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
380	487.396		27.0965 - 232.2727	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
600	487.446		1.1897 - 206.3409	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
100	487.584		2.0425 - 207.1360	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4H^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
80	487.819		19.8296 - 224.8249	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
400	487.910		20.9476 - 225.9037	$3d^7 - 3d^6(a^3I)4p$	$a^2G - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
590	487.967		19.8296 - 224.7615	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
270	488.141		18.3668 - 223.2254	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
380	488.274		2.0425 - 206.8470	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
290	488.653		27.0965 - 231.7420	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
570	488.754		2.0425 - 206.6457	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
340	488.842		23.6489 - 228.2142	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
410	488.892		18.1186 - 222.6629	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
470	489.036		20.9476 - 225.4316	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
30	489.486		18.3668 - 222.6629	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
250	489.558		18.9584 - 223.2254	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
350	489.608		19.8296 - 224.0753	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
590	489.658		2.6211 - 206.8470	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
580	489.682		18.1186 - 222.3333	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
20	489.915		28.7777 - 232.8970	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
30	490.213		27.0965 - 231.0918	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
420	490.275		18.3668 - 222.3333	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
160	490.429		23.6489 - 227.5494	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
380	490.494		20.9476 - 224.8249	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
430	490.906		18.9584 - 222.6629	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
320	491.253		24.6514 - 228.2142	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
300	491.328		23.6489 - 227.1811	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
590	491.364		20.9476 - 224.4636	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
280	491.422		28.7777 - 232.2727	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
550	492.216		19.8296 - 222.9933	$3d^7 - 3d^6(a^3I)4p$	$a^2G - ^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		903
70	492.305		20.9476 - 224.0753	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	160	492.441	2.0425 - 205.1141	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4S^o$	$\frac{5}{2} - \frac{3}{2}$		903
	170	492.705	28.7777 - 231.7420	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	360	492.917	19.8296 - 222.7055	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		903
	40	493.756	24.6514 - 227.1811	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		903
	220	494.286	28.7777 - 231.0918	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	494.565	19.8296 - 222.0293	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		903
	120	494.658	19.8296 - 221.9910	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		903
	30	494.871						903
	50	495.584	23.6489 - 225.4316	$3d^7 - 3d^6(a^1G)4p$	$a^2P - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	520	495.648	20.9476 - 222.7055	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		903
	100	496.470	27.0965 - 228.5185	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		903
	80	496.660	23.6489 - 224.9965	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		903
	170	496.806	23.6489 - 224.9369	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	410	497.233	27.0965 - 228.2142	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		903
	290	497.315	20.9476 - 222.0293	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		903
	400	498.706	28.7777 - 229.2975	$3d^7 - 3d^6(a^1S)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		903
	80	498.783	28.7777 - 229.2695	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	390	498.873	27.0965 - 227.5494	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	150	499.141	24.6514 - 224.9965	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		903
	470	499.805	43.4375 - 243.5201	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	620	499.840	19.8296 - 219.8960	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	550	499.873	26.6491 - 226.7025	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		903
	600	499.915	26.6491 - 226.6850	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2I^o$	$\frac{11}{2} - \frac{13}{2}$		903
	410	500.165	19.8296 - 219.7650	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		903
	350	500.799	43.8586 - 243.5420	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		903
	70	500.856	43.8586 - 243.5201	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		903
	120	501.065	18.3668 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	120	502.179	24.6514 - 223.7854	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	540	502.243	26.6491 - 225.7585	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		903
	90	502.391	18.3668 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		903
	600	502.447	19.8296 - 218.8606	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		903
	290	502.978	20.9476 - 219.7650	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		903
	130	503.089	28.7777 - 227.5494	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	480	503.512	20.9476 - 219.5534	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		903
	90	503.931	26.6491 - 225.0964	$3d^7 - 3d^6(a^3D)4p$	$a^2H - ^4F^o$	$\frac{11}{2} - \frac{9}{2}$		903
	250	504.032	28.7777 - 227.1811	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	610	504.477	27.6776 - 225.9037	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		903
	210	504.770	26.6491 - 224.7615	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		903
	360	504.847	27.6776 - 225.7585	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		903
	320	504.951	27.0965 - 225.1369	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		903
	220	505.467	27.0965 - 224.9369	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	190	505.750	27.0965 - 224.8249	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$		903
	120	506.434	27.6776 - 225.1369	$3d^7 - 3d^6(a^3D)4p$	$a^2H - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		903
	60	506.539	27.6776 - 225.0964	$3d^7 - 3d^6(a^3D)4p$	$a^2H - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		903
	60	506.675	27.0965 - 224.4636	$3d^7 - 3d^6(a^1G)4p$	$a^2D - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		903
	120	507.207	18.3668 - 215.5310	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^2S^o$	$\frac{3}{2} - \frac{1}{2}$		903
	480	507.400	27.6776 - 224.7615	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		903
	590	508.179	27.6776 - 224.4636	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		903
	330	508.510	28.7777 - 225.4316	$3d^7 - 3d^6(a^1G)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	200	509.170	27.6776 - 224.0753	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	610	509.313	26.6491 - 222.9933	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		903
	40	509.796	28.7777 - 224.9369	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	50	510.061	26.6491 - 222.7055	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		903
	70	510.449	19.8296 - 215.7361	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^4H^o$	$\frac{9}{2} - \frac{9}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	310	510.584	19.8296 - 215.6845	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^4H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	30	511.025	18.3668 - 214.0558	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	80	511.339	27.0965 - 222.6629	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903
	580	511.925	26.6491 - 221.9910	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		903
	130	512.432	43.8586 - 239.0087	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		903
	70	512.568	43.8586 - 238.9578	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
	200	512.747	27.6776 - 222.7055	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
	60	512.786	18.1186 - 213.1311	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
	80	512.999	27.0965 - 222.0293	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^2G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
	230	513.371	19.8296 - 214.6228	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
	90	513.458	19.8296 - 214.5874	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
	150	514.023	67.9898 - 262.5387	$3d^7 - 3d^6(b^1G)4p$	$b^2D - ^2G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
	290	514.173	19.8296 - 214.3168	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	510	514.525	27.6776 - 222.0293	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
	90	514.628	27.6776 - 221.9910	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
	260	514.684	23.6489 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	90	515.164	26.6491 - 220.7626	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2K^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	120	515.358	43.4375 - 237.4803	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		903
	230	515.560	20.9476 - 214.9105	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
	550	515.701	19.8296 - 213.7397	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
	280	515.823	67.3600 - 261.2263	$3d^7 - 3d^6(b^1G)4p$	$b^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903
	550	516.057	19.8296 - 213.6069	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	570	516.070	23.6489 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	490	516.324	20.9476 - 214.6228	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
	360	516.420	20.9476 - 214.5874	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
	470	517.328	19.8296 - 213.1311	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
	430	517.347	24.6514 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		903
	80	517.719	20.9476 - 214.1010	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
	80	518.175	18.3668 - 211.3517	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		903
	190	518.449	18.3668 - 211.2468	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		903
	150	518.602	18.1186 - 210.9436	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		903
	510	518.670	27.0965 - 219.8960	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	150	519.041	18.3668 - 211.0276	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	190	519.265	18.3668 - 210.9436	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	290	519.556	18.1186 - 210.5906	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		903
	340	519.572	20.9476 - 213.4121	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
	200	519.605	19.8296 - 212.2818	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
	230	519.767	18.9584 - 211.3517	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	340	519.848	67.9898 - 260.3555	$3d^7 - 3d^6(b^1G)4p$	$b^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
	330	519.959	19.8296 - 212.1509	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
	140	520.042	18.9584 - 211.2468	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	410	520.218	18.3668 - 210.5906	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		903
	550	520.256	26.6491 - 218.8606	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	430	520.587	27.6776 - 219.7650	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
	80	520.638	18.9584 - 211.0276	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		903
	390	520.817	18.1186 - 210.1218	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	350	521.156	23.6489 - 215.5310	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		903
	260	522.646	20.9476 - 212.2818	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
	60	523.051	27.6776 - 218.8606	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	180	523.892	24.6514 - 215.5310	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		903
	40	523.983	27.0965 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	410	524.164	28.7777 - 219.5534	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^2F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		903
	50	524.956	18.1186 - 208.6057	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		903
	340	525.185	23.6489 - 214.0558	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	70	525.362	18.1186 - 208.4610	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	460	525.423	27.0965 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	50	525.500	19.8296 - 210.1218	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	120	525.641	18.3668 - 208.6057	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	250	525.718	18.1186 - 208.3307	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	510	525.793						903
	180	526.199	67.3600 - 257.4064	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	250	526.341	23.6489 - 213.6402	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	490	528.248	19.8296 - 209.1319	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	300	528.608	20.9476 - 210.1218	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	360	528.636	28.7777 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	210	528.804	43.4375 - 232.5395	$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	350	528.994	26.6491 - 215.6845	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		903
	270	529.022	67.9898 - 257.0180	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	220	529.131	24.6514 - 213.6402	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	200	529.341						903
	20	529.493	26.6491 - 215.5066	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		903
	160	529.566	43.4375 - 232.2727	$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	450	529.992	43.8586 - 232.5395	$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	80	530.107	28.7777 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	50	530.133	23.6489 - 212.2759	$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	120	530.307						903
	440	530.656	20.9476 - 209.3914	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	110	530.749	43.8586 - 232.2727	$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	390	531.293	19.8296 - 208.0468	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4I^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	120	531.386	20.9476 - 209.1319	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	180	531.697						903
	230	531.737	27.6776 - 215.7361	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	110	532.008	20.9476 - 208.9121	$3d^7 - 3d^6(a^3P)4p$	$a^2G - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	170	532.754	67.3600 - 255.0640	$3d^7 - 3d^6(b^3P)4p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	540	532.847	26.6491 - 214.3168	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		903
	450	532.887	20.9476 - 208.6057	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	160	532.981	27.0965 - 214.7181	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	480	533.137	0. - 187.5703	$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	110	533.248	27.0965 - 214.6228	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	220	533.903	23.6489 - 210.9436	$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	430	534.080	43.8586 - 231.0918	$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	120	534.339						903
	460	534.388	1.1897 - 188.3201	$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	270	534.491	26.6491 - 213.7397	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	210	534.648	19.8296 - 206.8655	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4H^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	170	534.742	27.0965 - 214.1010	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	170	534.759	18.1186 - 205.1141	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	640	534.874	27.0965 - 214.0558	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	400	534.905	27.6776 - 214.6228	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	540	535.003	19.8296 - 206.7407	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4I^\circ$	$\frac{3}{2} - \frac{11}{2}$		903
	200	535.131						903
	370	535.386	2.0425 - 188.8242	$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	140	535.441	28.7777 - 215.5413	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	280	535.472	18.3668 - 205.1141	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4S^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	160	535.903	24.6514 - 211.2468	$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		903
	80	535.986						903
	70	536.084						903
	660	536.282	0. - 186.4701	$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	590	536.535	1.1897 - 187.5703	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		903
	20	536.659	23.6489 - 209.9851	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	536.754				$\frac{3}{2} - \frac{3}{2}$		903
	540	536.832	2.0425 - 188.3201	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		903
	20	536.927				$\frac{5}{2} - \frac{5}{2}$		903
	560	537.048	2.6211 - 188.8242	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	430	537.080	20.9476 - 207.1360	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$		903
	330	537.441	27.6776 - 213.7397	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		903
	370	537.522	27.0965 - 213.1311	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	290	537.825	27.6776 - 213.6069	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2H^o$	$\frac{3}{2} - \frac{3}{2}$		903
	670	537.955	0. - 185.8900	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	90	538.051				$\frac{3}{2} - \frac{3}{2}$		903
	370	538.257						903
	90	538.312						903
	50	538.404	27.6776 - 213.4086	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	Q	903
	340	538.503	2.6211 - 188.3201	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	70	538.590	24.6514 - 210.3133	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	370	539.005	2.0425 - 187.5703	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	200	539.072	26.6491 - 212.1509	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		903
	20	539.339	43.8586 - 229.2695	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		903
	30	539.476				$\frac{7}{2} - \frac{7}{2}$		903
	490	539.558	24.6514 - 209.9851	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	640	539.590	1.1897 - 186.5161	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		903
	370	539.727	1.1897 - 186.4701	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	50	539.849						903
	220	539.989	27.0965 - 212.2818	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	540.450				$\frac{3}{2} - \frac{3}{2}$		903
	590	540.792	2.0425 - 186.9572	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	200	540.947	28.7777 - 213.6402	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	541.193	43.4375 - 228.2142	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	541.342						903
	460	541.421	1.1897 - 185.8900	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		903
	80	541.521	43.8586 - 228.5185	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		903
	140	541.600	28.7777 - 213.4121	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$		903
	550	541.697	2.6211 - 187.2257	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	40	541.908	27.6776 - 212.2070	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		903
	490	542.088	2.0425 - 186.5161	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		903
	280	542.305	2.0425 - 186.4414	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{1}{2} - \frac{1}{2}$		903
	410	542.405	23.6489 - 208.0091	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	470	542.488	2.6211 - 186.9572	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	450	542.549	1.1897 - 185.5053	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	543.024	27.0965 - 211.2468	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	500	543.189	0. - 184.0991	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$		903
	20	543.676	27.0965 - 211.0276	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	70	543.789	2.6211 - 186.5161	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	110	543.928	2.0425 - 185.8900	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	150	544.013	2.6211 - 186.4414	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{1}{2} - \frac{1}{2}$		903
	210	544.232	43.4375 - 227.1811	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		903
	470	544.351	67.9898 - 251.6943	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	400	544.375	43.8586 - 227.5494	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	320	544.695	67.3600 - 250.9510	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	500	544.867	26.6491 - 210.1770	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		903
	170	544.950	28.7777 - 212.2759	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	230	545.066	2.0425 - 185.5053	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
450	545.509		27.6776 - 210.9875	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		903
20	545.652							903
40	546.565		67.9898 - 250.9510	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
150	546.717		1.1897 - 184.0991	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		903
60	546.804		2.6211 - 185.5053	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		903
20	546.866							903
20	546.974							903
20	547.256							903
20	547.330							903
20	547.426							903
40	547.669							903
50	547.897							903
240	547.984		26.6491 - 209.1319	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
90	548.101		27.6776 - 210.1218	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
70	548.155							903
60	548.294							903
90	548.546		27.0965 - 209.3914	$3d^7 - 3d^6(a^3H)4p$	$a^2D - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		903
70	549.013							903
290	549.073		0. - 182.1256	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
70	549.161							903
270	549.315		0. - 182.0449	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6F^\circ$	$\frac{9}{2} - \frac{9}{2}$		903
70	549.366							903
270	549.457		43.4375 - 225.4316	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2F^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
180	549.496		26.6491 - 208.6313	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$	Q	903
140	550.303		27.6776 - 209.3914	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
70	551.089		27.6776 - 209.1319	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
100	551.268		26.6491 - 208.0468	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4I^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
150	551.627		43.8586 - 225.1369	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^4D^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
110	551.755		43.8586 - 225.0964	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
260	552.401		43.4375 - 224.4636	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
270	552.437		1.1897 - 182.2068	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6F^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
120	552.685		1.1897 - 182.1256	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6F^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
260	552.779		43.8586 - 224.7615	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
160	554.379							903
250	554.893		43.8586 - 224.0753	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		903
100	555.062		2.0425 - 182.2068	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$	Q	903
20	556.604		2.6211 - 182.2884	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
30	557.243		27.6776 - 207.1360	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		903
10	557.401							903
10	557.566		26.6491 - 206.0053	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		903
10	557.949		28.7777 - 208.0091	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
10	558.469		27.6776 - 206.7407	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4I^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
250	559.935		43.4375 - 222.0293	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
300	561.378		43.8586 - 221.9910	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
40	566.714		43.4375 - 219.8960	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2F^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
100	567.811		43.4375 - 219.5534	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2F^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
150	568.056		43.8586 - 219.8960	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2F^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
20	568.489		43.8586 - 219.7650	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
10	568.621		0. - 175.8691	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
20	569.165		43.8586 - 219.5534	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2F^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
20	569.564		0. - 175.5695	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
10	571.262		1.1897 - 176.2471	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^6D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
60	573.063		43.4375 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2D^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
10	573.970							903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
30	574.799		43.4375 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		903
250	575.818		18.3668 - 192.0335	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
70	576.180		43.8586 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		903
250	576.376		18.1186 - 191.6182	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
100	577.201		18.3668 - 191.6182	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
80	577.788		18.9584 - 192.0335	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
400	579.009		18.1186 - 190.8303	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
300	579.183		18.9584 - 191.6182	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	579.337							903
300	579.835		18.3668 - 190.8303	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
100	580.423		43.4375 - 215.7245	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4H^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	581.818		43.8586 - 215.7361	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4H^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	582.167							903
10	582.544		43.8586 - 215.5168	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$	Q	903
30	584.167		43.4375 - 214.6228	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	584.559							903
10	584.741		67.9898 - 239.0087	$3d^7 - 3d^6(a^1F)4p$	$b^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	588.426							903
20	588.654		43.8586 - 213.7397	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		903
30	589.299		43.4375 - 213.1311	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	589.803		43.8586 - 213.4086	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	590.152		18.1186 - 187.5703	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	590.943							903
30	592.224		18.3668 - 187.2257	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	592.280		43.4375 - 212.2759	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		903
60	593.148		18.3668 - 186.9572	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
60	593.842		18.1186 - 186.5161	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
60	594.294		18.9584 - 187.2257	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
150	594.707		18.3668 - 186.5161	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	595.008							903
80	595.249		18.9584 - 186.9572	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	595.327		23.6489 - 191.6182	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
30	595.447							903
20	595.621							903
300	596.058		18.1186 - 185.8900	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	596.338							903
10	597.083		18.9584 - 186.4414	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^6P^o$	$\frac{1}{2} - \frac{1}{2}$	Q	903
30	597.436		24.6514 - 192.0335	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
30	598.154		23.6489 - 190.8303	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
30	598.319		18.3668 - 185.5053	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^6P^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	598.932		24.6514 - 191.6182	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		903
30	599.197							903
20	599.761		43.8586 - 210.5906	$3d^7 - 3d^6(a^3P)4p$	$a^2F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	Q	903
20	599.930		43.4375 - 210.1218	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	601.063							903
20	602.323		67.9898 - 234.0195	$3d^7 - 3d^6(a^1S)4p$	$b^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		903
100	602.482		18.1186 - 184.0991	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^6P^o$	$\frac{1}{2} - \frac{1}{2}$		903
100	602.573		43.4375 - 209.3914	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	603.770							903
20	604.106		43.8586 - 209.3914	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		903
10	604.738							903
150	605.045		43.8586 - 209.1319	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		903
30	605.785		43.8586 - 208.9336	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		903
20	606.130							903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	606.597						903
	10	606.811						903
	20	607.260	23.6489 - 188.3201	$3d^7 - 3d^6(a^5D)4p$	$a^2P - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	10	607.781						903
	10	608.709	67.9898 - 232.2727	$3d^7 - 3d^6(a^1D)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	50	609.058	43.8586 - 208.0468	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^4I^o$	$\frac{2}{2} - \frac{6}{2}$		903
	50	609.448	18.1186 - 182.2068	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6F^o$	$\frac{5}{2} - \frac{5}{2}$		903
	10	609.593						903
	250	610.043	18.3668 - 182.2884	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6F^o$	$\frac{3}{2} - \frac{1}{2}$	Q	903
	10	610.255						903
	10	610.366	18.3668 - 182.2068	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	20	612.351	18.9584 - 182.2599	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6F^o$	$\frac{1}{2} - \frac{3}{2}$		903
	10	613.474	43.8586 - 206.8655	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^4H^o$	$\frac{7}{2} - \frac{9}{2}$		903
	20	614.005	23.6489 - 186.5161	$3d^7 - 3d^6(a^5D)4p$	$a^2P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
	20	617.635	67.3600 - 229.2695	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	10	621.238						903
	10	621.690	67.3600 - 228.2142	$3d^7 - 3d^6(a^1D)4p$	$b^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	622.940	67.9898 - 228.5185	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	10	624.130	67.9898 - 228.2142	$3d^7 - 3d^6(a^1D)4p$	$b^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	10	624.243	67.3600 - 227.5494	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	30	626.712	67.9898 - 227.5494	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	10	631.158	18.1186 - 176.5544	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6D^o$	$\frac{3}{2} - \frac{5}{2}$		903
	30	631.421						903
	30	632.415	18.1186 - 176.2471	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6D^o$	$\frac{5}{2} - \frac{5}{2}$		903
	50	632.615	67.3600 - 225.4316	$3d^7 - 3d^6(a^1G)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	10	632.835						903
	10	632.923						903
	10	633.910	18.1186 - 175.8691	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6D^o$	$\frac{5}{2} - \frac{7}{2}$		903
	80	634.276	28.7777 - 186.4414	$3d^7 - 3d^6(a^5D)4p$	$a^2D - ^6P^o$	$\frac{3}{2} - \frac{5}{2}$	Q	903
	20	634.377	67.3600 - 224.9965	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		903
	30	636.343	67.9898 - 225.1369	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		903
	20	637.158	67.9898 - 224.9369	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	638.329	67.3600 - 224.0213	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	20	639.080	67.9898 - 224.4636	$3d^7 - 3d^6(a^1G)4p$	$b^2D - ^2G^o$	$\frac{3}{2} - \frac{7}{2}$		903
	30	640.668	67.9898 - 224.0753	$3d^7 - 3d^6(a^1G)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
	20	649.870						903
		651.32	0. - 153.5336	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		652.15	0. - 153.3388	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		656.41	1.1897 - 153.5336	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
	100	657.043	67.3600 - 219.5534	$3d^7 - 3d^6(a^3G)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
		657.25	1.1897 - 153.3388	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		657.36	1.1897 - 153.3138	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
	150	658.285	67.9898 - 219.8960	$3d^7 - 3d^6(a^3G)4p$	$b^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		903
		659.73	19.8296 - 171.4060	$3d^7 - 3d^6(a^1F)4s$	$a^2G - ^2F$	$\frac{10}{2} - \frac{10}{2}$	F,P	375,903
	30	659.783	67.9898 - 219.5534	$3d^7 - 3d^6(a^3G)4p$	$b^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
		660.91	2.0425 - 153.3494	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		660.95	2.0425 - 153.3388	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		661.06	2.0425 - 153.3138	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		663.45	2.6211 - 153.3494	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		663.60	2.6211 - 153.3138	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
	30	664.086	67.3600 - 217.9397	$3d^7 - 3d^6(a^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
		664.63	20.9476 - 171.4080	$3d^7 - 3d^6(a^1F)4s$	$a^2G - ^2F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
	40	669.223	67.9898 - 217.4143	$3d^7 - 3d^6(a^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	150	672.957						903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	678.122	28.7777 - 176.2471	$3d^7 - 3d^6(a^5D)4p$	$a^2D - ^6D^o$	$\frac{1}{2} - \frac{5}{2}$	Q	903
	10	683.321						903
	30	683.639	67.3600 - 213.6402	$3d^7 - 3d^6(a^3P)4p$	$b^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	Q	903
	40	684.631	67.9898 - 214.0558	$3d^7 - 3d^6(a^3P)4p$	$b^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		903
		686.33	0. - 145.7022	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,903
	100	688.947						903
	10	689.741						903
		690.27	1.1897 - 146.0615	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		690.54	0. - 144.8151	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{9}{2} - \frac{11}{2}$	F,P	375,903
	50	690.689						903
	10	690.851						903
		691.98	1.1897 - 145.7022	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{7}{2} - \frac{9}{2}$	F,P	375,903
		692.96	27.0965 - 171.4060	$3d^7 - 3d^6(a^1F)4s$	$a^2D - ^2F$	$\frac{5}{2} - \frac{7}{2}$	F,P	375,903
		693.91	2.0425 - 146.1538	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		694.35	2.0425 - 146.0615	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		696.09	2.0425 - 145.7022	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{5}{2} - \frac{9}{2}$	F,P	375,903
		696.26	1.1897 - 144.8151	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{7}{2} - \frac{11}{2}$	F,P	375,903
		696.71	2.6211 - 146.1538	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		697.15	2.6211 - 146.0615	$3d^7 - 3d^6(a^3G)4s$	$ga^4F - ^4G$	$\frac{1}{2} - \frac{7}{2}$	F,P	375,903
	30	698.105						903
	10	698.344						903
		701.11	28.7777 - 171.4080	$3d^7 - 3d^6(a^1F)4s$	$a^2D - ^2F$	$\frac{1}{2} - \frac{5}{2}$	F,P	375,903
		705.06	0. - 141.8320	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		706.33	0. - 141.5772	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
	10	707.779						903
		708.11	0. - 141.2203	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{9}{2} - \frac{9}{2}$	F,P	375,903
	10	708.185						903
	10	708.567						903
		710.06	1.1897 - 142.0235	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{7}{2} - \frac{1}{2}$	F,P	375,903
		711.02	1.1897 - 141.8320	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		712.31	1.1897 - 141.5772	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		714.13	1.1897 - 141.2203	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{7}{2} - \frac{10}{2}$	F,P	375,903
		714.38	2.0425 - 142.0235	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		715.36	2.0425 - 141.8320	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		716.67	2.0425 - 141.5772	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{5}{2} - \frac{7}{2}$	F,P	375,903
		717.35	2.6211 - 142.0235	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		718.33	2.6211 - 141.8320	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{1}{2} - \frac{5}{2}$	F,P	375,903
		718.51	2.0425 - 141.2203	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		719.65	2.6211 - 141.5772	$3d^7 - 3d^6(a^3F)4s$	$ga^4F - ^4F$	$\frac{3}{2} - \frac{7}{2}$	F,P	375,903
		732.48	19.8296 - 156.3512	$3d^7 - 3d^6(a^1G)4s$	$a^2G - ^2G$	$\frac{10}{2} - \frac{10}{2}$	F,P	375,903
		732.79	19.8296 - 156.2940	$3d^7 - 3d^6(a^1G)4s$	$a^2G - ^2G$	$\frac{9}{2} - \frac{9}{2}$	F,P	375,903
		734.38	23.6489 - 159.8184	$3d^7 - 3d^6(a^3D)4s$	$a^2P - ^2D$	$\frac{1}{2} - \frac{5}{2}$	F,P	375,903
		736.11	23.6489 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$a^2P - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		738.47	18.1186 - 153.5336	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{5}{2} - \frac{7}{2}$	F,P	375,903
		738.53	20.9476 - 156.3512	$3d^7 - 3d^6(a^1G)4s$	$a^2G - ^2G$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		738.84	20.9476 - 156.2940	$3d^7 - 3d^6(a^1G)4s$	$a^2G - ^2G$	$\frac{7}{2} - \frac{9}{2}$	F,P	375,903
		739.53	18.1186 - 153.3388	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		739.83	18.3668 - 153.5336	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{3}{2} - \frac{7}{2}$	F,P	375,903
		740.89	18.3668 - 153.3388	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{5}{2}$	F,P	375,903
		741.03	18.3668 - 153.3138	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{7}{2}$	F,P	375,903
		741.58	24.6514 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$a^2P - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F,P	375,903
		744.10	18.9584 - 153.3494	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		744.16	18.9584 - 153.3388	$3d^7 - 3d^6(a^3D)4s$	$a^3P - ^4D$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		744.29	18.9584 - 153.3138	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{3}{2}$	F,P	375,903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		753.46	27.0965 - 159.8184	$3d^7 - 3d^6(a^3D)4s$	$a^2D - ^2D$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		754.64	19.8296 - 152.3437	$3d^7 - 3d^6(a^3G)4s$	$a^2G - ^2G$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		755.28	27.0965 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$a^2D - ^2D$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		759.04	19.8296 - 151.5747	$3d^7 - 3d^6(a^3G)4s$	$a^2G - ^2G$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		761.06	20.9476 - 152.3437	$3d^7 - 3d^6(a^3G)4s$	$a^2G - ^2G$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		763.12	28.7777 - 159.8184	$3d^7 - 3d^6(a^3D)4s$	$a^2D - ^2D$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		764.99	28.7777 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$a^2D - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		771.00	26.6491 - 156.3512	$3d^7 - 3d^6(a^1G)4s$	$a^2H - ^2G$	$\frac{11}{2} - \frac{7}{2}$	F,P	375,903
		771.34	26.6491 - 156.2940	$3d^7 - 3d^6(a^1G)4s$	$a^2H - ^2G$	$\frac{11}{2} - \frac{9}{2}$	F,P	375,903
		777.16	27.6776 - 156.3512	$3d^7 - 3d^6(a^1G)4s$	$a^2H - ^2G$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		777.25	26.6491 - 155.3087	$3d^7 - 3d^6(a^1I)4s$	$a^2H - ^2I$	$\frac{11}{2} - \frac{11}{2}$	F,P	375,903
		777.51	27.6776 - 156.2940	$3d^7 - 3d^6(a^1G)4s$	$a^2H - ^2G$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		777.58	26.6491 - 155.2537	$3d^7 - 3d^6(a^1I)4s$	$a^2H - ^2I$	$\frac{11}{2} - \frac{11}{2}$	F,P	375,903
		778.04	19.8296 - 148.3582	$3d^7 - 3d^6(a^3F)4s$	$a^2G - ^2F$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		781.43	43.4375 - 171.4080	$3d^7 - 3d^6(a^1F)4s$	$a^2F - ^2F$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		783.51	27.6776 - 155.3087	$3d^7 - 3d^6(a^1I)4s$	$a^2H - ^2I$	$\frac{9}{2} - \frac{11}{2}$	F,P	375,903
		783.85	27.6776 - 155.2537	$3d^7 - 3d^6(a^1I)4s$	$a^2H - ^2I$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		784.02	43.8586 - 171.4060	$3d^7 - 3d^6(a^1F)4s$	$a^2F - ^2F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		784.86	20.9476 - 148.3582	$3d^7 - 3d^6(a^3F)4s$	$a^2G - ^2F$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		789.34	20.9476 - 147.6359	$3d^7 - 3d^6(a^3F)4s$	$a^2G - ^2F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		791.36	19.8296 - 146.1943	$3d^7 - 3d^6(a^3H)4s$	$a^2G - ^2H$	$\frac{9}{2} - \frac{9}{2}$	F,P	375,903
		792.81	19.8296 - 145.9625	$3d^7 - 3d^6(a^3H)4s$	$a^2G - ^2H$	$\frac{9}{2} - \frac{11}{2}$	F,P	375,903
		795.58	26.6491 - 152.3437	$3d^7 - 3d^6(a^3G)4s$	$a^2H - ^2G$	$\frac{11}{2} - \frac{7}{2}$	F,P	375,903
		798.42	20.9476 - 146.1943	$3d^7 - 3d^6(a^3H)4s$	$a^2G - ^2H$	$\frac{7}{2} - \frac{9}{2}$	F,P	375,903
		799.90	20.9476 - 145.9625	$3d^7 - 3d^6(a^3H)4s$	$a^2G - ^2H$	$\frac{7}{2} - \frac{11}{2}$	F,P	375,903
		800.48	26.6491 - 151.5747	$3d^7 - 3d^6(a^3G)4s$	$a^2H - ^2G$	$\frac{11}{2} - \frac{9}{2}$	F,P	375,903
		810.09	18.1186 - 141.5612	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,903
		811.73	18.3668 - 141.5612	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		815.64	18.9584 - 141.5612	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		818.17	18.1186 - 140.3430	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		819.83	18.3668 - 140.3430	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		822.75	23.6489 - 145.1921	$3d^7 - 3d^6(a^3P)4s$	$a^2P - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		823.83	18.9584 - 140.3430	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		825.11	1.1897 - 122.3861	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{7}{2} - \frac{1}{2}$	F,P	375,903
		827.06	0. - 120.9095	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{9}{2} - \frac{7}{2}$	F,P	375,903
		828.67	2.0425 - 122.7174	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,903
		829.06	1.1897 - 121.8077	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		829.60	27.0965 - 147.6359	$3d^7 - 3d^6(a^3F)4s$	$a^2D - ^2F$	$\frac{5}{2} - \frac{7}{2}$	F,P	375,903
		830.95	2.0425 - 122.3861	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		831.06	18.1186 - 138.4462	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		832.67	2.6211 - 122.7174	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		832.78	18.3668 - 138.4462	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		834.97	2.0425 - 121.8077	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903
		835.28	1.1897 - 120.9095	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,903
		836.26	28.7777 - 148.3582	$3d^7 - 3d^6(a^3F)4s$	$a^2D - ^2F$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		836.50	26.6491 - 146.1943	$3d^7 - 3d^6(a^3H)4s$	$a^2H - ^2H$	$\frac{11}{2} - \frac{9}{2}$	F,P	375,903
		836.90	18.9584 - 138.4462	$3d^7 - 3d^6(a^3P)4s$	$a^4P - ^4P$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		838.13	26.6491 - 145.9625	$3d^7 - 3d^6(a^3H)4s$	$a^2H - ^2H$	$\frac{11}{2} - \frac{11}{2}$	F,P	375,903
		841.34	28.7777 - 147.6359	$3d^7 - 3d^6(a^3F)4s$	$a^2D - ^2F$	$\frac{3}{2} - \frac{7}{2}$	F,P	375,903
		843.76	27.6776 - 146.1943	$3d^7 - 3d^6(a^3H)4s$	$a^2H - ^2H$	$\frac{9}{2} - \frac{9}{2}$	F,P	375,903
		845.42	27.6776 - 145.9625	$3d^7 - 3d^6(a^3H)4s$	$a^2H - ^2H$	$\frac{9}{2} - \frac{11}{2}$	F,P	375,903
		846.77	27.0965 - 145.1921	$3d^7 - 3d^6(a^3P)4s$	$a^2D - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,903
		859.00	28.7777 - 145.1921	$3d^7 - 3d^6(a^3P)4s$	$a^2D - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		859.25	43.4375 - 159.8184	$3d^7 - 3d^6(a^3D)4s$	$a^2F - ^2D$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		861.62	43.4375 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$a^2F - ^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		862.37	43.8586 - 159.8184	$3d^7 - 3d^6(a^3D)4s$	$a^2F - ^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		864.75	43.8586 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$a^2F - ^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		885.63	43.4375 - 156.3512	$3d^7 - 3d^6(a^1G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		886.08	43.4375 - 156.2940	$3d^7 - 3d^6(a^1G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		888.95	43.8586 - 156.3512	$3d^7 - 3d^6(a^1G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		889.40	43.8586 - 156.2940	$3d^7 - 3d^6(a^1G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		894.75	0. - 111.7633	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		899.31	0. - 111.1958	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		901.21	1.1897 - 112.1519	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		904.38	1.1897 - 111.7633	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		905.71	0. - 110.4106	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		906.32	2.0425 - 112.3793	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		908.19	2.0425 - 112.1519	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		909.04	1.1897 - 111.1958	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,903
		911.09	2.6211 - 112.3793	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		911.40	2.0425 - 111.7633	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		912.99	2.6211 - 112.1519	$3d^7 - 3d^6(a^3D)4s$	$ga^4F - ^6D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		918.22	43.4375 - 152.3437	$3d^7 - 3d^6(a^3G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		921.79	43.8586 - 152.3437	$3d^7 - 3d^6(a^3G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		924.75	43.4375 - 151.5747	$3d^7 - 3d^6(a^3G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		928.37	43.8586 - 151.5747	$3d^7 - 3d^6(a^3G)4s$	$a^2F - ^2G$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		953.10	43.4375 - 148.3582	$3d^7 - 3d^6(a^3F)4s$	$a^2F - ^2F$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		956.94	43.8586 - 148.3582	$3d^7 - 3d^6(a^3F)4s$	$a^2F - ^2F$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		959.71	43.4375 - 147.6359	$3d^7 - 3d^6(a^3F)4s$	$a^2F - ^2F$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		961.09	67.3600 - 171.4080	$3d^7 - 3d^6(a^3F)4s$	$b^2D - ^2F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		961.11	67.3600 - 171.4060	$3d^7 - 3d^6(a^3F)4s$	$b^2D - ^2F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		961.36	18.3668 - 122.3861	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		963.60	43.8586 - 147.6359	$3d^7 - 3d^6(a^3F)4s$	$a^2F - ^2F$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		963.77	18.9584 - 122.7174	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		964.42	18.1186 - 121.8077	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		966.74	18.3668 - 121.8077	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		966.86	18.9584 - 122.3861	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		966.97	67.9898 - 171.4060	$3d^7 - 3d^6(a^3F)4s$	$b^2D - ^2F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		972.30	18.9584 - 121.8077	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		972.85	18.1186 - 120.9095	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		975.20	18.3668 - 120.9095	$3d^7 - 3d^6(a^3D)4s$	$a^4P - ^4D$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,903
		1081.6	67.3600 - 159.8184	$3d^7 - 3d^6(a^3D)4s$	$b^2D - ^2D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		1085.3	67.3600 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$b^2D - ^2D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		1089.0	67.9898 - 159.8184	$3d^7 - 3d^6(a^3D)4s$	$b^2D - ^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
		1092.8	67.9898 - 159.4985	$3d^7 - 3d^6(a^3D)4s$	$b^2D - ^2D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
	0	1210.116						903
		1234.6	67.3600 - 148.3582	$3d^7 - 3d^6(a^3F)4s$	$b^2D - ^2F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		1244.3	67.9898 - 148.3582	$3d^7 - 3d^6(a^3F)4s$	$b^2D - ^2F$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
	60	1245.631	144.8151 - 225.0964	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
		1245.7	67.3600 - 147.6359	$3d^7 - 3d^6(a^3F)4s$	$b^2D - ^2F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
		1255.5	67.9898 - 147.6359	$3d^7 - 3d^6(a^3F)4s$	$b^2D - ^2F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,903
	10	1263.863	145.7022 - 224.8249	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	10	1269.056	145.9625 - 224.7615	$3d^6(a^3H)4s - 3d^6(a^1G)4p$	$^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	60	1282.750						903
	20	1287.406						903
	0	1288.316						903
		1295.3	67.9898 - 145.1921	$3d^7 - 3d^6(a^3P)4s$	$b^2D - ^2P$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,903
	10	1295.736	144.8151 - 221.9910	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1297.481	140.3430 - 217.4143	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		903
	140	1306.225	111.7633 - 188.3201	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		903
	20	1309.332	111.1958 - 187.5703	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		903
	30	1311.573	156.2940 - 232.5395	$3d^6(a^1G)4s - 3d^6(a^1D)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	260	1312.028	139.2894 - 215.5066	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		903
	20	1313.750	139.6192 - 215.7361	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{9}{2}$		903
	240	1314.660	139.6192 - 215.6845	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		903
	20	1314.757	110.4106 - 186.4701	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		903
	20	1315.286	145.9625 - 221.9910	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		903
	0	1317.738	139.6192 - 215.5066	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		903
	100	1318.379	139.8867 - 215.7361	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4H^o$	$\frac{7}{2} - \frac{9}{2}$		903
	40	1318.652	146.1943 - 222.0293	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		903
	120	1323.031	140.1409 - 215.7245	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$		903
	200	1324.867	110.4106 - 185.8900	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		903
	40	1327.665	111.1958 - 186.5161	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		903
	20	1328.480	111.1958 - 186.4701	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		903
	10	1329.885	111.7633 - 186.9572	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		299
	210	1332.843	139.2894 - 214.3168	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		903
	0	1335.030						903
	220	1335.623	179.7920 - 254.6634	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		903
	170	1336.164						903
	30	1336.805	112.1519 - 186.9572	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		903
	100	1337.751	111.7633 - 186.5161	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		903
	40	1337.973	156.3512 - 231.0918	$3d^6(a^1G)4s - 3d^6(a^1D)4p$	$^2G - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		903
	70	1338.796	111.1958 - 185.8900	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		903
	430	1339.070	111.7633 - 186.4414	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	350	1339.674	179.6550 - 254.3000	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		903
	10	1342.060						903
	140	1344.099	179.7240 - 254.1237	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		903
	0	1344.702						903
	580	1345.718	111.1958 - 185.5053	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6P^o$	$\frac{7}{2} - \frac{5}{2}$		903
	470	1346.083	112.1519 - 186.4414	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	0	1347.447	139.8867 - 214.1010	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	20	1349.151	139.6192 - 213.7397	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		903
	510	1350.218	112.3793 - 186.4414	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6P^o$	$\frac{1}{2} - \frac{3}{2}$		903
	90	1350.515	144.8151 - 218.8606	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		903
	170	1351.419	179.5830 - 253.5793	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		903
	20	1351.574	139.6192 - 213.6069	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		903
	50	1351.733	141.5612 - 215.5413	$3d^6(a^3P)4s - 3d^6(a^3G)4p$	$^4P - ^4F^o$	$\frac{1}{2} - \frac{3}{2}$		903
	40	1354.149	179.7920 - 253.6391	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		903
	0	1354.975	145.9625 - 219.7650	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2H^o$	$\frac{11}{2} - \frac{9}{2}$		903
	570	1356.087	111.7633 - 185.5053	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6P^o$	$\frac{2}{2} - \frac{2}{2}$		903
	20	1356.550	141.5772 - 215.2929	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$	Q	903
	0	1356.813	146.1943 - 219.8960	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	690	1357.068	110.4106 - 184.0991	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6P^o$	$\frac{9}{2} - \frac{7}{2}$		903
	60	1357.679						903
	390	1359.242	146.1943 - 219.7650	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		903
	40	1359.442	152.3437 - 225.9037	$3d^6(a^3G)4s - 3d^6(a^1I)4p$	$^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		903
	60	1359.911	179.7920 - 253.3262	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		903
	0	1362.426	159.4985 - 232.8970	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		903
	10	1363.012	141.2203 - 214.5874	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$	Q	903
	60	1363.135						903
	450	1363.267	112.1519 - 185.5053	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6P^o$	$\frac{3}{2} - \frac{5}{2}$		903
	40	1363.475						903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	1364.795	140.1409 - 213.4121	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	70	1365.162	179.7240 - 252.9754	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	30	1365.283	139.8867 - 213.1311	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	0	1366.895	145.7022 - 218.8606	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2H^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	40	1368.208	152.3437 - 225.4316	$3d^6(a^3G)4s - 3d^6(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	10	1368.987	141.5772 - 214.6228	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$	Q	903
	0	1369.212						903
	0	1369.690	141.5772 - 214.5874	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2H^\circ$	$\frac{7}{2} - \frac{5}{2}$	Q	903
	10	1370.062	140.1409 - 213.1311	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$	Q	903
	240	1371.411	139.2894 - 212.2070	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{13}{2} - \frac{11}{2}$		903
	600	1371.697	111.1958 - 184.0991	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	540	1371.780	145.9625 - 218.8606	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	10	1372.006	141.8320 - 214.7181	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	20	1373.774	152.3437 - 225.1369	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^2G - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	20	1377.644	139.6192 - 212.2070	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	160	1378.708	139.6192 - 212.1509	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	0	1379.337	138.4462 - 210.9436	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	10	1381.051						903
	150	1381.307	139.8867 - 212.2818	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	20	1381.905						903
	30	1382.290						903
	400	1382.459	111.7633 - 184.0991	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	10	1382.745	139.8867 - 212.2070	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	20	1383.727	141.8320 - 214.1010	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	50	1383.805	139.8867 - 212.1509	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	20	1383.899	147.6359 - 219.8960	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	50	1384.574	156.2940 - 228.5185	$3d^6(a^1G)4s - 3d^6(a^3D)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	20	1385.274	141.2203 - 213.4086	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	20	1385.763	141.5772 - 213.7397	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	470	1386.230						903
	290	1386.711	171.4060 - 243.5201	$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	70	1386.991						903
	20	1388.702	140.1409 - 212.1509	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	20	1390.614	141.2203 - 213.1311	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	60	1394.103	152.3437 - 224.0753	$3d^6(a^3G)4s - 3d^6(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	30	1394.739	139.2894 - 210.9875	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2I^\circ$	$\frac{13}{2} - \frac{11}{2}$		903
	10	1395.031	153.3138 - 224.9965	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	30	1395.190	138.4462 - 210.1218	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	20	1395.734	153.3494 - 224.9965	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	450	1395.993	110.4106 - 182.0449	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	400	1396.560	153.5336 - 225.1369	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	620	1397.364	153.5336 - 225.0964	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	760	1398.193	110.4106 - 181.9315	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	450	1398.838						903
	30	1399.604	155.2537 - 226.7025	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{13}{2} - \frac{11}{2}$		903
	660	1399.947	155.2537 - 226.6850	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{13}{2} - \frac{11}{2}$		903
	100	1400.211	151.5747 - 222.9933	$3d^6(a^3G)4s - 3d^6(a^1I)4p$	$^2G - ^2H^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	270	1400.376	185.9970 - 257.4064	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	310	1400.570						903
	630	1400.678	155.3087 - 226.7025	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	290	1400.782	142.0235 - 213.4121	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	20	1401.027	155.3087 - 226.6850	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	360	1401.895	153.3138 - 224.6457	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		903
	30	1402.133						903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
120	1402.391	153.3388 - 224.6457		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
150	1402.542	141.8320 - 213.1311		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
30	1403.944	153.5336 - 224.7615		$3d^6(a^3D)4s - 3d^6(a^1G)4p$	$^4D - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		903
30	1404.084							903
20	1404.609	148.3582 - 219.5534		$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
30	1405.940							903
40	1406.058							903
90	1406.458	139.8867 - 210.9875		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2I^o$	$\frac{3}{2} - \frac{5}{2}$		903
180	1407.440	185.9670 - 257.0180		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
20	1408.231	111.1958 - 182.2068		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
630	1408.711	141.2203 - 212.2070		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		903
640	1409.847	111.1958 - 182.1256		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
30	1410.953							903
20	1411.229	153.3138 - 224.1740		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
740	1411.453	111.1958 - 182.0449		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
110	1411.941	153.3494 - 224.1740		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
0	1413.124							903
20	1413.673	153.3388 - 224.0753		$3d^6(a^3D)4s - 3d^6(a^1G)4p$	$^4D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
90	1414.279	153.3138 - 224.0213		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		903
650	1414.603	144.8151 - 215.5066		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		903
390	1414.773	153.3388 - 224.0213		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		903
190	1414.899							903
390	1416.403	140.3430 - 210.9436		$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
430	1416.535	155.3087 - 225.9037		$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{13}{2}$		903
590	1416.960	141.5772 - 212.1509		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		903
380	1417.282	139.6192 - 210.1770		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2I^o$	$\frac{11}{2} - \frac{13}{2}$		903
410	1417.587	153.5336 - 224.0753		$3d^6(a^3D)4s - 3d^6(a^1G)4p$	$^4D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
290	1418.076							903
230	1418.337	155.2537 - 225.7585		$3d^6(a^1I)4s - 3d^6(a^1G)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{13}{2}$		903
130	1418.508	111.7633 - 182.2599		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
60	1418.786							903
610	1419.124	138.4462 - 208.9121		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
590	1419.456	141.8320 - 212.2818		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		903
690	1419.577	111.7633 - 182.2068		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
130	1419.725	153.3494 - 223.7854		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
540	1420.136	151.5747 - 221.9910		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		903
80	1420.281	156.2940 - 226.7025		$3d^6(a^1G)4s - 3d^6(a^1I)4p$	$^2G - ^2I^o$	$\frac{9}{2} - \frac{11}{2}$		903
740	1421.218	111.7633 - 182.1256		$3d^6(a^3D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
0	1421.806							903
160	1422.607	190.9328 - 261.2263		$3d^6(b^1G)4s - 3d^6(b^1G)4p$	$^2G - ^2F^o$	$\frac{7}{2} - \frac{9}{2}$		903
220	1423.437	142.0235 - 212.2759		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		903
190	1423.524	140.3430 - 210.5906		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		903
230	1425.791	112.1519 - 182.2884		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
660	1426.369	112.1519 - 182.2599		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
80	1426.505							903
390	1426.794							903
30	1426.941							903
700	1427.450	112.1519 - 182.2068		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
50	1427.906							903
670	1428.929	145.7022 - 215.6845		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$		903
660	1430.188	120.9095 - 190.8303		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$		903
630	1430.431	112.3793 - 182.2884		$3d^6(a^3D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903
520	1430.935	138.4462 - 208.3307		$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		903
600	1431.016	112.3793 - 182.2599		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	120	1431.818						903
	110	1432.283						903
	520	1432.453	121.8077 - 191.6182	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{1}{2}$		903
	440	1433.088	147.6359 - 217.4143	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		903
	180	1433.260	159.4985 - 229.2695	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
	80	1433.338	141.2203 - 210.9875	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	10	1434.665						903
	230	1434.953						903
	480	1435.031	152.3437 - 222.0293	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
	670	1435.235	146.0615 - 215.7361	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
	170	1435.385						903
	240	1435.793	152.3437 - 221.9910	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
	170	1436.984	145.7022 - 215.2929	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
	470	1437.168	148.3582 - 217.9397	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2D^{\circ}$	$\frac{5}{2} - \frac{1}{2}$		903
	610	1437.393	146.1538 - 215.7245	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4H^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
	200	1437.552	138.4462 - 208.0091	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^2D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		903
	180	1437.761	156.3512 - 225.9037	$3d^6(a^3G)4s - 3d^6(a^3I)4p$	$^2G - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
	660	1437.943	145.9625 - 215.5066	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	20	1438.590	139.6192 - 209.1319	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		903
	700	1438.816	144.8151 - 214.3168	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	560	1439.060	146.1943 - 215.6845	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	260	1439.497						903
	580	1439.584	156.2940 - 225.7585	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	290	1439.773	146.0615 - 215.5168	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		903
	230	1440.617	141.8320 - 211.2468	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903
	290	1441.269						903
	480	1441.620	141.5772 - 210.9436	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P	903
	640	1442.134	139.2894 - 208.6313	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	200	1442.414	142.0235 - 211.3517	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P	903
	270	1442.500	153.3388 - 222.6629	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P	903
	370	1442.675	122.7174 - 192.0335	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		903
	90	1444.043	140.1409 - 209.3914	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903
	220	1444.137	139.8867 - 209.1319	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^{\circ}$	$\frac{10}{2} - \frac{10}{2}$		903
	620	1444.425	146.0615 - 215.2929	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
	110	1444.604	142.0235 - 211.2468	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903
	660	1444.899	145.7022 - 214.9105	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{10}{2} - \frac{10}{2}$		903
	540	1445.078	179.6550 - 248.8554	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
	210	1446.376	146.1538 - 215.2929	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
	60	1446.935	141.8320 - 210.9436	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903
	20	1447.193	146.1943 - 215.2929	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
	240	1447.576	156.3512 - 225.4316	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		903
	320	1448.805	121.8077 - 190.8303	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903
	730	1449.011	139.6192 - 208.6313	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	90	1449.193	142.0235 - 211.0276	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		903
	230	1449.464	140.1409 - 209.1319	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		903
	550	1449.782	139.6192 - 208.5953	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	40	1450.366	145.9625 - 214.9105	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4G^{\circ}$	$\frac{11}{2} - \frac{10}{2}$		903
	20	1450.926	145.7022 - 214.6228	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	Q	903
	470	1451.347	141.2203 - 210.1218	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
	760	1452.220	139.2894 - 208.1495	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{11}{2} - \frac{15}{2}$		903
	330	1452.549						903
	470	1453.495	153.5336 - 222.3333	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		903
	50	1453.653	144.8151 - 213.6069	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
	220	1454.376	141.8320 - 210.5906	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
310	1454.501		141.5612 - 210.3133	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		903
700	1455.424		139.8867 - 208.5953	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
410	1455.602		159.8184 - 228.5185	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		903
140	1455.897		171.4080 - 240.0942	$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		903
20	1456.314		185.9970 - 254.6634	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^2F - ^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	Q	903
380	1456.516		146.0615 - 214.7181	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
130	1456.862							903
10	1457.165							903
90	1457.422	145.7022 - 214.3168		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		903
500	1457.862	144.8151 - 213.4086		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		903
80	1458.483	146.1538 - 214.7181		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		903
380	1458.904	141.5772 - 210.1218		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
10	1459.211	156.2940 - 224.8249		$3d^6(a^1G)4s - 3d^6(a^3D)4p$	$^2G - ^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
400	1460.430	156.3512 - 224.8249		$3d^6(a^1G)4s - 3d^6(a^3D)4p$	$^2G - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
590	1460.543	156.2940 - 224.7615		$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
220	1461.068	139.8867 - 208.3307		$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
460	1461.478	141.5612 - 209.9851		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		903
130	1461.762	156.3512 - 224.7615		$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
460	1462.005	145.7022 - 214.1010		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
470	1462.144	146.1943 - 214.5874		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
540	1463.248							903
380	1463.683	151.5747 - 219.8960		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
50	1464.335	141.8320 - 210.1218		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
80	1466.501	140.1409 - 208.3307		$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
20	1466.932	156.2940 - 224.4636		$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
120	1467.140	139.8867 - 208.0468		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
90	1467.881							903
570	1468.041	140.3430 - 208.4610		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		903
400	1468.159	156.3512 - 224.4636		$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
130	1468.422	147.6359 - 215.7361		$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^4H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
620	1468.925	138.4462 - 206.5232		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		903
80	1469.737	146.0615 - 214.1010		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
440	1470.422	179.7240 - 247.7317		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		903
30	1471.893	179.7920 - 247.7317		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
40	1472.500	141.2203 - 209.1319		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
690	1472.633	140.1409 - 208.0468		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
220	1474.626	141.5772 - 209.3914		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
150	1475.338	156.2940 - 224.0753		$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
660	1476.233	155.2537 - 222.9933		$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2H^{\circ}$	$\frac{13}{2} - \frac{11}{2}$		903
660	1476.296							903
490	1476.429	159.8184 - 227.5494		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		903
680	1476.815	141.2203 - 208.9336		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
80	1476.954	145.7022 - 213.4086		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
80	1477.284	141.2203 - 208.9121		$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		903
250	1477.485	159.4985 - 227.1811		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		903
160	1477.576	146.0615 - 213.7397		$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		903
500	1477.838	140.3430 - 208.0091		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^2D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$		903
110	1478.041	147.6359 - 215.2929		$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
620	1478.323	145.9625 - 213.6069		$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		903
20	1478.743							903
320	1479.209	171.4060 - 239.0087		$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		903
570	1480.345	171.4060 - 238.9578		$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		903
260	1480.490	146.1943 - 213.7397		$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		903
440	1481.411	140.3430 - 207.8462		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
730	1482.246	139.2894 - 206.7545	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ I°	$\frac{13}{2} - \frac{13}{2}$		903	
30	1482.556	139.2894 - 206.7407	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ I°	$\frac{11}{2} - \frac{11}{2}$		903	
450	1482.670	145.9625 - 213.4086	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ G)4p	² H - ⁴ F°	$\frac{11}{2} - \frac{9}{2}$		903	
510	1483.211	152.3437 - 219.7650	3d ⁶ (a ³ G)4s - 3d ⁶ (a ³ G)4p	² G - ² H°	$\frac{7}{2} - \frac{9}{2}$		903	
30	1483.432	120.9095 - 188.3201	3d ⁶ (a ³ D)4s - 3d ⁶ (a ³ D)4p	⁴ D - ⁴ F°	$\frac{7}{2} - \frac{5}{2}$		299	
180	1483.754	155.3087 - 222.7055	3d ⁶ (a ³ I)4s - 3d ⁶ (a ³ G)4p	² I - ² H°	$\frac{11}{2} - \frac{7}{2}$		903	
110	1483.849	144.8151 - 212.2070	3d ⁶ (a ³ G)4s - 3d ⁶ (a ³ F)4p	⁴ G - ⁴ G°	$\frac{11}{2} - \frac{11}{2}$		903	
230	1484.232	141.2203 - 208.5953	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ H)4p	⁴ F - ⁴ H°	$\frac{9}{2} - \frac{11}{2}$		903	
330	1484.442	148.3582 - 215.7245	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ G)4p	² F - ⁴ H°	$\frac{5}{2} - \frac{7}{2}$		903	
200	1484.640	141.5772 - 208.9336	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{7}{2} - \frac{7}{2}$		903	
60	1485.121	141.5772 - 208.9121	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ P)4p	⁴ F - ⁴ D°	$\frac{7}{2} - \frac{7}{2}$		903	
530	1486.204	151.5747 - 218.8606	3d ⁶ (a ³ G)4s - 3d ⁶ (a ³ H)4p	² G - ² H°	$\frac{9}{2} - \frac{11}{2}$		903	
40	1486.461	147.6359 - 214.9105	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ G)4p	² F - ⁴ G°	$\frac{7}{2} - \frac{9}{2}$		903	
20	1486.805	146.1538 - 213.4121	3d ⁶ (a ³ G)4s - 3d ⁶ (a ³ F)4p	⁴ G - ⁴ G°	$\frac{5}{2} - \frac{5}{2}$		903	
410	1487.011	139.8867 - 207.1360	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ H°	$\frac{9}{2} - \frac{7}{2}$		903	
420	1487.064	139.6192 - 206.8655	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ H°	$\frac{11}{2} - \frac{9}{2}$		903	
300	1487.865	152.3437 - 219.5534	3d ⁶ (a ³ G)4s - 3d ⁶ (a ³ G)4p	² G - ² F°	$\frac{7}{2} - \frac{5}{2}$		903	
20	1489.006	148.3582 - 215.5168	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ G)4p	² F - ⁴ F°	$\frac{5}{2} - \frac{5}{2}$		903	
670	1489.534	139.6192 - 206.7545	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ I°	$\frac{11}{2} - \frac{11}{2}$		903	
720	1489.833	139.6192 - 206.7407	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ I°	$\frac{11}{2} - \frac{11}{2}$		903	
390	1490.080	141.2203 - 208.3307	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{9}{2} - \frac{7}{2}$		903	
20	1490.748	141.8320 - 208.9121	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ P)4p	⁴ F - ⁴ D°	$\frac{5}{2} - \frac{7}{2}$		903	
20	1490.982	146.0615 - 213.1311	3d ⁶ (a ³ G)4s - 3d ⁶ (a ³ F)4p	⁴ G - ² F°	$\frac{7}{2} - \frac{7}{2}$		903	
430	1491.907	141.5772 - 208.6057	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{7}{2} - \frac{7}{2}$		903	
0	1492.168	121.8077 - 188.8242	3d ⁶ (a ³ D)4s - 3d ⁶ (a ³ D)4p	⁴ D - ⁴ F°	$\frac{5}{2} - \frac{3}{2}$		903	
610	1492.649	140.1409 - 207.1360	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ H°	$\frac{7}{2} - \frac{7}{2}$		903	
690	1493.007	139.8867 - 206.8655	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ H°	$\frac{9}{2} - \frac{9}{2}$		903	
740	1493.672	155.2537 - 222.2028	3d ⁶ (a ³ I)4s - 3d ⁶ (a ³ I)4p	² I - ² K°	$\frac{11}{2} - \frac{13}{2}$		903	
290	1493.993	141.8320 - 208.7669	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{9}{2} - \frac{7}{2}$		903	
640	1495.795	139.8867 - 206.7407	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ I°	$\frac{9}{2} - \frac{11}{2}$		903	
60	1496.412	141.2203 - 208.0468	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ H)4p	⁴ F - ⁴ I°	$\frac{9}{2} - \frac{9}{2}$		903	
0	1496.623	179.5830 - 246.4 + P	3d ⁶ (b ³ F)4s - 3d ⁶ (b ³ P)4p	⁴ F - ² S°	$\frac{3}{2} - \frac{1}{2}$	Q	903	
380	1497.596	141.8320 - 208.6057	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{3}{2} - \frac{3}{2}$		903	
530	1497.930	139.8867 - 206.6457	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ G°	$\frac{9}{2} - \frac{7}{2}$		903	
150	1498.051	141.5772 - 208.3307	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{7}{2} - \frac{7}{2}$		903	
490	1498.278	142.0235 - 208.7669	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{3}{2} - \frac{3}{2}$		903	
680	1498.707	140.1409 - 206.8655	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ H°	$\frac{7}{2} - \frac{9}{2}$		903	
710	1498.774	139.6192 - 206.3409	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ G°	$\frac{11}{2} - \frac{9}{2}$		903	
720	1498.898	139.2894 - 206.0053	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ G°	$\frac{13}{2} - \frac{11}{2}$		903	
510	1499.136	140.1409 - 206.8470	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ G°	$\frac{7}{2} - \frac{5}{2}$		903	
380	1499.248	156.2940 - 222.9933	3d ⁶ (a ³ G)4s - 3d ⁶ (a ³ I)4p	² G - ² H°	$\frac{9}{2} - \frac{11}{2}$		903	
0	1499.754						903	
670	1499.972	138.4462 - 205.1141	3d ⁶ (a ³ P)4s - 3d ⁶ (a ³ P)4p	⁴ P - ⁴ S°	$\frac{5}{2} - \frac{3}{2}$		903	
350	1500.130	120.9095 - 187.5703	3d ⁶ (a ³ D)4s - 3d ⁶ (a ³ D)4p	⁴ D - ⁴ F°	$\frac{7}{2} - \frac{7}{2}$		903	
110	1500.292						903	
30	1501.204						903	
100	1501.898	142.0235 - 208.6057	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{3}{2} - \frac{5}{2}$		903	
20	1502.867						903	
290	1503.172	185.9970 - 252.5230	3d ⁶ (b ³ F)4s - 3d ⁶ (b ³ F)4p	² F - ² G°	$\frac{5}{2} - \frac{7}{2}$		903	
430	1503.479	121.8077 - 188.3201	3d ⁶ (a ³ D)4s - 3d ⁶ (a ³ D)4p	⁴ D - ⁴ F°	$\frac{5}{2} - \frac{5}{2}$		903	
110	1503.653	140.1409 - 206.6457	3d ⁶ (a ³ H)4s - 3d ⁶ (a ³ H)4p	⁴ H - ⁴ G°	$\frac{7}{2} - \frac{7}{2}$		903	
20	1503.787	141.8320 - 208.3307	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ F)4p	⁴ F - ⁴ F°	$\frac{5}{2} - \frac{7}{2}$		903	
10	1504.470	141.5772 - 208.0468	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ H)4p	⁴ F - ⁴ I°	$\frac{7}{2} - \frac{9}{2}$	Q	903	
10	1504.544	147.6359 - 214.1010	3d ⁶ (a ³ F)4s - 3d ⁶ (a ³ G)4p	² F - ⁴ F°	$\frac{7}{2} - \frac{7}{2}$		903	

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
170	1504.800	139.8867 - 206.3409		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
20	1504.900	145.7022 - 212.1509		$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$	Q	903
360	1505.170	122.3861 - 188.8242		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		903
180	1505.763	156.2940 - 222.7055		$3d^6(a^3G)4s - 3d^6(a^1G)4p$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{1}{2}$		903
220	1506.946	148.3582 - 214.7181		$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
500	1507.055	156.3512 - 222.7055		$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{1}{2}$		903
0	1507.338							903
570	1509.108	148.3582 - 214.6228		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		903
70	1510.106	146.0615 - 212.2818		$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
10	1510.569	140.1409 - 206.3409		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$	Q	903
10	1511.597							903
190	1512.351	146.1538 - 212.2759		$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		903
350	1512.704	122.7174 - 188.8242		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4F^o$	$\frac{1}{2} - \frac{3}{2}$	P	903
350	1512.772	147.6359 - 213.7397		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$	P	903
10	1513.132	146.1943 - 212.2818		$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
530	1513.494	171.4080 - 237.4803		$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		903
90	1513.904	145.1921 - 211.2468		$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^2P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$	Q	903
20	1514.862	146.1943 - 212.2070		$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
700	1516.666	122.3861 - 188.3201		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		903
20	1517.080	141.2203 - 207.1360		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4H^o$	$\frac{3}{2} - \frac{1}{2}$		903
20	1518.951	145.1921 - 211.0276		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		903
400	1519.604	185.9670 - 251.7736		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$		903
730	1520.626	121.8077 - 187.5703		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{1}{2}$		903
220	1520.864	145.1921 - 210.9436		$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^2P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		903
0	1521.250	156.2940 - 222.0293		$3d^6(a^1G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^o$	$\frac{3}{2} - \frac{1}{2}$		903
20	1521.438	185.9670 - 251.6943		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		903
10	1522.209							903
360	1524.239	120.9095 - 186.5161		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		903
10	1524.527							903
10	1525.088							903
750	1525.306	120.9095 - 186.4701		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		903
100	1526.505	155.2537 - 220.7626		$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2K^o$	$\frac{11}{2} - \frac{11}{2}$		903
310	1526.764	159.4985 - 224.9965		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		903
520	1526.834	147.6359 - 213.1311		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		903
60	1527.487							903
740	1527.685	110.4106 - 175.8691		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6D^o$	$\frac{9}{2} - \frac{7}{2}$		903
740	1527.795	155.3087 - 220.7626		$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2K^o$	$\frac{11}{2} - \frac{11}{2}$		903
160	1527.933							903
10	1528.138	159.4985 - 224.9369		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	Q	903
40	1528.454	141.2203 - 206.6457		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
20	1529.092	145.1921 - 210.5906		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		903
0	1529.691							903
660	1529.943	144.8151 - 210.1770		$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		903
10	1530.250							903
10	1530.981	159.8184 - 225.1369		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^4D^o$	$\frac{3}{2} - \frac{7}{2}$	Q	903
520	1531.734	145.7022 - 210.9875		$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		903
40	1532.086	141.5772 - 206.8470		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
760	1534.710	110.4106 - 175.5695		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6D^o$	$\frac{9}{2} - \frac{7}{2}$		903
460	1534.926	121.8077 - 186.9572		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		903
320	1535.612	141.2203 - 206.3409		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
300	1535.733							903
310	1536.847	141.5772 - 206.6457		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		903
730	1537.246	111.1958 - 176.2471		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6D^o$	$\frac{9}{2} - \frac{7}{2}$		903
20	1537.875	145.9625 - 210.9875		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	190	1538.123	141.8320 - 206.8470	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	690	1538.933	120.9095 - 185.8900	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{2}{2} - \frac{2}{2}$		903
	20	1539.726	141.5772 - 206.5232	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	903
	0	1541.435	146.1538 - 211.0276	$3d^6(a^3G)4s - 3d^6(a^3P)4p$	$^4G - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		903
	260	1542.263	122.3861 - 187.2257	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
	410	1542.662	142.0235 - 206.8470	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	410	1542.886	141.8320 - 206.6457	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		903
	750	1543.412	111.7633 - 176.5544	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	560	1543.562	141.2203 - 206.0053	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		903
	440	1544.082	141.5772 - 206.3409	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		903
	610	1545.402	121.8077 - 186.5161	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	740	1546.231	111.1958 - 175.8691	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		903
	0	1546.695						903
	20	1546.889	147.6359 - 212.2818	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		903
	40	1547.121						903
	680	1548.043	112.1519 - 176.7490	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
	410	1548.680	122.3861 - 186.9572	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	20	1548.990						903
	0	1549.275						903
	100	1550.030	147.6359 - 212.1509	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		903
	260	1550.191	122.7174 - 187.2257	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
	630	1550.779	111.7633 - 176.2471	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	10	1551.419	155.3087 - 219.7650	$3d^6(a^1I)4s - 3d^6(a^3G)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	0	1552.002						903
	0	1552.065						903
	70	1552.306	145.7022 - 210.1218	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	10	1552.749	112.1519 - 176.5544	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	620	1553.427	111.1958 - 175.5695	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{9}{2}$		903
	520	1553.495						903
	20	1553.958						903
	470	1554.789	144.8151 - 209.1319	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		903
	10	1555.534	159.4985 - 223.7854	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		903
	30	1556.277	159.8184 - 224.0753	$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	180	1556.675	122.7174 - 186.9572	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
	690	1557.276	145.9625 - 210.1770	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		903
	610	1558.244	112.3793 - 176.5544	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		903
	260	1559.340	122.3861 - 186.5161	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	660	1559.924	111.7633 - 175.8691	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	670	1560.177	112.1519 - 176.2471	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	120	1560.501	121.8077 - 185.8900	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	30	1561.158	122.3861 - 186.4414	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$		903
	20	1564.277	146.1943 - 210.1218	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	0	1564.377	148.3582 - 212.2818	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		903
	70	1564.522	148.3582 - 212.2759	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		903
	20	1566.234						903
	460	1566.998	144.8151 - 208.6313	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		903
	0	1569.179	159.4985 - 223.2254	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	Q	903
	0	1569.272	122.7174 - 186.4414	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{1}{2} - \frac{3}{2}$		903
	0	1569.403	151.5747 - 215.2929	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$	Q	903
	260	1569.913	121.8077 - 185.5053	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{5}{2} - \frac{6}{2}$		903
	30	1570.108	145.7022 - 209.3914	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		903
	10	1571.655						903
	0	1572.132	155.2537 - 218.8606	$3d^6(a^1I)4s - 3d^6(a^3H)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$	Q	903
	0	1572.260	156.2940 - 219.8960	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	1575.662						903
	0	1576.539	145.7022 - 209.1319	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$	Q	903
	20	1579.040	146.0615 - 209.3914	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$	Q	903
	0	1579.220						903
	0	1579.584	147.6359 - 210.9436	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$	Q	903
	0	1580.695						903
	50	1581.343	146.1538 - 209.3914	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2G^o$	$\frac{5}{2} - \frac{5}{2}$		903
	270	1581.483	145.7022 - 208.9336	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	50	1582.063						903
	440	1582.356	146.1943 - 209.3914	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		903
	410	1582.531	120.9095 - 184.0991	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^6P^o$	$\frac{7}{2} - \frac{5}{2}$		903
	420	1583.030	145.9625 - 209.1319	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		903
	20	1584.299	122.3861 - 185.5053	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$		903
	70	1585.522	146.0615 - 209.1319	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		903
	120	1588.025	145.9625 - 208.9336	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^4F^o$	$\frac{11}{2} - \frac{9}{2}$		903
	20	1589.017						903
	320	1589.984	145.7022 - 208.5953	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$		903
	10	1590.126	148.3582 - 211.2468	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$	Q	903
	0	1590.564						903
	490	1591.933	145.1921 - 208.0091	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		903
	110	1593.836	151.5747 - 214.3168	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		903
	140	1597.898						903
	20	1598.274	152.3437 - 214.9105	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		903
	10	1605.345	121.8077 - 184.0991	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^6P^o$	$\frac{5}{2} - \frac{7}{2}$		903
	280	1605.549	179.6550 - 241.9390	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		903
	20	1606.415	185.9670 - 248.2180	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$	Q	903
	300	1606.575	152.3437 - 214.5874	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^2G - ^2H^o$	$\frac{7}{2} - \frac{7}{2}$		903
	10	1607.505						903
	0	1607.926	153.3494 - 215.5413	$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$^4D - ^4F^o$	$\frac{1}{2} - \frac{3}{2}$		903
	0	1608.159						903
	10	1608.625	151.5747 - 213.7397	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		903
	20	1609.352	146.1943 - 208.3307	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^4F^o$	$\frac{10}{2} - \frac{11}{2}$	Q	903
	100	1610.711	145.9625 - 208.0468	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^4I^o$	$\frac{11}{2} - \frac{10}{2}$		903
	20	1611.570	144.8151 - 206.8655	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4H^o$	$\frac{11}{2} - \frac{10}{2}$		903
	600	1612.071	151.5747 - 213.6069	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2H^o$	$\frac{10}{2} - \frac{11}{2}$		903
	230	1612.230	179.7920 - 241.8179	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{9}{2}$		903
	10	1613.273	146.0615 - 208.0468	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4I^o$	$\frac{7}{2} - \frac{9}{2}$		903
	0	1613.476						903
	10	1614.119	153.3388 - 215.2929	$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$^4D - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		903
	10	1616.747	146.1943 - 208.0468	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^4I^o$	$\frac{10}{2} - \frac{10}{2}$		903
	30	1617.113						903
	20	1617.225	151.5747 - 213.4086	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$	Q	903
	30	1617.678						903
	20	1617.924						903
	20	1619.297	147.6359 - 209.3914	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		903
	10	1622.765						903
	10	1623.801						903
	150	1624.524	151.5747 - 213.1311	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	30	1628.757	152.3437 - 213.7397	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		903
	120	1630.489	145.1921 - 206.5232	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^4P^o$	$\frac{11}{2} - \frac{10}{2}$		903
	100	1631.376	120.9095 - 182.2068	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6P^o$	$\frac{7}{2} - \frac{5}{2}$		299
	0	1633.555	120.9095 - 182.1256	$3d^6(a^3D)4s - 3d^6(a^5D)4p$	$^4D - ^6F^o$	$\frac{7}{2} - \frac{7}{2}$		903
	50	1634.246	144.8151 - 206.0053	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		903
	130	1635.703	120.9095 - 182.0449	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6F^o$	$\frac{7}{2} - \frac{7}{2}$		903

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1637.511	152.3437 - 213.4121	$3d^6(a^1G)4s - 3d^6(a^3F)4p$	$^2G - ^4G^o$	$\frac{7}{2} - \frac{5}{2}$		903
	10	1637.717						
	0	1638.482						
	20	1639.820	146.1538 - 207.1360	$3d^6(a^1G)4s - 3d^6(a^3H)4p$	$^4G - ^4H^o$	$\frac{5}{2} - \frac{7}{2}$		903
	210	1640.913						
	10	1641.961	145.9625 - 206.8655	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^4H^o$	$\frac{11}{2} - \frac{9}{2}$		903
	10	1642.953						
	20	1644.629						
	360	1644.951	145.9625 - 206.7545	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^4I^o$	$\frac{11}{2} - \frac{13}{2}$		903
	20	1647.251						
	10	1649.112	145.7022 - 206.3409	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		903
	0	1651.012						
	140	1651.629						
	10	1651.740	146.1943 - 206.7407	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^4I^o$	$\frac{9}{2} - \frac{11}{2}$		903
	30	1652.390						
	0	1654.843						
	0	1655.432	121.8077 - 182.2068	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6F^o$	$\frac{5}{2} - \frac{3}{2}$	Q	903
	0	1655.643						
	60	1656.392						
	80	1657.874	121.8077 - 182.1256	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6F^o$	$\frac{5}{2} - \frac{7}{2}$		903
	0	1658.292						
	0	1663.866	159.8184 - 219.8960	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		903
	40	1664.536						
	170	1665.040						
	10	1668.549	152.3437 - 212.2759	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		903
	10	1669.669						
	100	1671.282						
	20	1671.659	122.3861 - 182.2068	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6F^o$	$\frac{5}{2} - \frac{3}{2}$		903
	0	1672.632						
	0	1672.946						
	0	1674.105						903
	0	1674.823						
	0	1675.379						
	10	1679.478	122.7174 - 182.2599	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6F^o$	$\frac{1}{2} - \frac{3}{2}$		903
	10	1680.678						
	0	1684.338	147.6359 - 207.1360	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^2F - ^4H^o$	$\frac{7}{2} - \frac{5}{2}$		903
	10	1693.087						
	130	1713.687						
	0	1727.113	155.2537 - 213.6069	$3d^6(a^3I)4s - 3d^6(a^3G)4p$	$^2I - ^4G^o$	$\frac{13}{2} - \frac{11}{2}$		903
	0	1737.206						
	0	1737.206						
	110	1737.420	151.5747 - 209.1319	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^2G - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		903
	10	1743.427						
	0	1745.764	152.3437 - 208.9336	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		903
	0	1746.603						
	10	1747.824						
	40	1751.706	151.5747 - 208.0468	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^2G - ^4I^o$	$\frac{7}{2} - \frac{5}{2}$		903
	10	1759.389						
	20	1767.122						
	20	1770.805	151.5747 - 208.0468	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^2G - ^4I^o$	$\frac{9}{2} - \frac{7}{2}$		903
	0	1783.949						
	20	1805.012						
	10	1808.488						903
	10	1818.360						
	0	1829.304						

NI IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1829.498	120.9095 - 175.5695	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^6D^o$	$\frac{7}{2} - \frac{9}{2}$		903

NICKEL V (Ni^{4+}), Z = 28
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6(^5D_4)$ (24 electrons)
Ionization Potential $613\,500 \text{ cm}^{-1}$; 76.1 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	410	199.154	0.0 - 502.124	$3d^6 - 3d^5(a^6S)5f$	$ga^5D - ^5F^o$	4 - 5		927
	370	199.504	0.8897 - 502.133	$3d^6 - 3d^5(a^6S)5f$	$ga^5D - ^5F^o$	3 - 4		927
	230	199.742	1.4899 - 502.137	$3d^6 - 3d^5(a^6S)5f$	$ga^5D - ^5F^o$	2 - 3		927
	120	199.890	1.8715 - 502.148	$3d^6 - 3d^5(a^6S)5f$	$ga^5D - ^5F^o$	1 - 2		927
	250	199.966	2.0576 - 502.143	$3d^6 - 3d^5(a^6S)5f$	$ga^5D - ^5F^o$	0 - 1		927
	820	227.565	0.0 - 439.434	$3d^6 - 3d^5(a^6S)4f$	$ga^5D - ^5F^o$	4 - 5		927
	780	228.031	0.8897 - 439.427	$3d^6 - 3d^5(a^6S)4f$	$ga^5D - ^5F^o$	3 - 4		927
	660	228.346	1.4899 - 439.423	$3d^6 - 3d^5(a^6S)4f$	$ga^5D - ^5F^o$	2 - 3		927
	580	228.547	1.8715 - 439.419	$3d^6 - 3d^5(a^6S)4f$	$ga^5D - ^5F^o$	1 - 2		927
	300	228.644	2.0576 - 439.420	$3d^6 - 3d^5(a^6S)4f$	$ga^5D - ^5F^o$	0 - 1		927
	420	236.110	0.0 - 423.533	$3d^6 - 3d^5(a^6S)5p$	$ga^5D - ^5P^o$	4 - 3		927
	290	236.467	0.8897 - 423.782	$3d^6 - 3d^5(a^6S)5p$	$ga^5D - ^5P^o$	3 - 2		927
	200	236.606	0.8897 - 423.533	$3d^6 - 3d^5(a^6S)5p$	$ga^5D - ^5P^o$	3 - 3		927
	230	236.716	1.4899 - 423.935	$3d^6 - 3d^5(a^6S)5p$	$ga^5D - ^5P^o$	2 - 1		927
	120	236.802	1.4899 - 423.782	$3d^6 - 3d^5(a^6S)5p$	$ga^5D - ^5P^o$	2 - 2		927
	100	236.932	1.8715 - 423.935	$3d^6 - 3d^5(a^6S)5p$	$ga^5D - ^5P^o$	1 - 1		927
	290	304.018	27.1112 - 356.0363	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3G^o$	6 - 5		922
	210	304.702	27.5782 - 355.7652	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3G^o$	5 - 4		922
	20	304.854	41.6269 - 369.6491	$3d^6 - 3d^5(a^2P)4p$	$a^3D - ^3P^o$	2 - 2		922
	130	304.991	27.1112 - 354.9896	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3H^o$	6 - 6		922
	100	305.129	41.9202 - 369.6491	$3d^6 - 3d^5(a^2P)4p$	$a^3D - ^3P^o$	3 - 2		922
	80	305.305	27.8588 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3G^o$	4 - 3		922
	30	305.891	29.1237 - 356.0363	$3d^6 - 3d^5(b^2G)4p$	$a^3F - ^3G^o$	4 - 5		922
	20	306.054	41.7011 - 368.4405	$3d^6 - 3d^5(a^2P)4p$	$a^3D - ^3P^o$	1 - 0		922
	70	306.338	27.1112 - 353.5487	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3H^o$	6 - 5		922
	20	306.488	29.1237 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$a^3F - ^3G^o$	4 - 3		922
	20	306.565	29.5708 - 355.7652	$3d^6 - 3d^5(b^2G)4p$	$a^3F - ^3G^o$	3 - 4		922
	120	306.669	27.8588 - 353.9441	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3F^o$	4 - 3		922
	160	306.776	27.5782 - 353.5487	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3H^o$	5 - 5		922
	180	307.225	29.8992 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$a^3F - ^3G^o$	2 - 3		922
	130	307.492	27.8588 - 353.0716	$3d^6 - 3d^5(b^2G)4p$	$a^3H - ^3H^o$	4 - 4		922
	20	308.387						922
	80	308.994						922
	30	309.351	69.1561 - 392.4135	$3d^6 - 3d^5(c^2D)4p$	$b^3P - ^3P^o$	2 - 2		927
	20	309.769	0.0 - 322.8208	$3d^6 - 3d^5(a^1F)4p$	$ga^5D - ^3F^o$	4 - 4		922
	210	309.811	33.2565 - 356.0363	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3G^o$	5 - 5		922
	130	310.071	33.2565 - 355.7652	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3G^o$	5 - 4		922
	70	310.538	67.5479 - 389.5718	$3d^6 - 3d^5(c^2D)4p$	$b^3P - ^3D^o$	1 - 2		922
	230	310.791	68.7187 - 390.4782	$3d^6 - 3d^5(c^2D)4p$	$b^3F - ^3D^o$	4 - 3		922
	160	310.846	34.0617 - 355.7652	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3G^o$	4 - 4		922
	10	311.024	69.1561 - 390.6751	$3d^6 - 3d^5(c^2D)4p$	$b^3P - ^1D^o$	2 - 2		922
	240	311.201	34.0617 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3G^o$	4 - 3		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	170	311.547	34.4164 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3G^o$	3 - 3		922
	260	311.788	34.4164 - 355.1500	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3F^o$	3 - 2		922
	250	311.800	68.8547 - 389.5718	$3d^6 - 3d^5(c^2D)4p$	$b^3F - ^3D^o$	3 - 2		922
	100	312.217	33.2565 - 353.5487	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3H^o$	5 - 5		922
	220	312.388	68.6321 - 388.7461	$3d^6 - 3d^5(c^2D)4p$	$b^3F - ^3D^o$	2 - 1		927
	240	312.412	33.2565 - 353.3471	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3F^o$	5 - 4		922
	160	312.520	68.7187 - 388.6989	$3d^6 - 3d^5(c^2D)4p$	$b^3F - ^3F^o$	4 - 4		927
	120	312.615	34.0617 - 353.9441	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3F^o$	4 - 3		922
	130	312.680	33.2565 - 353.0716	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3H^o$	5 - 4		922
	90	312.839	0.0 - 319.6527	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^3G^o$	4 - 5		922
	170	312.962	34.4164 - 353.9441	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3F^o$	3 - 3		922
	100	313.000	34.0617 - 353.5487	$3d^6 - 3d^5(b^2G)4p$	$a^3G - ^3H^o$	4 - 5		922
	80	313.059	67.5479 - 386.9688	$3d^6 - 3d^5(c^2D)4p$	$b^3P - ^3F^o$	1 - 2		922
	120	313.993	68.8547 - 387.3334	$3d^6 - 3d^5(c^2D)4p$	$b^3F - ^3F^o$	3 - 3		927
	110	314.132	68.6321 - 386.9688	$3d^6 - 3d^5(c^2D)4p$	$b^3F - ^3F^o$	2 - 2		927
	130	315.082	0.0 - 317.3768	$3d^6 - 3d^5(a^2H)4p$	$ga^3D - ^3G^o$	4 - 3		922
	550	315.235	41.2522 - 358.4756	$3d^6 - 3d^5(b^2G)4p$	$a^1I - ^1H^o$	6 - 5		922
	240	315.573	57.9241 - 374.8037	$3d^6 - 3d^5(a^2P)4p$	$a^1F - ^3D^o$	3 - 2		927
	560	315.712	0.0 - 316.7440	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	4 - 4		922
	380	315.829	0.8897 - 317.5175	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	3 - 2		922
	210	315.905	42.2081 - 358.7600	$3d^6 - 3d^5(b^2G)4p$	$a^1G - ^1G^o$	4 - 4		922
	300	315.969	0.8897 - 317.3768	$3d^6 - 3d^5(a^2H)4p$	$ga^3D - ^3G^o$	3 - 3		922
	420	316.113	0.8897 - 317.2320	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	3 - 3		922
	210	316.189	42.2081 - 358.4756	$3d^6 - 3d^5(b^2G)4p$	$a^1G - ^1H^o$	4 - 5		922
	310	316.428	1.4899 - 317.5175	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	2 - 2		922
	330	316.468	1.4899 - 317.4779	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	2 - 1		922
	60	316.569	1.4899 - 317.3768	$3d^6 - 3d^5(a^2H)4p$	$ga^3D - ^3G^o$	2 - 3		922
	60	316.668	29.1237 - 344.9112	$3d^6 - 3d^5(b^2D)4p$	$a^3F - ^3F^o$	4 - 4		922
	90	316.714	1.4899 - 317.2320	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	2 - 3		922
	140	316.776	29.1237 - 344.8053	$3d^6 - 3d^5(b^2D)4p$	$a^3F - ^3D^o$	4 - 3		922
	210	316.810	1.8715 - 317.5175	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	1 - 2		922
	240	316.853	1.8715 - 317.4779	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	1 - 1		922
	270	316.866	1.8715 - 317.4623	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	1 - 0		922
	190	317.037	2.0576 - 317.4779	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5D^o$	0 - 1		922
	410	317.291	0.0 - 315.1682	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	4 - 5		922
	290	317.402	77.8995 - 392.9571	$3d^6 - 3d^5(c^2D)4p$	$b^1G - ^1F^o$	4 - 3		922
	160	317.865	0.0 - 314.5992	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	4 - 4		922
	20	317.901	0.0 - 314.5628	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	4 - 3		922
	80	318.260	0.0 - 314.2088	$3d^6 - 3d^5(a^2F)4p$	$ga^3D - ^3F^o$	4 - 4		922
	40	318.528	0.8897 - 314.8347	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	3 - 2		922
	20	318.703	41.6269 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$a^3D - ^3G^o$	2 - 3		922
	390	318.766	0.8897 - 314.5992	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	3 - 4		922
	20	318.803	0.8897 - 314.5628	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	3 - 3		922
	80	318.900	29.8992 - 343.4782	$3d^6 - 3d^5(b^2D)4p$	$a^3F - ^3D^o$	2 - 1		922
	110	319.015	0.0 - 313.4647	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5G^o$	4 - 5		922
	90	319.031	41.7011 - 355.1500	$3d^6 - 3d^5(b^2G)4p$	$a^3D - ^3F^o$	1 - 2		922
	200	319.163	0.8897 - 314.2088	$3d^6 - 3d^5(a^2F)4p$	$ga^3D - ^3F^o$	3 - 4		922
	20	319.202	1.8715 - 315.1528	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	1 - 1		922
	20	319.241	2.0576 - 315.3007	$3d^6 - 3d^5(a^2F)4p$	$ga^3D - ^3D^o$	0 - 1		922
	260	319.392	2.0576 - 315.1528	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	0 - 1		922
	480	319.414	1.4899 - 314.5628	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	2 - 3		922
	360	319.526	1.8715 - 314.8347	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5F^o$	1 - 2		922
	50	320.111	0.8897 - 313.2813	$3d^6 - 3d^5(a^4F)4p$	$ga^3D - ^5G^o$	3 - 4		927
	220	320.185	41.6269 - 353.9441	$3d^6 - 3d^5(b^2G)4p$	$a^3D - ^3F^o$	2 - 3		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	110	320.208	41.2522 - 353.5487	$3d^6 - 3d^5(b^2G)4p$	$a^1I - ^3H^{\circ}$	6 - 5		922
	20	320.351						922
	30	320.702	66.7378 - 378.5550	$3d^6 - 3d^5(a^2P)4p$	$b^3P - ^3S^{\circ}$	0 - 1		922
	20	320.815	1.8715 - 313.5773	$3d^6 - 3d^5(a^2D)4p$	$ga^5D - ^3P^{\circ}$	1 - 0		922
	290	320.868	33.2565 - 344.9112	$3d^6 - 3d^5(b^2D)4p$	$a^3G - ^3F^{\circ}$	5 - 4		922
	170	321.102	41.9202 - 353.3471	$3d^6 - 3d^5(b^2G)4p$	$a^3D - ^3F^{\circ}$	3 - 4		922
	80	321.385	41.9202 - 353.0716	$3d^6 - 3d^5(b^2G)4p$	$a^3D - ^3H^{\circ}$	3 - 4		922
	60	321.535	67.5479 - 378.5550	$3d^6 - 3d^5(a^2P)4p$	$b^3P - ^3S^{\circ}$	1 - 1		922
	100	321.809	34.0617 - 344.8053	$3d^6 - 3d^5(b^2D)4p$	$a^3G - ^3D^{\circ}$	4 - 3		922
	50	323.113	34.4164 - 343.9057	$3d^6 - 3d^5(b^2D)4p$	$a^3G - ^3D^{\circ}$	3 - 2		922
	40	323.168	77.8995 - 387.3334	$3d^6 - 3d^5(c^2D)4p$	$b^1G - ^3F^{\circ}$	4 - 3		927
	180	323.208	69.1561 - 378.5550	$3d^6 - 3d^5(a^2P)4p$	$b^3P - ^3S^{\circ}$	2 - 1		922
	160	323.394	34.0617 - 343.2810	$3d^6 - 3d^5(b^2D)4p$	$a^3G - ^3F^{\circ}$	4 - 3		922
	130	324.172	34.4164 - 342.8946	$3d^6 - 3d^5(b^2D)4p$	$a^3G - ^3F^{\circ}$	3 - 2		922
	120	324.460	68.8547 - 377.0591	$3d^6 - 3d^5(a^2P)4p$	$b^3F - ^1D^{\circ}$	3 - 2		922
	340	324.936	68.7187 - 376.4716	$3d^6 - 3d^5(a^2P)4p$	$b^3F - ^3D^{\circ}$	4 - 3		922
	20	325.082	68.8547 - 376.4716	$3d^6 - 3d^5(a^2P)4p$	$b^3F - ^3D^{\circ}$	3 - 3		922
	280	326.588	68.6321 - 374.8281	$3d^6 - 3d^5(a^2P)4p$	$b^3F - ^1D^{\circ}$	2 - 1		927
	10	326.614	68.6321 - 374.8037	$3d^6 - 3d^5(a^2P)4p$	$b^3F - ^3D^{\circ}$	2 - 2		927
	220	326.852	68.8547 - 374.8037	$3d^6 - 3d^5(a^2P)4p$	$b^3F - ^3D^{\circ}$	3 - 2		927
	20	327.510	41.6269 - 346.9595	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3P^{\circ}$	2 - 1		922
	20	327.876	41.9202 - 346.9124	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3P^{\circ}$	3 - 2		922
	40	328.613	41.6269 - 345.9361	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3F^{\circ}$	2 - 3		927
	20	329.251	26.1530 - 329.8729	$3d^6 - 3d^5(b^2F)4p$	$a^3P - ^3D^{\circ}$	2 - 3		922
	180	330.043	41.9202 - 344.9112	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3F^{\circ}$	3 - 4		922
	210	330.158	41.9202 - 344.8053	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3D^{\circ}$	3 - 3		922
	160	330.820	41.6269 - 343.9057	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3D^{\circ}$	2 - 2		922
	150	331.017	67.5479 - 369.6491	$3d^6 - 3d^5(a^2P)4p$	$b^3P - ^3P^{\circ}$	1 - 2		922
	120	331.113	66.7378 - 368.7497	$3d^6 - 3d^5(a^2P)4p$	$b^3P - ^3P^{\circ}$	0 - 1		922
	40	331.141	41.9202 - 343.9057	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3D^{\circ}$	3 - 2		922
	110	331.370	41.7011 - 343.4782	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3D^{\circ}$	1 - 1		922
	200	331.507	41.6269 - 343.2810	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3F^{\circ}$	2 - 3		922
	160	331.571	29.1237 - 330.7181	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^1G^{\circ}$	4 - 5		922
	200	332.012	41.7011 - 342.8946	$3d^6 - 3d^5(b^2D)4p$	$a^3D - ^3F^{\circ}$	1 - 2		922
	40	332.140	28.6976 - 329.7763	$3d^6 - 3d^5(b^2F)4p$	$a^3P - ^3D^{\circ}$	1 - 2		922
	230	332.293	48.6070 - 349.5460	$3d^6 - 3d^5(b^2D)4p$	$a^1D - ^1D^{\circ}$	2 - 2		922
	200	332.316	0.0 - 300.9181	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3F^{\circ}$	4 - 4		922
	70	332.345	67.5479 - 368.4405	$3d^6 - 3d^5(a^2P)4p$	$b^3P - ^3P^{\circ}$	1 - 0		922
	20	332.410	57.9241 - 358.7600	$3d^6 - 3d^5(b^2G)4p$	$a^1F - ^1G^{\circ}$	3 - 4		922
	220	332.471	47.6997 - 348.4779	$3d^6 - 3d^5(b^2D)4p$	$a^1S - ^1P^{\circ}$	0 - 1		922
	150	332.504	29.1237 - 329.8729	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^3D^{\circ}$	4 - 3		922
	220	332.528	29.5708 - 330.2976	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^3G^{\circ}$	3 - 4		922
	60	332.689	0.8897 - 301.4702	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3F^{\circ}$	3 - 3		922
	290	332.788	69.1561 - 369.6491	$3d^6 - 3d^5(a^2P)4p$	$b^3P - ^3P^{\circ}$	2 - 2		922
	330	333.109	0.0 - 300.2010	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3P^{\circ}$	4 - 3		922
	110	333.302	0.8897 - 300.9181	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3F^{\circ}$	3 - 4		922
	150	333.360	1.4899 - 301.4702	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3F^{\circ}$	2 - 3		922
	40	333.475	48.6070 - 348.4779	$3d^6 - 3d^5(b^2D)4p$	$a^1D - ^1P^{\circ}$	2 - 1		922
	140	333.651	29.8992 - 329.6143	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^3G^{\circ}$	2 - 3		922
	180	334.116	27.5782 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$a^3H - ^3F^{\circ}$	5 - 4		922
	20	334.429	27.8588 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$a^3H - ^3F^{\circ}$	4 - 4		922
	150	334.479	0.0 - 298.9723	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3D^{\circ}$	4 - 3		922
	420	335.382	27.8588 - 326.0299	$3d^6 - 3d^5(b^2F)4p$	$a^3H - ^3F^{\circ}$	4 - 3		922
	420	335.395	0.8897 - 299.0456	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3P^{\circ}$	3 - 2		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	390	335.478	0.8897 - 298.9723	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3D^o$	3 - 3		922
	240	335.529	27.1112 - 325.1484	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3H^o$	6 - 6		922
	240	335.593	27.5782 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$a^3H - ^1G^o$	5 - 4		922
	570	335.718	27.1112 - 324.9802	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3G^o$	6 - 5		922
	220	335.851	29.1237 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^3F^o$	4 - 4		922
	90	335.911	26.1530 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$a^3P - ^3F^o$	2 - 2		922
	510	335.971	27.5782 - 325.2229	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3G^o$	5 - 4		922
	160	336.072	1.4899 - 299.0456	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5P^o$	2 - 2		922
	280	336.154	1.4899 - 298.9723	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3D^o$	2 - 3		922
	460	336.301	27.8588 - 325.2119	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3G^o$	4 - 3		922
	90	336.446	29.8992 - 327.1227	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^1D^o$	2 - 2		922
	290	336.504	1.8715 - 299.0456	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5P^o$	1 - 2		922
	360	336.575	1.4899 - 298.6006	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3D^o$	2 - 1		922
	630	336.792	0.0 - 296.9193	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	4 - 4		922
	570	336.818	0.0 - 296.8970	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^3G^o$	4 - 4		927
	320	336.930	27.1112 - 323.9086	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3H^o$	6 - 5		922
	380	337.184	0.0 - 296.5740	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	4 - 3		922
	230	337.236	0.8897 - 297.4181	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3D^o$	3 - 3		922
	250	337.276	1.4899 - 297.9828	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5P^o$	2 - 1		922
	220	337.315	29.5708 - 326.0299	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^3F^o$	3 - 3		922
	100	337.340	27.1237 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^1G^o$	4 - 4		922
	230	337.441	27.5782 - 323.9263	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3H^o$	5 - 4		922
	340	337.461	27.5782 - 323.9086	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3H^o$	5 - 5		922
	310	337.623	1.8715 - 298.0600	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	1 - 0		927
	360	337.696	0.8897 - 297.0139	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	3 - 2		922
	240	337.726	29.1237 - 325.2229	$3d^6 - 3d^5(a^2G)4p$	$a^3F - ^3G^o$	4 - 4		922
	330	337.743	29.8992 - 325.9822	$3d^6 - 3d^5(b^2F)4p$	$a^3F - ^3F^o$	2 - 2		922
	350	337.761	27.8588 - 323.9263	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3H^o$	4 - 4		922
	370	337.804	0.8897 - 296.9193	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	3 - 4		922
	160	337.830	0.8897 - 296.8970	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^3G^o$	3 - 4		922
	250	337.920	1.4899 - 297.4179	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	2 - 1		922
	20	337.978	34.4164 - 330.2976	$3d^6 - 3d^5(b^2F)4p$	$a^3G - ^3G^o$	3 - 4		922
	490	338.198	0.8897 - 296.5740	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	3 - 3		922
	230	338.357	1.8715 - 297.4179	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	1 - 1		922
	350	338.382	1.4899 - 297.0139	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	2 - 2		922
	550	338.473	0.0 - 295.4443	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^o$	4 - 5		922
	300	338.569	2.0576 - 297.4179	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	0 - 1		922
	90	338.738	27.1112 - 322.3242	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^1I^o$	6 - 6		922
	410	338.819	1.8715 - 297.0139	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	1 - 2		922
	440	338.886	1.4899 - 296.5740	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5D^o$	2 - 3		922
	220	339.052	0.0 - 294.9396	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^o$	4 - 4		922
	40	339.213	29.1237 - 323.9263	$3d^6 - 3d^5(a^2H)4p$	$a^3F - ^3H^o$	4 - 4		922
	40	339.277	27.5782 - 322.3242	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^1I^o$	5 - 6		922
	60	339.674	29.1237 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3F^o$	4 - 3		922
	20	339.716	26.1530 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$a^3P - ^3F^o$	2 - 3		922
	60	339.810	29.5708 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3F^o$	3 - 2		922
	490	340.079	0.8897 - 294.9396	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^o$	3 - 4		922
	160	340.189	29.8992 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3F^o$	2 - 2		922
	290	340.487	29.1237 - 322.8208	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3F^o$	4 - 4		922
	460	340.516	27.1112 - 320.7831	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3I^o$	6 - 7		922
	90	340.577	33.2565 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$a^3G - ^3F^o$	5 - 4		922
	360	340.653	0.8897 - 294.4433	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^o$	3 - 3		922
	140	340.742	27.5782 - 321.0564	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3F^o$	5 - 4		922
	30	340.897	29.6400 - 322.9845	$3d^6 - 3d^5(a^4F)4p$	$a^3P - ^3D^o$	0 - 1		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
60	341.039		27.8588 - 321.0819	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^1F^{\circ}$	4 - 3		922
90	341.068		0.8897 - 294.0860	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^{\circ}$	3 - 2		922
30	341.242		29.5708 - 322.6176	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3D^{\circ}$	3 - 3		922
430	341.351		1.4899 - 294.4433	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^{\circ}$	2 - 3		922
270	341.589		27.1112 - 319.8604	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3I^{\circ}$	6 - 6		922
180	341.674		34.0617 - 326.7390	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^1F^{\circ}$	4 - 3		922
380	341.701		27.8588 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3F^{\circ}$	4 - 3		922
360	341.768		1.4899 - 294.0860	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^{\circ}$	2 - 2		922
500	341.832		27.1112 - 319.6527	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^3G^{\circ}$	6 - 5		922
320	341.858		42.2081 - 334.7276	$3d^6 - 3d^5(b^2F)4p$	$a^1G - ^1F^{\circ}$	4 - 3		922
440	342.090		27.5782 - 319.8991	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^3G^{\circ}$	5 - 4		922
350	342.135		27.5782 - 319.8604	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3I^{\circ}$	5 - 6		922
370	342.215		1.8715 - 294.0860	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^5F^{\circ}$	1 - 2		922
100	342.355		0.8897 - 292.9830	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3P^{\circ}$	3 - 2		922
220	342.379		27.5782 - 319.6527	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^3G^{\circ}$	5 - 5		922
180	342.418		27.8588 - 319.8991	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^3G^{\circ}$	4 - 4		922
110	342.472		1.8715 - 293.8670	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3P^{\circ}$	1 - 0		922
500	342.506		27.1112 - 319.0762	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3I^{\circ}$	6 - 5		927
360	342.545		1.4899 - 293.4200	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3P^{\circ}$	2 - 1		922
500	342.592		33.2565 - 325.1484	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3H^{\circ}$	5 - 6		922
340	342.728		2.0576 - 293.8338	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - ^3F^{\circ}$	0 - 1		927
200	342.747		27.8588 - 319.6202	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^3G^{\circ}$	4 - 3		922
400	342.790		33.2565 - 324.9802	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3G^{\circ}$	5 - 5		922
420	342.910		57.9241 - 349.5460	$3d^6 - 3d^5(b^2D)4p$	$a^1F - ^1D^{\circ}$	3 - 2		922
420	342.976		34.4164 - 325.9822	$3d^6 - 3d^5(b^2F)4p$	$a^3G - ^3F^{\circ}$	3 - 2		922
350	342.996		1.8715 - 293.4200	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3P^{\circ}$	1 - 1		922
440	343.044		29.5708 - 321.0819	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1F^{\circ}$	3 - 3		922
510	343.057		27.5782 - 319.0762	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3I^{\circ}$	5 - 5		922
90	343.182		29.1237 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$a^3F - ^3F^{\circ}$	4 - 3		922
140	343.215		2.0576 - 293.4200	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3P^{\circ}$	0 - 1		922
180	343.256		0.0 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^3F^{\circ}$	4 - 3		922
340	343.385		27.8588 - 319.0762	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3I^{\circ}$	4 - 5		922
140	343.427		29.8992 - 321.0819	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1F^{\circ}$	2 - 3		922
460	343.454		34.0617 - 325.2229	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3G^{\circ}$	4 - 4		922
430	343.464		34.0617 - 325.2119	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3G^{\circ}$	4 - 3		922
390	343.503		29.8992 - 321.0183	$3d^6 - 3d^5(a^2G)4p$	$a^3F - ^3F^{\circ}$	2 - 2		922
380	343.711		29.5708 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$a^3F - ^3F^{\circ}$	3 - 3		922
310	343.739		34.0617 - 324.9802	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3G^{\circ}$	4 - 5		922
360	343.869		34.4164 - 325.2229	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3G^{\circ}$	3 - 4		922
450	343.883		34.4164 - 325.2119	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3G^{\circ}$	3 - 3		922
680	343.930		0.0 - 290.7570	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3P^{\circ}$	4 - 3		922
320	344.038		0.8897 - 291.5546	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^3F^{\circ}$	3 - 4		922
370	344.053		33.2565 - 323.9086	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3H^{\circ}$	5 - 5		922
360	344.200		29.1237 - 319.6527	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3G^{\circ}$	4 - 5		922
590	344.234		0.8897 - 291.3900	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5P^{\circ}$	3 - 2		922
250	344.438		29.5708 - 319.8991	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3G^{\circ}$	3 - 4		922
60	344.516		0.0 - 290.2620	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^3D^{\circ}$	4 - 4		922
600	344.571		27.1112 - 317.3273	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3H^{\circ}$	6 - 6		922
60	344.676		26.1530 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^3P - ^3F^{\circ}$	2 - 3		922
530	344.767		1.4899 - 291.5417	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5P^{\circ}$	2 - 1		922
330	344.810		29.1237 - 319.1387	$3d^6 - 3d^5(a^2G)4p$	$a^3F - ^3G^{\circ}$	4 - 4		922
130	344.881		29.1237 - 319.0762	$3d^6 - 3d^5(a^2H)4p$	$a^3F - ^3I^{\circ}$	4 - 5		922
490	344.947		1.4899 - 291.3900	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5P^{\circ}$	2 - 2		922
500	344.986		0.8897 - 290.7570	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5P^{\circ}$	3 - 3		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	460	345.011	34.0617 - 323.9086	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3H^o$	4 - 5		922
	540	345.120	27.5782 - 317.3273	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3H^o$	5 - 6		922
	280	345.160	29.8992 - 319.6202	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^3G^o$	2 - 3		922
	460	345.219	1.8715 - 291.5417	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5P^o$	1 - 1		922
	330	345.287	27.1112 - 316.7266	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3G^o$	6 - 5		922
	500	345.345	33.2565 - 322.8208	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3F^o$	5 - 4		922
	550	345.406	34.4164 - 323.9263	$3d^6 - 3d^5(a^2H)4p$	$a^3G - ^3H^o$	3 - 4		922
	360	345.442	2.0576 - 291.5417	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5P^o$	0 - 1		922
	380	345.469	34.0617 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3F^o$	4 - 3		922
	380	345.500	34.4164 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3F^o$	3 - 2		922
	590	345.576	0.8897 - 290.2620	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	3 - 4		922
	520	345.652	27.5782 - 316.8878	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3G^o$	5 - 4		922
	510	345.662	27.5782 - 316.8878	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3G^o$	5 - 4		922
	340	345.701	1.4899 - 290.7570	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5P^o$	2 - 3		922
	290	345.821	27.5782 - 316.7440	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^5D^o$	5 - 4		922
	280	345.843	27.5782 - 316.7266	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3G^o$	5 - 5		922
	160	345.892	34.4164 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3F^o$	3 - 3		922
	200	345.939	33.2565 - 322.3242	$3d^6 - 3d^5(a^2H)4p$	$a^3G - ^1I^o$	5 - 6		922
	90	345.987	27.8588 - 316.8878	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3G^o$	4 - 4		922
	80	346.036	57.9241 - 346.9124	$3d^6 - 3d^5(b^2D)4p$	$a^3F - ^3P^o$	3 - 2		922
	320	346.165	27.1112 - 315.9905	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3H^o$	6 - 5		922
	160	346.239	28.6976 - 317.5175	$3d^6 - 3d^5(a^4F)4p$	$a^3P - ^5D^o$	1 - 2		922
	300	346.309	34.0617 - 322.8208	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3F^o$	4 - 4		922
	250	346.327	41.6269 - 330.3707	$3d^6 - 3d^5(a^2S)4p$	$a^3D - ^3P^o$	2 - 1		922
	340	346.417	41.7011 - 330.3707	$3d^6 - 3d^5(a^2S)4p$	$a^3D - ^3P^o$	1 - 1		922
	240	346.553	34.0617 - 322.6176	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3D^o$	4 - 3		922
	130	346.577	104.4205 - 392.9571	$3d^6 - 3d^5(c^2D)4p$	$b^1D - ^1F^o$	2 - 3		922
	130	346.632	27.5782 - 316.0688	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^3G^o$	5 - 4		922
	630	346.730	0.8897 - 289.2980	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	3 - 3		922
	110	346.925	41.6269 - 329.8729	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^3D^o$	2 - 3		922
	270	346.970	27.8588 - 316.0688	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^3G^o$	4 - 4		922
	600	347.028	0.0 - 288.1616	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	4 - 4		922
	400	347.064	27.8588 - 315.9905	$3d^6 - 3d^5(a^2H)4p$	$a^3H - ^3H^o$	4 - 5		922
	260	347.134	41.7011 - 329.7763	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^3D^o$	1 - 2		922
	410	347.156	27.1112 - 315.1682	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^5F^o$	6 - 5		922
	190	347.200	34.4164 - 322.4364	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3D^o$	3 - 2		927
	240	347.236	0.8897 - 288.8779	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5S^o$	3 - 2		927
	620	347.275	41.9202 - 329.8729	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^3D^o$	3 - 3		922
	740	347.335	0.0 - 287.9069	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	4 - 5		927
	410	347.397	41.9202 - 329.7763	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^3D^o$	3 - 2		922
	490	347.422	41.6269 - 329.4623	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^3D^o$	2 - 1		922
	700	347.456	1.4899 - 289.2980	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	2 - 3		922
	630	347.505	26.1530 - 313.9198	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^3D^o$	2 - 3		922
	610	347.515	1.4899 - 289.2471	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	2 - 2		922
	450	347.592	41.9202 - 329.6143	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^3G^o$	3 - 3		922
	640	347.702	29.1237 - 316.7266	$3d^6 - 3d^5(a^2H)4p$	$a^3F - ^3G^o$	4 - 5		922
	670	347.716	27.1112 - 314.7022	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^3G^o$	6 - 5		922
	460	347.788	26.1530 - 313.6866	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^3D^o$	2 - 2		922
	630	347.811	27.8588 - 315.3701	$3d^6 - 3d^5(a^2G)4p$	$a^3H - ^3H^o$	4 - 4		922
	530	347.865	28.6976 - 316.1654	$3d^6 - 3d^5(a^2F)4p$	$a^3P - ^3F^o$	1 - 2		922
	610	347.977	1.8715 - 289.2471	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	1 - 2		922
	610	348.047	68.7187 - 356.0363	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3G^o$	4 - 5		922
	630	348.080	1.8715 - 289.1630	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	1 - 1		922
	710	348.102	0.8897 - 288.1616	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	3 - 4		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	220	348.226	29.5708 - 316.7440	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^5D^o$	3 - 4		922
	230	348.245	29.1237 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3F^o$	4 - 3		922
	620	348.278	0.0 - 287.1280	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5H^o$	4 - 5		922
	530	348.303	2.0576 - 289.1630	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^3F^o$	0 - 1		922
	420	348.347	0.8897 - 287.9600	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	3 - 3		922
	310	348.375	68.7187 - 355.7652	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3G^o$	4 - 4		922
	410	348.409	34.0617 - 321.0819	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^1F^o$	4 - 3		922
	370	348.422	1.8715 - 288.8779	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5S^o$	1 - 2		927
	450	348.498	29.1237 - 316.0688	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3G^o$	4 - 4		922
	330	348.541	68.8547 - 355.7652	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3G^o$	3 - 4		922
	400	348.563	0.8897 - 287.7821	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	3 - 2		922
	140	348.594	29.1237 - 315.9905	$3d^6 - 3d^5(a^2H)4p$	$a^3F - ^3H^o$	4 - 5		922
	50	348.623	27.8588 - 314.7022	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^3G^o$	4 - 5		922
	500	348.674	26.1530 - 312.9536	$3d^6 - 3d^5(a^2F)4p$	$a^3P - ^3D^o$	2 - 3		922
	70	348.716	68.6321 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3G^o$	2 - 3		922
	280	348.752	26.1530 - 312.8894	$3d^6 - 3d^5(a^4F)4p$	$a^3P - ^5G^o$	2 - 3		927
	320	348.786	29.5708 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3F^o$	3 - 3		927
	410	348.836	28.6976 - 315.3661	$3d^6 - 3d^5(a^2F)4p$	$a^3P - ^3D^o$	1 - 2		922
	310	348.883	27.5782 - 314.2088	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^3F^o$	5 - 4		927
	410	348.915	34.4164 - 321.0183	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3F^o$	3 - 2		922
	320	348.987	68.8547 - 355.3980	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3G^o$	3 - 3		922
	380	349.019	68.6321 - 355.1500	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3F^o$	2 - 2		922
	340	349.043	29.5708 - 316.0688	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3G^o$	3 - 4		922
	550	349.076	1.4899 - 287.9600	$3d^6 - 3d^5(a^4G)4p$	$ga^5D - ^5F^o$	2 - 3		922
	390	349.096	34.0617 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3F^o$	4 - 3		922
	160	349.184	29.8992 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3F^o$	2 - 3		922
	60	349.220	27.1112 - 313.4647	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^5G^o$	6 - 5		922
	180	349.293	1.4899 - 287.7821	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	2 - 2		922
	360	349.326	1.4899 - 287.7555	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	2 - 1		927
	330	349.339	104.4205 - 390.6751	$3d^6 - 3d^5(c^2D)4p$	$b^1D - ^1D^o$	2 - 2		922
	120	349.403	29.1237 - 315.3262	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1F^o$	4 - 3		922
	210	349.485	28.6976 - 314.8347	$3d^6 - 3d^5(a^4F)4p$	$a^3P - ^5F^o$	1 - 2		922
	230	349.500	48.6070 - 334.7276	$3d^6 - 3d^5(b^2F)4p$	$a^1D - ^1F^o$	2 - 3		922
	240	349.522	41.2522 - 327.3566	$3d^6 - 3d^5(a^2H)4p$	$a^1I - ^1H^o$	6 - 5		922
	40	349.576	27.8588 - 313.9198	$3d^6 - 3d^5(a^2D)4p$	$a^3H - ^3D^o$	4 - 3		922
	310	349.759	1.8715 - 287.7821	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	1 - 2		922
	490	349.794	1.8715 - 287.7555	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	1 - 1		927
	490	349.809	48.6070 - 334.4772	$3d^6 - 3d^5(a^2S)4p$	$a^1D - ^1P^o$	2 - 1		922
	570	349.879	26.1530 - 311.9665	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^3P^o$	2 - 2		927
	270	349.900	29.5708 - 315.3661	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3D^o$	3 - 2		922
	190	349.950	29.5708 - 315.3262	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1F^o$	3 - 3		922
	240	350.019	2.0576 - 287.7555	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - ^5D^o$	0 - 1		927
	310	350.065	29.6400 - 315.3007	$3d^6 - 3d^5(a^2F)4p$	$a^3P - ^3D^o$	0 - 1		922
	80	350.133	27.8588 - 313.4647	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^5G^o$	4 - 5		922
	290	350.166	29.1237 - 314.7022	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3G^o$	4 - 5		922
	160	350.191	34.0617 - 319.6202	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3G^o$	4 - 3		922
	260	350.249	34.4164 - 319.9265	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^1D^o$	3 - 2		922
	470	350.302	29.8992 - 315.3661	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^3D^o$	2 - 2		922
	350	350.352	27.8588 - 313.2813	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^5G^o$	4 - 4		927
	20	350.439	57.9241 - 343.2810	$3d^6 - 3d^5(b^2D)4p$	$a^3F - ^3F^o$	3 - 3		922
	220	350.493	68.6321 - 353.9441	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3F^o$	2 - 3		922
	430	350.557	29.5708 - 314.8347	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^5F^o$	3 - 2		922
	390	350.566	29.8992 - 315.1528	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^5F^o$	2 - 1		922
	210	350.600	68.7187 - 353.9441	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3F^o$	4 - 3		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	350.626	34.4164 - 319.6202	$3d^6 - 3d^5(a^4F)4p$	$a^1G - ^1G^\circ$	3 - 3		922
	460	350.694	42.2081 - 327.3566	$3d^6 - 3d^5(a^2H)4p$	$a^1G - ^1H^\circ$	4 - 5		922
	690	350.773	41.2522 - 326.3371	$3d^6 - 3d^5(a^2G)4p$	$a^1I - ^1H^\circ$	6 - 5		922
	310	350.841	27.8588 - 312.8894	$3d^6 - 3d^5(a^4F)4p$	$a^3H - ^5G^\circ$	4 - 3		927
	320	350.900	28.6976 - 313.6866	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^1D^\circ$	1 - 2		922
	220	350.931	41.9202 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^1F^\circ$	3 - 4		922
	270	351.026	28.6976 - 313.5773	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^1P^\circ$	1 - 0		922
	220	351.085	68.7187 - 353.5487	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^3H^\circ$	4 - 5		922
	350	351.128	29.1237 - 313.9198	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1D^\circ$	4 - 3		927
	320	351.286	42.2081 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$a^1G - ^1F^\circ$	4 - 4		922
	430	351.335	68.7187 - 353.3471	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^1F^\circ$	4 - 4		922
	400	351.365	27.8588 - 312.4633	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^1G^\circ$	4 - 3		922
	450	351.455	42.2081 - 326.7390	$3d^6 - 3d^5(a^2G)4p$	$a^1G - ^1F^\circ$	4 - 3		922
	60	351.503	68.8547 - 353.3471	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^1F^\circ$	3 - 4		922
	60	351.581	27.5782 - 312.0083	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^1G^\circ$	5 - 4		922
	300	351.613	0.0 - 284.4025	$3d^6 - 3d^5(a^2G)4p$	$ga^3D - ^5G^\circ$	4 - 5		927
	330	351.677	29.5708 - 313.9198	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1D^\circ$	3 - 3		922
	200	351.691	29.1237 - 313.4647	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^1G^\circ$	4 - 5		922
	40	351.730	0.0 - 284.3089	$3d^6 - 3d^5(a^4G)4p$	$ga^3D - ^5G^\circ$	4 - 4		927
	120	351.762	41.7011 - 325.9822	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^1F^\circ$	1 - 2		922
	200	351.844	68.8547 - 353.0716	$3d^6 - 3d^5(b^2G)4p$	$b^3F - ^1H^\circ$	3 - 4		922
	270	351.926	27.8588 - 312.0083	$3d^6 - 3d^5(a^2F)4p$	$a^3H - ^1G^\circ$	4 - 4		922
	500	351.969	29.5708 - 313.6866	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1D^\circ$	3 - 2		922
	130	352.241	41.2522 - 325.1484	$3d^6 - 3d^5(a^2G)4p$	$a^1I - ^1H^\circ$	6 - 6		922
	530	352.324	29.1237 - 312.9536	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1D^\circ$	4 - 3		922
	380	352.386	29.8992 - 313.6790	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1D^\circ$	2 - 1		922
	60	352.451	41.2522 - 324.9802	$3d^6 - 3d^5(a^2G)4p$	$a^1I - ^1G^\circ$	6 - 5		922
	140	352.561	41.9202 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$a^3D - ^1G^\circ$	3 - 4		922
	210	352.618	28.6976 - 312.2910	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^1P^\circ$	1 - 1		922
	570	352.769	33.2565 - 316.7266	$3d^6 - 3d^5(a^2H)4p$	$a^3G - ^1G^\circ$	5 - 5		922
	210	352.834	0.8897 - 284.3089	$3d^6 - 3d^5(a^4G)4p$	$ga^3D - ^5G^\circ$	3 - 4		927
	70	352.879	29.5708 - 312.9536	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1D^\circ$	3 - 3		922
	400	352.919	42.2081 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$a^3G - ^1G^\circ$	4 - 4		922
	120	352.960	29.5708 - 312.8894	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^5G^\circ$	3 - 3		927
	260	353.099	29.5708 - 312.7782	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^5G^\circ$	3 - 2		927
	160	353.368	29.8992 - 312.8894	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^5G^\circ$	2 - 3		927
	410	353.407	34.4164 - 317.3768	$3d^6 - 3d^5(a^2H)4p$	$a^3G - ^1G^\circ$	3 - 3		922
	330	353.492	29.5708 - 312.4633	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1G^\circ$	3 - 3		922
	200	353.507	29.8992 - 312.7782	$3d^6 - 3d^5(a^4F)4p$	$a^3F - ^5G^\circ$	2 - 2		927
	620	353.573	34.0617 - 316.8878	$3d^6 - 3d^5(a^2H)4p$	$a^3G - ^1G^\circ$	4 - 4		922
	690	353.588	33.2565 - 316.0688	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^1G^\circ$	5 - 4		922
	280	353.619	26.1530 - 308.9430	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^1D^\circ$	2 - 2		922
	170	353.655	1.4899 - 284.2490	$3d^6 - 3d^5(a^4G)4p$	$ga^3D - ^5G^\circ$	2 - 3		927
	230	353.689	33.2565 - 315.9905	$3d^6 - 3d^5(a^2H)4p$	$a^3G - ^3H^\circ$	5 - 5		922
	170	353.754	47.6997 - 330.3707	$3d^6 - 3d^5(a^2S)4p$	$a^1S - ^3P^\circ$	0 - 1		922
	410	353.788	41.2522 - 323.9086	$3d^6 - 3d^5(a^2G)4p$	$a^1I - ^3H^\circ$	6 - 5		922
	160	353.815	27.5782 - 310.2126	$3d^6 - 3d^5(a^2D)4p$	$a^3H - ^3F^\circ$	5 - 4		922
	30	353.901	29.8992 - 312.4633	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1G^\circ$	2 - 3		922
	20	354.013	34.4164 - 316.8878	$3d^6 - 3d^5(a^2H)4p$	$a^3G - ^3G^\circ$	3 - 4		922
	220	354.061	29.5708 - 312.0083	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1G^\circ$	3 - 4		922
	440	354.118	29.8992 - 312.2910	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^3P^\circ$	2 - 1		922
	400	354.140	27.5782 - 309.9525	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^3H^\circ$	5 - 4		922
	720	354.181	1.8715 - 284.2155	$3d^6 - 3d^5(a^4G)4p$	$ga^3D - ^5G^\circ$	1 - 2		927
	410	354.335	34.0617 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^3F^\circ$	4 - 3		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	760	354.418	27.1112 - 309.2640	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^3H^o$	6 - 6		922
	360	354.467	33.2565 - 315.3701	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3H^o$	5 - 4		922
	680	354.493	27.8588 - 309.9525	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^3H^o$	4 - 4		922
	180	354.533	27.8588 - 309.9195	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^3H^o$	4 - 5		922
	370	354.721	33.2565 - 315.1682	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^3F^o$	5 - 5		922
	290	354.780	34.4164 - 316.2803	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^3F^o$	3 - 3		922
	250	354.925	34.4164 - 316.1654	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^3F^o$	3 - 2		922
	350	354.964	42.2081 - 323.9263	$3d^6 - 3d^5(a^2H)4p$	$a^1G - ^3H^o$	4 - 4		922
	0	354.994	27.1112 - 308.8041	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^1H^o$	6 - 5		922
	70	355.046	34.4164 - 316.0688	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^3G^o$	3 - 4		922
	250	355.140	26.1530 - 307.7311	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^3F^o$	2 - 2		922
	120	355.240	33.2565 - 314.7564	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^5G^o$	5 - 6		922
	220	355.309	33.2565 - 314.7022	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^3G^o$	5 - 5		922
	90	355.439	33.2565 - 314.5992	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^5F^o$	5 - 4		922
	50	355.471	42.2081 - 323.5232	$3d^6 - 3d^5(a^3F)4p$	$a^1G - ^3F^o$	4 - 3		922
	420	355.537	34.0617 - 315.3262	$3d^6 - 3d^5(a^2D)4p$	$a^3G - ^1F^o$	4 - 3		922
	400	355.586	27.5782 - 308.8041	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^1H^o$	5 - 5		922
	680	355.611	27.1112 - 308.3173	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^1I^o$	6 - 7		922
	700	355.780	41.2522 - 322.3242	$3d^6 - 3d^5(a^2H)4p$	$a^1I - ^1I^o$	6 - 6		922
	580	355.935	33.2565 - 314.2088	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^3F^o$	5 - 4		922
	140	355.986	34.4164 - 315.3262	$3d^6 - 3d^5(a^2D)4p$	$a^3G - ^1F^o$	3 - 3		922
	580	356.047	77.8995 - 358.7600	$3d^6 - 3d^5(b^2G)4p$	$b^1G - ^1G^o$	4 - 4		922
	160	356.090	29.1237 - 309.9525	$3d^6 - 3d^5(a^2I)4p$	$a^3F - ^3H^o$	4 - 4		922
	20	356.134	29.1237 - 309.9195	$3d^6 - 3d^5(a^2I)4p$	$a^3F - ^3H^o$	4 - 5		922
	130	356.208	27.8588 - 308.5920	$3d^6 - 3d^5(a^2D)4p$	$a^3H - ^3F^o$	4 - 3		922
	40	356.253	41.9202 - 322.6176	$3d^6 - 3d^5(a^4F)4p$	$a^3D - ^3D^o$	3 - 3		922
	220	356.328	34.0617 - 314.7022	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^3G^o$	4 - 5		922
	20	356.359	42.2081 - 322.8208	$3d^6 - 3d^5(a^3F)4p$	$a^1G - ^3F^o$	4 - 4		922
	250	356.410	77.8995 - 358.4756	$3d^6 - 3d^5(b^2G)4p$	$b^1G - ^1H^o$	4 - 5		922
	60	356.460	34.0617 - 314.5992	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^5F^o$	4 - 4		922
	70	356.506	34.0617 - 314.5628	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^5F^o$	4 - 3		922
	390	356.621	42.2081 - 322.6176	$3d^6 - 3d^5(a^3F)4p$	$a^1G - ^3D^o$	4 - 3		922
	490	356.775	27.1112 - 307.3997	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^1I^o$	6 - 6		922
	70	356.831	28.6976 - 308.9430	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^1D^o$	1 - 2		922
	170	356.860	26.1530 - 306.3778	$3d^6 - 3d^5(a^3D)4p$	$a^3P - ^3P^o$	2 - 2		922
	330	356.876	33.2565 - 313.4647	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^5G^o$	5 - 5		922
	30	356.957	34.4164 - 314.5628	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^5F^o$	3 - 3		922
	650	357.371	27.5782 - 307.3997	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^1I^o$	5 - 6		922
	230	357.550	26.1530 - 305.8381	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^3P^o$	2 - 1		922
	20	357.743	41.2522 - 320.7831	$3d^6 - 3d^5(a^2H)4p$	$a^1I - ^1I^o$	6 - 7		922
	400	357.822	29.1237 - 308.5920	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^3F^o$	4 - 3		922
	110	357.897	34.0617 - 313.4647	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^5G^o$	4 - 5		922
	130	357.921	41.6269 - 321.0183	$3d^6 - 3d^5(a^2G)4p$	$a^3D - ^3F^o$	2 - 2		922
	160	357.946	29.5708 - 308.9430	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1D^o$	3 - 2		927
	360	358.014	41.7011 - 321.0183	$3d^6 - 3d^5(a^2G)4p$	$a^3D - ^3F^o$	1 - 2		922
	50	358.142	34.0617 - 313.2813	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^5G^o$	4 - 4		927
	370	358.248	41.9202 - 321.0564	$3d^6 - 3d^5(a^2G)4p$	$a^3D - ^3F^o$	3 - 4		922
	100	358.368	29.8992 - 308.9430	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^1D^o$	2 - 2		922
	140	358.396	29.5708 - 308.5920	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^3F^o$	3 - 3		922
	70	358.503	27.1112 - 306.0490	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^1I^o$	6 - 5		922
	690	358.570	27.1112 - 305.9963	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^3K^o$	6 - 7		927
	680	358.583	42.2081 - 321.0819	$3d^6 - 3d^5(a^3F)4p$	$a^1G - ^1F^o$	4 - 3		922
	530	358.618	42.2081 - 321.0564	$3d^6 - 3d^5(a^2G)4p$	$a^3G - ^3F^o$	4 - 4		922
	260	358.742	33.2565 - 312.0083	$3d^6 - 3d^5(a^3F)4p$	$a^3G - ^1G^o$	5 - 4		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	60	358.819	29.8992 - 308.5920	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^3F^o$	2 - 3		922
	260	358.927	41.2522 - 319.8604	$3d^6 - 3d^5(a^2H)4p$	$a^1I - ^3I^o$	6 - 6		922
	120	358.944	41.9202 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$a^3D - ^3F^o$	3 - 3		922
	240	359.020	34.4164 - 312.9536	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^3D^o$	3 - 3		922
	380	359.047	48.6070 - 327.1227	$3d^6 - 3d^5(b^2F)4p$	$a^1D - ^1D^o$	2 - 2		922
	190	359.101	34.4164 - 312.8894	$3d^6 - 3d^5(a^4F)4p$	$a^3G - ^3G^o$	3 - 3		927
	150	359.194	34.0617 - 312.4633	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^3G^o$	4 - 3		922
	150	359.316	42.2081 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$a^1G - ^3F^o$	4 - 3		922
	70	359.420	41.7011 - 319.9265	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^1D^o$	1 - 2		922
	660	359.467	27.8588 - 306.0490	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^3I^o$	4 - 5		922
	330	359.505	29.5708 - 307.7311	$3d^6 - 3d^5(a^2D)4p$	$a^3F - ^3F^o$	3 - 2		922
	330	359.542	48.6070 - 326.7390	$3d^6 - 3d^5(a^2G)4p$	$a^1D - ^1F^o$	2 - 3		922
	580	359.696	27.5782 - 305.5908	$3d^6 - 3d^5(a^2I)4p$	$a^3H - ^3K^o$	5 - 6		922
	260	359.720	41.6269 - 319.6202	$3d^6 - 3d^5(a^4F)4p$	$a^3D - ^3G^o$	2 - 3		922
	170	359.737	41.9202 - 319.8991	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3G^o$	3 - 4		922
	350	359.781	34.0617 - 312.0083	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^1G^o$	4 - 4		922
	140	359.967	69.1561 - 346.9595	$3d^6 - 3d^5(b^2D)4p$	$b^3P - ^3P^o$	2 - 1		922
	350	360.028	69.1561 - 346.9124	$3d^6 - 3d^5(b^2D)4p$	$b^3P - ^3P^o$	2 - 2		922
	220	360.112	42.2081 - 319.8991	$3d^6 - 3d^5(a^4F)4p$	$a^1G - ^3G^o$	4 - 4		922
	60	360.242	34.4164 - 312.0083	$3d^6 - 3d^5(a^2F)4p$	$a^3G - ^1G^o$	3 - 4		922
	410	360.474	42.2081 - 319.6202	$3d^6 - 3d^5(a^4F)4p$	$a^1G - ^3G^o$	4 - 3		922
	270	360.726	41.9202 - 319.1387	$3d^6 - 3d^5(a^2G)4p$	$a^3D - ^3G^o$	3 - 4		927
	90	360.827	28.6976 - 305.8381	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^3P^o$	1 - 1		922
	550	360.886	26.1530 - 303.2495	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3S^o$	2 - 1		922
	550	361.101	42.2081 - 319.1387	$3d^6 - 3d^5(a^2G)4p$	$a^1G - ^1G^o$	4 - 4		922
	580	361.266	57.9241 - 334.7276	$3d^6 - 3d^5(b^2F)4p$	$a^1F - ^1F^o$	3 - 3		922
	80	361.349	66.7378 - 343.4782	$3d^6 - 3d^5(b^2D)4p$	$b^3P - ^3D^o$	0 - 1		922
	70	361.416	28.6976 - 305.3869	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^3P^o$	1 - 0		927
	140	361.450	33.2565 - 309.9195	$3d^6 - 3d^5(a^2I)4p$	$a^3G - ^3H^o$	5 - 5		922
	110	361.526	48.6070 - 325.2119	$3d^6 - 3d^5(a^2G)4p$	$a^3D - ^3G^o$	2 - 3		922
	170	361.851	67.5479 - 343.9057	$3d^6 - 3d^5(b^2D)4p$	$b^3P - ^3D^o$	1 - 2		922
	70	362.058	29.6400 - 305.8381	$3d^6 - 3d^5(a^2D)4p$	$a^3P - ^3P^o$	0 - 1		922
	130	362.120	34.0617 - 310.2126	$3d^6 - 3d^5(a^2D)4p$	$a^3G - ^3F^o$	4 - 4		922
	550	362.219	68.7187 - 344.8053	$3d^6 - 3d^5(b^2D)4p$	$b^3F - ^3D^o$	4 - 3		922
	590	362.309	33.2565 - 309.2640	$3d^6 - 3d^5(a^2I)4p$	$a^3G - ^3H^o$	5 - 6		922
	560	362.506	34.0617 - 309.9195	$3d^6 - 3d^5(a^2I)4p$	$a^3G - ^3H^o$	4 - 5		922
	280	362.654	104.4205 - 380.1656	$3d^6 - 3d^5(a^2P)4p$	$b^1D - ^1P^o$	2 - 1		922
	220	362.779	69.1561 - 344.8053	$3d^6 - 3d^5(b^2D)4p$	$b^3P - ^3D^o$	2 - 3		922
	530	362.928	34.4164 - 309.9525	$3d^6 - 3d^5(a^2I)4p$	$a^3G - ^3H^o$	3 - 4		922
	40	363.043	77.8995 - 353.3471	$3d^6 - 3d^5(b^2G)4p$	$b^3G - ^3F^o$	4 - 4		922
	20	363.182	67.5479 - 342.8946	$3d^6 - 3d^5(b^2D)4p$	$b^3P - ^3F^o$	1 - 2		922
	50	363.309	48.6070 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$a^1D - ^3F^o$	2 - 2		922
	340	363.541	57.9241 - 332.9956	$3d^6 - 3d^5(a^2H)4p$	$a^1F - ^1G^o$	3 - 4		922
	60	363.568	68.8547 - 343.9057	$3d^6 - 3d^5(b^2D)4p$	$b^3F - ^3D^o$	3 - 2		922
	20	363.839	68.6321 - 343.4782	$3d^6 - 3d^5(b^2D)4p$	$b^3F - ^3D^o$	2 - 1		922
	60	363.975	34.0617 - 308.8041	$3d^6 - 3d^5(a^2I)4p$	$a^3G - ^1H^o$	4 - 5		922
	80	364.059	42.2081 - 316.8878	$3d^6 - 3d^5(a^2H)4p$	$a^1G - ^3G^o$	4 - 4		922
	20	364.094	41.6269 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3F^o$	2 - 3		922
	360	364.229	28.6976 - 303.2495	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3S^o$	1 - 1		922
	160	364.262	34.0617 - 308.5920	$3d^6 - 3d^5(a^2D)4p$	$a^3G - ^3F^o$	4 - 3		922
	20	364.345	41.7011 - 316.1654	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3F^o$	1 - 2		922
	50	364.485	41.9202 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3F^o$	3 - 3		922
	240	364.773	33.2565 - 307.3997	$3d^6 - 3d^5(a^2I)4p$	$a^3G - ^3I^o$	5 - 6		922
	120	364.797	69.1561 - 343.2810	$3d^6 - 3d^5(b^2D)4p$	$b^3P - ^3F^o$	2 - 3		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	110	364.867	26.1530 - 300.2249	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^3D^o$	2 - 2		922
	340	364.899	26.1530 - 300.2010	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^5P^o$	2 - 3		922
	50	365.148	42.2081 - 316.0688	$3d^6 - 3d^5(a^2F)4p$	$a^1G - ^3G^o$	4 - 4		922
	100	365.189	48.6070 - 322.4364	$3d^6 - 3d^5(a^4F)4p$	$a^1D - ^3D^o$	2 - 2		922
	60	365.363	41.6269 - 315.3262	$3d^6 - 3d^5(a^2D)4p$	$a^3D - ^1F^o$	2 - 3		922
	80	365.410	41.7011 - 315.3661	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3D^o$	1 - 2		922
	190	365.485	29.6400 - 303.2495	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3S^o$	0 - 1		922
	180	366.085	42.2081 - 315.3701	$3d^6 - 3d^5(a^2G)4p$	$a^1G - ^3H^o$	4 - 4		922
	620	366.113	41.2522 - 314.3920	$3d^6 - 3d^5(a^2I)4p$	$a^1I - ^1I^o$	6 - 6		922
	80	366.386	41.6269 - 314.5628	$3d^6 - 3d^5(a^4F)4p$	$a^3D - ^5F^o$	2 - 3		922
	140	366.541	26.1530 - 298.9723	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^3D^o$	2 - 3		922
	410	367.005	48.6070 - 321.0819	$3d^6 - 3d^5(a^2F)4p$	$a^1D - ^1F^o$	2 - 3		922
	30	367.093	48.6070 - 321.0183	$3d^6 - 3d^5(a^2G)4p$	$a^1D - ^3F^o$	2 - 2		922
	150	367.182	29.1237 - 301.4702	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3F^o$	4 - 3		922
	280	367.258	41.9202 - 314.2088	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3F^o$	3 - 4		922
	110	367.567	41.6269 - 313.6866	$3d^6 - 3d^5(a^2D)4p$	$a^3D - ^3D^o$	2 - 2		922
	130	367.648	41.9202 - 313.9198	$3d^6 - 3d^5(a^2D)4p$	$a^3D - ^3D^o$	3 - 3		922
	120	367.664	34.0617 - 306.0490	$3d^6 - 3d^5(a^2I)4p$	$a^3G - ^3I^o$	4 - 5		922
	90	367.778	29.5708 - 301.4702	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3F^o$	3 - 3		922
	50	367.826	28.6976 - 300.5633	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^3D^o$	1 - 1		922
	130	367.923	29.1237 - 300.9181	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3F^o$	4 - 4		922
	50	368.037	42.2081 - 313.9198	$3d^6 - 3d^5(a^2D)4p$	$a^1G - ^3D^o$	4 - 3		922
	20	368.115	29.8992 - 301.5530	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3F^o$	2 - 2		922
	320	368.286	28.6976 - 300.2249	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^3D^o$	1 - 2		922
	420	368.496	47.6997 - 319.0734	$3d^6 - 3d^5(a^2D)4p$	$a^1S - ^1P^o$	0 - 1		922
	580	368.569	48.6070 - 319.9265	$3d^6 - 3d^5(a^2F)4p$	$a^1D - ^1D^o$	2 - 2		922
	40	368.641	26.1530 - 297.4181	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3D^o$	2 - 3		922
	510	368.898	29.1237 - 300.2010	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^5P^o$	4 - 3		927
	90	368.958	41.9202 - 312.9536	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3D^o$	3 - 3		922
	230	368.986	48.6070 - 319.6202	$3d^6 - 3d^5(a^4F)4p$	$a^1D - ^3G^o$	2 - 3		922
	150	369.108	29.6400 - 300.5633	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^3D^o$	0 - 1		922
	80	369.192	26.1530 - 297.0139	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^5D^o$	2 - 2		922
	150	369.226	41.6269 - 312.4633	$3d^6 - 3d^5(a^2F)4p$	$a^3D - ^3G^o$	2 - 3		922
	210	369.475	29.5708 - 300.2249	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3D^o$	3 - 2		922
	120	369.508	29.5708 - 300.2010	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^5P^o$	3 - 3		922
	80	369.562	41.7011 - 312.2910	$3d^6 - 3d^5(a^2D)4p$	$a^3D - ^3P^o$	1 - 1		922
	120	369.733	48.6070 - 319.0734	$3d^6 - 3d^5(a^2D)4p$	$a^1D - ^1P^o$	2 - 1		922
	70	369.906	41.6269 - 311.9665	$3d^6 - 3d^5(a^2D)4p$	$a^3D - ^3P^o$	2 - 2		922
	40	369.925	29.8992 - 300.2249	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3D^o$	2 - 2		922
	60	370.021	42.2081 - 312.4633	$3d^6 - 3d^5(a^2F)4p$	$a^1G - ^3G^o$	4 - 3		922
	700	370.616	27.1112 - 296.9329	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^3G^o$	6 - 5		922
	220	370.975	27.8588 - 297.4181	$3d^6 - 3d^5(a^4P)4p$	$a^3H - ^3D^o$	4 - 3		922
	290	371.091	29.5708 - 299.0456	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^5P^o$	3 - 2		922
	590	371.275	27.5782 - 296.9193	$3d^6 - 3d^5(a^4D)4p$	$a^3H - ^5D^o$	5 - 4		927
	670	371.306	27.5782 - 296.8970	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^3G^o$	5 - 4		922
	330	371.473	57.9241 - 327.1227	$3d^6 - 3d^5(b^2F)4p$	$a^1F - ^1D^o$	3 - 2		922
	100	371.543	29.8992 - 299.0456	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^5P^o$	2 - 2		922
	120	371.643	29.8992 - 298.9723	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3D^o$	2 - 3		922
	680	371.763	27.8588 - 296.8471	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^3G^o$	4 - 3		922
	250	371.812	29.6400 - 298.6006	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3D^o$	0 - 1		922
	430	372.002	57.9241 - 326.7390	$3d^6 - 3d^5(a^2G)4p$	$a^1F - ^1F^o$	3 - 3		922
	390	372.159	29.8992 - 298.6006	$3d^6 - 3d^5(a^4P)4p$	$a^3F - ^3D^o$	2 - 1		922
	610	372.451	41.2522 - 309.7436	$3d^6 - 3d^5(a^2I)4p$	$a^1I - ^1K^o$	6 - 7		922
	620	372.724	29.1237 - 297.4181	$3d^6 - 3d^5(a^4P)4p$	$a^3F - ^3D^o$	4 - 3		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	560	372.756	29.5708 - 297.8425	$3d^6 - 3d^5(a^4P)4p$	$a^3F - ^3D^{\circ}$	3 - 2		922
	300	372.987	57.9241 - 326.0299	$3d^6 - 3d^5(b^2F)4p$	$a^1F - ^3F^{\circ}$	3 - 3		922
	410	373.018	29.8992 - 297.9828	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^5P^{\circ}$	2 - 1		922
	230	373.083	77.8995 - 345.9361	$3d^6 - 3d^5(b^2D)4p$	$b^1G - ^1F^{\circ}$	4 - 3		927
	170	373.213	29.8992 - 297.8425	$3d^6 - 3d^5(a^4P)4p$	$a^3F - ^3D^{\circ}$	2 - 2		922
	140	373.347	29.5708 - 297.4181	$3d^6 - 3d^5(a^4P)4p$	$a^3F - ^3D^{\circ}$	3 - 3		922
	540	373.401	29.1237 - 296.9329	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3G^{\circ}$	4 - 5		922
	270	373.418	29.1237 - 296.9193	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3D^{\circ}$	4 - 4		927
	140	373.449	29.1237 - 296.8970	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3G^{\circ}$	4 - 4		922
	220	373.521	234.4127 - 502.137	$3d^5(a^4F)4s - 3d^5(a^6S)5f$	$^5F - ^5F^{\circ}$	2 - 3		922
	230	373.536	42.2081 - 309.9195	$3d^6 - 3d^5(a^2I)4p$	$a^1G - ^1H^{\circ}$	4 - 5		922
	670	373.605	33.2565 - 300.9181	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^3F^{\circ}$	5 - 4		922
	400	373.644	57.9241 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$a^1F - ^1G^{\circ}$	3 - 4		922
	180	373.690	47.6997 - 315.3007	$3d^6 - 3d^5(a^2F)4p$	$a^1S - ^3D^{\circ}$	0 - 1		922
	390	373.760	41.2522 - 308.8041	$3d^6 - 3d^5(a^2I)4p$	$a^1I - ^1H^{\circ}$	6 - 5		922
	400	373.804	29.8992 - 297.4179	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3D^{\circ}$	2 - 1		922
	370	373.903	29.1237 - 296.5740	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^3D^{\circ}$	4 - 3		922
	640	373.960	34.0617 - 301.4702	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^3F^{\circ}$	4 - 3		922
	390	374.045	29.5708 - 296.9193	$3d^6 - 3d^5(a^4D)4p$	$a^3F - ^5D^{\circ}$	3 - 4		927
	640	374.075	29.5708 - 296.8970	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3G^{\circ}$	3 - 4		922
	500	374.159	26.1530 - 293.4200	$3d^6 - 3d^5(a^2P)4p$	$a^3P - ^3P^{\circ}$	2 - 1		922
	620	374.340	34.4164 - 301.5530	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^3F^{\circ}$	3 - 2		922
	210	374.454	34.4164 - 301.4702	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^3F^{\circ}$	3 - 3		922
	240	374.581	41.6269 - 308.5920	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3F^{\circ}$	2 - 3		922
	480	374.604	29.8992 - 296.8471	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3G^{\circ}$	2 - 3		922
	130	374.733	34.0617 - 300.9181	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^3F^{\circ}$	4 - 4		922
	590	374.770	26.1530 - 292.9830	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3P^{\circ}$	2 - 2		922
	50	374.963	48.6070 - 315.3007	$3d^6 - 3d^5(a^2F)4p$	$a^1D - ^3D^{\circ}$	2 - 1		922
	40	374.992	41.9202 - 308.5920	$3d^6 - 3d^5(a^2D)4p$	$a^3D - ^3F^{\circ}$	3 - 3		922
	580	375.100	42.2081 - 308.8041	$3d^6 - 3d^5(a^2I)4p$	$a^1G - ^1H^{\circ}$	4 - 5		922
	20	375.733	41.2522 - 307.3997	$3d^6 - 3d^5(a^2I)4p$	$a^1I - ^1I^{\circ}$	6 - 6		922
	160	375.898	41.7011 - 307.7311	$3d^6 - 3d^5(a^2D)4p$	$a^3D - ^3F^{\circ}$	1 - 2		922
	20	376.119	68.8547 - 334.7276	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^1F^{\circ}$	3 - 3		922
	70	376.211	34.4164 - 300.2249	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^3D^{\circ}$	3 - 2		922
	20	376.509	57.9241 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$a^1F - ^3F^{\circ}$	3 - 3		922
	110	376.810	28.6976 - 294.0860	$3d^6 - 3d^5(a^4D)4p$	$a^3P - ^5F^{\circ}$	1 - 2		922
	110	377.015	27.1112 - 292.3534	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^3H^{\circ}$	6 - 5		922
	240	377.117	28.6976 - 293.8670	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3P^{\circ}$	1 - 0		922
	20	377.251	48.6070 - 313.6866	$3d^6 - 3d^5(a^2D)4p$	$a^1D - ^3D^{\circ}$	2 - 2		922
	60	377.283	27.5782 - 292.6310	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^3H^{\circ}$	5 - 4		922
	100	377.486	34.0617 - 298.9723	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^3D^{\circ}$	4 - 3		922
	290	377.646	41.2522 - 306.0490	$3d^6 - 3d^5(a^2I)4p$	$a^1I - ^3I^{\circ}$	6 - 5		922
	720	377.676	27.1112 - 291.8914	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^3H^{\circ}$	6 - 6		922
	320	377.713	41.6269 - 306.3778	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3P^{\circ}$	2 - 2		927
	220	377.754	28.6976 - 293.4200	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3P^{\circ}$	1 - 1		922
	50	377.795	57.9241 - 322.6176	$3d^6 - 3d^5(a^4F)4p$	$a^1F - ^3D^{\circ}$	3 - 3		922
	70	378.054	57.9241 - 322.4364	$3d^6 - 3d^5(a^4F)4p$	$a^1F - ^3D^{\circ}$	3 - 2		922
	520	378.133	41.9202 - 306.3778	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3P^{\circ}$	3 - 2		922
	190	378.379	28.6976 - 292.9830	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3P^{\circ}$	1 - 2		922
	370	378.485	41.6269 - 305.8381	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3P^{\circ}$	2 - 1		922
	150	378.591	41.7011 - 305.8381	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3P^{\circ}$	1 - 1		922
	40	378.820	27.5782 - 291.5546	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^3F^{\circ}$	5 - 4		922
	310	379.018	42.2081 - 306.0490	$3d^6 - 3d^5(a^2I)4p$	$a^1G - ^3I^{\circ}$	4 - 5		922
	160	379.104	29.6400 - 293.4200	$3d^6 - 3d^5(a^4P)4p$	$a^3P - ^3P^{\circ}$	0 - 1		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	190	379.225	27.8588 - 291.5546	$3d^6 - 3d^5(a^4G)4p$	$a^1H - ^3F^{\circ}$	4 - 4		922
	560	379.252	33.2565 - 296.9329	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3G^{\circ}$	5 - 5		927
	80	379.497	29.1237 - 292.6310	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3H^{\circ}$	4 - 4		922
	70	379.550	27.8588 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$a^1H - ^3F^{\circ}$	4 - 3		922
	40	379.895	29.1237 - 292.3534	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3H^{\circ}$	4 - 5		922
	30	380.037	57.9241 - 321.0564	$3d^6 - 3d^5(a^2G)4p$	$a^1F - ^3F^{\circ}$	3 - 4		922
	20	380.141	29.5708 - 292.6310	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3H^{\circ}$	3 - 4		922
	270	380.417	34.0617 - 296.9329	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3G^{\circ}$	4 - 5		922
	330	380.433	34.0617 - 296.9193	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^5D^{\circ}$	4 - 4		927
	370	380.467	34.0617 - 296.8970	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3G^{\circ}$	4 - 4		922
	220	380.626	66.7378 - 329.4623	$3d^6 - 3d^5(b^2F)4p$	$b^3P - ^3D^{\circ}$	0 - 1		927
	140	380.920	69.1561 - 331.6782	$3d^6 - 3d^5(a^2S)4p$	$b^3P - ^3P^{\circ}$	2 - 2		922
	60	380.948	34.4164 - 296.9193	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^5D^{\circ}$	3 - 4		927
	80	380.981	34.4164 - 296.8970	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3G^{\circ}$	3 - 4		922
	620	381.052	29.1237 - 291.5546	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3F^{\circ}$	4 - 4		922
	210	381.346	67.5479 - 329.7763	$3d^6 - 3d^5(b^2F)4p$	$b^3P - ^3D^{\circ}$	1 - 2		922
	130	381.380	29.1237 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3F^{\circ}$	4 - 3		922
	20	381.577	67.5479 - 329.6185	$3d^6 - 3d^5(a^2S)4p$	$b^3P - ^3P^{\circ}$	1 - 0		927
	400	381.678	68.7187 - 330.7181	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3G^{\circ}$	4 - 5		922
	130	381.702	29.5708 - 291.5546	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3F^{\circ}$	3 - 4		922
	500	382.032	29.5708 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3F^{\circ}$	3 - 3		922
	30	382.142	33.2565 - 294.9396	$3d^6 - 3d^5(a^4D)4p$	$a^3G - ^5F^{\circ}$	5 - 4		922
	20	382.294	68.7187 - 330.2976	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3G^{\circ}$	4 - 4		922
	170	382.370	29.5708 - 291.0977	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3F^{\circ}$	3 - 2		922
	310	382.493	68.8547 - 330.2976	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3G^{\circ}$	3 - 4		922
	160	382.509	29.8992 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3F^{\circ}$	2 - 3		922
	120	382.788	68.6321 - 329.8729	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3D^{\circ}$	2 - 3		922
	240	382.827	57.9241 - 319.1387	$3d^6 - 3d^5(a^2G)4p$	$a^1F - ^1G^{\circ}$	3 - 4		922
	480	382.849	29.8992 - 291.0977	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^3F^{\circ}$	2 - 2		922
	90	382.914	68.7187 - 329.8729	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3D^{\circ}$	4 - 3		922
	80	383.167	68.6321 - 329.6143	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3G^{\circ}$	2 - 3		922
	30	383.255	68.8547 - 329.7763	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3D^{\circ}$	3 - 2		922
	50	383.293	68.7187 - 329.6143	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3G^{\circ}$	4 - 3		922
	20	383.496	68.8547 - 329.6143	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3G^{\circ}$	3 - 3		922
	230	383.557	69.1561 - 329.8729	$3d^6 - 3d^5(b^2F)4p$	$b^3P - ^3D^{\circ}$	2 - 3		922
	70	383.826	27.1112 - 287.6459	$3d^6 - 3d^5(a^4G)4p$	$a^1H - ^5H^{\circ}$	6 - 6		927
	220	383.938	69.1561 - 329.6143	$3d^6 - 3d^5(b^2F)4p$	$b^3P - ^3G^{\circ}$	2 - 3		922
	70	384.594	27.1112 - 287.1280	$3d^6 - 3d^5(a^4G)4p$	$a^1H - ^5H^{\circ}$	6 - 5		922
	20	385.245	67.5479 - 327.1227	$3d^6 - 3d^5(b^2F)4p$	$b^3P - ^1D^{\circ}$	1 - 2		922
	70	385.283	27.5782 - 287.1280	$3d^6 - 3d^5(a^4G)4p$	$a^1H - ^5H^{\circ}$	5 - 5		922
	20	385.910	27.5782 - 286.7066	$3d^6 - 3d^5(a^4G)4p$	$a^1H - ^5H^{\circ}$	5 - 4		927
	20	386.044	29.1237 - 288.1616	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^5F^{\circ}$	4 - 4		922
	20	386.106	41.9202 - 300.9181	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3F^{\circ}$	3 - 4		922
	90	386.196	41.6269 - 300.5633	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3D^{\circ}$	2 - 1		922
	230	386.306	41.7011 - 300.5633	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3D^{\circ}$	1 - 1		922
	480	386.645	33.2565 - 291.8914	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3H^{\circ}$	5 - 6		922
	400	386.702	41.6269 - 300.2249	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3D^{\circ}$	2 - 2		922
	120	386.738	34.0617 - 292.6310	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3H^{\circ}$	4 - 4		922
	90	386.945	27.8588 - 286.2936	$3d^6 - 3d^5(a^4G)4p$	$a^1H - ^5H^{\circ}$	4 - 3		927
	60	387.074	57.9241 - 316.2803	$3d^6 - 3d^5(a^2F)4p$	$a^1F - ^3F^{\circ}$	3 - 3		922
	580	387.154	34.0617 - 292.3534	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3H^{\circ}$	4 - 5		922
	530	387.176	41.9202 - 300.2010	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^5P^{\circ}$	3 - 3		922
	340	387.274	34.4164 - 292.6310	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3H^{\circ}$	3 - 4		922
	310	387.360	68.7187 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3F^{\circ}$	4 - 4		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	130	387.563	68.7187 - 326.7390	$3d^6 - 3d^5(a^2G)4p$	$b^3F - ^1F^o$	4 - 3		922
	160	387.771	68.8547 - 326.7390	$3d^6 - 3d^5(a^2G)4p$	$b^3F - ^1F^o$	3 - 3		922
	20	388.224	29.1237 - 286.7066	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^5H^o$	4 - 4		927
	130	388.360	34.0617 - 291.5546	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3F^o$	4 - 4		922
	60	388.398	27.1112 - 284.5795	$3d^6 - 3d^5(a^4G)4p$	$a^3H - ^5G^o$	6 - 6		927
	120	388.503	68.6321 - 326.0299	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3F^o$	2 - 3		922
	360	388.576	68.6321 - 325.9822	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3F^o$	2 - 2		922
	280	388.702	34.0617 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3F^o$	4 - 3		922
	210	388.841	68.8547 - 326.0299	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^3F^o$	3 - 3		922
	240	389.026	41.9202 - 298.9723	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^3D^o$	3 - 3		922
	100	389.239	34.4164 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3F^o$	3 - 3		922
	80	389.259	41.7011 - 298.6006	$3d^6 - 3d^5(a^4P)4p$	$a^3D - ^3D^o$	1 - 1		922
	230	389.350	68.7187 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^1G^o$	4 - 4		922
	260	389.365	77.8995 - 334.7276	$3d^6 - 3d^5(b^2F)4p$	$b^1G - ^1F^o$	4 - 3		927
	60	389.554	68.8547 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$b^3F - ^1G^o$	3 - 4		922
	250	389.588	34.4164 - 291.0977	$3d^6 - 3d^5(a^4G)4p$	$a^3G - ^3F^o$	3 - 2		922
	160	389.855	68.7187 - 325.2229	$3d^6 - 3d^5(a^2G)4p$	$b^3F - ^3G^o$	4 - 4		922
	130	390.082	68.8547 - 325.2119	$3d^6 - 3d^5(a^2G)4p$	$b^3F - ^3G^o$	3 - 3		922
	90	390.158	67.5479 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$b^3P - ^3F^o$	1 - 2		922
	90	390.197	41.7011 - 297.9828	$3d^6 - 3d^5(a^4D)4p$	$a^3D - ^5P^o$	1 - 1		922
	180	390.226	68.7187 - 324.9802	$3d^6 - 3d^5(a^2G)4p$	$b^3F - ^3G^o$	4 - 5		922
	150	390.249	66.7378 - 322.9845	$3d^6 - 3d^5(a^4F)4p$	$b^3P - ^3D^o$	0 - 1		922
	90	390.296	41.6269 - 297.8425	$3d^6 - 3d^5(a^4P)4p$	$a^3D - ^3D^o$	2 - 2		922
	30	390.410	41.7011 - 297.8425	$3d^6 - 3d^5(a^4P)4p$	$a^3D - ^3D^o$	1 - 2		922
	50	390.744	41.9202 - 297.8425	$3d^6 - 3d^5(a^4P)4p$	$a^3D - ^3D^o$	3 - 2		922
	30	390.943	41.6269 - 297.4181	$3d^6 - 3d^5(a^4P)4p$	$a^3D - ^3D^o$	2 - 3		922
	300	391.177	104.4205 - 360.0597	$3d^6 - 3d^5(b^2G)4p$	$b^1D - ^1F^o$	2 - 3		922
	120	391.394	41.9202 - 297.4181	$3d^6 - 3d^5(a^4P)4p$	$a^3D - ^3D^o$	3 - 3		922
	130	391.487	67.5479 - 322.9845	$3d^6 - 3d^5(a^4F)4p$	$b^3P - ^3D^o$	1 - 1		922
	230	391.816	68.6321 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3F^o$	2 - 2		922
	480	392.010	77.8995 - 332.9956	$3d^6 - 3d^5(a^2H)4p$	$b^1G - ^1G^o$	4 - 4		922
	250	392.159	68.8547 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3F^o$	3 - 2		922
	250	392.328	68.6321 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3F^o$	2 - 3		922
	310	392.458	68.7187 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3F^o$	4 - 3		922
	80	392.623	69.1561 - 323.8531	$3d^6 - 3d^5(a^4F)4p$	$b^3P - ^3F^o$	2 - 2		922
	370	392.659	68.8547 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3F^o$	3 - 3		922
	190	393.134	69.1561 - 323.5232	$3d^6 - 3d^5(a^4F)4p$	$b^3P - ^3F^o$	2 - 3		922
	250	393.155	29.8992 - 284.2490	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^5G^o$	2 - 3		922
	100	393.211	29.8992 - 284.2155	$3d^6 - 3d^5(a^4G)4p$	$a^3F - ^5G^o$	2 - 2		927
	440	393.543	68.7187 - 322.8208	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3F^o$	4 - 4		922
	140	393.573	57.9241 - 312.0083	$3d^6 - 3d^5(a^2F)4p$	$a^3F - ^1G^o$	3 - 4		922
	240	393.858	68.7187 - 322.6176	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3D^o$	4 - 3		922
	700	393.914	0.0 - 253.8627	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	4 - 3		922
	130	394.005	68.6321 - 322.4364	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3D^o$	2 - 2		922
	180	394.070	68.8547 - 322.6176	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3D^o$	3 - 3		922
	660	394.313	0.8897 - 254.4956	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	3 - 2		922
	260	394.350	68.8547 - 322.4364	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3D^o$	3 - 2		922
	270	394.537	69.1561 - 322.6176	$3d^6 - 3d^5(a^4F)4p$	$b^3P - ^3D^o$	2 - 3		922
	520	394.641	1.4899 - 254.8850	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	2 - 1		922
	90	394.819	69.1561 - 322.4364	$3d^6 - 3d^5(a^4F)4p$	$b^3P - ^3D^o$	2 - 2		922
	660	395.242	1.4899 - 254.4956	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	2 - 2		922
	580	395.299	0.8897 - 253.8627	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	3 - 3		922
	420	395.527	2.0576 - 254.8850	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	0 - 1		922
	340	395.845	1.8715 - 254.4956	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	1 - 2		922

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
210	396.239		1.4899 - 253.8627	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^5P^o$	2 - 3		922
70	396.256		68.7187 - 321.0819	$3d^6 - 3d^5(a^2F)4p$	$b^3F - ^1F^o$	4 - 3		922
30	397.015		68.6321 - 320.5138	$3d^6 - 3d^5(a^2G)4p$	$b^3F - ^3F^o$	2 - 3		922
230	398.336		68.8547 - 319.8991	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3G^o$	3 - 4		922
310	398.514		68.7187 - 319.6527	$3d^6 - 3d^5(a^4F)4p$	$b^3F - ^3G^o$	4 - 5		922
410	400.588		41.9202 - 291.5546	$3d^6 - 3d^5(a^4G)4p$	$a^3D - ^3F^o$	3 - 4		922
250	400.871		77.8995 - 327.3566	$3d^6 - 3d^5(a^2H)4p$	$b^1G - ^1H^o$	4 - 5		922
120	400.952		41.9202 - 291.3285	$3d^6 - 3d^5(a^4G)4p$	$a^3D - ^3F^o$	3 - 3		922
260	400.969		41.7011 - 291.0977	$3d^6 - 3d^5(a^4G)4p$	$a^3D - ^3F^o$	1 - 2		922
20	401.644		77.8995 - 326.8763	$3d^6 - 3d^5(b^2F)4p$	$b^1G - ^3F^o$	4 - 4		922
20	402.024		68.6321 - 317.3768	$3d^6 - 3d^5(a^2H)4p$	$b^3F - ^3G^o$	2 - 3		922
210	402.515		77.8995 - 326.3371	$3d^6 - 3d^5(a^2G)4p$	$b^1G - ^1H^o$	4 - 5		922
60	403.172		68.8547 - 316.8878	$3d^6 - 3d^5(a^2H)4p$	$b^3F - ^3G^o$	3 - 4		922
50	403.211		68.7187 - 316.7266	$3d^6 - 3d^5(a^2H)4p$	$b^3F - ^3G^o$	4 - 5		922
60	403.781		77.8995 - 325.5586	$3d^6 - 3d^5(b^2F)4p$	$b^1G - ^1G^o$	4 - 4		922
20	404.954		66.7378 - 313.6790	$3d^6 - 3d^5(a^2D)4p$	$b^3P - ^1D^o$	0 - 1		922
110	407.953		104.4205 - 349.5460	$3d^6 - 3d^5(b^2D)4p$	$b^1D - ^1D^o$	2 - 2		922
80	408.443		68.8547 - 313.6866	$3d^6 - 3d^5(a^2D)4p$	$b^3F - ^3D^o$	3 - 2		922
20	409.127		67.5479 - 311.9665	$3d^6 - 3d^5(a^2D)4p$	$b^3P - ^3P^o$	1 - 2		922
80	409.451		68.7187 - 312.9536	$3d^6 - 3d^5(a^2F)4p$	$b^3F - ^3D^o$	4 - 3		922
180	410.495		0.0 - 243.6085	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^3P^o$	4 - 3		927
220	413.321		0.8897 - 242.8370	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^7P^o$	3 - 2		927
20	414.344		1.4899 - 242.8370	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - ^7P^o$	2 - 2		927
70	418.237		68.6321 - 307.7311	$3d^6 - 3d^5(a^2D)4p$	$b^3F - ^3F^o$	2 - 2		922
120	418.704		67.5479 - 306.3778	$3d^6 - 3d^5(a^4D)4p$	$b^3P - ^3P^o$	1 - 2		922
50	420.456		67.5479 - 305.3869	$3d^6 - 3d^5(a^4D)4p$	$b^3P - ^3P^o$	1 - 0		927
120	421.547		69.1561 - 306.3778	$3d^6 - 3d^5(a^4D)4p$	$b^3P - ^3P^o$	2 - 2		922
50	422.510		69.1561 - 305.8381	$3d^6 - 3d^5(a^4D)4p$	$b^3P - ^3P^o$	2 - 1		922
20	424.273		67.5479 - 303.2495	$3d^6 - 3d^5(a^4P)4p$	$b^3P - ^3S^o$	1 - 1		922
	461.69		0.0 - 216.5960	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	4 - 3	F,P	375,927
	462.56		0.0 - 216.1899	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	4 - 4	F,P	375,927
	463.59		0.8897 - 216.5960	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	3 - 3	F,P	375,927
	463.61		0.8897 - 216.5905	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	3 - 2	F,P	375,927
	463.94		0.8897 - 216.4347	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	3 - 1	F,P	375,927
	464.27		27.1112 - 242.5043	$3d^6 - 3d^5(a^2G)4s$	$a^3H - ^3G$	6 - 4	F,P	375,927
	464.47		0.8897 - 216.1899	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	3 - 4	F,P	375,927
	464.89		1.4899 - 216.5960	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	2 - 3	F,P	375,927
	465.24		1.4899 - 216.4347	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	2 - 1	F,P	375,927
	465.52		1.4899 - 216.3054	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	2 - 0	F,P	375,927
	465.72		1.8715 - 216.5905	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	1 - 2	F,P	375,927
	465.77		1.4899 - 216.1899	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	2 - 4	F,P	375,927
	466.06		1.8715 - 216.4347	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	1 - 1	F,P	375,927
	466.13		2.0576 - 216.5905	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	0 - 2	F,P	375,927
	466.34		1.8715 - 216.3054	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	1 - 0	F,P	375,927
	466.47		2.0576 - 216.4347	$3d^6 - 3d^5(a^4D)4s$	$ga^5D - ^5D$	0 - 1	F,P	375,927
	471.14		0.0 - 212.2534	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	4 - 2	F,P	375,927
	471.49		0.0 - 212.0958	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	4 - 3	F,P	375,927
	472.67		0.8897 - 212.4557	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	3 - 1	F,P	375,927
	473.12		0.8897 - 212.2534	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	3 - 2	F,P	375,927
	473.47		0.8897 - 212.0958	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	3 - 3	F,P	375,927
	474.01		1.4899 - 212.4557	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	2 - 1	F,P	375,927
	474.47		1.4899 - 212.2534	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	2 - 2	F,P	375,927
	474.87		1.8715 - 212.4557	$3d^6 - 3d^5(a^4P)4s$	$ga^5D - ^5P$	1 - 1	F,P	375,927
	480.39		0.0 - 208.1637	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	4 - 4	F,P	375,927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		480.47	0.0 - 208.1310	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	4 - 5	F,P	375,927
		480.66	0.0 - 208.0464	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	4 - 6	F,P	375,927
		482.45	0.8897 - 208.1637	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	3 - 4	F,P	375,927
		482.53	0.8897 - 208.1310	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	3 - 5	F,P	375,927
		483.85	1.4899 - 208.1646	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	2 - 3	F,P	375,927
		483.88	1.4899 - 208.1515	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	2 - 2	F,P	375,927
		484.75	1.8715 - 208.1646	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	1 - 3	F,P	375,927
		484.78	1.8715 - 208.1515	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	1 - 2	F,P	375,927
		485.22	2.0576 - 208.1515	$3d^6 - 3d^5(a^4G)4s$	$ga^5D - ^5G$	0 - 2	F,P	375,927
		607.81	0.0 - 164.5259	$3d^6 - 3d^5(a^6S)4s$	$ga^5D - ^7S$	4 - 3	F,P	375,927
		611.11	0.8897 - 164.5259	$3d^6 - 3d^5(a^6S)4s$	$ga^5D - ^7S$	3 - 3	F,P	375,927
	30	990.816	216.5905 - 317.5175	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$^5D - ^5D^o$	2 - 2		927
	90	990.867	216.5960 - 317.5175	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$^5D - ^5D^o$	3 - 2		927
	110	993.676	216.5960 - 317.2320	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$^5D - ^5D^o$	3 - 3		927
	180	1002.410	217.1291 - 316.8878	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$^3G - ^3G^o$	4 - 4		927
	270	1003.233	217.0487 - 316.7266	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$^3G - ^3G^o$	5 - 5		927
	140	1008.269	217.1010 - 316.2803	$3d^5(a^4G)4s - 3d^5(a^2F)4p$	$^3G - ^3F^o$	3 - 3		927
	540	1010.338	216.1899 - 315.1682	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$^5D - ^5F^o$	4 - 5		927
	340	1020.382	208.0464 - 306.0490	$3d^5(a^4G)4s - 3d^5(a^2I)4p$	$^5G - ^3I^o$	6 - 5		927
	320	1020.707	216.5905 - 314.5628	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$^5D - ^5F^o$	2 - 3		927
	140	1021.536	251.6549 - 349.5460	$3d^5(b^2F)4s - 3d^5(b^2D)4p$	$^1F - ^1D^o$	3 - 2		927
	50	1024.462	216.5960 - 314.2088	$3d^5(a^4D)4s - 3d^5(a^2F)4p$	$^5D - ^3F^o$	3 - 4		927
	280	1026.306						927
	220	1026.504	225.2007 - 322.6176	$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$^3D - ^3D^o$	3 - 3		927
	150	1043.230	225.2007 - 321.0564	$3d^5(a^4D)4s - 3d^5(a^2G)4p$	$^3D - ^3F^o$	3 - 4		927
	20	1044.633	247.1650 - 342.8946	$3d^5(b^2F)4s - 3d^5(b^2D)4p$	$^3F - ^3F^o$	2 - 2		927
	550	1047.429	225.5451 - 321.0183	$3d^5(a^4D)4s - 3d^5(a^2G)4p$	$^3D - ^3F^o$	1 - 2		927
	110	1058.190	229.4088 - 323.9086	$3d^5(a^2I)4s - 3d^5(a^2G)4p$	$^3I - ^3H^o$	6 - 5		927
	100	1064.534	221.4290 - 315.3661	$3d^5(a^4P)4s - 3d^5(a^2F)4p$	$^3P - ^3D^o$	1 - 2		927
	150	1074.646	253.9052 - 346.9595	$3d^5(a^2S)4s - 3d^5(b^2D)4p$	$^3S - ^3P^o$	1 - 1		927
	300	1075.182	253.9052 - 346.9124	$3d^5(a^2S)4s - 3d^5(b^2D)4p$	$^3S - ^3P^o$	1 - 2		927
	640	1081.097	233.8392 - 326.3371	$3d^5(a^2I)4s - 3d^5(a^2G)4p$	$^3I - ^3H^o$	6 - 5		927
	170	1089.481	268.2739 - 360.0597	$3d^5(b^2D)4s - 3d^5(b^2G)4p$	$^1D - ^1F^o$	2 - 3		927
	230	1094.767	229.4406 - 320.7831	$3d^5(a^2I)4s - 3d^5(a^2H)4p$	$^3I - ^3I^o$	7 - 7		927
	600	1105.561	229.4088 - 319.8604	$3d^5(a^2I)4s - 3d^5(a^2H)4p$	$^3I - ^3I^o$	6 - 6		927
	420	1115.298	229.4130 - 319.0762	$3d^5(a^2I)4s - 3d^5(a^2H)4p$	$^3I - ^3I^o$	5 - 5		927
	580	1119.345	164.5259 - 253.8627	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^5P^o$	3 - 3		927
	820	1120.894	241.0822 - 330.2976	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$^3H - ^3G^o$	5 - 4		927
	820	1124.311	241.7736 - 330.7181	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$^3H - ^3G^o$	6 - 5		927
	540	1125.053	208.0464 - 296.9329	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^3G^o$	6 - 5		927
	440	1135.020	212.0958 - 300.2010	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^5P^o$	3 - 3		927
	180	1137.829	229.4406 - 317.3273	$3d^5(a^2I)4s - 3d^5(a^2H)4p$	$^3I - ^3H^o$	7 - 6		927
	530	1139.055	242.5043 - 330.2976	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^3G - ^3G^o$	4 - 4		927
	90	1141.140	239.1077 - 326.7390	$3d^5(a^2D)4s - 3d^5(a^2G)4p$	$^1D - ^1F^o$	2 - 3		927
	20	1141.758	242.2904 - 329.8729	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^3G - ^3D^o$	3 - 3		927
	50	1143.576	247.2818 - 334.7276	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^1F^o$	4 - 3		927
	690	1144.197	208.0464 - 295.4443	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	6 - 5		927
	450	1144.602						927
	450	1145.318	208.1310 - 295.4443	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	5 - 5		927
	310	1149.889	243.3315 - 330.2976	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^3G^o$	4 - 4		927
	540	1150.096	212.0958 - 299.0456	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5P^o$	3 - 2		927
	170	1150.482						927
	690	1151.066	212.0958 - 298.9723	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^3D^o$	3 - 3		927
	660	1151.972	208.1310 - 294.9396	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	5 - 4		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
310	1152.179		212.2534 - 299.0456	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5P^o$	2 - 2		927
460	1152.403		208.1637 - 294.9396	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	4 - 4		927
490	1152.533		225.2007 - 311.9665	$3d^5(a^4D)4s - 3d^5(a^2D)4p$	$^3D - ^3P^o$	3 - 2		927
780	1152.687		246.2409 - 332.9956	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^1H - ^1G^o$	5 - 4		927
70	1153.994		229.4130 - 316.0688	$3d^5(a^2I)4s - 3d^5(a^2F)4p$	$^3I - ^3G^o$	5 - 4		927
280	1154.888		212.4557 - 299.0456	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5P^o$	1 - 2		927
40	1155.471		240.1938 - 326.7390	$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$^1F - ^1F^o$	3 - 3		927
30	1155.929		243.2662 - 329.7763	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^3D^o$	2 - 2		927
150	1157.343		243.3705 - 329.7763	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^3D^o$	3 - 2		927
260	1157.450		240.9596 - 327.3566	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^1H^o$	4 - 5		927
420	1158.127		212.2534 - 298.6006	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^3D^o$	2 - 1		927
790	1159.021		208.1637 - 294.4433	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	4 - 3		927
190	1159.521		243.3705 - 329.6143	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^3G^o$	3 - 3		927
320	1160.120							927
130	1163.362		229.4130 - 315.3701	$3d^5(a^2I)4s - 3d^5(a^2G)4p$	$^3I - ^3H^o$	5 - 4		927
450	1163.523		247.0491 - 332.9956	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$^1G - ^1G^o$	4 - 4		927
260	1163.688		208.1515 - 294.0860	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	2 - 2		927
630	1163.865		208.1646 - 294.0860	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	3 - 2		927
70	1165.596		241.0822 - 326.8763	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$^3H - ^3F^o$	5 - 4		927
180	1165.861		234.1254 - 319.8991	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^3G^o$	4 - 4		927
240	1166.226		212.0958 - 297.8425	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^3D^o$	3 - 2		927
320	1166.475		212.2534 - 297.9828	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5P^o$	2 - 1		927
370	1166.683		247.2818 - 332.9956	$3d^5(b^2F)4s - 3d^5(a^2H)4p$	$^3F - ^1G^o$	4 - 4		927
650	1167.113		208.1515 - 293.8338	$3d^5(a^2G)4s - 3d^5(a^4D)4p$	$^5G - ^5F^o$	2 - 1		927
20	1167.893		234.2752 - 319.8991	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^3G^o$	3 - 4		927
50	1168.166		212.4557 - 298.0600	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5D^o$	1 - 0		927
390	1168.626		234.0821 - 319.6527	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^3G^o$	5 - 5		927
290	1170.254		306.9629 - 392.4135	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3P^o$	3 - 2		927
450	1171.138		212.4557 - 297.8425	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^3D^o$	1 - 2		927
350	1171.450		240.1938 - 325.5586	$3d^5(a^2F)4s - 3d^5(b^2F)4p$	$^1F - ^1G^o$	3 - 4		927
240	1171.712		234.2752 - 319.6202	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^3G^o$	3 - 3		927
150	1172.128		229.4406 - 314.7564	$3d^5(a^2I)4s - 3d^5(a^4F)4p$	$^3I - ^5G^o$	7 - 6		927
420	1172.468		221.0876 - 306.3778	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^3P^o$	2 - 2		927
800	1174.202		212.2534 - 297.4181	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^3D^o$	2 - 3		927
760	1176.986		212.4557 - 297.4179	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5D^o$	1 - 1		927
180	1177.178		221.4290 - 306.3778	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^3P^o$	1 - 2		927
160	1177.601		212.0958 - 297.0139	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5D^o$	3 - 2		927
610	1178.227		216.5960 - 301.4702	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^3F^o$	3 - 3		927
170	1178.382		234.2752 - 319.1387	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^5F - ^1G^o$	3 - 4		927
20	1178.806		232.5459 - 317.3768	$3d^5(a^2D)4s - 3d^5(a^2H)4p$	$^3D - ^3G^o$	3 - 3		927
710	1178.914		212.0958 - 296.9193	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5D^o$	3 - 4		927
560	1179.234		212.0958 - 296.8970	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$^5P - ^3G^o$	3 - 4		927
700	1179.970							927
570	1180.256		216.1899 - 300.9181	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^3F^o$	4 - 4		927
70	1182.506		232.9108 - 317.4779	$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5D^o$	1 - 1		927
620	1182.615		212.4557 - 297.0139	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5D^o$	1 - 2		927
20	1182.724		232.9108 - 317.4623	$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5D^o$	1 - 0		927
260	1183.767		241.0822 - 325.5586	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$^3H - ^1G^o$	5 - 4		927
30	1185.236		242.5043 - 326.8763	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^3G - ^3F^o$	4 - 4		927
770	1185.948		212.2534 - 296.5740	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^5P - ^5D^o$	2 - 3		927
20	1187.197		235.4206 - 319.6527	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^3F - ^3G^o$	4 - 5		927
200	1187.321		208.1310 - 292.3534	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^3H^o$	5 - 5		927
350	1187.781		235.7365 - 319.9265	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^1D^o$	2 - 2		927
550	1189.544		241.0822 - 325.1484	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3H^o$	5 - 6		927

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1189.687	229.4088 - 313.4647	$3d^5(a^2I)4s - 3d^5(a^4F)4p$	$^3I - ^5G^\circ$	6 - 5		927
	550	1190.334	216.1899 - 300.2010	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^5P^\circ$	4 - 3		927
	220	1191.082	221.4290 - 305.3869	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^5P^\circ$	1 - 0		927
	330	1192.687	208.0464 - 291.8914	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^5H^\circ$	6 - 6		927
	20	1192.849	242.5043 - 326.3371	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^5H^\circ$	4 - 5		927
	90	1193.612	274.6954 - 358.4756	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^5H^\circ$	5 - 5		927
	440	1193.887	208.1310 - 291.8914	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^5H^\circ$	5 - 6		927
	550	1194.282	240.1938 - 323.9263	$3d^5(a^2F)4s - 3d^5(a^2H)4p$	$^1F - ^3H^\circ$	3 - 4		927
	30	1194.498	235.4206 - 319.1387	$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$^3F - ^1G^\circ$	4 - 4		927
	20	1194.576	306.9629 - 390.6751	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^1D^\circ$	3 - 2		927
	390	1194.862	242.2904 - 325.9822	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^3G - ^3F^\circ$	3 - 2		927
	710	1195.192	247.0491 - 330.7181	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^1G - ^3G^\circ$	4 - 5		927
	120	1195.825	232.6556 - 316.2803	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^3F^\circ$	2 - 3		927
	100	1196.036	216.5905 - 300.2010	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^5P^\circ$	2 - 3		927
	630	1196.118	216.5960 - 300.2010	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^5P^\circ$	3 - 3		927
	300	1196.975	243.3315 - 326.8763	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^3F^\circ$	4 - 4		927
	370	1197.274	232.5459 - 316.0688	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^3G^\circ$	3 - 4		927
	370	1197.378	306.9629 - 390.4782	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^1D^\circ$	3 - 3		927
	230	1197.975	242.8626 - 326.3371	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^1H^\circ$	5 - 5		927
	230	1197.998	236.4541 - 319.9265	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^1D^\circ$	3 - 2		927
	410	1198.278	307.0252 - 390.4782	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3D^\circ$	2 - 3		927
	710	1198.525	247.2818 - 330.7181	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3G^\circ$	4 - 5		927
	210	1198.699	208.1310 - 291.5546	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3F^\circ$	5 - 4		927
	270	1198.898						927
	800	1199.402	241.7736 - 325.1484	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3H^\circ$	6 - 6		927
	230	1200.947	242.2904 - 325.5586	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^3G - ^1G^\circ$	3 - 4		927
	290	1201.087	263.7009 - 346.9595	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3P^\circ$	1 - 1		927
	440	1201.197	234.1254 - 317.3768	$3d^5(a^4F)4s - 3d^5(a^2H)4p$	$^3F - ^3G^\circ$	4 - 3		927
	460	1201.324	234.2752 - 317.5175	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^5D^\circ$	3 - 2		927
	340	1201.594	263.7357 - 346.9595	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3P^\circ$	2 - 1		927
	240	1201.644	263.7009 - 346.9202	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3P^\circ$	1 - 0		927
	460	1201.760	263.7009 - 346.9124	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3P^\circ$	1 - 2		927
	350	1201.834	241.7736 - 324.9802	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3G^\circ$	6 - 5		927
	290	1201.857	247.1650 - 330.3707	$3d^5(b^2F)4s - 3d^5(a^2S)4p$	$^3F - ^3P^\circ$	2 - 1		927
	750	1202.040	247.1049 - 330.2976	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3G^\circ$	3 - 4		927
	380	1202.261	263.7357 - 346.9124	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3P^\circ$	2 - 2		927
	290	1202.427	208.1637 - 291.3285	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^3F^\circ$	4 - 3		927
	780	1203.285	263.8058 - 346.9124	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3P^\circ$	3 - 2		927
	790	1203.314	234.4127 - 317.5175	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^5D^\circ$	2 - 2		927
	630	1203.361	217.1010 - 300.2010	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^3G - ^5P^\circ$	3 - 3		927
	740	1203.776	217.1291 - 300.2010	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^3G - ^5P^\circ$	4 - 3		927
	720	1203.871	234.4127 - 317.4779	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^5D^\circ$	2 - 1		927
	120	1204.738	243.3315 - 326.3371	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^1H^\circ$	4 - 5		927
	600	1205.310	240.9596 - 323.9263	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^3H^\circ$	4 - 4		927
	640	1205.453	234.2752 - 317.2320	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^5D^\circ$	3 - 3		927
	640	1205.559	240.9596 - 323.9086	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3H^\circ$	4 - 5		927
	210	1205.794	242.2904 - 325.2229	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3G^\circ$	3 - 4		927
	530	1205.957	242.2904 - 325.2119	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3G^\circ$	3 - 3		927
	800	1207.345	241.0822 - 323.9086	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3H^\circ$	5 - 5		927
	670	1207.394	247.0491 - 329.8729	$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^1G - ^3D^\circ$	4 - 3		927
	490	1207.452	234.4127 - 317.2320	$3d^5(a^2H)4s - 3d^5(a^4F)4p$	$^3F - ^5D^\circ$	2 - 3		927
	90	1207.636	234.0821 - 316.8878	$3d^5(a^4F)4s - 3d^5(a^2H)4p$	$^3F - ^3G^\circ$	5 - 4		927
	210	1207.989	216.1899 - 298.9723	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^3D^\circ$	4 - 3		927
	130	1208.210	247.1049 - 329.8729	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3D^\circ$	3 - 3		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1208.266	234.1254 - 316.8878	$3d^5(a^4F)4s - 3d^5(a^2H)4p$	$^5F - ^3G^\circ$	4 - 4		927
	650	1208.908	242.5043 - 325.2229	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3G^\circ$	4 - 4		927
	480	1208.966	243.2662 - 325.9822	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^3F^\circ$	2 - 2		927
	530	1209.099	247.1650 - 329.8729	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3D^\circ$	2 - 3		927
	300	1209.225	243.3315 - 326.0299	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^3F^\circ$	4 - 3		927
	220	1209.431	236.4541 - 319.1387	$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$^3F - ^1G^\circ$	3 - 4		927
	700	1209.607	247.1049 - 329.7763	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3D^\circ$	3 - 2		927
	790	1209.771	234.0821 - 316.7440	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5D^\circ$	5 - 4		927
	810	1210.399	234.1254 - 316.7440	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5D^\circ$	4 - 4		927
	850	1210.509	247.1650 - 329.7763	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3D^\circ$	2 - 2		927
	190	1210.638	234.1254 - 316.7266	$3d^5(a^2F)4s - 3d^5(a^2H)4p$	$^5F - ^3G^\circ$	4 - 5		927
	480	1210.736	229.4130 - 312.0083	$3d^5(a^2I)4s - 3d^5(a^2F)4p$	$^3I - ^1G^\circ$	5 - 4		927
	420	1210.799	247.2818 - 329.8729	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3D^\circ$	4 - 3		927
	240	1211.424	307.0252 - 389.5718	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3D^\circ$	2 - 2		927
	210	1211.999	247.1049 - 329.6143	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3G^\circ$	3 - 3		927
	150	1212.474	242.5043 - 324.9802	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3G - ^3G^\circ$	4 - 5		927
	590	1212.592	307.1051 - 389.5718	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3D^\circ$	1 - 2		927
	780	1212.780	216.5905 - 299.0456	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5P^\circ$	2 - 2		927
	460	1212.889	247.1650 - 329.6143	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3G^\circ$	2 - 3		927
	200	1213.237	240.1938 - 322.6176	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^1F - ^3D^\circ$	3 - 3		927
	520	1213.589	235.1165 - 317.5175	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5D^\circ$	1 - 2		927
	660	1213.859	216.5905 - 298.9723	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^3D^\circ$	2 - 3		927
	780	1213.943	216.5960 - 298.9723	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^3D^\circ$	3 - 3		927
	710	1214.174	242.8626 - 325.2229	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3G^\circ$	5 - 4		927
	700	1214.410	235.1165 - 317.4623	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5D^\circ$	1 - 0		927
	630	1214.595	247.2818 - 329.6143	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3G^\circ$	4 - 3		927
	690	1215.133	216.3054 - 298.6006	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^3D^\circ$	0 - 1		927
	750	1215.272	242.8626 - 325.1484	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3H^\circ$	5 - 6		927
	670	1216.151	243.3315 - 325.5586	$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$^3F - ^1G^\circ$	4 - 4		927
	280	1216.539	263.7357 - 345.9361	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^1F^\circ$	2 - 3		927
	640	1217.062	216.4347 - 298.6006	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^3D^\circ$	1 - 1		927
	740	1217.112	221.0876 - 303.2495	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3S^\circ$	2 - 1		927
	320	1217.502	241.7736 - 323.9086	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3H^\circ$	6 - 5		927
	750	1217.576	208.1310 - 290.2620	$3d^5(a^2G)4s - 3d^5(a^4P)4p$	$^5G - ^5D^\circ$	5 - 4		927
	810	1217.761	242.8626 - 324.9802	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3G^\circ$	5 - 5		927
	410	1218.061	208.1637 - 290.2620	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$^5G - ^5D^\circ$	4 - 4		927
	160	1218.726	232.5459 - 314.5992	$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5F^\circ$	3 - 4		927
	250	1219.886	239.1077 - 321.0819	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^1D - ^1F^\circ$	2 - 3		927
	360	1220.317	243.2662 - 325.2119	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	2 - 3		927
	250	1220.836	239.1077 - 321.0183	$3d^5(a^2D)4s - 3d^5(a^2G)4p$	$^1D - ^3F^\circ$	2 - 2		927
	300	1220.879	232.6556 - 314.5628	$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5F^\circ$	2 - 3		927
	640	1221.113	243.3315 - 325.2229	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	4 - 4		927
	810	1221.699	243.3705 - 325.2229	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	3 - 4		927
	320	1221.870	243.3705 - 325.2119	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	3 - 3		927
	540	1222.189	221.4290 - 303.2495	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3S^\circ$	1 - 1		927
	510	1222.788	235.7365 - 317.5175	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^3F - ^3D^\circ$	2 - 2		927
	380	1223.204	234.4127 - 316.1654	$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$^5F - ^3F^\circ$	2 - 2		927
	520	1223.390	241.0822 - 322.8208	$3d^5(a^2H)4s - 3d^5(a^4F)4p$	$^3H - ^3F^\circ$	5 - 4		927
	760	1223.444	306.9629 - 388.6989	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3F^\circ$	3 - 4		927
	60	1223.685	307.0252 - 388.7461	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3D^\circ$	2 - 1		927
	500	1224.335	216.3054 - 297.9828	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5P^\circ$	0 - 1		927
	680	1224.558	232.5459 - 314.2088	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^3F^\circ$	3 - 4		927
	580	1224.758	243.3315 - 324.9802	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	4 - 5		927
	510	1224.875	235.7365 - 317.3768	$3d^5(a^2F)4s - 3d^5(a^2H)4p$	$^3F - ^3G^\circ$	2 - 3		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
810	1224.948		242.2904 – 323.9263	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$^3G - ^3H^\circ$	3 - 4		927
530	1225.112		216.4347 – 298.0600	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5D^\circ$	1 - 0		927
380	1226.276		216.4347 – 297.9828	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5P^\circ$	1 - 1		927
240	1227.057		235.7365 – 317.2320	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^5D^\circ$	2 - 3		927
420	1227.196		311.4703 – 392.9571	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^1D - ^1F^\circ$	2 - 3		927
20	1227.480		235.4206 – 316.8878	$3d^5(a^2F)4s - 3d^5(a^2H)4p$	$^3F - ^3G^\circ$	4 - 4		927
190	1228.168		242.5043 – 323.9263	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$^3G - ^3H^\circ$	4 - 4		927
700	1228.426		242.5043 – 323.9086	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3H^\circ$	4 - 5		927
810	1229.400		251.6549 – 332.9956	$3d^5(b^2F)4s - 3d^5(a^2H)4p$	$^1F - ^1G^\circ$	3 - 4		927
810	1229.400		274.6954 – 356.0363	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3G^\circ$	5 - 5		927
200	1229.680		235.4206 – 316.7440	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^5D^\circ$	4 - 4		927
600	1230.062		274.7386 – 356.0363	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3G^\circ$	4 - 5		927
640	1230.439		268.2739 – 349.5460	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^1D - ^1D^\circ$	2 - 2		927
320	1230.731		216.5905 – 297.8425	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5D^\circ$	2 - 2		927
580	1230.821		216.5960 – 297.8425	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5D^\circ$	3 - 2		927
760	1230.875		241.0822 – 322.3242	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^1I^\circ$	5 - 6		927
600	1231.030		242.2904 – 323.5232	$3d^5(a^2G)4s - 3d^5(a^2F)4p$	$^3G - ^3F^\circ$	3 - 3		927
720	1231.090		216.1899 – 297.4181	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5D^\circ$	4 - 3		927
760	1231.881		225.2007 – 306.3778	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3P^\circ$	3 - 2		927
180	1232.341		208.1515 – 289.2980	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$^5G - ^5D^\circ$	2 - 3		927
860	1232.517		208.1637 – 289.2980	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$^5G - ^5D^\circ$	4 - 3		927
850	1232.801		246.2409 – 327.3566	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^1H - ^1H^\circ$	5 - 5		927
850	1232.965		263.8058 – 344.9112	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3F^\circ$	3 - 4		927
710	1233.120		208.1515 – 289.2471	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5F^\circ$	2 - 2		927
860	1233.268		234.0821 – 315.1682	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^\circ$	5 - 5		927
810	1233.324		208.1646 – 289.2471	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5F^\circ$	3 - 2		927
750	1233.500		274.6954 – 355.7652	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3G^\circ$	5 - 4		927
690	1233.596		236.4541 – 317.5175	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^5D^\circ$	3 - 2		927
440	1233.850		242.8626 – 323.9086	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3H^\circ$	5 - 5		927
880	1233.884		242.8626 – 323.9086	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3H^\circ$	5 - 5		927
820	1234.163		274.7386 – 355.7652	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3G^\circ$	4 - 4		927
300	1234.257		242.5043 – 323.5232	$3d^5(a^2G)4s - 3d^5(a^2F)4p$	$^3G - ^3F^\circ$	4 - 3		927
810	1234.390		208.1515 – 289.1630	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5F^\circ$	2 - 1		927
770	1234.579		263.8058 – 344.8053	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3D^\circ$	3 - 3		927
440	1234.697		274.7735 – 355.7652	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3G^\circ$	3 - 4		927
270	1235.305							927
160	1235.430		311.4703 – 392.4135	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^1D - ^3P^\circ$	2 - 2		927
680	1235.764		236.4541 – 317.3768	$3d^5(a^2F)4s - 3d^5(a^2H)4p$	$^3F - ^3G^\circ$	3 - 3		927
860	1235.831		233.8392 – 314.7564	$3d^5(a^2I)4s - 3d^5(a^2F)4p$	$^1I - ^5G^\circ$	6 - 6		927
810	1236.267		240.1938 – 321.0819	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^1F - ^1F^\circ$	3 - 3		927
620	1236.664		240.1938 – 321.0564	$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$^1F - ^3F^\circ$	3 - 4		927
690	1236.696		279.1995 – 360.0597	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^1G - ^1F^\circ$	4 - 3		927
270	1237.119		225.5451 – 306.3778	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3P^\circ$	1 - 2		927
740	1237.197		216.5905 – 297.4179	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5D^\circ$	2 - 1		927
560	1237.328		239.1077 – 319.9265	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^1D - ^1D^\circ$	2 - 2		927
380	1237.972		232.9108 – 313.6866	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3D^\circ$	1 - 2		927
640	1238.111		232.9108 – 313.6790	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3D^\circ$	1 - 1		927
490	1238.209		225.6165 – 306.3778	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3P^\circ$	2 - 2		927
380	1238.548		234.4127 – 315.1528	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^\circ$	2 - 1		927
600	1238.637		232.5459 – 313.2813	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^5G^\circ$	3 - 4		927
830	1238.698		216.1899 – 296.9193	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5D^\circ$	4 - 4		927
690	1238.962		208.1646 – 288.8779	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$^5G - ^5S^\circ$	3 - 2		927
700	1239.051		216.1899 – 296.8970	$3d^5(a^4D)4s - 3d^5(a^4G)4p$	$^5D - ^3G^\circ$	4 - 4		927
780	1239.549		234.0821 – 314.7564	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5G^\circ$	5 - 6		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
400	1239.664	232.9108 - 313.5773		$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3P^o$	1 - 0		927
240	1239.769	274.7386 - 355.3980		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3G^o$	4 - 3		927
660	1239.950	235.4206 - 316.0688		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3G^o$	4 - 4		927
210	1240.152	246.2409 - 326.8763		$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$^1H - ^3F^o$	5 - 4		927
650	1240.309	274.7735 - 355.3980		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3G^o$	3 - 3		927
590	1241.044	243.3315 - 323.9086		$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^3H^o$	4 - 5		927
120	1241.166	235.4206 - 315.9905		$3d^5(a^2F)4s - 3d^5(a^2H)4p$	$^3F - ^3H^o$	4 - 5		927
780	1241.326	234.2752 - 314.8347		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	3 - 2		927
810	1241.422	233.8392 - 314.3920		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^1I - ^1I^o$	6 - 6		927
840	1241.630	229.4130 - 309.9525		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3H^o$	5 - 4		927
810	1241.975	234.0821 - 314.5992		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	5 - 4		927
860	1242.072	229.4088 - 309.9195		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3H^o$	6 - 5		927
700	1242.134	229.4130 - 309.9195		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3H^o$	5 - 5		927
540	1242.645	234.1254 - 314.5992		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	4 - 4		927
800	1243.218	234.1254 - 314.5628		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	4 - 3		927
560	1243.326	235.7365 - 316.1654		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3F^o$	2 - 2		927
530	1243.407	216.5905 - 297.0139		$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^5D - ^5D^o$	2 - 2		927
770	1243.495	216.5960 - 297.0139		$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5D^o$	3 - 2		927
230	1243.660	232.5459 - 312.9536		$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^3D^o$	3 - 3		927
750	1244.015	216.1899 - 296.5740		$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5D^o$	4 - 3		927
880	1244.174	164.5259 - 244.9005		$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^7P^o$	3 - 4		927
520	1244.272							927
170	1244.650	232.5459 - 312.8894		$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5G^o$	3 - 3		927
610	1244.772	229.4088 - 309.7436		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^1K^o$	6 - 7		927
790	1244.955	234.2752 - 314.5992		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	3 - 4		927
690	1245.054	242.5043 - 322.8208		$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^3F^o$	4 - 4		927
870	1245.176	234.0821 - 314.3920		$3d^5(a^4F)4s - 3d^5(a^2I)4p$	$^5F - ^1I^o$	5 - 6		927
530	1245.263	229.4406 - 309.7436		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^1K^o$	7 - 7		927
690	1245.353	232.6556 - 312.9536		$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^3D^o$	2 - 3		927
850	1245.439	225.5451 - 305.8381		$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3P^o$	1 - 1		927
650	1245.522	234.2752 - 314.5628		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	3 - 3		927
80	1245.988	243.2662 - 323.5232		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^3F^o$	2 - 3		927
350	1246.115	235.1165 - 315.3661		$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$^5F - ^3D^o$	1 - 2		927
250	1246.353	232.6556 - 312.8894		$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5G^o$	2 - 3		927
570	1246.535	225.6165 - 305.8381		$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3P^o$	2 - 1		927
710	1246.821	268.2739 - 348.4779		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^1D - ^1P^o$	2 - 1		927
830	1247.368	263.7357 - 343.9057		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3D^o$	2 - 2		927
740	1247.600	243.3705 - 323.5232		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^3F^o$	3 - 3		927
570	1247.664	234.4127 - 314.5628		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	2 - 3		927
650	1248.031	234.0821 - 314.2088		$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$^5F - ^3F^o$	5 - 4		927
380	1248.081	232.6556 - 312.7782		$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5G^o$	2 - 2		927
240	1248.217	242.5043 - 322.6176		$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^3D^o$	4 - 3		927
550	1248.435	263.8058 - 343.9057		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3D^o$	3 - 2		927
730	1248.485	246.2409 - 326.3371		$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^1H - ^1H^o$	5 - 5		927
630	1248.814	247.2818 - 327.3566		$3d^5(b^2F)4s - 3d^5(a^2H)4p$	$^3F - ^1H^o$	4 - 5		927
930	1249.432	235.1165 - 315.1528		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5F^o$	1 - 1		927
860	1249.520	208.1310 - 288.1616		$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^5G - ^5F^o$	5 - 4		927
830	1250.033	208.1637 - 288.1616		$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5F^o$	4 - 4		927
890	1250.384	208.0464 - 288.0216		$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^o$	6 - 7		927
740	1250.541	239.1077 - 319.0734		$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^1D - ^1P^o$	2 - 1		927
430	1250.675	242.8626 - 322.8208		$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^3F^o$	5 - 4		927
480	1250.772	235.4206 - 315.3701		$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$^3F - ^3H^o$	4 - 4		927
260	1250.893	307.0252 - 386.9688		$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3F^o$	2 - 2		927
220	1251.283	232.5459 - 312.4633		$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^3G^o$	3 - 3		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	890	1251.821	217.0487 - 296.9329	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3G^\circ$	5 - 5		927
	790	1252.055	232.9108 - 312.7782	$3d^5(a^2D)4s - 3d^5(a^4F)4p$	$^3D - ^5G^\circ$	1 - 2		927
	880	1252.155	307.1051 - 386.9688	$3d^5(c^2D)4s - 3d^5(c^2D)4p$	$^3D - ^3F^\circ$	1 - 2		927
	830	1252.267	229.4088 - 309.2640	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3H^\circ$	6 - 6		927
	680	1252.336	229.4130 - 309.2640	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3H^\circ$	5 - 6		927
	620	1252.383	217.0487 - 296.8970	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3G^\circ$	5 - 4		927
	440	1252.467	225.5451 - 305.3869	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3P^\circ$	1 - 0		927
	720	1252.707	236.4541 - 316.2803	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3F^\circ$	3 - 3		927
	870	1252.765	229.4406 - 309.2640	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3H^\circ$	7 - 6		927
	680	1253.004	232.6556 - 312.4633	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^3G^\circ$	2 - 3		927
	580	1253.086	217.1291 - 296.9329	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3G^\circ$	4 - 5		927
	850	1253.191	208.1637 - 287.9600	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5F^\circ$	4 - 3		927
	810	1253.290	217.1291 - 296.9193	$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^3G - ^5D^\circ$	4 - 4		927
	820	1253.486	263.7009 - 343.4782	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3D^\circ$	1 - 1		927
	610	1253.588	247.1049 - 326.8763	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3F^\circ$	3 - 4		927
	850	1253.654	217.1291 - 296.8970	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3G^\circ$	4 - 4		927
	870	1253.983	217.1010 - 296.8471	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3G^\circ$	3 - 3		927
	710	1254.187	240.1938 - 319.9265	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^1F - ^1D^\circ$	3 - 2		927
	790	1254.412	243.2662 - 322.9845	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^3D^\circ$	2 - 1		927
	470	1254.530	236.4541 - 316.1654	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3F^\circ$	3 - 2		927
	550	1254.850	247.0491 - 326.7390	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^1G - ^1F^\circ$	4 - 3		927
	220	1255.565	234.2752 - 313.9198	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$^5F - ^3D^\circ$	3 - 3		927
	740	1255.732	232.6556 - 312.2910	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3P^\circ$	2 - 1		927
	520	1255.810	235.7365 - 315.3661	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3D^\circ$	2 - 2		927
	760	1256.019	208.1646 - 287.7821	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$^5G - ^5D^\circ$	3 - 2		927
	170	1256.209	208.1515 - 287.7555	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$^5G - ^3D^\circ$	2 - 1		927
	210	1256.292	208.0464 - 287.6459	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	6 - 6		927
	590	1256.422	235.7365 - 315.3262	$3d^5(a^2F)4s - 3d^5(a^2D)4p$	$^3F - ^1F^\circ$	2 - 3		927
	490	1256.818						927
	730	1256.900	279.1995 - 358.7600	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^1G - ^1G^\circ$	4 - 4		927
	410	1256.989	240.9596 - 320.5138	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3F^\circ$	4 - 3		927
	500	1257.129	263.7357 - 343.2810	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3F^\circ$	2 - 3		927
	860	1257.620	208.1310 - 287.6459	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	5 - 6		927
	660	1258.014	243.3315 - 322.8208	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3F^\circ$	4 - 4		927
	620	1258.238	263.8058 - 343.2810	$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3F^\circ$	3 - 3		927
	460	1258.452	232.5459 - 312.0083	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$^3D - ^1G^\circ$	3 - 4		927
	620	1258.525	247.2818 - 326.7390	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$^3F - ^1F^\circ$	4 - 3		927
	530	1259.024	240.1938 - 319.6202	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^1F - ^3G^\circ$	3 - 3		927
	780	1259.118	232.5459 - 311.9665	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3P^\circ$	3 - 2		927
	650	1259.183	235.7365 - 315.1528	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^3F - ^5F^\circ$	2 - 1		927
	800	1259.576	229.4130 - 308.8041	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^1H^\circ$	5 - 5		927
	800	1259.716	234.0821 - 313.4647	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^5F - ^3G^\circ$	5 - 5		927
	820	1260.401	234.1254 - 313.4647	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^5F - ^5G^\circ$	4 - 5		927
	180	1260.748	246.2409 - 325.5586	$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$^1H - ^1G^\circ$	5 - 4		927
	80	1260.870	232.6556 - 311.9665	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3P^\circ$	2 - 2		927
	100	1261.109	212.0958 - 291.3900	$3d^5(a^2P)4s - 3d^5(a^4P)4p$	$^5P - ^3P^\circ$	3 - 2		927
	820	1261.222	247.0491 - 326.3371	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^1G - ^1H^\circ$	4 - 5		927
	850	1261.330	235.4206 - 314.7022	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3G^\circ$	4 - 5		927
	800	1261.430	279.1995 - 358.4756	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^1G - ^1H^\circ$	4 - 5		927
	90	1261.564	234.4127 - 313.6790	$3d^5(a^2F)4s - 3d^5(a^2D)4p$	$^5F - ^3D^\circ$	2 - 1		927
	850	1261.745	216.1899 - 295.4443	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	4 - 5		927
	20	1262.134						927
	700	1262.535	274.7386 - 353.9441	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3F^\circ$	4 - 3		927
	200	1262.644	234.0821 - 313.2813	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^5F - ^5G^\circ$	5 - 4		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
490	1262.727	263.7009 - 342.8946		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3F^\circ$	1 - 2		927
20	1262.974	235.4206 - 314.5992		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^5F^\circ$	4 - 4		927
110	1263.090	274.7735 - 353.9441		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3F^\circ$	3 - 3		927
690	1263.290	263.7357 - 342.8946		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$^3D - ^3F^\circ$	2 - 2		927
770	1263.333	234.1254 - 313.2813		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^5F - ^5G^\circ$	4 - 4		927
410	1263.569	235.4206 - 314.5628		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^5F^\circ$	4 - 3		927
330	1263.622	212.2534 - 291.3900		$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5P^\circ$	2 - 2		927
20	1264.002	221.0876 - 300.2010		$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^5P^\circ$	2 - 3		927
90	1264.245	235.7365 - 314.8347		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^5F^\circ$	2 - 2		927
90	1264.253	235.7365 - 314.8347		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^5F^\circ$	2 - 2		927
710	1264.426	212.4557 - 291.5417		$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5P^\circ$	1 - 1		927
870	1264.518	164.5259 - 243.6085		$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^7P^\circ$	3 - 3		927
430	1264.629	212.2534 - 291.3285		$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$^5P - ^3F^\circ$	2 - 3		927
700	1264.739							927
670	1264.920	247.2818 - 326.3371		$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$^3F - ^1H^\circ$	4 - 5		927
860	1265.655	241.7736 - 320.7831		$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^3I^\circ$	6 - 7		927
830	1265.722	234.2752 - 313.2813		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^5F - ^5G^\circ$	3 - 4		927
290	1265.874	208.1310 - 287.1280		$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	5 - 5		927
280	1266.124	247.0491 - 326.0299		$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^1G - ^3F^\circ$	4 - 3		927
870	1266.395	208.1637 - 287.1280		$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	4 - 5		927
510	1266.697	240.1938 - 319.1387		$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$^1F - ^1G^\circ$	3 - 4		927
800	1266.859	212.4557 - 291.3900		$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5P^\circ$	1 - 2		927
470	1267.027	247.1049 - 326.0299		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3F^\circ$	3 - 3		927
260	1267.140							927
860	1267.275	229.4088 - 308.3173		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3I^\circ$	6 - 7		927
850	1267.803	229.4406 - 308.3173		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3I^\circ$	7 - 7		927
780	1267.885	236.4541 - 315.3262		$3d^5(a^2F)4s - 3d^5(a^2D)4p$	$^3F - ^1F^\circ$	3 - 3		927
390	1267.985	247.1650 - 326.0299		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3F^\circ$	2 - 3		927
640	1268.170	274.6954 - 353.5487		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3H^\circ$	5 - 5		927
480	1268.746	247.1650 - 325.9822		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^3F - ^3F^\circ$	2 - 2		927
750	1268.871	274.7386 - 353.5487		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3H^\circ$	4 - 5		927
710	1269.243	235.4206 - 314.2088		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3F^\circ$	4 - 4		927
810	1269.372	241.0822 - 319.8604		$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^3I^\circ$	5 - 6		927
580	1269.620	234.1254 - 312.8894		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^5F - ^5G^\circ$	4 - 3		927
600	1270.186	242.2904 - 321.0183		$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3F^\circ$	3 - 2		927
870	1270.677	229.4406 - 308.1388		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3K^\circ$	7 - 8		927
640	1271.252	212.0958 - 290.7570		$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5P^\circ$	3 - 3		927
720	1271.432	274.6954 - 353.3471		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3F^\circ$	5 - 4		927
660	1272.025	234.2752 - 312.8894		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^5F - ^5G^\circ$	3 - 3		927
50	1272.148	274.7386 - 353.3471		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3F^\circ$	4 - 4		927
700	1272.637	208.1310 - 286.7066		$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	5 - 4		927
660	1272.710	274.7735 - 353.3471		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3F^\circ$	3 - 4		927
110	1272.775							927
30	1272.857	235.1165 - 313.6790		$3d^5(a^2F)4s - 3d^5(a^2D)4p$	$^5F - ^3D^\circ$	1 - 1		927
870	1273.198	208.1646 - 286.7066		$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	3 - 4		927
560	1273.728	247.0491 - 325.5586		$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$^1G - ^1G^\circ$	4 - 4		927
830	1273.809	212.2534 - 290.7570		$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5P^\circ$	2 - 3		927
780	1274.252	234.4127 - 312.8894		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^5F - ^5G^\circ$	2 - 3		927
20	1274.491							927
720	1275.906	274.6954 - 353.0716		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3H^\circ$	5 - 4		927
850	1276.415	216.5960 - 294.9396		$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^5D - ^5F^\circ$	3 - 4		927
160	1276.603	274.7386 - 353.0716		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3H^\circ$	4 - 4		927
360	1276.882	217.1291 - 295.4443		$3d^5(a^4G)4s - 3d^5(a^4D)4p$	$^3G - ^5F^\circ$	4 - 5		927
690	1276.945	164.5259 - 242.8370		$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^7S - ^7P^\circ$	3 - 2		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
220	1277.183		274.7735 - 353.0716	$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$^3G - ^3H^\circ$	3 - 4		927
290	1278.658		239.1077 - 317.3768	$3d^5(a^2D)4s - 3d^5(a^2H)4p$	$^1D - ^3G^\circ$	2 - 3		927
20	1278.387		242.2904 - 320.5138	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3F^\circ$	3 - 3		927
140	1278.874		242.8626 - 321.0564	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3F^\circ$	5 - 4		927
170	1279.050		235.7365 - 313.9198	$3d^5(a^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3D^\circ$	2 - 3		927
590	1279.329		212.0958 - 290.2620	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5D^\circ$	3 - 4		927
650	1279.708		208.1515 - 286.2936	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	2 - 3		927
120	1279.926		208.1646 - 286.2936	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5H^\circ$	3 - 3		927
520	1280.105		247.1049 - 325.2229	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	3 - 4		927
80	1280.274		247.1049 - 325.2119	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	3 - 3		927
210	1281.269		247.1650 - 325.2119	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$^3F - ^3G^\circ$	2 - 3		927
60	1281.875		242.5043 - 320.5138	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3F^\circ$	4 - 3		927
600	1282.247		229.4130 - 307.3997	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3I^\circ$	5 - 6		927
550	1282.740		229.4406 - 307.3997	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3I^\circ$	7 - 6		927
120	1283.177		247.0491 - 324.9802	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^1G - ^3G^\circ$	4 - 5		927
160	1283.941		221.0876 - 298.9723	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^3D^\circ$	2 - 3		927
560	1284.470		216.5905 - 294.4433	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	2 - 3		927
470	1284.550		216.5960 - 294.4433	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	3 - 3		927
300	1285.808		253.9052 - 331.6782	$3d^5(a^2S)4s - 3d^5(a^2S)4p$	$^3S - ^3P^\circ$	1 - 2		927
270	1286.111		236.4541 - 314.2088	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3F^\circ$	3 - 4		927
20	1286.465		234.2752 - 312.0083	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^5F - ^1G^\circ$	3 - 4		927
610	1287.576		232.5459 - 310.2126	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3F^\circ$	3 - 4		927
590	1287.656		235.1165 - 312.7782	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^5G^\circ$	1 - 2		927
480	1287.800		216.4347 - 294.0860	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	1 - 2		927
30	1288.519		242.2904 - 319.8991	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^3G^\circ$	3 - 4		927
310	1289.830		216.3054 - 293.8338	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	0 - 1		927
380	1290.393		216.5905 - 294.0860	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	2 - 2		927
220	1290.479		216.5960 - 294.0860	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	3 - 2		927
20	1290.872		236.4541 - 313.9198	$3d^5(a^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3D^\circ$	3 - 3		927
320	1292.013		216.4347 - 293.8338	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^5D - ^5F^\circ$	1 - 1		927
50	1293.178		242.2904 - 319.6202	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^3G^\circ$	3 - 3		927
420	1295.286		212.0958 - 289.2980	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5D^\circ$	3 - 3		927
490	1295.761		235.1165 - 312.2910	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$^5F - ^3P^\circ$	1 - 1		927
490	1296.198		242.5043 - 319.6527	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^3G^\circ$	4 - 5		927
30	1297.731		239.1077 - 316.1654	$3d^5(a^4D)4s - 3d^5(a^2F)4p$	$^1D - ^3F^\circ$	2 - 2		927
70	1297.983		235.7365 - 312.7782	$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$^3F - ^5G^\circ$	2 - 2		927
630	1298.733		242.8626 - 319.8604	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$^3G - ^3I^\circ$	5 - 6		927
160	1300.224		212.2534 - 289.1630	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$^5P - ^5F^\circ$	2 - 1		927
610	1300.981		178.0198 - 254.8850	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^5P^\circ$	2 - 1		927
90	1301.600		216.5905 - 293.4200	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^3P^\circ$	2 - 1		927
490	1302.175							927
530	1302.380		212.0958 - 288.8779	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5S^\circ$	3 - 2		927
100	1302.833		221.0876 - 297.8425	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3D^\circ$	2 - 2		927
660	1303.317		235.7365 - 312.4633	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^3F - ^3G^\circ$	2 - 3		927
170	1303.968		247.1650 - 323.8531	$3d^5(b^2F)4s - 3d^5(a^4F)4p$	$^3F - ^3F^\circ$	2 - 2		927
630	1304.866		229.4130 - 306.0490	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3I^\circ$	5 - 5		927
420	1305.061		212.2534 - 288.8779	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5S^\circ$	2 - 2		927
610	1305.696		229.4088 - 305.9963	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3K^\circ$	6 - 7		927
550	1305.933							927
660	1306.237		229.4406 - 305.9963	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3K^\circ$	7 - 7		927
700	1306.614		208.0464 - 284.5795	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^5G - ^3G^\circ$	6 - 6		927
590	1307.595		178.0198 - 254.4956	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^5P^\circ$	2 - 2		927
100	1307.755		253.9052 - 330.3707	$3d^5(a^2S)4s - 3d^5(a^2S)4p$	$^3S - ^3P^\circ$	1 - 1		927
460	1308.649		221.4290 - 297.8425	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3D^\circ$	1 - 2		927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	1309.149						927
	530	1309.656	208.0464 – 284.4025	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5G^\circ$	6 - 5		927
	530	1310.082	221.0876 – 297.4181	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3D^\circ$	2 - 3		927
	480	1310.249	243.3315 – 319.6527	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^3G^\circ$	4 - 5		927
	250	1310.819	243.3315 – 319.6202	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^3G^\circ$	4 - 3		927
	670	1311.106	208.1310 – 284.4025	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5G^\circ$	5 - 5		927
	580	1311.551	241.0822 – 317.3273	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^3H^\circ$	5 - 6		927
	610	1312.031	239.1077 – 315.3262	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^1D - ^1F^\circ$	2 - 3		927
	650	1312.706	229.4130 – 305.5908	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^3I - ^3K^\circ$	5 - 6		927
	630	1313.303	208.1637 – 284.3089	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5G^\circ$	4 - 4		927
	710	1314.330	208.1646 – 284.2490	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5G^\circ$	3 - 3		927
	710	1314.330	246.2409 – 322.3242	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^1H - ^1I^\circ$	5 - 6		927
	700	1314.681	208.1515 – 284.2155	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5G^\circ$	2 - 2		927
	330	1314.909	208.1646 – 284.2155	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^5G^\circ$	3 - 2	P	927
	300	1314.992	232.5459 – 308.5920	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3F^\circ$	3 - 3	P	927
	550	1315.269						927
	450	1315.663	225.5451 – 301.5530	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3F^\circ$	1 - 2		927
	110	1315.975	221.4290 – 297.4179	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^3D^\circ$	1 - 1		927
	50	1316.307						927
	590	1316.912	232.6556 – 308.5920	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3F^\circ$	2 - 3		927
	420	1317.035	240.9596 – 316.8878	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^3G^\circ$	4 - 4		927
	670	1317.436	233.8392 – 309.7436	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^1I - ^1K^\circ$	6 - 7		927
	330	1317.962	240.1938 – 316.0688	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^1F - ^1G^\circ$	3 - 4		927
	520	1318.148	212.0958 – 287.9600	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$^5P - ^5F^\circ$	3 - 3		927
	670	1318.360						927
	690	1318.513	178.0198 – 253.8627	$3d^5(a^6S)4s - 3d^5(a^6S)4p$	$^5S - ^5P^\circ$	2 - 3		927
	70	1318.920	247.1650 – 322.9845	$3d^5(b^2F)4s - 3d^5(a^4F)4p$	$^3F - ^3D^\circ$	2 - 1		927
	420	1319.153	241.0822 – 316.8878	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^3G^\circ$	5 - 4		927
	220	1319.745	247.0491 – 322.8208	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^1G - ^3F^\circ$	4 - 4		927
	100	1320.200	243.3315 – 319.0762	$3d^5(a^4F)4s - 3d^5(a^4H)4p$	$^3F - ^3I^\circ$	4 - 5		927
	560	1320.707	225.2007 – 300.9181	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3F^\circ$	3 - 4		927
	240	1320.896	212.2534 – 287.9600	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$^5P - ^5F^\circ$	2 - 3		927
	350	1321.252	212.0958 – 287.7821	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5D^\circ$	3 - 2		927
	60	1323.296	247.0491 – 322.6176	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^1G - ^3D^\circ$	4 - 3		927
	560	1323.550	241.7736 – 317.3273	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$^3H - ^3H^\circ$	6 - 6		927
	650	1323.986	217.1010 – 292.6310	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3H^\circ$	3 - 4		927
	440	1324.466	217.1291 – 292.6310	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3H^\circ$	4 - 4		927
	440	1324.751	221.0876 – 296.5740	$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$^3P - ^3D^\circ$	2 - 3		927
	420	1325.081	251.6549 – 327.1227	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^1F - ^1D^\circ$	3 - 2		927
	20	1325.822	233.8392 – 309.2640	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^1I - ^3H^\circ$	6 - 6		927
	210	1327.473	247.1049 – 322.4364	$3d^5(b^2F)4s - 3d^5(a^4F)4p$	$^3F - ^3D^\circ$	3 - 2		927
	590	1327.640	240.9596 – 316.2803	$3d^5(a^2H)4s - 3d^5(a^2F)4p$	$^3H - ^3F^\circ$	4 - 3		927
	610	1328.019	212.4557 – 287.7555	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^5P - ^5D^\circ$	1 - 1		927
	640	1329.372	217.1291 – 292.3534	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^5G - ^3H^\circ$	4 - 5		927
	150	1330.063	232.5459 – 307.7311	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3F^\circ$	3 - 2		927
	70	1331.413	216.4347 – 291.5417	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5P^\circ$	1 - 1		927
	230	1332.005	232.6556 – 307.7311	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3F^\circ$	2 - 2		927
	610	1332.845						927
	470	1332.989	225.5451 – 300.5633	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3D^\circ$	1 - 1		927
	500	1333.351	225.2007 – 300.2010	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^5P^\circ$	3 - 3		927
	120	1333.561	241.0822 – 316.0688	$3d^5(a^2H)4s - 3d^5(a^2F)4p$	$^3H - ^3G^\circ$	5 - 4		927
	540	1333.958	233.8392 – 308.8041	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^1I - ^3H^\circ$	6 - 5		927
	510	1334.184	216.5905 – 291.5417	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5P^\circ$	2 - 1		927
	560	1334.992						927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
650	1336.157		217.0487 - 291.8914	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3H^\circ$	5 - 6		927
180	1336.539		232.9108 - 307.7311	$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$^3D - ^3F^\circ$	1 - 2		927
170	1336.636		246.2409 - 321.0564	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^1H - ^3F^\circ$	5 - 4		927
560	1337.049		235.4206 - 310.2126	$3d^5(a^2F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^\circ$	4 - 4		927
670	1339.072		225.5451 - 300.2249	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3D^\circ$	1 - 2		927
370	1340.350		225.6165 - 300.2249	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3D^\circ$	2 - 2		927
360	1341.074		216.1899 - 290.7570	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5P^\circ$	4 - 3		927
630	1342.177		217.0487 - 291.5546	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3F^\circ$	5 - 4		927
230	1342.902		242.8626 - 317.3273	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$^3G - ^3H^\circ$	5 - 6		927
190	1343.633		217.1291 - 291.5546	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3F^\circ$	4 - 4		927
380	1343.898		240.9596 - 315.3701	$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$^3H - ^3H^\circ$	4 - 4		927
170	1347.222		217.1010 - 291.3285	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3F^\circ$	3 - 3		927
550	1347.743		217.1291 - 291.3285	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3F^\circ$	4 - 3		927
110	1348.683		243.3705 - 317.5175	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^5D^\circ$	3 - 2		927
560	1350.065							927
190	1350.868		242.8626 - 316.8878	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$^3G - ^3G^\circ$	5 - 4		927
220	1351.070		240.1938 - 314.2088	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^1F - ^3F^\circ$	3 - 4		927
640	1351.419		217.1010 - 291.0977	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$^3G - ^3F^\circ$	3 - 2		927
180	1353.134		251.6549 - 325.5586	$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$^1F - ^1G^\circ$	3 - 4		927
260	1353.878		243.3705 - 317.2320	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$^3F - ^5D^\circ$	3 - 3		927
120	1354.535		235.1165 - 308.9430	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$^5F - ^1D^\circ$	1 - 2		927
370	1355.541		225.2007 - 298.9723	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^3D^\circ$	3 - 3		927
350	1357.493		216.5960 - 290.2620	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5D^\circ$	3 - 4		927
100	1358.166		217.1291 - 290.7570	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$^3G - ^5P^\circ$	4 - 3		927
150	1358.339		241.0822 - 314.7022	$3d^5(a^2H)4s - 3d^5(a^2F)4p$	$^3H - ^3G^\circ$	5 - 5		927
50	1360.815		242.5043 - 315.9905	$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$^3G - ^3H^\circ$	4 - 5		927
20	1361.880		225.6165 - 299.0456	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^5P^\circ$	2 - 2		927
80	1363.929		234.4127 - 307.7311	$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$^3F - ^3F^\circ$	2 - 2		927
150	1366.027		242.8626 - 316.0688	$3d^5(a^2G)4s - 3d^5(a^2F)4p$	$^3G - ^3G^\circ$	5 - 4		927
70	1366.690							927
270	1368.371		242.2904 - 315.3701	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^3G - ^3H^\circ$	3 - 4		927
130	1372.552		216.3054 - 289.1630	$3d^5(a^4D)4s - 3d^5(a^4G)4p$	$^5D - ^5F^\circ$	0 - 1		927
290	1373.413		216.4347 - 289.2471	$3d^5(a^4D)4s - 3d^5(a^4G)4p$	$^5D - ^5F^\circ$	1 - 2		927
200	1375.376		216.5905 - 289.2980	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5D^\circ$	2 - 3		927
440	1376.195		242.5043 - 315.1682	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^5F^\circ$	4 - 5		927
240	1376.315		216.5905 - 289.2471	$3d^5(a^4D)4s - 3d^5(a^4G)4p$	$^5D - ^5F^\circ$	2 - 2		927
160	1379.217		240.9596 - 313.4647	$3d^5(a^2H)4s - 3d^5(a^4F)4p$	$^3H - ^5G^\circ$	4 - 5		927
30	1379.556							927
100	1380.514		225.5451 - 297.9828	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$^3D - ^5P^\circ$	1 - 1		927
170	1383.017		242.8626 - 315.1682	$3d^5(a^2G)4s - 3d^5(a^4F)4p$	$^3G - ^5F^\circ$	5 - 5		927
20	1383.489		216.5960 - 288.8779	$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$^5D - ^5S^\circ$	3 - 2		927
540	1384.873		233.8392 - 306.0490	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$^1I - ^3I^\circ$	6 - 5		927
530	1385.923		212.0958 - 284.2490	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$^5P - ^5G^\circ$	3 - 3		927
70	1387.174		247.0491 - 319.1387	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$^1G - ^1G^\circ$	4 - 4		927
20	1388.879		243.3705 - 315.3701	$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$^3F - ^3H^\circ$	3 - 4		927
240	1389.047		221.4290 - 293.4200	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3P^\circ$	1 - 1		927
220	1389.447		216.1899 - 288.1616	$3d^5(a^4D)4s - 3d^5(a^4G)4p$	$^5D - ^5F^\circ$	4 - 4		927
490	1390.921		221.0876 - 292.9830	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3P^\circ$	2 - 2		927
120	1391.672		247.2818 - 319.1387	$3d^5(b^2F)4s - 3d^5(a^2G)4p$	$^3F - ^1G^\circ$	4 - 4		927
600	1392.484		240.1938 - 312.0083	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$^1F - ^1G^\circ$	3 - 4		927
560	1394.375		216.1899 - 287.9069	$3d^5(a^4D)4s - 3d^5(a^4G)4p$	$^5D - ^5F^\circ$	4 - 5		927
460	1397.550		221.4290 - 292.9830	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$^3P - ^3P^\circ$	1 - 2		927
	1446.0		0.0 - 69.1561	$3d^6 - 3d^6$	$ga^5D - b^3P$	4 - 2	F,P	375,927
	1455.2		0.0 - 68.7187	$3d^6 - 3d^6$	$ga^5D - b^3F$	4 - 4	F,P	375,927

NI V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1464.8	0.8897 - 69.1561	$3d^6 - 3d^6$	$ga^5D - b^3P$	3 - 2	F,P	375,927
		1471.3	0.8897 - 68.8547	$3d^6 - 3d^6$	$ga^5D - b^3F$	3 - 3	F,P	375,927
		1474.3	0.8897 - 68.7187	$3d^6 - 3d^6$	$ga^5D - b^3F$	3 - 4	F,P	375,927
		1477.8	1.4899 - 69.1561	$3d^6 - 3d^6$	$ga^5D - b^3P$	2 - 2	F,P	375,927
		1484.4	1.4899 - 68.8547	$3d^6 - 3d^6$	$ga^5D - b^3F$	2 - 3	F,P	375,927
		1487.5	1.4899 - 68.7187	$3d^6 - 3d^6$	$ga^5D - b^3F$	2 - 4	F,P	375,927
		1489.4	1.4899 - 68.6321	$3d^6 - 3d^6$	$ga^5D - b^3F$	2 - 2	F,P	375,927
		1492.9	1.8715 - 68.8547	$3d^6 - 3d^6$	$ga^5D - b^3F$	1 - 3	F,P	375,927
		1497.9	1.8715 - 68.6321	$3d^6 - 3d^6$	$ga^5D - b^3F$	1 - 2	F,P	375,927
		1500.2	0.8897 - 67.5479	$3d^6 - 3d^6$	$ga^5D - b^3P$	3 - 1	F,P	375,927
		1502.1	2.0576 - 68.6321	$3d^6 - 3d^6$	$ga^5D - b^3F$	0 - 2	F,P	375,927
		1513.8	1.4899 - 67.5479	$3d^6 - 3d^6$	$ga^5D - b^3P$	2 - 1	F,P	375,927
		1522.6	1.8715 - 67.5479	$3d^6 - 3d^6$	$ga^5D - b^3P$	1 - 1	F,P	375,927
		1532.6	1.4899 - 66.7378	$3d^6 - 3d^6$	$ga^5D - b^3P$	2 - 0	F,P	375,927
		1541.6	1.8715 - 66.7378	$3d^6 - 3d^6$	$ga^5D - b^3P$	1 - 0	F,P	375,927
		1791.7	48.6070 - 104.4205	$3d^6 - 3d^6$	$a^1D - b^1D$	2 - 2	F,P	375,927
		1830.3	178.0198 - 232.6556	$3d^5(a^6S)4s - 3d^5(a^2D)4s$	$^5S - ^3D$	2 - 2	F,P	375,927
		1834.0	178.0198 - 232.5459	$3d^5(a^6S)4s - 3d^5(a^2D)4s$	$^5S - ^3D$	2 - 3	F,P	375,927
		1920.5	164.5259 - 216.5960	$3d^5(a^6S)4s - 3d^5(a^4D)4s$	$^7S - ^5D$	3 - 3	F,P	375,927
		1935.6	164.5259 - 216.1899	$3d^5(a^6S)4s - 3d^5(a^4D)4s$	$^7S - ^5D$	3 - 4	F,P	375,927

NICKEL VI (Ni⁵⁺), Z = 28
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 (^6S_{5/2})$ (23 electrons)
Ionization Potential [870 000] cm^{-1} ; [108] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
180	224.703	67.0851 - 512.1132	$3d^5 - 3d^4(b^1D)4p$	$a^2F - ^2D^o$	2 - 2		1093	
60	227.162	67.0851 - 507.3004	$3d^5 - 3d^4(b^1D)4p$	$a^2F - ^2F^o$	2 - 1		1093	
160	231.556	75.4417 - 507.3004	$3d^5 - 3d^4(b^1D)4p$	$a^2G - ^2F^o$	2 - 2		1093	
100	231.574	79.3914 - 511.2174	$3d^5 - 3d^4(b^1D)4p$	$b^2F - ^2D^o$	2 - 2		1093	
160	232.275	74.6277 - 505.1505	$3d^5 - 3d^4(b^1D)4p$	$a^2G - ^2F^o$	2 - 1		1093	
180	233.890	46.1044 - 473.6564	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	2 - 2		1093	
220	233.969	45.8842 - 473.2924	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	2 - 1		1093	
130	234.010	46.3248 - 473.6564	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	2 - 2		1093	
190	234.088	46.1044 - 473.2924	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	2 - 1		1093	
300	234.403	45.8842 - 472.4973	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4D^o$	2 - 2		1093	
330	235.170	45.8842 - 471.1068	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4S^o$	2 - 2		1093	
280	235.293	46.1044 - 471.1068	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4S^o$	2 - 1		1093	
130	235.386	41.9209 - 466.7543	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4G^o$	11 - 11		1093	
140	235.414	46.3248 - 471.1068	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4S^o$	11 - 11		1093	
90	235.769	41.9209 - 466.0652	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4G^o$	11 - 11		1093	
50	235.790	42.0232 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^2F^o$	11 - 11		1093	
70	235.825	42.0232 - 466.0652	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4G^o$	11 - 11		1093	
40	236.399	50.6435 - 473.6564	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4D^o$	11 - 11		1093	
130	236.871	50.3310 - 472.4973	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4D^o$	11 - 11		1093	
150	237.124	50.7776 - 472.4973	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4D^o$	11 - 11		1093	
150	237.857	42.0232 - 462.4431	$3d^5 - 3d^4(b^3P)4p$	$a^4G - ^4D^o$	11 - 11		1093	
190	237.909	50.7776 - 471.1068	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4S^o$	11 - 11		1093	
10	238.476	64.1524 - 483.4809	$3d^5 - 3d^4(b^3F)4p$	$a^2D - ^2D^o$	11 - 11		1093	
390	238.550	41.9209 - 461.1183	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	11 - 11		1093	

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	260	238.890	42.0036 - 460.6036	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	390	238.941	42.0232 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		1093
	210	239.029	42.0036 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	310	239.046	42.0351 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$a^4G - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	80	239.071	61.1960 - 479.4818	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	360	239.118	61.2795 - 479.4818	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	180	239.320	61.1960 - 479.0463	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		1093
	70	239.808	45.8842 - 462.8841	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	140	239.941	46.1044 - 462.8841	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	110	240.063	45.8842 - 462.4431	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	140	240.410	67.0851 - 483.0434	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	120	240.536	45.8842 - 461.6226	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	60	240.582	96.4612 - 512.1132	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		1093
	210	240.647	65.1735 - 480.7242	$3d^5 - 3d^4(b^1G)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		1093
	130	240.771	46.1044 - 461.4378	$3d^5 - 3d^4(b^3P)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		1093
	90	240.830	50.3310 - 465.5527	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	300	240.885	61.1960 - 476.3321	$3d^5 - 3d^4(b^1G)4p$	$a^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	90	240.946	68.4449 - 483.4809	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	180	241.104	96.4612 - 511.2174	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		1093
	100	241.167	45.8842 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^4P - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	160	241.268	50.3310 - 464.8078	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	90	241.527	50.7776 - 464.8078	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	440	242.148	50.3310 - 463.3015	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	100	242.412	50.7805 - 463.3015	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	180	242.576	86.5321 - 498.7730	$3d^5 - 3d^4(b^1D)4p$	$a^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	480	242.653	50.3310 - 462.4431	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	60	242.741	67.0851 - 479.0463	$3d^5 - 3d^4(b^1G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	130	242.917	50.7776 - 462.4431	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	60	243.084	61.1960 - 472.5795	$3d^5 - 3d^4(b^3F)4p$	$a^2I - ^2G^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	270	243.403	50.7776 - 461.6226	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	90	243.432	50.3310 - 461.1183	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	200	243.512	50.7776 - 461.4378	$3d^5 - 3d^4(b^3P)4p$	$a^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	60	243.683	130.0259 - 540.3941	$3d^5 - 3d^4(b^1S)4p$	$a^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	270	243.781	50.3310 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	110	243.927	50.6435 - 460.6036	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	160	244.008	50.7805 - 460.6036	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	150	244.051	50.7776 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	210	244.150	50.7805 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$a^4D - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	50	244.270	64.1524 - 473.5319	$3d^5 - 3d^4(b^3F)4p$	$a^2D - ^2G^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	60	244.350	67.0851 - 476.3321	$3d^5 - 3d^4(b^1G)4p$	$a^2F - ^2H^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	70	244.688	64.1524 - 472.8330	$3d^5 - 3d^4(b^3P)4p$	$a^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	20	245.407	69.4470 - 476.9356	$3d^5 - 3d^4(b^1G)4p$	$a^4F - ^2G^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	180	246.249	74.6277 - 480.7242	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	400	246.473	73.7566 - 479.4818	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	80	246.614	67.0851 - 472.5795	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	490	246.738	73.7566 - 479.0463	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	110	246.785	68.4449 - 473.6564	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	60	246.861	68.4449 - 473.5319	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	280	247.069	75.4417 - 480.1893	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		1093
	140	247.186	69.1735 - 473.7276	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	180	247.225	68.8017 - 473.2924	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	40	247.396	69.4470 - 473.6564	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	50	247.472	79.3914 - 483.4809	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	370	247.508	72.9088 - 476.9356	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{11}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	247.560	68.5512 - 472.4973	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		1093
	40	247.639	96.4612 - 500.2752	$3d^5 - 3d^4(b^1D)4p$	$b^2D - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	190	247.767	75.4417 - 479.0463	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	340	247.878	72.9088 - 476.3321	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	270	248.400	73.7566 - 476.3321	$3d^5 - 3d^4(b^1G)4p$	$a^2H - ^2H^\circ$	$\frac{1}{2} - \frac{3}{2}$		1093
	300	248.568	74.6277 - 476.9356	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	350	248.635	140.9222 - 543.1156	$3d^5 - 3d^4(b^1S)4p$	$c^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	40	248.689	141.0068 - 543.1156	$3d^5 - 3d^4(b^1S)4p$	$c^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	140	249.069	75.4417 - 476.9356	$3d^5 - 3d^4(b^1G)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	20	249.170	79.3914 - 480.7242	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	510	249.611	72.9088 - 473.5319	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	50	249.636	79.6083 - 480.1893	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	250	250.206	72.9088 - 472.5795	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	560	250.344	79.6083 - 479.0463	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	220	250.384	141.0068 - 540.3941	$3d^5 - 3d^4(b^1S)4p$	$c^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	50	250.504	42.0232 - 441.2161	$3d^5 - 3d^4(a^1D)4p$	$a^4G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	330	250.686	74.6277 - 473.5319	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	540	250.738	73.7566 - 472.5795	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		1093
	40	250.792	64.1524 - 462.8841	$3d^5 - 3d^4(b^1P)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	470	251.128	68.5512 - 466.7543	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	380	251.199	75.4417 - 473.5319	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	120	251.428	65.1735 - 462.9036	$3d^5 - 3d^4(b^1P)4p$	$a^2D - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	60	251.452	68.4449 - 466.1337	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	310	251.544	79.3914 - 476.9356	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	330	251.564	68.5512 - 466.0652	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	180	251.678	79.6083 - 476.9356	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	520	251.722	107.8870 - 505.1505	$3d^5 - 3d^4(b^1D)4p$	$b^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	60	251.761	69.4470 - 466.6491	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	220	251.802	75.4417 - 472.5795	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	70	251.854	75.4417 - 472.4973	$3d^5 - 3d^4(b^1F)4p$	$a^2G - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	420	252.047	68.8017 - 465.5527	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	340	252.062	79.6083 - 476.3321	$3d^5 - 3d^4(b^1G)4p$	$b^2F - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	130	252.088	69.4470 - 466.1337	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	150	252.151	69.4470 - 466.0342	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	190	252.291	68.4449 - 464.8078	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	250	252.362	68.5512 - 464.8078	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	140	252.386	67.0851 - 463.3015	$3d^5 - 3d^4(b^1P)4p$	$a^2F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	200	252.523	68.8017 - 464.8078	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	100	252.792	68.4449 - 464.0278	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	110	252.888	65.1735 - 460.6036	$3d^5 - 3d^4(b^1F)4p$	$a^2D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	240	253.257	69.1735 - 464.0278	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	110	253.435	69.4470 - 464.0278	$3d^5 - 3d^4(b^1F)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	250	253.461	67.0851 - 461.6226	$3d^5 - 3d^4(b^1P)4p$	$a^2F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	560	253.485	68.8017 - 463.3015	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	510	253.524	68.4449 - 462.8841	$3d^5 - 3d^4(b^1P)4p$	$a^2F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	160	253.717	79.3914 - 473.5319	$3d^5 - 3d^4(b^1F)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	110	253.808	50.7805 - 444.7842	$3d^5 - 3d^4(a^1D)4p$	$a^4D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	690	253.877	68.5512 - 462.4431	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	520	253.981	69.1735 - 462.9036	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	280	254.067	65.1735 - 458.7722	$3d^5 - 3d^4(a^1F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	540	254.105	41.9209 - 435.4594	$3d^5 - 3d^4(a^1D)4p$	$a^4G - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		1093
	520	254.168	69.4470 - 462.8841	$3d^5 - 3d^4(b^1P)4p$	$a^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	60	254.273	67.0851 - 460.3646	$3d^5 - 3d^4(b^1F)4p$	$a^2F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	250	254.308	72.9088 - 466.1337	$3d^5 - 3d^4(b^1F)4p$	$a^2H - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
170	254.353		72.9088 - 466.0652	$3d^5 - 3d^4(b^3F)4p$	$a^2H - ^4G^\circ$			1093
470	254.393		42.0232 - 435.1162	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$			1093
420	254.458		69.4470 - 462.4431	$3d^5 - 3d^4(b^3P)4p$	$a^4F - ^4D^\circ$			1093
270	254.472		79.6083 - 472.5795	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2G^\circ$			1093
660	254.570		68.8017 - 461.6226	$3d^5 - 3d^4(b^3P)4p$	$a^4F - ^4D^\circ$			1093
220	254.672		64.1524 - 456.8156	$3d^5 - 3d^4(a^1F)4p$	$a^2D - ^2D^\circ$			1093
690	254.733		68.5512 - 461.1183	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
80	254.810		69.1735 - 461.6226	$3d^5 - 3d^4(b^3P)4p$	$a^4F - ^4D^\circ$			1093
470	254.897		68.8017 - 461.1183	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
230	254.974		42.0036 - 434.2009	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$			1093
300	255.043		68.4449 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^4F^\circ$			1093
370	255.089		74.6277 - 466.6491	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^2F^\circ$			1093
450	255.109		68.5512 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
570	255.155		68.4449 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$a^2F - ^4F^\circ$			1093
660	255.274		68.8017 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
80	255.385		68.8017 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
120	255.426		74.6277 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^2F^\circ$			1093
590	255.474		69.1735 - 460.6036	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
60	255.528		42.0232 - 433.3712	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^2G^\circ$			1093
330	255.630		69.1735 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
270	255.696		69.4470 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
510	255.809		69.4470 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$a^4F - ^4F^\circ$			1093
110	255.907		42.0351 - 432.8001	$3d^5 - 3d^4(a^1G)4p$	$a^4G - ^2F^\circ$			1093
150	255.957		75.4417 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^2F^\circ$			1093
130	256.001		50.7776 - 441.4012	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^2D^\circ$			1093
150	256.196		68.4449 - 458.7722	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2D^\circ$			1093
190	256.571		0.0 - 389.7604	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^4P^\circ$			1093
250	256.587		67.0851 - 456.8156	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2D^\circ$			1093
320	256.675		69.1735 - 458.7722	$3d^5 - 3d^4(a^1F)4p$	$a^4F - ^2D^\circ$			1093
140	256.716		50.6435 - 440.1686	$3d^5 - 3d^4(a^1S)4p$	$a^4D - ^2P^\circ$			1093
360	256.806		50.7776 - 440.1686	$3d^5 - 3d^4(a^1S)4p$	$a^4D - ^2P^\circ$			1093
440	256.828		75.4417 - 464.8078	$3d^5 - 3d^4(b^3F)4p$	$a^2G - ^4G^\circ$			1093
420	256.910		0.0 - 389.2434	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6D^\circ$			1093
200	257.198		67.0851 - 455.8876	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2G^\circ$			1093
120	257.486		68.4449 - 456.8156	$3d^5 - 3d^4(a^1F)4p$	$a^2F - ^2D^\circ$			1093
150	257.593		72.9088 - 461.1183	$3d^5 - 3d^4(b^3F)4p$	$a^2H - ^4F^\circ$			1093
220	257.615		46.1044 - 434.2816	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$			1093
280	257.657		41.9209 - 430.0333	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^\circ$			1093
210	257.725		42.0232 - 430.0333	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^\circ$			1093
70	257.760		46.3248 - 434.2816	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$			1093
590	257.831		0.0 - 387.8499	$3d^5 - 3d^4(a^3D)4p$	$ga^6S - ^6D^\circ$			1093
200	258.014		41.9209 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^\circ$			1093
210	258.093		42.0232 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^\circ$			1093
370	258.170		86.5321 - 473.8695	$3d^5 - 3d^4(b^3P)4p$	$a^2S - ^2P^\circ$			1093
250	258.222		79.3914 - 466.6491	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2F^\circ$			1093
360	258.306		46.3248 - 433.4625	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$			1093
140	258.371		79.6083 - 466.6491	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2F^\circ$			1093
130	258.397		75.4417 - 462.4431	$3d^5 - 3d^4(b^3P)4p$	$a^2G - ^4D^\circ$			1093
90	258.474		64.1524 - 451.0413	$3d^5 - 3d^4(a^1F)4p$	$a^2D - ^2F^\circ$			1093
140	258.505		42.0232 - 428.8665	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^4G^\circ$			1093
80	258.569		79.3914 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2F^\circ$			1093
480	258.637		79.3914 - 466.0342	$3d^5 - 3d^4(b^3P)4p$	$b^2F - ^2D^\circ$			1093
40	258.674		96.4612 - 483.0434	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^2D^\circ$			1093
210	258.716		79.6083 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^2F^\circ$			1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
210	258.755	42.0351 - 428.4965	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ G°	7 - 5 2 - 2		1093	
510	258.791	45.8842 - 432.2957	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ P - ⁴ D°	2 - 2 2 - 2		1093	
130	258.867	86.5321 - 472.8330	3d ⁵ - 3d ⁴ (b ³ P)4p	a ² S - ² P°	1 - 1 2 - 2		1093	
440	258.941	46.1044 - 432.2957	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ P - ⁴ D°	2 - 2 2 - 2		1093	
610	258.962	0.0 - 386.1573	3d ⁵ - 3d ⁴ (a ³ D)4p	ga ⁶ S - ⁴ P°	2 - 2 2 - 2		1093	
90	259.047	45.8842 - 431.9126	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ P - ⁴ D°	2 - 2 2 - 2		1093	
520	259.103	79.6083 - 465.5527	3d ⁵ - 3d ⁴ (b ³ P)4p	b ² F - ² D°	7 - 5 2 - 2		1093	
290	259.283	42.0232 - 427.7027	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ² H°	1 - 1 2 - 2		1093	
150	259.357	42.0036 - 427.5750	3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - ² G°	2 - 2 2 - 2		1093	
190	259.377	68.4449 - 453.9830	3d ⁵ - 3d ⁴ (a ³ F)4p	a ² F - ² G°	2 - 2 2 - 2		1093	
280	259.615	68.8017 - 453.9830	3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ F - ² G°	1 - 1 2 - 2		1093	
620	259.650	50.3310 - 435.4594	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ F°	1 - 1 2 - 2		1093	
210	259.682	42.0036 - 427.0960	3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - ² F°	4 - 5 2 - 2		1093	
190	259.699	42.0351 - 427.0960	3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - ² F°	1 - 1 2 - 2		1093	
360	259.797	46.1044 - 431.0203	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ P - ⁴ P°	2 - 2 2 - 2		1093	
230	259.830	46.1044 - 430.9719	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ P - ⁴ D°	1 - 1 2 - 2		1093	
360	259.891	67.0851 - 451.8594	3d ⁵ - 3d ⁴ (a ³ F)4p	a ² F - ² F°	1 - 1 2 - 2		1093	
210	259.978	46.3248 - 430.9719	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ P - ⁴ D°	1 - 1 2 - 2		1093	
720	260.057	41.9209 - 426.4519	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ H°	11 - 11 2 - 2		1093	
230	260.131	79.6083 - 464.0278	3d ⁵ - 3d ⁴ (b ³ F)4p	b ² F - ⁴ G°	2 - 2 2 - 2		1093	
500	260.187	50.7776 - 435.1162	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ F°	2 - 2 2 - 2		1093	
290	260.218	50.3310 - 434.6260	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ F°	1 - 1 2 - 2		1093	
340	260.238	96.4612 - 480.7242	3d ⁵ - 3d ⁴ (b ³ G)4p	b ² D - ² F°	1 - 1 2 - 2		1093	
290	260.270	50.7805 - 434.9970	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ D - ² F°	1 - 1 2 - 2		1093	
790	260.351	0.0 - 384.0965	3d ⁵ - 3d ⁴ (a ³ D)4p	ga ⁶ S - ⁶ P°	2 - 2 2 - 2		1093	
230	260.446	67.0851 - 451.0413	3d ⁵ - 3d ⁴ (a ³ F)4p	a ² F - ² F°	1 - 1 2 - 2		1093	
530	260.522	50.7805 - 434.6260	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ F°	1 - 1 2 - 2		1093	
790	260.592	0.0 - 383.7398	3d ⁵ - 3d ⁴ (a ³ D)4p	ga ⁶ S - ⁶ P°	1 - 1 2 - 2		1093	
630	260.661	50.6435 - 434.2816	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ P°	1 - 1 2 - 2		1093	
780	260.717	0.0 - 383.5578	3d ⁵ - 3d ⁴ (a ³ D)4p	ga ⁶ S - ⁶ P°	2 - 2 2 - 2		1093	
590	260.756	50.7805 - 434.2816	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ P°	2 - 2 2 - 2		1093	
490	260.808	50.7805 - 434.2009	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ F°	1 - 1 2 - 2		1093	
190	260.976	68.4449 - 451.6229	3d ⁵ - 3d ⁴ (a ³ D)4p	a ² F - ² P°	1 - 1 2 - 2		1093	
280	261.058	68.8017 - 451.8594	3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ F - ² F°	1 - 1 2 - 2		1093	
510	261.109	72.9088 - 455.8876	3d ⁵ - 3d ⁴ (a ³ F)4p	a ² H - ² G°	1 - 1 2 - 2		1093	
680	261.310	50.7776 - 433.4625	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ P°	2 - 2 2 - 2		1093	
660	261.436	42.0351 - 424.5370	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ H°	7 - 9 2 - 2		1093	
210	261.498	69.4470 - 451.8594	3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ F - ² F°	1 - 1 2 - 2		1093	
660	261.547	42.0232 - 424.3637	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ H°	1 - 1 2 - 2		1093	
440	261.622	79.3914 - 461.6226	3d ⁵ - 3d ⁴ (b ³ P)4p	b ² F - ⁴ D°	1 - 1 2 - 2		1093	
490	261.657	42.0351 - 424.2185	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ F°	1 - 1 2 - 2		1093	
630	261.689	73.7566 - 455.8876	3d ⁵ - 3d ⁴ (a ³ F)4p	a ² H - ² G°	11 - 2 2 - 2		1093	
680	261.804	50.3310 - 432.2957	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ D°	2 - 2 2 - 2		1093	
160	261.842	64.1524 - 446.0612	3d ⁵ - 3d ⁴ (a ³ D)4p	a ² D - ² F°	2 - 2 2 - 2		1093	
340	261.888	41.9209 - 423.7633	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ F°	11 - 11 2 - 2		1093	
440	261.958	42.0232 - 423.7633	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ F°	1 - 1 2 - 2		1093	
160	261.982	42.0036 - 423.7105	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ F°	1 - 1 2 - 2		1093	
270	262.028	42.0036 - 423.6458	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ² F°	2 - 2 2 - 2		1093	
650	262.066	50.3310 - 431.9126	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ D°	7 - 7 2 - 2		1093	
280	262.111	50.7776 - 432.2957	3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - ⁴ D°	2 - 2 2 - 2		1093	
650	262.235	42.0036 - 423.3414	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ H°	2 - 2 2 - 2		1093	
460	262.255	42.0351 - 423.3414	3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ G - ⁴ H°	1 - 1 2 - 2		1093	
180	262.287	74.6277 - 455.8876	3d ⁵ - 3d ⁴ (a ³ F)4p	a ² G - ² G°	1 - 1 2 - 2		1093	
150	262.302	46.1044 - 427.3422	3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - ² D°	2 - 2 2 - 2		1093	

Ni VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	210	262.335	130.0259 - 511.2174	$3d^5 - 3d^4(b^1D)4p$	$a^2P - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	230	262.372	50.7776 - 431.9126	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		1093
	410	262.416	72.9088 - 453.9830	$3d^5 - 3d^4(a^1F)4p$	$a^2H - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	510	262.447	42.0351 - 423.0652	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	180	262.485	79.3914 - 460.3646	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	260	262.518	79.6083 - 460.5359	$3d^5 - 3d^4(b^3F)4p$	$b^2F - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	430	262.541	42.0036 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	280	262.562	42.0351 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^4G - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	290	262.612	41.9209 - 422.7118	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2I^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	290	262.662	41.9209 - 422.6424	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2I^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	460	262.683	50.3310 - 431.0203	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	330	262.723	42.0232 - 422.6424	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2I^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	570	262.850	42.0036 - 422.4372	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	390	262.931	50.6435 - 430.9719	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	490	262.963	42.0232 - 422.3066	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	630	262.990	50.7776 - 431.0203	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	560	263.026	50.7776 - 430.9719	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	330	263.077	50.7805 - 430.8988	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	490	263.352	61.1960 - 440.9179	$3d^5 - 3d^4(a^1D)4p$	$a^2I - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	400	263.434	42.0036 - 421.6072	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	300	263.605	74.6277 - 453.9830	$3d^5 - 3d^4(a^1F)4p$	$a^2G - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	500	263.653	42.0351 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	180	263.868	67.0851 - 446.0612	$3d^5 - 3d^4(a^1D)4p$	$a^2F - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	690	263.913	41.9209 - 420.8357	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	190	263.984	42.0232 - 420.8357	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	520	264.022	61.2795 - 440.0392	$3d^5 - 3d^4(a^1D)4p$	$a^2I - ^2H^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	720	264.060	41.9209 - 420.6234	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	100	264.131	42.0232 - 420.6234	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	700	264.182	42.0232 - 420.5532	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	190	264.228	45.8842 - 424.3461	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	300	264.358	42.0351 - 420.3089	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	150	264.440	41.9209 - 420.0800	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	710	264.512	42.0232 - 420.0800	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	190	264.614	46.3248 - 424.2354	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	770	264.669	42.0351 - 419.8633	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	350	264.718	45.8842 - 423.6458	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	120	264.746	50.7805 - 428.4965	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	120	264.825	46.1044 - 423.7105	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	20	264.868	46.1044 - 423.6468	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	600	264.979	42.0036 - 419.3905	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	540	265.002	42.0351 - 419.3905	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	210	265.080	64.1524 - 441.4012	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	250	265.103	79.6083 - 456.8156	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	490	265.207	64.1524 - 441.2161	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	310	265.243	45.8842 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	530	265.397	46.1044 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^4P - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	620	265.455	42.0036 - 418.7134	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	600	265.511	41.9209 - 418.5536	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	590	265.525	65.1735 - 441.7857	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	420	265.565	45.8842 - 422.4372	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	550	265.611	42.0036 - 418.4908	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4F^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	680	265.658	45.8842 - 422.3066	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	730	265.716	42.0232 - 418.3688	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	590	265.765	79.6083 - 455.8876	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2G^o$	$\frac{1}{2} - \frac{1}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	190	265.795	65.1735 - 441.4012	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	170	265.878	46.3248 - 422.4372	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		1093
	530	265.926	46.3248 - 422.3694	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	600	265.946	45.8842 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	570	266.105	46.1044 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	450	266.154	42.0036 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	280	266.180	42.0232 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
	650	266.227	41.9209 - 417.5384	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	500	266.299	42.0232 - 417.5384	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	270	266.354	45.8842 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	670	266.473	61.2795 - 436.5503	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2K^\circ$	$\frac{13}{2} - \frac{15}{2}$		1093
	690	266.493	41.9209 - 417.1641	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	590	266.565	42.0232 - 417.1641	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	460	266.670	65.1735 - 440.1686	$3d^5 - 3d^4(a^3S)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	180	266.721	50.7776 - 425.7031	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	410	266.781	45.8842 - 420.7223	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	350	266.805	69.4470 - 444.2522	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	140	266.882	67.0851 - 441.7857	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	670	266.931	46.1044 - 420.7223	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	630	267.026	41.9209 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	590	267.076	45.8842 - 420.3089	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	620	267.094	42.0232 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	510	267.110	42.0351 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	630	267.153	67.0851 - 441.4012	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	130	267.189	61.1960 - 435.4594	$3d^5 - 3d^4(a^3D)4p$	$a^2I - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	560	267.232	46.1044 - 420.3089	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	490	267.253	68.4449 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	90	267.285	67.0851 - 441.2161	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	630	267.367	50.3310 - 424.3461	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	560	267.408	61.1960 - 435.1654	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2K^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	670	267.461	61.2795 - 435.1654	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2K^\circ$	$\frac{13}{2} - \frac{13}{2}$		1093
	610	267.498	41.9209 - 415.7543	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4I^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	710	267.571	61.2795 - 435.0115	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^\circ$	$\frac{13}{2} - \frac{11}{2}$		1093
	510	267.640	42.0036 - 415.6408	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	590	267.654	42.0232 - 415.6408	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	590	267.688	50.7776 - 424.3461	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	650	267.769	50.7776 - 424.2354	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	700	267.784	50.3310 - 423.7633	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	320	267.825	42.0036 - 415.3820	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	390	267.848	42.0351 - 415.3820	$3d^5 - 3d^4(a^3F)4p$	$a^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	490	267.972	69.4470 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	240	267.995	42.0036 - 415.1445	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	170	268.019	42.0351 - 415.1445	$3d^5 - 3d^4(a^3P)4p$	$a^4G - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	430	268.048	50.6435 - 423.7105	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		1093
	680	268.118	61.1960 - 434.1673	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	330	268.146	50.7805 - 423.7105	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	550	268.193	50.7805 - 423.6468	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	600	268.215	45.8842 - 418.7134	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	190	268.262	68.4449 - 441.2161	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		1093
	290	268.288	50.3310 - 423.0652	$3d^5 - 3d^4(a^3H)4p$	$a^4D - ^2H^\circ$	$\frac{3}{2} - \frac{9}{2}$		1093
	570	268.381	46.1044 - 418.7134	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	190	268.410	50.7776 - 423.3414	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^4H^\circ$	$\frac{3}{2} - \frac{7}{2}$		1093
	200	268.479	79.3914 - 451.8594	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2F^\circ$	$\frac{1}{2} - \frac{7}{2}$		1093
	250	268.539	46.1044 - 418.4908	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	550	268.571	107.8483 - 480.1893	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2F^o$	$2 - 2$ $2 - 2$		1093
	610	268.637	79.6083 - 451.8594	$3d^5 - 3d^4(a^1F)4p$	$b^2F - ^2F^o$	$2 - 2$ $2 - 2$		1093
	400	268.697	46.3248 - 418.4908	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4F^o$	$2 - 2$ $2 - 2$		1093
	530	268.732	50.7805 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^4D - ^2F^o$	$3 - 3$ $2 - 2$		1093
	330	268.835	50.3310 - 422.3066	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4D^o$	$2 - 2$ $2 - 2$		1093
	400	268.939	45.8842 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$a^4P - ^2G^o$	$2 - 2$ $2 - 2$		1093
	540	268.967	50.6435 - 422.4372	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$1 - 2$ $2 - 2$		1093
	720	269.007	61.1960 - 432.9320	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^o$	$11 - 11$ $2 - 2$		1093
	720	269.026	41.9209 - 413.6316	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$11 - 11$ $2 - 2$		1093
	670	269.072	61.2795 - 432.9320	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^o$	$11 - 11$ $2 - 2$		1093
	430	269.114	50.7805 - 422.3694	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$2 - 2$ $2 - 2$		1093
	550	269.140	50.3310 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$2 - 2$ $2 - 2$		1093
	570	269.159	50.7776 - 422.3066	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4D^o$	$5 - 2$ $2 - 2$		1093
	710	269.234	61.1960 - 432.6166	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^o$	$11 - 11$ $2 - 2$		1093
	700	269.298	61.2795 - 432.6166	$3d^5 - 3d^4(a^1I)4p$	$a^2I - ^2I^o$	$11 - 11$ $2 - 2$		1093
	530	269.399	107.8483 - 479.0463	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2G^o$	$2 - 2$ $2 - 2$		1093
	140	269.425	107.8870 - 479.0463	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2G^o$	$2 - 2$ $2 - 2$		1093
	470	269.459	50.7776 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^o$	$2 - 2$ $2 - 2$		1093
	140	269.547	50.3310 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^2D^o$	$2 - 2$ $2 - 2$		1093
	520	269.661	41.9209 - 412.7511	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$11 - 11$ $2 - 2$		1093
	680	269.740	42.0232 - 412.7511	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$2 - 2$ $2 - 2$		1093
	680	269.828	45.8842 - 416.4930	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4D^o$	$2 - 2$ $2 - 2$		1093
	350	269.874	50.7776 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^2D^o$	$2 - 2$ $2 - 2$		1093
	90	269.903	50.3310 - 420.8357	$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4F^o$	$2 - 2$ $2 - 2$		1093
	10	269.925	64.1524 - 434.6260	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4F^o$	$5 - 5$ $2 - 2$		1093
	510	270.013	46.1044 - 416.4590	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^o$	$3 - 3$ $2 - 2$		1093
	50	270.035	129.9516 - 500.2752	$3d^5 - 3d^4(b^1D)4p$	$a^2P - ^2P^o$	$3 - 3$ $2 - 2$		1093
	220	270.090	130.0259 - 500.2752	$3d^5 - 3d^4(b^1D)4p$	$a^2P - ^2P^o$	$3 - 3$ $2 - 2$		1093
	150	270.118	141.0068 - 511.2174	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2D^o$	$3 - 3$ $2 - 2$		1093
	310	270.134	96.4612 - 466.6491	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^2F^o$	$3 - 2$ $2 - 2$		1093
	480	270.156	74.6277 - 444.7842	$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2D^o$	$2 - 2$ $2 - 2$		1093
	390	270.172	46.3248 - 416.4590	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4P^o$	$1 - 1$ $2 - 2$		1093
	660	270.226	42.0351 - 412.0956	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$2 - 2$ $2 - 2$		1093
	600	270.287	50.3310 - 420.3089	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$2 - 2$ $2 - 2$		1093
	290	270.312	50.7776 - 420.7223	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4S^o$	$2 - 2$ $2 - 2$		1093
	260	270.401	65.1735 - 434.9970	$3d^5 - 3d^4(a^1G)4p$	$a^2D - ^2F^o$	$2 - 2$ $2 - 2$		1093
	210	270.454	50.3310 - 420.0800	$3d^5 - 3d^4(a^3H)4p$	$a^4D - ^4G^o$	$2 - 2$ $2 - 2$		1093
	640	270.515	42.0036 - 411.6694	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$2 - 2$ $2 - 2$		1093
	270	270.538	42.0351 - 411.6694	$3d^5 - 3d^4(a^3H)4p$	$a^4G - ^4H^o$	$2 - 2$ $2 - 2$		1093
	480	270.585	96.5665 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^2F^o$	$2 - 2$ $2 - 2$		1093
	500	270.614	50.7776 - 420.3089	$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^o$	$2 - 2$ $2 - 2$		1093
	360	270.635	45.8842 - 415.3820	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4G^o$	$2 - 2$ $2 - 2$		1093
	280	270.658	68.4449 - 437.9197	$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2G^o$	$5 - 2$ $2 - 2$		1093
	290	270.736	64.1524 - 433.5173	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2G^o$	$5 - 2$ $2 - 2$		1093
	210	270.771	64.1524 - 433.4625	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4P^o$	$2 - 2$ $2 - 2$		1093
	510	270.803	46.1044 - 415.3820	$3d^5 - 3d^4(a^3F)4p$	$a^4P - ^4G^o$	$2 - 2$ $2 - 2$		1093
	520	270.811	45.8842 - 415.1445	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$2 - 2$ $2 - 2$		1093
	320	270.941	96.4612 - 465.5527	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2D^o$	$2 - 2$ $2 - 2$		1093
	640	270.971	46.1044 - 415.1445	$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^o$	$3 - 2$ $2 - 2$		1093
	460	271.014	96.5665 - 465.5527	$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^2D^o$	$2 - 2$ $2 - 2$		1093
	340	271.135	129.9516 - 498.7730	$3d^5 - 3d^4(b^1D)4p$	$a^2P - ^2P^o$	$2 - 2$ $2 - 2$		1093
	450	271.179	65.1735 - 433.9369	$3d^5 - 3d^4(a^1S)4p$	$a^2D - ^2P^o$	$3 - 1$ $2 - 2$		1093
	430	271.262	64.1524 - 432.8001	$3d^5 - 3d^4(a^1G)4p$	$a^2D - ^2F^o$	$2 - 2$ $2 - 2$		1093
	460	271.383	107.8483 - 476.3321	$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2H^o$	$2 - 2$ $2 - 2$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
330	271.410	107.8870 - 476.3321		$3d^5 - 3d^4(b^1G)4p$	$b^2G - ^2H^{\circ}$	7 2 2 2 2 2 2 2		1093
90	271.463	67.0851 - 435.4594		$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
310	271.525	61.1960 - 429.4863		$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4G^{\circ}$	1 1 1 1 1 1 1 1		1093
210	271.562	96.5665 - 464.8078		$3d^5 - 3d^4(b^3F)4p$	$b^2D - ^4G^{\circ}$	1 1 1 1 1 1 1 1		1093
140	271.689	50.6435 - 418.7134		$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^{\circ}$	1 1 1 1 1 1 1 1		1093
610	271.733	72.9088 - 440.9179		$3d^5 - 3d^4(a^1D)4p$	$a^2H - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
320	271.788	50.7776 - 418.7134		$3d^5 - 3d^4(a^3P)4p$	$a^4D - ^4P^{\circ}$	1 1 1 1 1 1 1 1		1093
40	271.849	50.6435 - 418.4908		$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
500	271.953	50.7805 - 418.4908		$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
680	271.990	45.8842 - 413.5531		$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
610	272.146	46.1044 - 413.5531		$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
680	272.311	46.3248 - 413.5531		$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
280	272.361	73.7566 - 440.9179		$3d^5 - 3d^4(a^1D)4p$	$a^2H - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
310	272.384	72.9088 - 440.0392		$3d^5 - 3d^4(a^1D)4p$	$a^2H - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
550	272.548	68.5512 - 435.4594		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
580	272.587	61.1960 - 428.0515		$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
280	272.629	61.1960 - 427.9956		$3d^5 - 3d^4(a^3F)4p$	$a^2I - ^2G^{\circ}$	1 1 1 1 1 1 1 1		1093
120	272.648	74.6277 - 441.4012		$3d^5 - 3d^4(a^3D)4p$	$a^2G - ^2D^{\circ}$	1 1 1 1 1 1 1 1		1093
120	272.678	96.5665 - 463.3015		$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^4P^{\circ}$	1 1 1 1 1 1 1 1		1093
200	272.726	79.3914 - 446.0612		$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2F^{\circ}$	1 1 1 1 1 1 1 1		1093
600	272.811	68.4449 - 434.9970		$3d^5 - 3d^4(a^1G)4p$	$a^2F - ^2F^{\circ}$	1 1 1 1 1 1 1 1		1093
490	272.887	79.6083 - 446.0612		$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2F^{\circ}$	1 1 1 1 1 1 1 1		1093
410	272.901	61.2795 - 427.7027		$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
190	272.942	140.9222 - 507.3004		$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2F^{\circ}$	1 1 1 1 1 1 1 1		1093
620	272.992	68.8017 - 435.1162		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
720	273.013	67.0851 - 433.3712		$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2G^{\circ}$	1 1 1 1 1 1 1 1		1093
520	273.089	68.4449 - 434.6260		$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
310	273.117	46.1044 - 412.2482		$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
390	273.281	46.3248 - 412.2482		$3d^5 - 3d^4(a^3P)4p$	$a^4P - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
20	273.315	96.5665 - 462.4431		$3d^5 - 3d^4(b^3P)4p$	$b^2D - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
460	273.358	68.8017 - 434.6260		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
410	273.394	75.4417 - 441.2161		$3d^5 - 3d^4(a^3D)4p$	$a^2G - ^2F^{\circ}$	1 1 1 1 1 1 1 1		1093
680	273.436	50.7776 - 416.4930		$3d^5 - 3d^4(a^3F)4p$	$a^4D - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
400	273.465	69.4470 - 435.1162		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
550	273.490	107.8870 - 473.5319		$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2G^{\circ}$	1 1 1 1 1 1 1 1		1093
610	273.560	69.4470 - 434.9970		$3d^5 - 3d^4(a^1G)4p$	$a^4F - ^2F^{\circ}$	1 1 1 1 1 1 1 1		1093
540	273.616	75.4417 - 440.9179		$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
210	273.636	69.1735 - 434.6260		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
160	273.677	79.3914 - 444.7842		$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^{\circ}$	1 1 1 1 1 1 1 1		1093
650	273.841	79.6083 - 444.7842		$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^{\circ}$	1 1 1 1 1 1 1 1		1093
560	273.893	86.5321 - 451.6420		$3d^5 - 3d^4(a^1D)4p$	$a^2S - ^2P^{\circ}$	1 1 1 1 1 1 1 1		1093
580	273.904	86.5321 - 451.6229		$3d^5 - 3d^4(a^1D)4p$	$a^2S - ^2P^{\circ}$	1 1 1 1 1 1 1 1		1093
630	273.965	72.9088 - 437.9197		$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2G^{\circ}$	1 1 1 1 1 1 1 1		1093
660	274.062	73.7566 - 438.6394		$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2G^{\circ}$	1 1 1 1 1 1 1 1		1093
610	274.077	79.3914 - 444.2522		$3d^5 - 3d^4(a^1D)4p$	$b^2F - ^2D^{\circ}$	1 1 1 1 1 1 1 1		1093
170	274.103	67.0851 - 431.9126		$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
520	274.156	69.4470 - 434.2009		$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	1 1 1 1 1 1 1 1		1093
590	274.174	107.8483 - 472.5795		$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2G^{\circ}$	1 1 1 1 1 1 1 1		1093
50	274.236	107.8483 - 472.4973		$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^4D^{\circ}$	1 1 1 1 1 1 1 1		1093
390	274.276	75.4417 - 440.0392		$3d^5 - 3d^4(a^1D)4p$	$a^2G - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
160	274.295	68.8017 - 433.3712		$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2G^{\circ}$	1 1 1 1 1 1 1 1		1093
400	274.444	61.1960 - 425.5676		$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
650	274.508	61.2795 - 425.5676		$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2H^{\circ}$	1 1 1 1 1 1 1 1		1093
120	274.618	141.0068 - 505.1505		$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2F^{\circ}$	1 1 1 1 1 1 1 1		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	260	274.676	64.1524 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	150	274.726	68.8017 - 432.8001	$3d^5 - 3d^4(a^1G)4p$	$a^4F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	140	274.838	68.4449 - 432.2957	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	170	275.108	68.8017 - 432.2957	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	190	275.163	64.1524 - 427.5750	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	600	275.210	68.5512 - 431.9126	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	620	275.221	61.1960 - 424.5370	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	570	275.260	74.6277 - 437.9197	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	520	275.311	79.3914 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	620	275.332	64.1524 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	580	275.400	68.8017 - 431.9126	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	660	275.417	61.2795 - 424.3637	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	510	275.522	64.1524 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	160	275.597	69.4470 - 432.2957	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	530	275.810	61.1960 - 423.7633	$3d^5 - 3d^4(a^3G)4p$	$a^2I - ^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	270	275.838	68.4449 - 430.9719	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	340	275.879	75.4417 - 437.9197	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	280	275.941	79.3914 - 441.7857	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	70	276.005	96.4612 - 458.7722	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	340	276.077	68.8017 - 431.0203	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	430	276.114	65.1735 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	660	276.342	61.1960 - 423.0652	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	510	276.402	79.6083 - 441.4012	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	280	276.452	69.1735 - 430.8988	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	250	276.542	79.6083 - 441.2161	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	490	276.587	64.1524 - 425.7031	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	650	276.639	68.5512 - 430.0333	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	710	276.672	61.2795 - 422.7118	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2I^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	550	276.694	73.7566 - 435.1654	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2K^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	280	276.730	61.2795 - 422.6424	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^2I^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	510	276.812	73.7566 - 435.0115	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	480	277.033	67.0851 - 428.0515	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2H^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	330	277.058	68.5512 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	240	277.074	67.0851 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	600	277.250	68.8017 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	630	277.373	65.1735 - 425.7031	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	430	277.421	72.9088 - 433.3712	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
	600	277.457	73.7566 - 434.1673	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	590	277.579	67.0851 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	80	277.623	64.1524 - 424.3461	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	410	277.715	64.1524 - 424.2354	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	550	277.735	68.8017 - 428.8665	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	630	277.765	67.0851 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	140	277.862	72.9088 - 432.8001	$3d^5 - 3d^4(a^1G)4p$	$a^2H - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	210	277.958	68.4449 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	280	278.032	68.5512 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	410	278.075	73.7566 - 433.3712	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	540	278.118	75.4417 - 435.0115	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
	480	278.168	64.1524 - 423.6458	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	460	278.209	68.5512 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	550	278.226	69.4470 - 428.8665	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	600	278.301	69.1735 - 428.4965	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	230	278.341	141.0068 - 500.2752	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	530	278.401	68.8017 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	640	278.435	68.5512 - 427.7027	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2H^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	590	278.448	68.4449 - 427.5750	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	290	278.511	69.4470 - 428.4965	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	320	278.526	79.6083 - 438.6394	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	560	278.636	68.4449 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	430	278.660	73.7566 - 432.6166	$3d^5 - 3d^4(a^1I)4p$	$a^2H - ^2I^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	570	278.735	107.8870 - 466.6491	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	500	278.764	75.4417 - 434.1673	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2H^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	180	278.829	68.4449 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	420	278.915	79.3914 - 437.9197	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	330	278.962	65.1735 - 423.6468	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	520	279.106	107.8483 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	470	279.201	74.6277 - 432.8001	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	350	279.270	75.4417 - 433.5173	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	450	279.385	75.4417 - 433.3712	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	310	279.410	69.4470 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	320	279.445	140.9222 - 498.7730	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2P^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	260	279.514	141.0068 - 498.7730	$3d^5 - 3d^4(b^1D)4p$	$c^2D - ^2P^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	490	279.545	65.1735 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^2D - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	580	279.605	69.4470 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	240	279.728	75.4417 - 432.9320	$3d^5 - 3d^4(a^1I)4p$	$a^2G - ^2I^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	320	279.756	64.1524 - 421.6072	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	420	279.786	96.5665 - 453.9830	$3d^5 - 3d^4(a^1F)4p$	$b^2D - ^2G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	310	279.830	75.4417 - 432.8001	$3d^5 - 3d^4(a^1G)4p$	$a^2G - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	560	279.908	68.4449 - 425.7031	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	560	279.976	64.1524 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	370	280.014	72.9088 - 430.0333	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	510	280.142	107.8483 - 464.8078	$3d^5 - 3d^4(b^3F)4p$	$b^2G - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	490	280.330	65.1735 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	620	280.449	67.0851 - 423.6458	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	340	280.480	69.1735 - 425.7031	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	210	280.556	65.1735 - 421.6072	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	110	280.627	61.1960 - 417.5384	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	500	280.672	45.8842 - 402.1713	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	390	280.696	61.2795 - 417.5384	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	410	280.786	65.1735 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	60	280.829	86.5321 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$a^2S - ^2D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	420	280.931	72.9088 - 428.8665	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	270	280.979	68.4449 - 424.3461	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	490	281.026	45.8842 - 401.7209	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	340	281.077	68.4449 - 424.2185	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^4F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	480	281.111	73.7566 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	230	281.141	64.1524 - 419.8447	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	470	281.204	46.1044 - 401.7209	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	350	281.257	68.8017 - 424.3461	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	390	281.380	79.6083 - 434.9970	$3d^5 - 3d^4(a^1G)4p$	$b^2F - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	630	281.442	72.9088 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	620	281.504	61.1960 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$a^2I - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	640	281.515	68.5512 - 423.7633	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	530	281.548	46.1044 - 401.2809	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4D^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	630	281.620	72.9088 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	530	281.644	96.5665 - 451.6229	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2P^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	370	281.722	68.8017 - 423.7633	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093
	410	281.802	74.6277 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^\circ$	$1^1_1, 1^1_2, 1^1_3, 1^1_4, 1^1_5, 1^1_6, 1^1_7, 1^1_8$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	330	281.843	67.0851 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	370	281.857	72.9088 - 427.7027	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	610	281.955	72.9088 - 427.5750	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^2G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	480	281.975	46.3248 - 400.9621	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	560	282.015	75.4417 - 430.0333	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	320	282.038	64.1524 - 418.7134	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^4P^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	210	282.055	69.1735 - 423.7105	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^4F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	150	282.075	68.5512 - 423.0652	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	120	282.118	68.4449 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^2F - ^2F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	660	282.250	73.7566 - 428.0515	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	400	282.295	67.0851 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	350	282.327	69.4470 - 423.6458	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	280	282.362	86.5321 - 440.6893	$3d^5 - 3d^4(a^3D)4p$	$a^2S - ^2P^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	530	282.385	79.3914 - 433.5173	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	330	282.410	68.8017 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	100	282.451	75.4417 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	220	282.492	68.4449 - 422.4372	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	570	282.529	73.7566 - 427.7027	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	370	282.594	68.4449 - 422.3066	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	640	282.676	68.5512 - 422.3066	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	540	282.833	64.1524 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$a^2D - ^2G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	490	282.853	65.1735 - 418.7134	$3d^5 - 3d^4(a^3P)4p$	$a^2D - ^2P^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	420	282.924	69.4470 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^4F - ^2F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	390	282.946	74.6277 - 428.0515	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	350	282.990	74.6277 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	250	283.032	65.1735 - 418.4908	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	160	283.071	69.1735 - 422.4372	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	160	283.107	67.0851 - 420.3089	$3d^5 - 3d^4(a^3P)4p$	$a^2F - ^4P^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	400	283.131	79.6083 - 432.8001	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	390	283.213	68.8017 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	520	283.327	74.6277 - 427.5750	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	190	283.391	68.4449 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^2D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	570	283.463	75.4417 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	540	283.515	74.6277 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$a^2G - ^2D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	520	283.599	75.4417 - 428.0515	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	70	283.645	75.4417 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	120	283.670	68.8017 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	510	283.713	74.6277 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^2F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	390	283.732	69.4470 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	260	283.816	64.1524 - 416.4930	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	580	283.862	68.5512 - 420.8357	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	530	283.878	75.4417 - 427.7027	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	730	283.977	41.9209 - 394.0610	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	410	284.033	68.5512 - 420.6234	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	460	284.059	42.0232 - 394.0610	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	130	284.192	69.4470 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^2D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	680	284.219	50.3310 - 402.1713	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	620	284.243	73.7566 - 425.5676	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	480	284.292	68.8017 - 420.5532	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	450	284.392	72.9088 - 424.5370	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	220	284.458	61.1960 - 412.7511	$3d^5 - 3d^4(a^3H)4p$	$a^2I - ^4H^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	460	284.507	64.1524 - 415.6408	$3d^5 - 3d^4(a^3F)4p$	$a^2D - ^4G^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	730	284.539	42.0232 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093
	650	284.580	50.7776 - 402.1713	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\begin{matrix} 7 & 5 \\ 2 & 2 \\ 2 & 2 \\ 2 & 2 \end{matrix}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	630	284.671	68.8017 - 420.0800	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	560	284.845	42.0036 - 393.0720	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	710	284.868	42.0351 - 393.0720	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	660	284.946	50.7776 - 401.7209	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	710	285.057	42.0036 - 392.8081	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	230	285.112	72.9088 - 423.6458	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
	510	285.195	50.6435 - 401.2809	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		1093
	490	285.220	73.7566 - 424.3637	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	540	285.304	50.7776 - 401.2809	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1093
	290	285.375	69.4470 - 419.8633	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	430	285.456	50.6435 - 400.9621	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	440	285.471	96.5665 - 446.8638	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		1093
	280	285.537	69.1735 - 419.3905	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	430	285.566	50.7805 - 400.9621	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	370	285.587	72.9088 - 423.0652	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	170	285.611	75.4417 - 425.5676	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	550	285.710	73.7566 - 423.7633	$3d^5 - 3d^4(a^3G)4p$	$a^2H - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	280	285.789	74.6277 - 424.5370	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	610	285.932	72.9088 - 422.6424	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	170	286.040	96.4612 - 446.0612	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	360	286.127	96.5665 - 446.0612	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	210	286.200	67.0851 - 416.4930	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	150	286.257	67.0851 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$a^2F - ^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	370	286.310	68.4449 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		1093
	310	286.421	74.6277 - 423.7633	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	380	286.448	75.4417 - 424.5370	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	420	286.547	68.5512 - 417.5384	$3d^5 - 3d^4(a^3H)4p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	630	286.569	73.7566 - 422.7118	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	460	286.597	75.4417 - 424.3637	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	160	286.624	73.7566 - 422.6424	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	150	286.670	79.3914 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		1093
	180	286.768	74.6277 - 423.3414	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^4H^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	360	286.806	67.0851 - 415.7543	$3d^5 - 3d^4(a^3H)4p$	$a^2F - ^4I^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	610	286.851	79.6083 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	610	286.977	86.5321 - 434.9958	$3d^5 - 3d^4(a^1D)4p$	$a^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	610	286.991	74.6277 - 423.0652	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	90	287.035	79.6083 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		1093
	260	287.089	96.4612 - 444.7842	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	430	287.134	74.6277 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	530	287.176	96.5665 - 444.7842	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	340	287.203	79.3914 - 427.5750	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		1093
	230	287.320	107.8483 - 455.8876	$3d^5 - 3d^4(a^3F)4p$	$b^2G - ^2G^\circ$	$\frac{10}{2} - \frac{10}{2}$		1093
	640	287.387	79.6083 - 427.5750	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	220	287.470	68.5512 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{10}{2}$		1093
	490	287.530	96.4612 - 444.2522	$3d^5 - 3d^4(a^1D)4p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	520	287.577	79.6083 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$b^2F - ^2D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	480	287.599	79.3914 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	480	287.668	68.8017 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^\circ$	$\frac{7}{2} - \frac{10}{2}$		1093
	280	287.701	45.8842 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		1093
	460	287.778	79.6083 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	370	287.848	86.5321 - 433.9369	$3d^5 - 3d^4(a^3S)4p$	$a^2S - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	150	287.965	74.6277 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	570	287.999	129.9516 - 477.1771	$3d^5 - 3d^4(a^3P)4p$	$a^2P - ^2S^\circ$	$\frac{2}{2} - \frac{1}{2}$		1093
	240	288.028	45.8842 - 393.0720	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
240	288.059		130.0259 - 477.1771	$3d^5 - 3d^4(a^3P)4p$	$a^2P - ^2S^o$	1-1 2-1 3-1 4-1 5-1		1093
500	288.222		72.9088 - 419.8633	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^4G^o$	1-1 2-1 3-1 4-1 5-1		1093
90	288.296		73.7566 - 420.6234	$3d^5 - 3d^4(a^3F)4p$	$a^2H - ^4G^o$	1-1 2-1 3-1 4-1 5-1		1093
150	288.437		46.1044 - 392.8081	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
110	288.613		46.3248 - 392.8081	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
400	288.757		79.3914 - 425.7031	$3d^5 - 3d^4(a^3P)4p$	$b^2F - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
400	288.854		69.4470 - 415.6408	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^o$	1-1 2-1 3-1 4-1 5-1		1093
240	288.885		96.4612 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
180	288.937		107.8870 - 453.9830	$3d^5 - 3d^4(a^1F)4p$	$b^2G - ^2G^o$	1-1 2-1 3-1 4-1 5-1		1093
300	288.971		96.5665 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
40	289.038		69.1735 - 415.1445	$3d^5 - 3d^4(a^3P)4p$	$a^4F - ^4D^o$	1-1 2-1 3-1 4-1 5-1		1093
70	289.077		69.4470 - 415.3820	$3d^5 - 3d^4(a^3F)4p$	$a^4F - ^4G^o$	1-1 2-1 3-1 4-1 5-1		1093
260	289.467		72.9088 - 418.3688	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2G^o$	1-1 2-1 3-1 4-1 5-1		1093
430	289.583		96.4612 - 441.7857	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2F^o$	1-1 2-1 3-1 4-1 5-1		1093
300	289.995		96.5665 - 441.4012	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
240	290.014		72.9088 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2G^o$	1-1 2-1 3-1 4-1 5-1		1093
350	290.149		96.5665 - 441.2161	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2F^o$	1-1 2-1 3-1 4-1 5-1		1093
160	290.181		73.7566 - 418.3688	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^2G^o$	1-1 2-1 3-1 4-1 5-1		1093
80	290.326		86.5321 - 430.9719	$3d^5 - 3d^4(a^3D)4p$	$a^2S - ^4D^o$	1-1 2-1 3-1 4-1 5-1		1093
150	290.388		86.5321 - 430.8988	$3d^5 - 3d^4(a^3D)4p$	$a^2S - ^4D^o$	1-1 2-1 3-1 4-1 5-1		1093
100	290.429		79.3914 - 423.7105	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
310	290.504		96.4612 - 440.6893	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^2P^o$	1-1 2-1 3-1 4-1 5-1		1093
340	290.666		79.6083 - 423.6458	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2F^o$	1-1 2-1 3-1 4-1 5-1		1093
220	290.687		107.8483 - 451.8594	$3d^5 - 3d^4(a^1F)4p$	$b^2G - ^2F^o$	1-1 2-1 3-1 4-1 5-1		1093
90	290.739		79.3914 - 423.3414	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^4H^o$	1-1 2-1 3-1 4-1 5-1		1093
590	290.802		45.8842 - 389.7604	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	1-1 2-1 3-1 4-1 5-1		1093
170	290.830		130.0259 - 473.8695	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2P^o$	1-1 2-1 3-1 4-1 5-1		1093
520	290.925		50.3310 - 394.0610	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
480	290.988		46.1044 - 389.7604	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^4P^o$	1-1 2-1 3-1 4-1 5-1		1093
270	291.035		96.5665 - 440.1686	$3d^5 - 3d^4(a^1S)4p$	$b^2D - ^2P^o$	1-1 2-1 3-1 4-1 5-1		1093
220	291.115		79.3914 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2F^o$	1-1 2-1 3-1 4-1 5-1		1093
170	291.201		73.7566 - 417.1641	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^4I^o$	1-1 2-1 3-1 4-1 5-1		1093
560	291.264		45.8842 - 389.2140	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	1-1 2-1 3-1 4-1 5-1		1093
60	291.297		79.6083 - 422.8978	$3d^5 - 3d^4(a^3G)4p$	$b^2F - ^2F^o$	1-1 2-1 3-1 4-1 5-1		1093
370	291.427		50.3310 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
220	291.468		74.6277 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2G^o$	1-1 2-1 3-1 4-1 5-1		1093
150	291.609		75.4417 - 418.3688	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^2G^o$	1-1 2-1 3-1 4-1 5-1		1093
480	291.641		46.3248 - 389.2140	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	1-1 2-1 3-1 4-1 5-1		1093
460	291.703		46.1044 - 388.9186	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	1-1 2-1 3-1 4-1 5-1		1093
420	291.806		50.7776 - 393.4682	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
250	291.891		46.3248 - 388.9186	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	1-1 2-1 3-1 4-1 5-1		1093
220	291.918		140.9222 - 483.4809	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
440	291.990		141.0068 - 483.4809	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
450	292.146		50.7805 - 393.0720	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
30	292.208		79.3914 - 421.6072	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
240	292.256		50.6435 - 392.8081	$3d^5 - 3d^4(a^5D)4p$	$a^4D - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093
560	292.294		140.9222 - 483.0434	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
440	292.367		141.0068 - 483.0434	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
280	292.402		73.7566 - 415.7543	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^4I^o$	1-1 2-1 3-1 4-1 5-1		1093
510	292.427		45.8842 - 387.8499	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	1-1 2-1 3-1 4-1 5-1		1093
140	292.456		79.3914 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^2D^o$	1-1 2-1 3-1 4-1 5-1		1093
360	292.616		46.1044 - 387.8499	$3d^5 - 3d^4(a^5D)4p$	$a^4P - ^6D^o$	1-1 2-1 3-1 4-1 5-1		1093
80	292.784		42.0036 - 383.5578	$3d^5 - 3d^4(a^5D)4p$	$a^4G - ^6P^o$	1-1 2-1 3-1 4-1 5-1		1093
40	293.059		79.6083 - 420.8357	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4F^o$	1-1 2-1 3-1 4-1 5-1		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	70	293.248	74.6277 - 415.6408	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	140	293.467	42.0036 - 382.7589	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	190	293.482	42.0232 - 382.7589	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	110	293.517	79.6083 - 420.3089	$3d^5 - 3d^4(a^3P)4p$	$b^2F - ^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	200	293.849	75.4417 - 415.7543	$3d^5 - 3d^4(a^3H)4p$	$a^2G - ^4I^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	570	293.883	45.8842 - 386.1573	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	60	293.944	75.4417 - 415.6408	$3d^5 - 3d^4(a^3F)4p$	$a^2G - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
	140	294.074	46.1044 - 386.1573	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	290	294.121	79.3914 - 419.3905	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	110	294.224	73.7566 - 413.6316	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^4H^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	480	294.264	42.0036 - 381.8328	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	330	294.290	42.0351 - 381.8328	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	350	294.362	141.0068 - 480.7242	$3d^5 - 3d^4(b^3G)4p$	$c^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	190	294.507	50.3310 - 389.8832	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	640	294.613	50.3310 - 389.7604	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	490	294.754	140.9222 - 480.1893	$3d^5 - 3d^4(b^3G)4p$	$c^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	130	294.819	72.9088 - 412.0956	$3d^5 - 3d^4(a^3H)4p$	$a^2H - ^4H^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	180	294.850	42.0036 - 381.1638	$3d^5 - 3d^4(a^3D)4p$	$a^4G - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	600	295.001	50.7776 - 389.7604	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	570	295.194	79.6083 - 418.3688	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	580	295.298	46.1044 - 384.7474	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	270	295.362	50.6435 - 389.2140	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	150	295.389	96.4612 - 434.9970	$3d^5 - 3d^4(a^3G)4p$	$b^2D - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	590	295.480	50.7805 - 389.2140	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	520	295.573	79.3914 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	590	295.622	50.6435 - 388.9186	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	530	296.009	96.4612 - 434.2816	$3d^5 - 3d^4(a^3D)4p$	$b^2D - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	210	296.145	45.8842 - 383.5578	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	100	296.238	64.1524 - 401.7209	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	570	296.279	50.3310 - 387.8499	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	110	296.310	96.4612 - 433.9369	$3d^5 - 3d^4(a^3S)4p$	$b^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	70	296.531	46.3248 - 383.5578	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	270	296.630	86.5321 - 423.6468	$3d^5 - 3d^4(a^3P)4p$	$a^2S - ^2P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	460	296.672	50.7776 - 387.8499	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	60	296.831	79.6083 - 416.4930	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	50	296.846	45.8842 - 382.7589	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	70	296.901	79.6083 - 416.4225	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	150	297.001	129.9516 - 466.6491	$3d^5 - 3d^4(b^3F)4p$	$a^2P - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	250	297.400	79.3914 - 415.6408	$3d^5 - 3d^4(a^3F)4p$	$b^2F - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	360	297.490	79.6083 - 415.7543	$3d^5 - 3d^4(a^3H)4p$	$b^2F - ^4I^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	170	297.526	65.1735 - 401.2809	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	180	297.544	129.9516 - 466.0342	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	420	297.612	130.0259 - 466.0342	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	120	297.659	45.8842 - 381.8328	$3d^5 - 3d^4(a^3D)4p$	$a^4P - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	220	297.806	65.1735 - 400.9621	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	370	297.973	129.9516 - 465.5527	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^2D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	170	298.049	50.6435 - 386.1573	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	520	298.170	50.7776 - 386.1573	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	210	298.832	67.0851 - 401.7209	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	410	299.305	50.6435 - 384.7474	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	350	299.341	129.9516 - 464.0278	$3d^5 - 3d^4(b^3F)4p$	$a^2P - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	350	299.417						1093
	580	299.495	107.8870 - 441.7857	$3d^5 - 3d^4(a^3D)4p$	$b^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	700	299.742	68.5512 - 402.1713	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
630	299.967		107.8483 - 441.2161	$3d^5 - 3d^4(a^1D)4p$	$b^2G - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
300	299.996		107.8870 - 441.2161	$3d^5 - 3d^4(a^3D)4p$	$b^2G - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
520	300.053		68.4449 - 401.7209	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
490	300.272		107.8870 - 440.9179	$3d^5 - 3d^4(a^1I)4p$	$b^2G - ^2H^{\circ}$	$\frac{1}{2} - \frac{9}{2}$		1093
270	300.334		50.7776 - 383.7398	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
670	300.372		68.8017 - 401.7209	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
440	300.426		141.0068 - 473.8695	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
580	300.447		68.4449 - 401.2809	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
200	300.499		50.7776 - 383.5578	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6P^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
250	300.545		69.4470 - 402.1713	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
120	300.707		69.1735 - 401.7209	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
	300.89		0.0 - 332.3448	$3d^5 - 3d^4(a^3P)4s$	$ga^6S - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,1093
360	300.955		69.4470 - 401.7209	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
470	301.031		107.8483 - 440.0392	$3d^5 - 3d^4(a^1I)4p$	$b^2G - ^2H^{\circ}$	$\frac{1}{2} - \frac{11}{2}$		1093
450	301.107		69.1735 - 401.2809	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
90	301.174		96.4612 - 428.4965	$3d^5 - 3d^4(a^3G)4p$	$b^2D - ^4G^{\circ}$	$\frac{1}{2} - \frac{9}{2}$		1093
400	301.286		140.9222 - 472.8330	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
520	301.355		69.4470 - 401.2809	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
580	301.396		69.1735 - 400.9621	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
540	301.518		96.5665 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2F^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
20	301.739		130.0259 - 461.4378	$3d^5 - 3d^4(b^3P)4p$	$a^2P - ^4P^{\circ}$	$\frac{1}{2} - \frac{5}{2}$		1093
90	302.065		50.7805 - 381.8328	$3d^5 - 3d^4(a^3D)4p$	$a^4D - ^6F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
140	302.108		96.5665 - 427.5750	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2G^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
370	302.224		96.4612 - 427.3422	$3d^5 - 3d^4(a^3P)4p$	$b^2D - ^2D^{\circ}$	$\frac{1}{2} - \frac{5}{2}$		1093
370	302.306		107.8483 - 438.6394	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{9}{2}$		1093
230	302.448		96.4612 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2F^{\circ}$	$\frac{1}{2} - \frac{5}{2}$		1093
180	302.536		96.5665 - 427.0960	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2F^{\circ}$	$\frac{1}{2} - \frac{5}{2}$		1093
180	303.001		107.8870 - 437.9197	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{9}{2}$		1093
	303.003		0.0 - 330.0016	$3d^5 - 3d^4(a^3P)4s$	$ga^6S - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,1093
	304.47		0.0 - 328.4372	$3d^5 - 3d^4(a^3P)4s$	$ga^6S - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1093
170	305.220		65.1735 - 392.8081	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
750	305.658		107.8483 - 435.0115	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2H^{\circ}$	$\frac{1}{2} - \frac{11}{2}$		1093
240	306.056		75.4417 - 402.1713	$3d^5 - 3d^4(a^3D)4p$	$a^2G - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
110	306.388		67.0851 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
290	306.489		107.8870 - 434.1673	$3d^5 - 3d^4(a^1G)4p$	$b^2G - ^2H^{\circ}$	$\frac{1}{2} - \frac{9}{2}$		1093
570	307.097		107.8870 - 433.5173	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
710	307.207		68.5512 - 394.0610	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{9}{2}$		1093
90	307.383		96.5665 - 421.8940	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^4D^{\circ}$	$\frac{1}{2} - \frac{6}{2}$		1093
260	307.449		68.8017 - 394.0610	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		1093
420	307.492		140.9222 - 466.1337	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
90	307.592		140.9222 - 466.0342	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
160	307.613		107.8483 - 432.9320	$3d^5 - 3d^4(a^1I)4p$	$b^2G - ^2I^{\circ}$	$\frac{3}{2} - \frac{11}{2}$		1093
250	307.670		68.4449 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
370	307.773		68.5512 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
170	307.819		96.4612 - 421.3243	$3d^5 - 3d^4(a^3F)4p$	$b^2D - ^2D^{\circ}$	$\frac{1}{2} - \frac{5}{2}$		1093
580	308.009		68.8017 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
440	308.046		140.9222 - 465.5527	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
300	308.299		68.4449 - 392.8081	$3d^5 - 3d^4(a^3D)4p$	$a^2F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
280	308.385		68.8017 - 393.0720	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
180	308.623		69.4470 - 393.4682	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
370	308.755		140.9222 - 464.8078	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
520	308.993		69.4470 - 393.0720	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
110	309.252		69.4470 - 392.8081	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093
110	309.495		140.9222 - 464.0278	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
220	309.581		141.0068 - 464.0278	$3d^5 - 3d^4(b^3F)4p$	$c^2D - ^4G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
110	310.316		96.4612 - 418.7134	$3d^5 - 3d^4(a^3P)4p$	$b^2D - ^4P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
120	310.383		107.8483 - 430.0333	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^4G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
120	310.441		79.6083 - 401.7209	$3d^5 - 3d^4(a^3D)4p$	$b^2F - ^4D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
50	310.948		107.8870 - 429.4863	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^4G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
170	311.023		140.9222 - 462.4431	$3d^5 - 3d^4(b^3P)4p$	$c^2D - ^4D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
580	311.202		68.5512 - 389.8832	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^6D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
300	311.542		65.1735 - 386.1573	$3d^5 - 3d^4(a^3D)4p$	$a^2D - ^4P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
100	312.173		107.8870 - 428.2214	$3d^5 - 3d^4(a^3F)4p$	$b^2G - ^2F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
170	312.302		107.8483 - 428.0515	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2H^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
120	312.335		107.8870 - 428.0515	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2H^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
510	312.390		107.8870 - 427.9956	$3d^5 - 3d^4(a^3F)4p$	$b^2G - ^2G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
270	312.645		107.8483 - 427.7027	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2H^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
170	313.858		75.4417 - 394.0610	$3d^5 - 3d^4(a^3D)4p$	$a^2G - ^4F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
310	314.743		107.8483 - 425.5676	$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2H^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
350	315.944		107.8483 - 424.3637	$3d^5 - 3d^4(a^3G)4p$	$b^2G - ^2H^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
130	316.916		68.5512 - 384.0965	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^6P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
660	317.291		68.8017 - 383.9602	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^6F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
150	317.631		129.9516 - 444.7842	$3d^5 - 3d^4(a^1D)4p$	$a^2P - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
420	318.260		68.5512 - 382.7589	$3d^5 - 3d^4(a^3D)4p$	$a^4F - ^6F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
100	319.828		129.9516 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$a^2P - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
210	319.899		130.0259 - 442.6199	$3d^5 - 3d^4(a^3D)4p$	$a^2P - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
190	321.897		130.0259 - 440.6893	$3d^5 - 3d^4(a^3D)4p$	$a^2P - ^2P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
180	322.356		129.9516 - 440.1686	$3d^5 - 3d^4(a^1S)4p$	$a^2P - ^2P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
160	322.434		130.0259 - 440.1686	$3d^5 - 3d^4(a^1S)4p$	$a^2P - ^2P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
	322.60		0.0 - 309.9771	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^4D$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$	F,P	375,1093
170	322.753		107.8870 - 417.7181	$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^2G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
180	323.298		107.8483 - 417.1641	$3d^5 - 3d^4(a^3H)4p$	$b^2G - ^4I^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
	323.57		0.0 - 309.0549	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^4D$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$	F,P	375,1093
	324.33		0.0 - 308.3238	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^4D$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$	F,P	375,1093
450	331.570							1093
590	332.787							1093
	335.42		0.0 - 298.1305	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^6D$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$	F,P	375,1093
	336.30		0.0 - 297.3505	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^6D$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$	F,P	375,1093
	337.04		0.0 - 296.6967	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^6D$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$	F,P	375,1093
	337.61		0.0 - 296.1981	$3d^5 - 3d^4(a^3D)4s$	$ga^6S - ^6D$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$	F,P	375,1093
170	896.886		309.0549 - 420.5532	$3d^4(a^5D)4s - 3d^4(a^3F)4p$	$^4D - ^4F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
370	902.047		309.9771 - 420.8357	$3d^4(a^3D)4s - 3d^4(a^3F)4p$	$^4D - ^4F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
130	905.889		308.3238 - 418.7134	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$^4D - ^4P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
50	906.380		309.9771 - 420.3089	$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$^4D - ^4P^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
40	948.324		339.3358 - 444.7842	$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^2F - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
20	965.287		347.4452 - 451.0413	$3d^4(a^1G)4s - 3d^4(a^1F)4p$	$^2G - ^2F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
20	970.672		343.8426 - 446.8638	$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$^2G - ^2F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
50	979.761		339.3358 - 441.4012	$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^2F - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
20	981.539		339.3358 - 441.2161	$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^2F - ^2F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
390	994.120		382.8891 - 483.4809	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
360	996.349		382.6771 - 483.0434	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
280	1002.559		366.2898 - 466.0342	$3d^4(a^1F)4s - 3d^4(b^3P)4p$	$^2F - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
430	1004.309		332.3436 - 431.9126	$3d^4(a^3F)4s - 3d^4(a^1D)4p$	$^4F - ^4D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
580	1005.497		330.5805 - 430.0333	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
420	1006.593		330.1410 - 429.4863	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
320	1007.513		366.2998 - 465.5527	$3d^4(a^1F)4s - 3d^4(b^3P)4p$	$^2F - ^2D^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
20	1008.665		335.9760 - 435.1162	$3d^4(a^3G)4s - 3d^4(a^1D)4p$	$^4G - ^4F^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093
780	1008.944		329.7542 - 428.8665	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\begin{matrix} 3 \\ 2 \\ 1 \end{matrix} - \begin{matrix} 3 \\ 2 \\ 1 \end{matrix}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	560	1009.797	336.4304 - 435.4594	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	560	1009.992	329.4862 - 428.4965	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	20	1011.667	332.1754 - 431.0203	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^4F - ^4P^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	240	1011.978	335.3845 - 434.2009	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	410	1012.437	336.3449 - 435.1162	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	260	1013.680	335.9760 - 434.6260	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	60	1015.756	374.8439 - 473.2924	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1093
	20	1015.877	339.4824 - 437.9197	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	170	1021.804	343.0520 - 440.9179	$3d^4(a^3G)4s - 3d^4(a^3I)4p$	$^2G - ^2H^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	600	1021.923	330.1410 - 427.9956	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	140	1022.270	329.7542 - 427.5750	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	200	1023.645	332.3436 - 430.0333	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	630	1024.030	374.8439 - 472.4973	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1093
	130	1026.968	343.8426 - 441.2161	$3d^4(a^3G)4s - 3d^4(a^3D)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	560	1029.628	330.5805 - 427.7027	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	200	1030.722	337.9939 - 435.0115	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	500	1031.470	376.3437 - 473.2924	$3d^4(b^3P)4s - 3d^4(b^3F)4p$	$^4P - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1093
	770	1032.799	375.6730 - 472.4973	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		1093
	320	1032.908	332.0516 - 428.8665	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$		1093
	360	1036.166	337.0077 - 433.5173	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	50	1036.656	332.0318 - 428.4965	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$		1093
	120	1038.830	374.8439 - 471.1068	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	410	1039.537	343.8426 - 440.0392	$3d^4(a^3G)4s - 3d^4(a^3I)4p$	$^2G - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	260	1040.388	297.3505 - 393.4682	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	650	1042.418	298.1305 - 394.0610	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
	280	1042.493	337.0077 - 432.9320	$3d^4(a^3H)4s - 3d^4(a^3I)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	680	1043.057	330.5805 - 426.4519	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	20	1043.596	332.1754 - 427.9956	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	220	1047.928	330.1410 - 425.5676	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	590	1048.468	337.9939 - 433.3712	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	170	1048.664	332.3436 - 427.7027	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^2H^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
		1052.2	45.8842 - 140.9222	$3d^5 - 3d^5$	$a^4P - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1093
		1053.7	46.1044 - 141.0068	$3d^5 - 3d^5$	$a^4P - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1093
	290	1054.105	343.0520 - 437.9197	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
		1054.7	46.1044 - 140.9222	$3d^5 - 3d^5$	$a^4P - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1093
	270	1054.879	343.8426 - 438.6394	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
	510	1055.037	329.7542 - 424.5370	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
	250	1055.260	376.3437 - 471.1068	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{1}{2}$		1093
		1056.2	46.3248 - 141.0068	$3d^5 - 3d^5$	$a^4P - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1093
	20	1056.820	337.9939 - 432.6166	$3d^4(a^3H)4s - 3d^4(a^3I)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
		1057.1	46.3248 - 140.9222	$3d^5 - 3d^5$	$a^4P - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1093
	660	1061.319	330.1410 - 424.3637	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	310	1063.435	339.3358 - 433.3712	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2G^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	810	1063.811	328.4372 - 422.4372	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	20	1064.595	328.4372 - 422.3694	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	780	1065.478	329.4862 - 423.3414	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4H^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	20	1067.460	389.3625 - 483.0434	$3d^4(b^3G)4s - 3d^4(b^3F)4p$	$^2G - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	180	1068.132	330.1410 - 423.7633	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^4H - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	760	1068.350	336.4304 - 430.0333	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	410	1068.606	329.4862 - 423.0652	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	730	1068.796	296.1981 - 389.7604	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	20	1069.927	339.3358 - 432.8001	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	280	1070.238	307.8439 - 401.2809	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	350	1070.695	308.3238 - 401.7209	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
670	1071.450		295.8827 – 389.2140	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
310	1071.676		329.7542 – 423.0652	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
780	1073.638		336.3449 – 429.4863	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
670	1073.924		309.0549 – 402.1713	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
700	1073.975		335.3845 – 428.4965	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
720	1074.535		296.6967 – 389.7604	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
350	1074.856		295.8827 – 388.9186	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
790	1075.781		308.3238 – 401.2809	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
370	1076.344		358.7166 – 451.6229	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
780	1076.542		335.9760 – 428.8665	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
120	1077.412		358.8279 – 451.6420	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
70	1077.635		358.8279 – 451.6229	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
620	1078.035		347.2785 – 440.0392	$3d^4(a^1G)4s - 3d^4(a^1I)4p$	$^2G - ^2H^\circ$	$\frac{0}{2} - \frac{11}{2}$		1093
680	1078.509		296.1981 – 388.9186	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
800	1079.144		309.0549 – 401.7209	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
690	1079.472		308.3238 – 400.9621	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
180	1080.255		330.1410 – 422.7118	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
820	1080.537		296.6967 – 389.2434	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
810	1080.694		297.3505 – 389.8832	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
750	1080.875		296.6967 – 389.2140	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
650	1081.320		366.2898 – 458.7722	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
680	1082.141		297.3505 – 389.7604	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
430	1083.487		332.0516 – 424.3461	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
570	1084.296		309.0549 – 401.2809	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
820	1084.672		309.9771 – 402.1713	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
590	1084.946		332.1754 – 424.3461	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
790	1085.226		347.8924 – 440.0392	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
130	1086.069		347.9639 – 440.0392	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
540	1086.489		337.9939 – 430.0333	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
40	1086.727		335.9760 – 427.9956	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
410	1086.931		332.3436 – 424.3461	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{0}{2} - \frac{7}{2}$		1093
190	1087.457		335.3845 – 427.3422	$3d^4(a^3G)4s - 3d^4(a^3P)4p$	$^4G - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
810	1088.223		297.3505 – 389.2434	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
830	1089.885		298.1305 – 389.8832	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
550	1089.992		309.9771 – 401.7209	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
20	1090.445		336.3449 – 428.0515	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
810	1091.097		296.1981 – 387.8499	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
200	1091.509		332.0318 – 423.6468	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
20	1091.651		330.0016 – 421.6072	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
70	1091.745		335.9760 – 427.5750	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
350	1091.851		332.1754 – 423.7633	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
810	1093.380		343.9996 – 435.4594	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
190	1093.853		332.3436 – 423.7633	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{0}{2} - \frac{0}{2}$		1093
780	1094.560		347.2785 – 438.6394	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^\circ$	$\frac{0}{2} - \frac{0}{2}$		1093
380	1095.092		351.3040 – 442.6199	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
510	1095.271		332.3436 – 423.6458	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
700	1095.631		336.4304 – 427.7027	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
600	1096.875		343.8426 – 435.0115	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
630	1097.055		296.6967 – 387.8499	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
660	1097.539		298.1305 – 389.2434	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
780	1097.931		375.6730 – 466.7543	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
790	1099.960		344.2035 – 435.1162	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
300	1100.235		389.2996 – 480.1893	$3d^4(b^3G)4s - 3d^4(b^3G)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
230	1100.991		389.3625 – 480.1893	$3d^4(b^3G)4s - 3d^4(b^3G)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	1101.585	375.8708 - 466.6491	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	470	1102.262	375.9271 - 466.6491	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
		1102.8	50.3310 - 141.0068	$3d^5 - 3d^5$	$a^4D - c^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,1093
	650	1103.249	347.2785 - 437.9197	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
		1103.8	50.3310 - 140.9222	$3d^5 - 3d^5$	$a^4D - c^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,1093
		1103.9	50.3310 - 140.9222	$3d^5 - 3d^5$	$a^4D - c^2D$	$\frac{7}{2} - \frac{5}{2}$	F,P	375,1093
	140	1104.150	337.0077 - 427.5750	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
	430	1104.773	366.2998 - 456.8156	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	170	1104.977	297.3505 - 387.8499	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	460	1105.193	351.3040 - 441.7857	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1093
	490	1105.284	347.4452 - 437.9197	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	770	1105.393	343.0520 - 433.5173	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	440	1106.366	332.0516 - 422.4372	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	230	1106.479	329.4862 - 419.8633	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	540	1106.948	332.0318 - 422.3694	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
	330	1107.102	329.7542 - 420.0800	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
	200	1107.319	330.0016 - 420.3089	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
		1108.3	50.7805 - 141.0068	$3d^5 - 3d^5$	$a^4D - c^2D$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1093
		1108.3	50.7776 - 141.0068	$3d^5 - 3d^5$	$a^4D - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1093
	710	1108.863	351.0330 - 441.2161	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
	730	1108.909	344.4474 - 434.6260	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
		1109.3	50.7776 - 140.9222	$3d^5 - 3d^5$	$a^4D - c^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,1093
	880	1109.410	375.9271 - 466.0652	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	820	1109.760	329.7542 - 419.8633	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	900	1110.503						1093
	870	1110.842	336.4304 - 426.4519	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	810	1111.557	332.3448 - 422.3066	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	790	1111.854	330.1410 - 420.0800	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	780	1112.305	329.4862 - 419.3905	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	540	1114.236	389.2996 - 479.0463	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
	580	1114.590	332.1754 - 421.8940	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	580	1115.017	389.3625 - 479.0463	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	840	1116.192	344.6100 - 434.2009	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^4F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		1093
	790	1116.235	366.2998 - 455.8876	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	510	1116.368	332.0318 - 421.6072	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
	810	1116.962	343.8426 - 433.3712	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
	20	1117.445	344.4474 - 433.9369	$3d^4(a^3D)4s - 3d^4(a^3S)4p$	$^4D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
	170	1117.812	296.6967 - 386.1573	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	330	1118.783	339.4824 - 428.8665	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4G^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	700	1119.867	336.4048 - 425.7031	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		1093
	250	1120.165	332.0516 - 421.3243	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	210	1120.334	344.2035 - 433.4625	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	780	1120.801	336.3449 - 425.5676	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2H^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		1093
	620	1121.881	351.0330 - 440.1686	$3d^4(a^3D)4s - 3d^4(a^3S)4p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
	340	1122.689	351.0962 - 440.1686	$3d^4(a^3S)4s - 3d^4(a^3S)4p$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		1093
	660	1123.412	344.4474 - 433.4625	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		1093
	890	1124.195	330.5805 - 419.5335	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		1093
	660	1125.050	339.3358 - 428.2214	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	370	1125.305	295.8827 - 384.7474	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		1093
	520	1125.395	375.9498 - 464.8078	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4G^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	220	1125.481	335.3845 - 424.2354	$3d^4(a^3G)4s - 3d^4(a^3P)4p$	$^4G - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		1093
	230	1126.917	339.4824 - 428.2214	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	750	1127.206	339.3358 - 428.0515	$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^2H^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093
	80	1127.766	332.0516 - 420.7223	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4S^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	880	1127.935	347.8924 - 436.5503	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2K^\circ$	$\frac{13}{2} - \frac{15}{2}$		1093
	840	1129.173	335.9760 - 424.5370	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{2}{2} - \frac{10}{2}$		1093
	310	1129.325	296.1981 - 384.7474	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	310	1129.917	332.0516 - 420.5532	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{2}{2}$		1093
	820	1130.049	332.3436 - 420.8357	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{10}{2} - \frac{10}{2}$		1093
	840	1130.477	337.9939 - 426.4519	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	880	1131.064	330.1410 - 418.5536	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	730	1131.508	332.3448 - 420.7223	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4S^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	730	1131.508	332.1754 - 420.5532	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{1}{2} - \frac{2}{2}$		1093
	160	1132.190	335.3845 - 423.7105	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{2}{2}$		1093
	150	1132.550	343.9996 - 432.2957	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	850	1132.759	332.3436 - 420.6234	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{10}{2} - \frac{11}{2}$		1093
	660	1133.236	335.9760 - 424.2185	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{2}{2} - \frac{5}{2}$		1093
	280	1133.295	339.3358 - 427.5750	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1093
	270	1133.442	330.1410 - 418.3688	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^2G^\circ$	$\frac{11}{2} - \frac{10}{2}$		1093
	460	1133.935						1093
	580	1134.470	358.7166 - 446.8638	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{2}{2}$		1093
	360	1134.989	336.4304 - 424.5370	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{10}{2}$		1093
	820	1135.179	344.2035 - 432.2957	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	400	1135.299	339.2601 - 427.3422	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	800	1136.127	336.3449 - 424.3637	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{10}{2} - \frac{11}{2}$		1093
	270	1136.298	339.3358 - 427.3422	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	660	1136.352	336.3449 - 424.3461	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{10}{2} - \frac{11}{2}$		1093
	680	1136.820	332.3448 - 420.3089	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{10}{2} - \frac{10}{2}$		1093
	820	1136.922	335.3845 - 423.3414	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4H^\circ$	$\frac{5}{2} - \frac{2}{2}$		1093
	840	1137.491	343.9996 - 431.9126	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{10}{2} - \frac{10}{2}$		1093
	720	1137.598	332.1754 - 420.0800	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{10}{2} - \frac{10}{2}$		1093
	360	1138.186	339.4824 - 427.3422	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^2D^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	620	1138.484	339.2601 - 427.0960	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^2P - ^2F^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	520	1138.799	332.0318 - 419.8447	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1093
	500	1139.040	332.0516 - 419.8447	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	860	1139.168	329.7542 - 417.5384	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^\circ$	$\frac{10}{2} - \frac{11}{2}$		1093
	800	1139.825	347.2785 - 435.0115	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^\circ$	$\frac{1}{2} - \frac{11}{2}$		1093
	780	1140.347	366.2898 - 453.9830	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	320	1140.571	295.8827 - 383.5578	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	70	1141.084	389.2996 - 476.9356	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{2}{2}$		1093
	280	1141.386	339.4824 - 427.0960	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		1093
	550	1141.563	374.8439 - 462.4431	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^2D^\circ$	$\frac{1}{2} - \frac{2}{2}$		1093
	810	1141.889	337.9939 - 425.5676	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	670	1142.171	347.4452 - 434.9970	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{2}{2} - \frac{5}{2}$		1093
	140	1142.313	296.1981 - 383.7398	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6P^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	290	1142.478	337.0077 - 424.5370	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4H^\circ$	$\frac{10}{2} - \frac{11}{2}$		1093
	740	1144.047	329.7542 - 417.1641	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	890	1144.290	298.1305 - 385.5209	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{1}{2} - \frac{1}{2}$		1093
	770	1144.686	332.0318 - 419.3905	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{2}{2} - \frac{5}{2}$		1093
	60	1144.790	375.9498 - 463.3015	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4P^\circ$	$\frac{2}{2} - \frac{1}{2}$		1093
	130	1144.973	332.0516 - 419.3905	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{2}{2} - \frac{2}{2}$		1093
	750	1145.048	336.4304 - 423.7633	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{10}{2}$		1093
	150	1145.398	336.4048 - 423.7105	$3d^4(a^3P)4s - 3d^4(a^3G)4p$	$^2P - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		1093
	160	1145.453	336.3449 - 423.6458	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^4G - ^2F^\circ$	$\frac{10}{2} - \frac{2}{2}$		1093
	620	1145.835	347.8924 - 435.1654	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2K^\circ$	$\frac{13}{2} - \frac{13}{2}$		1093
	440	1146.342	358.8279 - 446.0612	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2F^\circ$	$\frac{1}{2} - \frac{2}{2}$		1093
	840	1146.776	347.9639 - 435.1654	$3d^4(a^1I)4s - 3d^4(a^1I)4p$	$^2I - ^2K^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	80	1147.038	347.4452 - 434.6260	$3d^4(a^1G)4s - 3d^4(a^1D)4p$	$^2G - ^4F^\circ$	$\frac{2}{2} - \frac{2}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	1147.855	347.8924 - 435.0115	$3d^4(a^1I)4s - 3d^4(a^1G)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	330	1148.257	335.9760 - 423.0652	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2H^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	670	1148.861	296.6967 - 383.7398	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	570	1149.000	389.2996 - 476.3321	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	740	1149.153	343.9996 - 431.0203	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	450	1149.828	389.3625 - 476.3321	$3d^4(b^1G)4s - 3d^4(b^1G)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	720	1149.979	330.5805 - 417.5384	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	850	1150.267	329.4862 - 416.4225	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	640	1151.253	296.6967 - 383.5578	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6P^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	130	1151.857	344.2035 - 431.0203	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	570	1152.355	374.8439 - 461.6226	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	640	1152.492	375.6730 - 462.4431	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	710	1152.788	297.3505 - 384.0965	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	770	1153.121	347.4452 - 434.1673	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	240	1153.654	332.0318 - 418.7134	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	880	1154.605	297.3505 - 383.9602	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	220	1154.804	374.8439 - 461.4378	$3d^4(b^3P)4s - 3d^4(b^3P)4p$	$^4P - ^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	810	1154.960	330.5805 - 417.1641	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
	180	1155.735	344.4474 - 430.9719	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	210	1155.857	375.9271 - 462.4431	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	400	1156.632	330.0016 - 416.4590	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	180	1156.730	344.4474 - 430.8988	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	190	1156.844	339.2601 - 425.7031	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	360	1156.955	343.0520 - 429.4863	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	830	1157.552	297.3505 - 383.7398	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	760	1157.805	332.3448 - 418.7134	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	590	1158.792	336.3449 - 422.6424	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	860	1158.996	330.1410 - 416.4225	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	780	1159.178	329.4862 - 415.7543	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	80	1159.574	347.2785 - 433.5173	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	680	1160.221	343.8426 - 430.0333	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		1093
	400	1160.823	332.3448 - 418.4908	$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$^4P - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	440	1161.533	347.2785 - 433.3712	$3d^4(a^1G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	500	1161.825	347.4452 - 433.5173	$3d^4(a^1G)4s - 3d^4(a^3G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	250	1161.872	358.7166 - 444.7842	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	880	1161.952	296.6967 - 382.7589	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	840	1162.007	337.0077 - 423.0652	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	860	1163.252	298.1305 - 384.0965	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6P^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	140	1164.200	329.4862 - 415.3820	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$		1093
	430	1164.329	329.7542 - 415.6408	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
	850	1165.098	298.1305 - 383.9602	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	120	1165.907	337.9939 - 423.7633	$3d^4(a^3H)4s - 3d^4(a^3G)4p$	$^2H - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	90	1167.219	375.9498 - 461.6226	$3d^4(b^3F)4s - 3d^4(b^3P)4p$	$^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		1093
	30	1167.319	332.0516 - 417.7181	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		1093
	870	1167.748	296.1981 - 381.8328	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	550	1168.061	330.1410 - 415.7543	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4I^\circ$	$\frac{11}{2} - \frac{9}{2}$		1093
	510	1168.788	366.2998 - 451.8594	$3d^4(a^1F)4s - 3d^4(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	200	1168.981	332.1754 - 417.7181	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	710	1169.297	347.2785 - 432.8001	$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		1093
	740	1170.327	375.6730 - 461.1183	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		1093
	100	1170.631	358.8279 - 444.2522	$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		1093
	850	1170.846	297.3505 - 382.7589	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	120	1171.324	332.3436 - 417.7181	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		1093
	770	1172.591	295.8827 - 381.1638	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^6D - ^6F^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
550	1173.786	332.3436 - 417.5384		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
720	1174.495	330.0016 - 415.1445		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
860	1174.590	296.6967 - 381.8328		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
780	1174.885	328.4372 - 413.5531		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
440	1175.926	347.8924 - 432.9320		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
220	1176.461	343.0520 - 428.0515		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
170	1176.803	339.2601 - 424.2354		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
870	1176.937	296.1981 - 381.1638		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
740	1177.256	343.0520 - 427.9956		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
820	1178.217	295.8827 - 380.7567		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
300	1178.364	375.6730 - 460.5359		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
310	1178.959	332.3436 - 417.1641		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4I^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
840	1179.960	308.3238 - 393.0720		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
850	1180.295	347.8924 - 432.6166		$3d^4(a^1D)4s - 3d^4(a^1D)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
840	1180.363	337.9939 - 422.7118		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		1093
590	1181.293	375.9498 - 460.6036		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
150	1181.641	298.1305 - 382.7589		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
370	1181.899	375.9271 - 460.5359		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
690	1182.605	296.1981 - 380.7567		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
700	1183.671	297.3505 - 381.8328		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
710	1183.897	296.6967 - 381.1638		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^6D - ^6F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
20	1183.991	335.3845 - 419.8447		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
100	1184.311	375.9271 - 460.3646		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^4F - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
20	1184.445	339.3358 - 423.7633		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$^2F - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
860	1184.659	309.0549 - 393.4682		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
170	1184.753	336.4304 - 420.8357		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
210	1185.024	339.2601 - 423.6468		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
430	1185.140	343.8426 - 428.2214		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
440	1186.984	332.1754 - 416.4225		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
570	1187.529	336.3449 - 420.5532		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
840	1188.364	332.3436 - 416.4930		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
	1188.5	45.8842 - 130.0259		$3d^5 - 3d^5$	$a^4P - a^2P$	$\frac{3}{2} - \frac{11}{2}$	F,P	375,1093
870	1189.300	309.9771 - 394.0610		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
	1189.5	45.8842 - 129.9516		$3d^5 - 3d^5$	$a^4P - a^2P$	$\frac{3}{2} - \frac{11}{2}$	F,P	375,1093
20	1189.859	343.0520 - 427.0960		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^2F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
390	1190.237	309.0549 - 393.0720		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
310	1190.326							1093
300	1191.015	351.0330 - 434.9958		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
	1191.6	46.1044 - 130.0259		$3d^5 - 3d^5$	$a^4P - a^2P$	$\frac{3}{2} - \frac{11}{2}$	F,P	375,1093
190	1191.898	351.0962 - 434.9958		$3d^4(a^3S)4s - 3d^4(a^3D)4p$	$^2S - ^2P^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
560	1192.110	335.9760 - 419.8633		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
50	1192.346	335.9760 - 419.8447		$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
790	1192.469	343.8426 - 427.7027		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2H^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
	1192.6	46.1044 - 129.9516		$3d^5 - 3d^5$	$a^4P - a^2P$	$\frac{3}{2} - \frac{11}{2}$	F,P	375,1093
480	1193.159	328.4372 - 412.2482		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
70	1193.458	358.8279 - 442.6199		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
400	1193.883	382.8891 - 466.6491		$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2F^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
440	1194.274	336.3449 - 420.0800		$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
	1194.7	46.3248 - 130.0259		$3d^5 - 3d^5$	$a^4P - a^2P$	$\frac{3}{2} - \frac{11}{2}$	F,P	375,1093
20	1195.948	337.0077 - 420.6234		$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
590	1196.328	332.0516 - 415.6408		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
20	1196.477	332.1754 - 415.7543		$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4I^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
310	1196.788	336.4048 - 419.9615		$3d^4(a^3P)4s - 3d^4(b^3P)4p$	$^2P - ^2S^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093
540	1196.867	330.0016 - 413.5531		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{11}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	1196.967	337.0077 - 420.5532	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		1093
	470	1197.754	330.1410 - 413.6316	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	590	1198.111	332.1754 - 415.6408	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	330	1198.239	382.6771 - 466.1337	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	420	1198.893	332.3436 - 415.7543	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^4F - ^4I^o$	$\frac{9}{2} - \frac{9}{2}$		1093
	620	1199.764	332.0318 - 415.3820	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	560	1200.041	332.0516 - 415.3820	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^4F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	30	1202.128	351.0962 - 434.2816	$3d^4(a^3S)4s - 3d^4(a^3D)4p$	$^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	850	1204.085	330.5805 - 413.6316	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	700	1205.264	332.1754 - 415.1445	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	330	1207.107	351.0962 - 433.9369	$3d^4(a^3S)4s - 3d^4(a^3S)4p$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	130	1207.735	332.3448 - 415.1445	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^4P - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	90	1209.427	358.7166 - 441.4012	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	860	1210.512	330.1410 - 412.7511	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	30	1211.271	339.3358 - 421.8940	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	120	1213.704	335.9760 - 418.3688	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		1093
	820	1214.453	329.7542 - 412.0956	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{9}{2} - \frac{9}{2}$		1093
	520	1214.581	335.3845 - 417.7181	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		1093
	870	1216.798	329.4862 - 411.6694	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	10	1216.977	330.5805 - 412.7511	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	20	1217.419	347.8924 - 430.0333	$3d^4(a^3I)4s - 3d^4(a^3G)4p$	$^2I - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	720	1217.572	382.6771 - 464.8078	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	510	1217.672	339.4824 - 421.6072	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	20	1219.164	336.3449 - 418.3688	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		1093
	910	1219.662	339.3358 - 421.3243	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		1093
	380	1220.191	330.1410 - 412.0956	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	470	1220.428	336.4304 - 418.3688	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		1093
	150	1220.709	382.8891 - 464.8078	$3d^4(b^3F)4s - 3d^4(b^3F)4p$	$^2F - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		1093
	110	1220.781	329.7542 - 411.6694	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^4H - ^4H^o$	$\frac{9}{2} - \frac{9}{2}$		1093
	110	1226.961	332.0516 - 413.5531	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	20	1227.556	339.2601 - 420.7223	$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$^2P - ^4S^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	20	1227.957	308.3238 - 389.7604	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{1}{2} - \frac{5}{2}$		1093
	300	1228.903	336.3449 - 417.7181	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		1093
	20	1229.084	337.0077 - 418.3688	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		1093
	800	1232.957	336.4304 - 417.5384	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	160	1233.436	307.8439 - 388.9186	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	320	1237.325	336.3449 - 417.1641	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4I^o$	$\frac{9}{2} - \frac{11}{2}$		1093
	600	1238.637	336.4304 - 417.1641	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4I^o$	$\frac{11}{2} - \frac{11}{2}$		1093
	680	1238.970	337.0077 - 417.7181	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		1093
	680	1239.041	309.0549 - 389.7604	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$		1093
	240	1240.767	308.3238 - 388.9186	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{1}{2} - \frac{1}{2}$		1093
	230	1241.254	366.2998 - 446.8638	$3d^4(a^3F)4s - 3d^4(a^3D)4p$	$^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		1093
	250	1241.907	343.8426 - 424.3637	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4H^o$	$\frac{9}{2} - \frac{11}{2}$		1093
	850	1244.177	337.9939 - 418.3688	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^2G^o$	$\frac{11}{2} - \frac{9}{2}$		1093
	20	1247.062	309.0549 - 389.2434	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{5}{2} - \frac{7}{2}$		1093
	460	1247.513	309.0549 - 389.2140	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{5}{2} - \frac{3}{2}$		1093
	420	1248.807	336.3449 - 416.4225	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		1093
		1248.9	295.8827 - 375.9498	$3d^4(a^3D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	$\frac{1}{2} - \frac{5}{2}$	F,P	375,1093
	310	1249.792	343.0520 - 423.0652	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		1093
	780	1250.031	335.3845 - 415.3820	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		1093
		1250.2	295.8827 - 375.8708	$3d^4(a^3D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,1093
	110	1251.240	343.8426 - 423.7633	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		1093
	700	1251.467	309.9771 - 389.8832	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^o$	$\frac{7}{2} - \frac{9}{2}$		1093
	310	1252.411	343.0520 - 422.8978	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		1093

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	400	1253.079	343.8426 - 423.6458	$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$^2G - ^2F^{\circ}$	2-2		1093
	790	1253.398	309.9771 - 389.7604	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4P^{\circ}$	2-2		1093
	260	1253.581	344.4474 - 424.2185	$3d^4(a^3D)4s - 3d^4(a^3G)4p$	$^4D - ^4F^{\circ}$	2-2		1093
		1253.9	296.1981 - 375.9498	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093
		1254.2	296.1981 - 375.9271	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093
	1255.1	296.1981 - 375.8708	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093	
160	1255.260	335.9760 - 415.6408	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^4G - ^4G^{\circ}$	2-2		1093	
	1255.5	296.6967 - 376.3437	$3d^4(a^3D)4s - 3d^4(b^3P)4s$	$^6D - ^4P$	2-2	F,P	375,1093	
110	1255.881	344.6100 - 424.2354	$3d^4(a^3D)4s - 3d^4(a^3P)4p$	$^4D - ^2P^{\circ}$	2-2		1093	
	1256.0	50.3310 - 129.9516	$3d^5 - 3d^5$	$a^4D - a^2P$	2-2	F,P	375,1093	
	1259.7	50.6435 - 130.0259	$3d^5 - 3d^5$	$a^4D - a^2P$	2-2	F,P	375,1093	
	1261.8	296.6967 - 375.9498	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093	
	1261.9	50.7805 - 130.0259	$3d^5 - 3d^5$	$a^4D - a^2P$	2-2	F,P	375,1093	
	1262.1	296.6967 - 375.9271	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093	
30	1262.120	339.4824 - 418.7134	$3d^4(a^3F)4s - 3d^4(a^3P)4p$	$^2F - ^4P^{\circ}$	2-2		1093	
	1263.0	50.7776 - 129.9516	$3d^5 - 3d^5$	$a^4D - a^2P$	2-2	F,P	375,1093	
	1263.1	50.7805 - 129.9516	$3d^5 - 3d^5$	$a^4D - a^2P$	2-2	F,P	375,1093	
400	1265.280	339.3358 - 418.3688	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^2F - ^2G^{\circ}$	2-2		1093	
	1265.9	297.3505 - 376.3437	$3d^4(a^5D)4s - 3d^4(b^3P)4s$	$^6D - ^4P$	2-2	F,P	375,1093	
	1266.2	296.6967 - 375.6730	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093	
60	1268.350	343.0520 - 421.8940	$3d^4(a^3G)4s - 3d^4(a^3F)4p$	$^2G - ^4D^{\circ}$	2-2		1093	
220	1269.113	309.0549 - 387.8499	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^6D^{\circ}$	2-2		1093	
100	1269.870	337.0077 - 415.7543	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4I^{\circ}$	2-2		1093	
120	1271.718	337.0077 - 415.6408	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^4G^{\circ}$	2-2		1093	
	1272.6	297.3505 - 375.9271	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093	
20	1275.029	337.9939 - 416.4225	$3d^4(a^3H)4s - 3d^4(a^3F)4p$	$^2H - ^4G^{\circ}$	2-2		1093	
90	1278.173	339.4824 - 417.7181	$3d^4(a^3F)4s - 3d^4(a^3H)4p$	$^2F - ^2G^{\circ}$	2-2		1093	
	1279.6	296.6967 - 374.8439	$3d^4(a^5D)4s - 3d^4(b^3P)4s$	$^6D - ^4P$	2-2	F,P	375,1093	
560	1284.137	309.9771 - 387.8499	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$^4D - ^6D^{\circ}$	2-2		1093	
180	1284.782	308.3238 - 386.1573	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4P^{\circ}$	2-2		1093	
90	1285.975	337.9939 - 415.7543	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4I^{\circ}$	2-2		1093	
	1289.6	298.1305 - 375.6730	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^6D - ^4F$	2-2	F,P	375,1093	
	1290.4	297.3505 - 374.8439	$3d^4(a^5D)4s - 3d^4(b^3P)4s$	$^6D - ^4P$	2-2	F,P	375,1093	
210	1295.315	336.4304 - 413.6316	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^{\circ}$	2-2		1093	
320	1296.970	309.0549 - 386.1573	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4P^{\circ}$	2-2		1093	
20	1297.239	339.3358 - 416.4225	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4G^{\circ}$	2-2		1093	
110	1300.331	307.8439 - 384.7474	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4P^{\circ}$	2-2		1093	
	1301.2	64.1524 - 141.0068	$3d^5 - 3d^5$	$a^2D - c^2D$	2-2	F,P	375,1093	
	1302.6	64.1524 - 140.9222	$3d^5 - 3d^5$	$a^2D - c^2D$	2-2	F,P	375,1093	
	1303.5	298.1305 - 374.8439	$3d^4(a^5D)4s - 3d^4(b^3P)4s$	$^6D - ^4P$	2-2	F,P	375,1093	
250	1308.496	308.3238 - 384.7474	$3d^4(a^5D)4s - 3d^4(a^5D)4p$	$^4D - ^4P^{\circ}$	2-2		1093	
90	1308.781	336.3449 - 412.7511	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^{\circ}$	2-2		1093	
130	1310.863	335.3845 - 411.6694	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^{\circ}$	2-2		1093	
20	1313.049	339.4824 - 415.6408	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$^2F - ^4G^{\circ}$	2-2		1093	
210	1313.720	335.9760 - 412.0956	$3d^4(a^3G)4s - 3d^4(a^3H)4p$	$^4G - ^4H^{\circ}$	2-2		1093	
	1318.7	65.1735 - 141.0068	$3d^5 - 3d^5$	$a^2D - c^2D$	2-2	F,P	375,1093	
	1320.2	65.1735 - 140.9222	$3d^5 - 3d^5$	$a^2D - c^2D$	2-2	F,P	375,1093	
	20	1322.078	337.9939 - 413.6316	$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$^2H - ^4H^{\circ}$	2-2		1093
	1352.8	67.0851 - 141.0068	$3d^5 - 3d^5$	$a^2F - c^2D$	2-2	F,P	375,1093	
	1354.3	67.0851 - 140.9222	$3d^5 - 3d^5$	$a^2F - c^2D$	2-2	F,P	375,1093	
	1354.4	309.0549 - 382.8891	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^2F$	2-2	F,P	375,1093	
	1358.3	309.0549 - 382.6771	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^2F$	2-2	F,P	375,1093	
	1375.5	309.9771 - 382.6771	$3d^4(a^5D)4s - 3d^4(b^3F)4s$	$^4D - ^2F$	2-2	F,P	375,1093	
	1378.1	68.4449 - 141.0068	$3d^5 - 3d^5$	$a^2F - c^2D$	2-2	F,P	375,1093	

NI VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1379.7	68.4449 - 140.9222	$3d^5 - 3d^5$	$a^2F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1381.8	68.5512 - 140.9222	$3d^5 - 3d^5$	$a^4F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1384.9	68.8017 - 141.0068	$3d^5 - 3d^5$	$a^4F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1386.6	68.8017 - 140.9222	$3d^5 - 3d^5$	$a^4F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1397.4	69.4470 - 141.0068	$3d^5 - 3d^5$	$a^4F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1468.3	307.8439 - 375.9498	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1470.0	307.8439 - 375.8708	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1470.2	308.3238 - 376.3437	$3d^4(a^2D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1478.7	308.3238 - 375.9498	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1479.2	308.3238 - 375.9271	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1480.4	308.3238 - 375.8708	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1486.1	309.0549 - 376.3437	$3d^4(a^2D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1494.9	309.0549 - 375.9498	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1495.4	309.0549 - 375.9271	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1501.1	309.0549 - 375.6730	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1506.8	309.9771 - 376.3437	$3d^4(a^2D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1515.9	41.9209 - 107.8870	$3d^5 - 3d^5$	$a^4G - b^2G$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1516.3	309.9771 - 375.9271	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1516.8	41.9209 - 107.8483	$3d^5 - 3d^5$	$a^4G - b^2G$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1518.1	64.1524 - 130.0259	$3d^5 - 3d^5$	$a^2D - a^2P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1518.3	42.0232 - 107.8870	$3d^5 - 3d^5$	$a^4G - b^2G$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1518.6	42.0351 - 107.8870	$3d^5 - 3d^5$	$a^4G - b^2G$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1519.2	42.0232 - 107.8483	$3d^5 - 3d^5$	$a^4G - b^2G$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1519.8	64.1524 - 129.9516	$3d^5 - 3d^5$	$a^2D - a^2P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1520.0	309.0549 - 374.8439	$3d^4(a^2D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1522.2	309.9771 - 375.6730	$3d^4(a^2D)4s - 3d^4(b^3F)4s$	$^4D - ^4F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1541.6	309.9771 - 374.8439	$3d^4(a^2D)4s - 3d^4(b^3P)4s$	$^4D - ^4P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1542.0	65.1735 - 130.0259	$3d^5 - 3d^5$	$a^2D - a^2P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1543.7	65.1735 - 129.9516	$3d^5 - 3d^5$	$a^2D - a^2P$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1623.0	79.3914 - 141.0068	$3d^5 - 3d^5$	$b^2F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1625.2	79.3914 - 140.9222	$3d^5 - 3d^5$	$b^2F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1628.7	79.6083 - 141.0068	$3d^5 - 3d^5$	$b^2F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1631.0	79.6083 - 140.9222	$3d^5 - 3d^5$	$b^2F - c^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1711.0	307.8439 - 366.2898	$3d^4(a^2D)4s - 3d^4(a^1F)4s$	$^4D - ^2F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1724.8	308.3238 - 366.2998	$3d^4(a^2D)4s - 3d^4(a^1F)4s$	$^4D - ^2F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1725.1	308.3238 - 366.2898	$3d^4(a^2D)4s - 3d^4(a^1F)4s$	$^4D - ^2F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1746.9	309.0549 - 366.2998	$3d^4(a^2D)4s - 3d^4(a^1F)4s$	$^4D - ^2F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1747.2	309.0549 - 366.2898	$3d^4(a^2D)4s - 3d^4(a^1F)4s$	$^4D - ^2F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1775.5	309.9771 - 366.2998	$3d^4(a^2D)4s - 3d^4(a^1F)4s$	$^4D - ^2F$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1969.3	0.0 - 50.7805	$3d^5 - 3d^5$	$ga^6S - a^4D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1969.4	0.0 - 50.7776	$3d^5 - 3d^5$	$ga^6S - a^4D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1980.0	308.3238 - 358.8279	$3d^4(a^2D)4s - 3d^4(a^1D)4s$	$^4D - ^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1981.7	46.1044 - 96.5665	$3d^5 - 3d^5$	$a^4P - b^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1985.8	46.1044 - 96.4612	$3d^5 - 3d^5$	$a^4P - b^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1986.8	0.0 - 50.3310	$3d^5 - 3d^5$	$ga^6S - a^4D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1990.4	46.3248 - 96.5665	$3d^5 - 3d^5$	$a^4P - b^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093
		1994.6	46.3248 - 96.4612	$3d^5 - 3d^5$	$a^4P - b^2D$	1-1 2-2 3-3 4-4 5-5	F,P	375,1093

NICKEL VII (Ni⁶⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁶3d⁴(⁵D₀) (22 electrons)
Ionization Potential [1 070 000] cm⁻¹; [133] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	28	204.979	0.804 - 488.665	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	2 - 3		622
	78	205.278	1.520 - 488.665	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	3 - 3		622
	32	205.369	0.279 - 487.207	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	1 - 2		622
	88	205.591	0.804 - 487.207	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	2 - 2		622
	140	205.645	2.392 - 488.665	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	4 - 3		622
	28	205.697	0.0 - 486.151	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	0 - 1		622
	72	205.816	0.279 - 486.151	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	1 - 1		622
	108	205.896	1.520 - 487.207	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	3 - 2		622
	62	206.038	0.804 - 486.151	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - ⁵ P°	2 - 1		622
	104	208.195	31.672 - 511.991	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - ³ G°	4 - 3		622
	104	208.589	32.286 - 511.698	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - ³ G°	5 - 4		622
	94	208.691	32.286 - 511.464	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - ³ G°	5 - 5		622
	104	208.948	32.877 - 511.464	3d ⁴ - 3d ³ (a ² H)4p	a ³ H - ³ G°	6 - 5		622
	98	210.020	2.392 - 478.534	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ³ G°	4 - 5		622
	98	211.046	38.160 - 511.991	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - ³ G°	3 - 3		622
	62	211.307	38.746 - 511.991	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - ³ G°	4 - 3		622
	104	211.438	38.746 - 511.698	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - ³ G°	4 - 4		622
	24	211.541	38.746 - 511.464	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - ³ G°	4 - 5		622
	114	211.615	0.804 - 473.360	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ³ D°	2 - 3		622
	126	211.660	39.247 - 511.698	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - ³ G°	5 - 4		622
	118	211.767	39.247 - 511.464	3d ⁴ - 3d ³ (a ² H)4p	a ³ G - ³ G°	5 - 5		622
	100	212.001	0.279 - 471.976	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ³ D°	1 - 2		622
	70	212.202	0.0 - 471.250	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	0 - 1		622
	70	212.328	2.392 - 473.360	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ³ D°	4 - 3		622
	160	212.521	1.520 - 472.067	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	3 - 4		622
	166	212.533	2.392 - 472.907	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	4 - 5		622
	20	212.56	1.520 - 471.976	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ³ D°	3 - 2		548
	28	212.635	0.804 - 471.096	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	2 - 3		622
	20	212.86	0.279 - 470.056	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	1 - 2		548
	174	212.913	2.392 - 472.067	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	4 - 4		622
	156	212.958	1.520 - 471.096	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	3 - 3		622
	126	213.104	0.804 - 470.056	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	2 - 2		622
	80	213.13	0.0 - 469.175	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	0 - 1		548
	116	213.151	0.0 - 469.175	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	0 - 1		622
	48	213.267	0.279 - 469.175	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	1 - 1		622
	70	213.346	2.392 - 471.096	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	4 - 3		622
	106	213.431	1.520 - 470.056	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ F°	3 - 2		622
	142	213.506	0.804 - 469.175	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	2 - 1		622
	154	213.527	1.520 - 469.844	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	3 - 4		622
	138	213.728	0.804 - 468.690	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	2 - 3		622
	180	213.926	2.392 - 469.844	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	4 - 4		622
	152	213.938	0.279 - 467.705	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	1 - 2		622
	144	214.053	1.520 - 468.690	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	3 - 3		622
	128	214.126	0.0 - 467.015	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ³ D°	0 - 1		622
	98	214.180	0.804 - 467.705	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	2 - 2		622
	52	214.252	0.279 - 467.015	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ³ D°	1 - 1		622
	72	214.456	2.392 - 468.690	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	4 - 3		622
	68	214.507	1.520 - 467.705	3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - ⁵ D°	3 - 2		622
	148	215.767	32.877 - 496.340	3d ⁴ - 3d ³ (a ² G)4p	a ³ H - ³ G°	6 - 5		622
	146	216.074	32.286 - 495.087	3d ⁴ - 3d ³ (a ² G)4p	a ³ H - ³ G°	5 - 4		622
	120	216.417	31.672 - 493.743	3d ⁴ - 3d ³ (a ² G)4p	a ³ H - ³ G°	4 - 3		622
	86	216.562	34.576 - 496.340	3d ⁴ - 3d ³ (a ² G)4p	a ³ F - ³ G°	4 - 5		622
	96	217.029	34.317 - 495.087	3d ⁴ - 3d ³ (a ² G)4p	a ³ F - ³ G°	3 - 4		622
	110	217.151	34.576 - 495.087	3d ⁴ - 3d ³ (a ² G)4p	a ³ F - ³ G°	4 - 4		622

NI VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	72	217.630	34.247 - 493.743	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	2 - 3		622
	92	217.663	34.317 - 493.743	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	3 - 3		622
	10	217.78	34.576 - 493.743	$3d^4 - 3d^3(a^2G)4p$	$a^3F - ^3G^\circ$	4 - 3		548
	100	218.53	38.746 - 496.340	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	4 - 5		548
	98	218.774	39.247 - 496.340	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	5 - 5		622
	20	218.85	38.160 - 495.087	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	3 - 4		548
	50	219.137	38.746 - 495.087	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	4 - 4		622
	116	219.499	38.160 - 493.743	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	3 - 3		622
	20	219.78	38.746 - 493.743	$3d^4 - 3d^3(a^2G)4p$	$a^3G - ^3G^\circ$	4 - 3		548
	20	223.25	34.317 - 482.229	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	3 - 4		548
	98	223.387	34.576 - 482.229	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	4 - 4		622
	60	223.76	31.672 - 478.534	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	4 - 5		548
	26	223.791	34.247 - 481.091	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	2 - 3		622
	52	223.826	34.317 - 481.091	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	3 - 3		622
	26	223.954	34.576 - 481.091	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	4 - 3		622
	82	224.363	34.247 - 479.950	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	2 - 2		622
	152	224.388	32.877 - 478.534	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	6 - 5		622
	146	224.733	32.286 - 477.261	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	5 - 4		622
	136	224.928	31.672 - 476.258	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3G^\circ$	4 - 3		622
	10	225.191	38.160 - 482.229	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	3 - 4		622
	58	225.246	34.576 - 478.534	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	4 - 5		622
	40	225.487	38.746 - 482.229	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	4 - 4		622
	134	225.742	39.247 - 482.229	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	5 - 4		622
	76	225.767	34.317 - 477.261	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	3 - 4		622
	38	225.894	34.576 - 477.261	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	4 - 4		622
	110	226.069	38.746 - 481.091	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	4 - 3		622
	48	226.238	34.247 - 476.258	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	2 - 3		622
	46	226.273	34.317 - 476.258	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	3 - 3		622
	102	226.352	38.160 - 479.950	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	3 - 2		622
	20	226.40	34.576 - 476.258	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3G^\circ$	4 - 3		548
	44	226.668	30.077 - 471.250	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3F^\circ$	0 - 1		622
	102	227.200	31.836 - 471.976	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	1 - 2		622
	46	227.256	32.877 - 472.907	$3d^4 - 3d^3(a^4F)4p$	$a^3H - ^3F^\circ$	6 - 5		622
	80	227.377	38.746 - 478.534	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	4 - 5		622
	90	227.581	31.836 - 471.250	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3F^\circ$	1 - 1		622
	126	227.642	39.247 - 478.534	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	5 - 5		622
	50	227.738	38.160 - 477.261	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	3 - 4		622
	130	227.893	34.555 - 473.360	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 3		622
	116	227.907	34.576 - 473.360	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	4 - 3		622
	102	228.043	38.746 - 477.261	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	4 - 4		622
	68	228.262	38.160 - 476.258	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	3 - 3		622
	10	228.30	39.247 - 477.261	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	5 - 4		548
	72	228.489	34.317 - 471.976	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	3 - 2		622
	100	228.54	38.746 - 476.258	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3G^\circ$	4 - 3		548
	34	228.613	34.555 - 471.976	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 2		622
	34	228.831	34.247 - 471.250	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	2 - 1		622
	26	228.865	30.077 - 467.015	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	0 - 1		622
	20	228.93	34.247 - 471.096	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3F^\circ$	2 - 3		548
	30	229.427	31.836 - 467.705	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	1 - 2		622
	24	229.795	31.836 - 467.015	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	1 - 1		622
	28	230.342	34.555 - 468.690	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 3		622
	18	230.598	39.247 - 472.907	$3d^4 - 3d^3(a^4F)4p$	$a^3G - ^3F^\circ$	5 - 5		622
	20	230.739	34.317 - 467.705	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^\circ$	3 - 2		622
	16	230.866	34.555 - 467.705	$3d^4 - 3d^3(a^4F)4p$	$a^3P - ^3D^\circ$	2 - 2		622

NI VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	168	231.071	34.247 - 467.015	$3d^4 - 3d^3(a^4F)4p$	$a^3F - ^3D^o$	2 - 1		622

NICKEL VIII (Ni^{7+}), $Z = 28$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3(^4F_{3/2})$ (21 electrons)
Ionization Potential [1 310 000] cm^{-1} ; [162] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	167.07	0.0 - 598.570	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$		003
	20	167.35	1.012 - 598.638	$3d^3 - 3d^2(^1G)4p$	$ga^4F - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		003
	10	167.66	2.184 - 598.638	$3d^3 - 3d^2(^1G)4p$	$ga^4F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		003
	40	167.97	3.721 - 599.079	$3d^3 - 3d^2(^1G)4p$	$ga^4F - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		003
	20	168.08	3.721 - 598.638	$3d^3 - 3d^2(^1G)4p$	$ga^4F - ^2G^o$	$\frac{10}{2} - \frac{7}{2}$		003
	10	168.33	0.0 - 594.068	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4D^o$	$\frac{2}{2} - \frac{2}{2}$		003
	150	168.58	3.721 - 596.908	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4D^o$	$\frac{6}{2} - \frac{7}{2}$		003
	10	168.62	1.012 - 594.068	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4D^o$	$\frac{8}{2} - \frac{8}{2}$		003
	40	168.87	0.0 - 592.175	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4D^o$	$\frac{10}{2} - \frac{10}{2}$		003
	20	168.95	2.184 - 594.068	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4D^o$	$\frac{12}{2} - \frac{5}{2}$		003
	400	169.16	1.012 - 592.175	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4D^o$	$\frac{14}{2} - \frac{2}{2}$		003
	40	169.27	0.0 - 590.764	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4D^o$	$\frac{16}{2} - \frac{1}{2}$		003
	80	170.17	28.068 - 615.725	$3d^3 - 3d^2(^1G)4p$	$a^2G - ^2H^o$	$\frac{10}{2} - \frac{11}{2}$		003
	20	170.27	0.0 - 587.305	$3d^3 - 3d^2(^3P)4p$	$ga^4F - ^4S^o$	$\frac{10}{2} - \frac{10}{2}$		003
	250	170.52	26.977 - 613.417	$3d^3 - 3d^2(^1G)4p$	$a^2G - ^2H^o$	$\frac{12}{2} - \frac{10}{2}$		003
	10	170.84	28.068 - 613.417	$3d^3 - 3d^2(^1G)4p$	$a^2G - ^2H^o$	$\frac{12}{2} - \frac{10}{2}$		003
	40	172.10	2.184 - 583.241	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^2G^o$	$\frac{15}{2} - \frac{15}{2}$		003
	20	172.32	1.012 - 581.337	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^2G^o$	$\frac{15}{2} - \frac{12}{2}$		003
	40	172.67	2.184 - 581.337	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		003
	20	172.93	37.475 - 615.725	$3d^3 - 3d^2(^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		003
	750	173.41	36.754 - 613.417	$3d^3 - 3d^2(^1G)4p$	$a^2H - ^2H^o$	$\frac{10}{2} - \frac{10}{2}$		003
	40	173.95	23.710 - 598.570	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		003
	10	174.22	24.669 - 598.638	$3d^3 - 3d^2(^1G)4p$	$a^4P - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		003
	750	174.24	24.669 - 598.570	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$		003
	400	174.36	23.261 - 596.770	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		003
	250	174.46	23.710 - 596.905	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		003
	10	174.50	23.710 - 596.770	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		003
	40	174.75	24.669 - 596.908	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{2}{2}$		003
	150	174.79	26.977 - 599.079	$3d^3 - 3d^2(^1G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{10}{2}$		003
	80	174.88	0.0 - 571.845	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^2D^o$	$\frac{7}{2} - \frac{10}{2}$		003
	750	174.92	26.977 - 598.638	$3d^3 - 3d^2(^1G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		003
	40	174.95	0.0 - 571.517	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4D^o$	$\frac{10}{2} - \frac{10}{2}$		003
	400	175.13	28.068 - 599.079	$3d^3 - 3d^2(^1G)4p$	$a^2G - ^2G^o$	$\frac{10}{2} - \frac{10}{2}$		003
	40	175.26	28.068 - 598.638	$3d^3 - 3d^2(^1G)4p$	$a^2G - ^2G^o$	$\frac{10}{2} - \frac{10}{2}$		003
	40	175.28	1.012 - 571.517	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		003
	400	175.32	0.0 - 570.353	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		003
	20	175.49	0.0 - 569.839	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4D^o$	$\frac{1}{2} - \frac{5}{2}$		003
	40	175.54	2.184 - 571.845	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^2D^o$	$\frac{2}{2} - \frac{5}{2}$		003
	750	175.56	3.721 - 573.327	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4D^o$	$\frac{10}{2} - \frac{7}{2}$		003
	20	175.62	24.669 - 594.068	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		003
	400	175.64	2.184 - 571.517	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		003
	400	175.67	3.721 - 572.969	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4G^o$	$\frac{10}{2} - \frac{11}{2}$		003

NI VIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1000	175.80	1.012 - 569.839	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{1}{2}$		003
	1000	175.82	2.184 - 570.960	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	175.91	23.710 - 592.175	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	750	175.94	2.184 - 570.546	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	400	176.03	3.721 - 571.804	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	250	176.13	1.012 - 568.746	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{5}{2} - \frac{1}{2}$		003
	10	176.21	23.261 - 590.764	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		003
	80	176.25	2.184 - 569.564	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	250	176.29	3.721 - 570.960	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	20	176.35	23.710 - 590.764	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	40	176.42	0.0 - 566.831	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	150	176.50	2.184 - 568.746	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	80	176.69	1.012 - 566.964	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{5}{2} - \frac{1}{2}$		003
	250	176.74	1.012 - 566.831	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	750	176.87	0.0 - 565.388	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	250	176.95	0.0 - 565.124	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	176.98	3.721 - 568.746	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	10	177.10	2.184 - 566.831	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	400	177.19	1.012 - 565.388	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{5}{2} - \frac{1}{2}$		003
	80	177.29	23.261 - 587.305	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4S^\circ$	$\frac{1}{2} - \frac{1}{2}$		003
	40	177.32	34.689 - 598.638	$3d^3 - 3d^2(^1G)4p$	$a^2D - ^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	80	177.43	23.710 - 587.305	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	10	177.63	2.184 - 565.124	$3d^3 - 3d^2(^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	177.73	24.669 - 587.305	$3d^3 - 3d^2(^3P)4p$	$a^4P - ^4S^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	10	177.83	36.754 - 599.079	$3d^3 - 3d^2(^1G)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	10	177.87	34.689 - 596.905	$3d^3 - 3d^2(^3P)4p$	$a^2D - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	20	177.97	36.754 - 598.638	$3d^3 - 3d^2(^1G)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	20	178.06	37.475 - 599.079	$3d^3 - 3d^2(^1G)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		003
	80	178.52	36.754 - 596.908	$3d^3 - 3d^2(^3P)4p$	$a^2H - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	400	178.77	34.689 - 594.068	$3d^3 - 3d^2(^3P)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	250	178.91	35.120 - 594.068	$3d^3 - 3d^2(^3P)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	179.77	26.977 - 583.241	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	550	179.97	35.120 - 590.764	$3d^3 - 3d^2(^3P)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	250	180.12	28.068 - 583.241	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	250	180.39	26.977 - 581.337	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	180.74	28.068 - 581.337	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	181.10	35.120 - 587.305	$3d^3 - 3d^2(^3P)4p$	$a^2D - ^4S^\circ$	$\frac{1}{2} - \frac{1}{2}$		003
	20	182.27	24.669 - 573.327	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4D^\circ$	$\frac{5}{2} - \frac{1}{2}$		003
	400	182.44	23.710 - 571.845	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	182.55	23.710 - 571.517	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	20	182.76	24.669 - 571.845	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	20	182.79	23.261 - 570.353	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		003
	80	182.87	24.669 - 571.517	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		003
	40	182.94	23.710 - 570.353	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		003
	80	182.96	23.261 - 569.839	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		003
	40	182.99	36.754 - 583.241	$3d^3 - 3d^2(^3F)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	183.02	23.261 - 569.667	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		003
	10	183.16	23.710 - 569.667	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	10	183.23	37.475 - 583.241	$3d^3 - 3d^2(^3F)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		003
	20	183.39	28.068 - 573.327	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	183.44	24.669 - 569.839	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4D^\circ$	$\frac{5}{2} - \frac{1}{2}$		003
	150	183.51	28.068 - 572.969	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4G^\circ$	$\frac{3}{2} - \frac{11}{2}$		003
	10	183.63	36.754 - 581.337	$3d^3 - 3d^2(^3F)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		003
	40	183.80	24.669 - 568.746	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$		003

NI VIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
900	183.83	183.83	26.977 - 570.960	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4F^o$	3-2, 2-2		003
80	183.91	183.91	28.068 - 571.804	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^2F^o$	3-2, 2-2		003
20	183.97	183.97	26.977 - 570.546	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^2F^o$	2-2, 2-2		003
900	184.12	184.12	23.710 - 566.831	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4F^o$	3-2, 2-2		003
10	184.20	184.20	28.068 - 570.960	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4F^o$	3-2, 2-2		003
10	184.40	184.40	24.669 - 566.964	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4G^o$	3-2, 2-2		003
550	184.44	184.44	24.669 - 566.831	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4F^o$	3-2, 2-2		003
10	184.58	184.58	26.977 - 568.746	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4F^o$	3-2, 2-2		003
10	184.62	184.62	23.710 - 565.388	$3d^3 - 3d^2(^3F)4p$	$a^4P - ^4F^o$	3-2, 2-2		003
40	184.68	184.68	28.068 - 569.564	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4G^o$	3-2, 2-2		003
40	184.95	184.95	28.068 - 568.746	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4F^o$	3-2, 2-2		003
20	185.18	185.18	26.977 - 566.964	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4G^o$	3-2, 2-2		003
10	185.23	185.23	26.977 - 566.831	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4F^o$	3-2, 2-2		003
80	185.65	185.65	34.689 - 573.327	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^4D^o$	3-2, 2-2		003
10	185.82	185.82	26.977 - 565.124	$3d^3 - 3d^2(^3F)4p$	$a^2G - ^4G^o$	3-2, 2-2		003
10	186.16	186.16	34.689 - 571.845	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^2D^o$	3-2, 2-2		003
80	186.18	186.18	34.689 - 571.804	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^2F^o$	3-2, 2-2		003
10	186.31	186.31	35.120 - 571.845	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^2D^o$	3-2, 2-2		003
250	186.49	186.49	36.754 - 572.969	$3d^3 - 3d^2(^3F)4p$	$a^2H - ^4G^o$	3-2, 2-2		003
10	186.76	186.76	35.120 - 570.546	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^2F^o$	3-2, 2-2		003
10	186.86	186.86	34.689 - 569.839	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^4D^o$	3-2, 2-2		003
40	186.93	186.93	34.689 - 569.667	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^2D^o$	3-2, 2-2		003
10	187.08	187.08	35.120 - 569.667	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^2D^o$	3-2, 2-2		003
20	187.20	187.20	36.754 - 570.960	$3d^3 - 3d^2(^3F)4p$	$a^2H - ^4F^o$	3-2, 2-2		003
10	187.23	187.23	34.689 - 568.746	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^4F^o$	3-2, 2-2		003
10	187.87	187.87	34.689 - 566.964	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^4G^o$	3-2, 2-2		003
20	188.06	188.06	35.120 - 566.831	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^4F^o$	3-2, 2-2		003
150	188.58	188.58	35.120 - 565.388	$3d^3 - 3d^2(^3F)4p$	$a^2D - ^4F^o$	3-2, 2-2		003

NICKEL IX (Ni⁸⁺), Z = 28
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2(^3F_2)$ (20 electrons)
Ionization Potential [1 560 000] cm^{-1} ; [193] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
80	101.657	101.657	0.0 - 983.704	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3G^o$	2-3		207
80	101.701	101.701	1.880 - 985.144	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3G^o$	3-4		207
100	101.846	101.846	4.070 - 985.944	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3G^o$	4-5		207
20	101.932	101.932	4.070 - 985.144	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3G^o$	4-4		207
10	102.283	102.283	0.0 - 977.68	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3F^o$	2-3		207
60	102.340	102.340	0.0 - 977.13	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3F^o$	2-2		207
1	102.364	102.364	1.880 - 978.74	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3F^o$	3-4		207
60	102.480	102.480	1.880 - 977.68	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3F^o$	3-3		207
1	102.539	102.539	1.880 - 977.13	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3F^o$	3-2		207
100	102.602	102.602	4.070 - 978.74	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3F^o$	4-4		207
1	102.710	102.710	4.070 - 977.68	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$g^3F - ^3F^o$	4-3		207
40	103.428	103.428	21.900+X - 988.76+X	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$^1D - ^3D^o$	2-3		207
80	103.620	103.620	21.900+X - 986.96+X	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$^1D - ^1F^o$	2-3		207
60	103.871	103.871	21.900+X - 984.63+X	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$^1D - ^1D^o$	2-2		207
1	103.926	103.926	17.80+R - 980.02+R	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$^3P - ^3D^o$	0-1		207
100	103.981	103.981	22.00+K - 983.71+K	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$^3P - ^3D^o$	1-2		207
100	103.993	103.993	27.160+X - 988.76+X	$3p^6(^1S)3d^2 - 3p^6(^1S)3d4f$	$^3P - ^3D^o$	2-3		207
10	140.542	140.542	0.0 - 711.52	$3p^6(^1S)3d^2 - 3p^3(^3P^o)3d^3(^4F)$	$g^3F - ^3D^o$	2-2		1056

NI IX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
85	140.917		1.880 - 711.52	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3D^{\circ}$	3 - 2		1056
50	141.002		0.0 - 709.21	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3D^{\circ}$	2 - 1		1056
120	141.356		4.070 - 711.51	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3D^{\circ}$	4 - 3		1056
85	147.013		35.898 + C - 716.11 + C	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4H)$	$^1G - ^1G^{\circ}$	4 - 4		1056
10	150.32		1.880 - 667.08	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3F^{\circ}$	3 - 4		1056
10	150.574		0.0 - 664.08	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3F^{\circ}$	2 - 3		1056
85	150.836		4.070 - 667.08	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3F^{\circ}$	4 - 4		1056
85	151.022		1.880 - 664.08	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3F^{\circ}$	3 - 3		1056
50	151.281		0.0 - 661.05	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3F^{\circ}$	2 - 2		1056
10	151.700		1.880 - 661.05	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4F)$	$g^3F - ^3F^{\circ}$	3 - 2		1056
150	165.436		4.070 - 608.53	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4H)$	$g^3F - ^3G^{\circ}$	4 - 5		1056
85	166.079		1.880 - 604.00	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4H)$	$g^3F - ^3G^{\circ}$	3 - 4		1056
85	166.306		0.0 - 601.30	$3p^6(^1S)3d^2 - 3p^5(^2P^{\circ})3d^3(^4H)$	$g^3F - ^3G^{\circ}$	2 - 3		1056
	1769.		21.900 + X - 78.43 + W	$3p^6(^1S)3d^2 - 3p^6(^1S)3d^2$	$^1D - ^1S$	2 - 0	F,P	375,1051
	1772.		22.00 + K - 78.43 + W	$3p^6(^1S)3d^2 - 3p^6(^1S)3d^2$	$^3P - ^1S$	1 - 0	F,P	375,1051
	1950.		27.160 + X - 78.43 + W	$3p^6(^1S)3d^2 - 3p^6(^1S)3d^2$	$^3P - ^1S$	2 - 0	F,P	375,1051

NICKEL X (Ni^{9+}), $Z = 28$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 (D_{3/2})$ (19 electrons)
Ionization Potential [1 812 000] cm^{-1} ; [224.6] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	61.809		0.0 - 1617.89	$3p^6(^1S)3d - 3p^6(^1S)7f$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		207
1	61.915		3.178 - 1618.31	$3p^6(^1S)3d - 3p^6(^1S)7f$	$g^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		207
10	66.542		0.0 - 1502.81	$3p^6(^1S)3d - 3p^6(^1S)6f$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		207
10	66.687		3.178 - 1502.72	$3p^6(^1S)3d - 3p^6(^1S)6f$	$g^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		207
20	74.097		0.0 - 1349.58	$3p^6(^1S)3d - 3p^6(^1S)5f$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		207
30	74.266		3.178 - 1349.69	$3p^6(^1S)3d - 3p^6(^1S)5f$	$g^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		207
2	82.892		0.0 - 1206.41	$3p^6(^1S)3d - 3p^5 3d(^3D^{\circ})4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
25	83.108		3.178 - 1206.41	$3p^6(^1S)3d - 3p^5 3d(^3D^{\circ})4s$	$g^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		315
2	83.326		3.178 - 1203.27	$3p^6(^1S)3d - 3p^5 3d(^3D^{\circ})4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
10	83.676		3.178 - 1198.26	$3p^6(^1S)3d - 3p^5 3d(^1F^{\circ})4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
2	84.194		0.0 - 1187.75	$3p^6(^1S)3d - 3p^5 3d(^3D^{\circ})4s$	$g^2D - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
5	84.418		3.178 - 1187.75	$3p^6(^1S)3d - 3p^5 3d(^3D^{\circ})4s$	$g^2D - ^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		315
5	84.659		3.178 - 1184.39	$3p^6(^1S)3d - 3p^5 3d(^3D^{\circ})4s$	$g^2D - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
25	85.523		0.0 - 1169.30	$3p^6(^1S)3d - 3p^5 3d(^3F^{\circ})4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
5	85.753		3.178 - 1169.30	$3p^6(^1S)3d - 3p^5 3d(^3F^{\circ})4s$	$g^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		315
60	86.300		3.178 - 1161.93	$3p^6(^1S)3d - 3p^5 3d(^3F^{\circ})4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
5	86.464		0.0 - 1156.55	$3p^6(^1S)3d - 3p^5 3d(^3F^{\circ})4s$	$g^2D - ^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
2	86.865		3.178 - 1154.39	$3p^6(^1S)3d - 3p^5 3d(^3F^{\circ})4s$	$g^2D - ^4F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		315
1	87.077		0.0 - 1148.42	$3p^6(^1S)3d - 3p^5 3d(^3P^{\circ})4s$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
25	87.317		3.178 - 1148.42	$3p^6(^1S)3d - 3p^5 3d(^3P^{\circ})4s$	$g^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		315
15	87.680		0.0 - 1140.51	$3p^6(^1S)3d - 3p^5 3d(^3P^{\circ})4s$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		315
40	91.527		0.0 - 1092.57	$3p^6(^1S)3d - 3p^6(^1S)4f$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		207
60	91.790		3.178 - 1092.62	$3p^6(^1S)3d - 3p^6(^1S)4f$	$g^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		207
10	128.273		0.0 - 779.600	$3p^6(^1S)3d - 3p^6(^1S)4p$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1085
120	128.796		3.178 - 779.600	$3p^6(^1S)3d - 3p^6(^1S)4p$	$g^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		1085
70	129.258		0.0 - 773.647	$3p^6(^1S)3d - 3p^6(^1S)4p$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1085
400	144.216		0.0 - 693.404	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^3F)$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1085
100	144.323		0.0 - 692.890	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^3F)$	$g^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		1085
80	144.880		3.178 - 693.404	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^3F)$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		1085
500	144.988		3.178 - 692.890	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^3F)$	$g^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		1085

NI X — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
100	145.061		0.0 - 689.365	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1P)$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
400	145.733		3.178 - 689.365	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1P)$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
250	146.081		0.0 - 684.552	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1P)$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
600	158.377		3.178 - 634.583	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1F)$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
600	159.977		0.0 - 625.091	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1F)$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
40	160.794		3.178 - 625.091	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1F)$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
150	184.937		0.0 - 540.725	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1D)$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
250	192.599		3.178 - 522.391	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1D)$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
170	197.405		3.178 - 509.751	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1G)$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085
150	197.909		0.0 - 505.283	$3p^6(^1S)3d - 3p^5(^2P^{\circ})3d^2(^1G)$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		1085

NICKEL XI (Ni¹⁰⁺), Z = 28
Ground State $1s^22s^22p^63s^23p^6(^1S_0)$ (18 electrons)
Ionization Potential [2 589 000] cm^{-1} ; [321.0] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
20	62.730		0.0 - 1594.13	$3s^23p^6 - 3s^23p^54d$	$g^1S - (^3\frac{3}{2})^{\circ}$	0 - 1		207
40	63.641		0.0 - 1571.31	$3s^23p^6 - 3s^23p^54d$	$g^1S - (^3\frac{3}{2})^{\circ}$	0 - 1		207
80	77.393		0.0 - 1292.11	$3s^23p^6 - 3s^23p^5(^2P^{\circ}_{1/2})4s$	$g^1S - (^3\frac{3}{2})^{\circ}$	0 - 1		207
60	78.744		0.0 - 1269.94	$3s^23p^6 - 3s^23p^5(^2P^{\circ}_{3/2})4s$	$g^1S - (^3\frac{3}{2})^{\circ}$	0 - 1		207
30	81.138		469.31 - 1701.8	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3P^{\circ} - (^3\frac{3}{2})$	0 - 1		729
50	81.213		472.95 - 1704.3	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3P^{\circ} - (^3\frac{3}{2})$	1 - 2		729
40	81.378		472.95 - 1701.8	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3P^{\circ} - (^3\frac{3}{2})$	1 - 1		729
70	81.468		480.77 - 1708.3	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3P^{\circ} - (^3\frac{3}{2})$	2 - 3		729
50	81.732		480.77 - 1704.3	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3P^{\circ} - (^3\frac{3}{2})$	2 - 2		729
100	82.417		493.06 - 1706.4	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3F^{\circ} - (^3\frac{3}{2})$	4 - 5		729
70	82.530		496.95 - 1708.6	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3F^{\circ} - (^3\frac{3}{2})$	3 - 4		729
60	82.625		500.0+S - 1710.3+S	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3F^{\circ} - (^3\frac{3}{2})$	2 - 3		729
10	83.02		534.81 - 1739.4	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{1/2})4f$	$^3D^{\circ} - (^3\frac{3}{2})$	1 - 2		729
60	83.139		530.05 - 1732.9	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{1/2})4f$	$^3D^{\circ} - (^3\frac{3}{2})$	2 - 3		729
40	83.546		539.07 - 1736.0	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{1/2})4f$	$^3D^{\circ} - (^3\frac{3}{2})$	2 - 3		729
60	83.798		543.04 - 1736.4	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{1/2})4f$	$^1F^{\circ} - (^3\frac{3}{2})$	3 - 4		729
70	84.092		527.22 - 1716.4	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^3D^{\circ} - (^3\frac{3}{2})$	3 - 4		729
10	85.226		543.04 - 1716.4	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^1F^{\circ} - (^3\frac{3}{2})$	3 - 4		729
20	85.798		543.04 - 1708.6	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{3/2})4f$	$^1F^{\circ} - (^3\frac{3}{2})$	3 - 4	Q	729
10	93.85		673.85 - 1739.4	$3s^23p^53d - 3s^23p^4(^2P^{\circ}_{1/2})4f$	$^1P^{\circ} - (^3\frac{3}{2})$	1 - 2		729
100	148.402		0.0 - 673.85	$3s^23p^6 - 3s^23p^53d$	$g^1S - ^1P^{\circ}$	0 - 1		207
	497.8		472.95 - 673.85	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^1P^{\circ}$	1 - 1	F,P	375,1108
	517.9		480.77 - 673.85	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^1P^{\circ}$	2 - 1	F,P	375,1108
	1427.		472.95 - 543.04	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^1F^{\circ}$	1 - 3	F,P	375,1108
	1433.		469.31 - 539.07	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^3D^{\circ}$	0 - 2	F,P	375,1108
	1512.		472.95 - 539.07	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^3D^{\circ}$	1 - 2	F,P	375,1108
	1527.		469.31 - 534.81	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^3D^{\circ}$	0 - 1	F,P	375,1108
	1606.		480.77 - 543.04	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^1F^{\circ}$	2 - 3	F,P	375,1108
	1617.		472.95 - 534.81	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^3D^{\circ}$	1 - 1	F,P	375,1108
	1646.		469.31 - 530.05	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^1D^{\circ}$	0 - 2	F,P	375,1108
	1715.		480.77 - 539.07	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^3D^{\circ}$	2 - 2	F,P	375,1108
	1751.		472.95 - 530.05	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^1D^{\circ}$	1 - 2	F,P	375,1108
	1843.		472.95 - 527.22	$3s^23p^53d - 3s^23p^53d$	$^3P^{\circ} - ^3D^{\circ}$	1 - 3	F,P	375,1108

NICKEL XII (Ni¹¹⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential [2 840 000] cm⁻¹; [352] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		60.02	0.0 - 1666.1	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		854
		71.4	0.0 - 1401.0	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4s	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		854
		72.17	0.0 - 1385.6	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		854
		72.57	23.52 - 1401.6	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)4s	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		854
		72.77	0.0 - 1374.2	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)4s	g ² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		854
		74.44	454.00 + X - 1797.4 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ D - ⁴ F°	$\frac{7}{2} - \frac{9}{2}$		854
		75.62	485.57 + X - 1808.0 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ F - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		854
		75.69	527.23 + X - 1848.4 + X	3s ² 3p ⁴ (¹ D)3d - 3s ² 3p ⁴ (¹ D)4f	² G - ² H°	$\frac{9}{2} - \frac{11}{2}$		854
		75.83	492.75 + X - 1811.4 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)4f	⁴ F - ⁴ G°	$\frac{7}{2} - \frac{9}{2}$		854
	1	147.847	0.0 - 676.37	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		302
	1	152.152	0.0 - 657.24	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		302
	15	152.153	0.0 - 657.23	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		302
	5	153.174	23.52 - 676.37	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		302
	15	154.175	0.0 - 648.62	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P° - ² P	$\frac{1}{2} - \frac{3}{2}$		302
	2	157.798	23.52 - 657.24	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P° - ² P	$\frac{1}{2} - \frac{1}{2}$		302
	1	159.975	23.52 - 648.62	3s ² 3p ⁵ - 3s ² 3p ⁴ (³ P)3d	g ² P° - ² P	$\frac{1}{2} - \frac{3}{2}$		302
	2	160.554	0.0 - 622.84	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)3d	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		302
		166.856	23.52 - 622.84	3s ² 3p ⁵ - 3s ² 3p ⁴ (¹ D)3d	g ² P° - ² S	$\frac{1}{2} - \frac{1}{2}$	P	375
		883.4	454.00 + X - 567.20 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ D)3d	⁴ D - ² F	$\frac{7}{2} - \frac{7}{2}$	F,P	375,1108
		1225.	485.57 + X - 567.20 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ D)3d	⁴ F - ² F	$\frac{9}{2} - \frac{7}{2}$	F,P	375,1108
		1343.	492.75 + X - 567.20 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ D)3d	⁴ F - ² F	$\frac{7}{2} - \frac{7}{2}$	F,P	375,1108
		1366.	454.00 + X - 527.23 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ D)3d	⁴ D - ² G	$\frac{7}{2} - \frac{3}{2}$	F,P	375,1108
		1371.	454.00 + X - 526.96 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ D)3d	⁴ D - ² G	$\frac{7}{2} - \frac{7}{2}$	F,P	375,1108
		1687.	454.00 + X - 513.29 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (³ P)3d	⁴ D - ² F	$\frac{7}{2} - \frac{7}{2}$	F,P	375,1108
		1855.	513.29 + X - 567.20 + X	3s ² 3p ⁴ (³ P)3d - 3s ² 3p ⁴ (¹ D)3d	² F - ² F	$\frac{7}{2} - \frac{7}{2}$	F,P	375,1108

NICKEL XIII (Ni¹²⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [3 097 000] cm⁻¹; [384] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		56.18	47.0329 - 1827.01	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)4d	¹ D - ¹ F°	2 - 3		854
		56.39	47.0329 - 1820.38	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)4d	¹ D - ¹ D°	2 - 2		854
		56.57	0. - 1767.72	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)4d	g ³ P - ³ D°	2 - 3		854
		69.25	597.5 + D - 2041.55 + D	3s ² 3p ³ (⁴ S°)3d - 3s ² 3p ³ (⁴ S°)4f	³ D° - ³ F	3 - 4		854
		69.37	600.00 + D - 2041.55 + D	3s ² 3p ³ (⁴ S°)3d - 3s ² 3p ³ (⁴ S°)4f	³ D° - ³ F	4 - 5		854
		70.07	950.00 + L - 2377.15 + L	3s ² 3p ³ (² D°)3d - 3s ² 3p ³ (² D°)4f	³ G° - ³ H	5 - 6		854
		155.12	0. - 644.66	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 2		240
	50	157.55	47.0329 - 681.70	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	¹ D - ¹ F°	2 - 3		240,295
	35	157.730	0. - 634.00	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 3		856
	50	158.77	20.0469 - 649.84	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	0 - 1		240,256
		159.97	19.5418 - 644.66	3s ² 3p ⁴ - 3s ² 3p ³ (⁴ S°)3d	g ³ P - ³ D°	1 - 2		240
	50	161.56	47.0329 - 665.95	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	¹ D - ¹ D°	2 - 2		240,256
		161.78	97.8362 - 715.95	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	¹ S - ¹ P°	0 - 1		240
	35	164.146	0. - 609.20	3s ² 3p ⁴ - 3s ² 3p ³ (² D°)3d	g ³ P - ³ P°	2 - 2		856
		303.31	0. - 329.70	3s ² 3p ⁴ - 3s ² 3p ³	g ³ P - ³ P°	2 - 2		240
		1022.1	0. - 97.8362	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ S	2 - 0	F,P	375,1108
	0	1277.23	19.5418 - 97.8362	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ S	1 - 0	F	940
		1968.4	47.0329 - 97.8362	3s ² 3p ⁴ - 3s ² 3p ⁴	¹ D - ¹ S	2 - 0	F,P	375,1108

NICKEL XIV (Ni¹³⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [3 470 000] cm⁻¹; [430] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		62.52	53.5690 - 1653.07	3s ² 3p ³ - 3s ² 3p ² 4d	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		851
		63.50	53.5690 - 1628.37	3s ² 3p ³ - 3s ² 3p ² 4d	² D° - ² P	$\frac{3}{2} - \frac{3}{2}$		851
		64.79	560. + D - 2103.45 + D	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	$\frac{2}{2} - \frac{11}{2}$		854
		65.01	580. + R - 2118.2 + R	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ D - ⁴ F°	$\frac{2}{2} - \frac{9}{2}$		854
		65.40	600. + S - 2129.05 + S	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4f	² G - ² H°	$\frac{3}{2} - \frac{11}{2}$		854
		164.146	53.5690 - 662.77	3s ² 3p ³ - 3s ² 3p ² (¹ D)3d	² D° - ² F	$\frac{3}{2} - \frac{7}{2}$		240
		164.80	85.1267 - 691.88	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		240
		168.12	0. - 594.81	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{1}{2}$		240
		168.37	96.6738 + X - 690.56 + X	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		240
	30	169.69	0. - 589.31	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		240,856
		170.50	45.7678 - 632.29	3s ² 3p ³ - 3s ² 3p ² (¹ D)3d	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		240
	40	171.37	0. - 583.53	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		240,856
		172.16	53.5690 - 634.41	3s ² 3p ³ - 3s ² 3p ² (¹ D)3d	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		240
		177.28	96.6738 + X - 660.71 + X	3s ² 3p ³ - 3s ² 3p ² (¹ D)3d	² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		240
		177.56	85.1267 - 648.27	3s ² 3p ³ - 3s ² 3p ² (¹ D)3d	² P° - ² P	$\frac{1}{2} - \frac{1}{2}$		240
		253.69	53.5690 - 447.74	3s ² 3p ³ - 3s3p ⁴	² D° - ² P	$\frac{3}{2} - \frac{3}{2}$		240
		292.03	53.5690 - 395.99	3s ² 3p ³ - 3s3p ⁴	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		240
		302.27	0. - 330.83	3s ² 3p ³ - 3s3p ⁴	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		240
		316.53	0. - 315.926	3s ² 3p ³ - 3s3p ⁴	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		240
		1034.41	0. - 96.6738 + X	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² P°	$\frac{3}{2} - \frac{3}{2}$	F,P	726
	0	1174.72	0. - 85.1267	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² P°	$\frac{3}{2} - \frac{1}{2}$	F	442
	1	1866.75	0. - 53.5690	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² D°	$\frac{3}{2} - \frac{3}{2}$	F	442
		1964.	45.7678 - 96.6738 + X	3s ² 3p ³ - 3s ² 3p ³	² D° - ² P°	$\frac{3}{2} - \frac{3}{2}$	F,P	375,726

NICKEL XV (Ni¹⁴⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [3 740 000] cm⁻¹; [464] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		49.39	14.9175 - 2039.6	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ P°	1 - 0		970
		49.58	0. - 2016.9	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	0 - 1		970
		49.626	27.3765 - 2042.4	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ F°	2 - 3		970
		49.914	14.9175 - 2018.4	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	1 - 2		970
		50.172	27.3765 - 2020.5	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	2 - 3		970
		50.249	62.8521 - 2052.9	3s ² 3p ² - 3s ² 3p4d	¹ D - ¹ F°	2 - 3		970
		50.947	111.7029 + S - 2074.5 + S	3s ² 3p ² - 3s ² 3p4d	¹ S - ¹ P°	0 - 1		970
		58.330	574.33 - 2288.7	3s ² 3p3d - 3s ² 3p4f	¹ D° - ¹ F	2 - 3		970
		58.715	27.3765 - 1730.52	3s ² 3p ² - 3s ² 3p4s	g ³ P - ³ P°	2 - 2		970
		59.58	62.8521 - 1741.29	3s ² 3p ² - 3s ² 3p4s	¹ D - ¹ P°	2 - 1		854
		60.890	563.82 + D - 2206.1 + D	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	4 - 5		970
		61.152	570.00 + D - 2205.3 + D	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	3 - 4		970
		62.369	570.00 + R - 2173.4 + R	3s ² 3p3d - 3s ² 3p4f	³ P° - ³ D	0 - 1		970
		63.069	585.16 - 2170.7	3s ² 3p3d - 3s ² 3p4f	³ D° - ³ F	3 - 4		970
		64.635	638.46 - 2185.7	3s ² 3p3d - 3s ² 3p4f	¹ F° - ¹ G	3 - 4		970
		65.415	590.0 + K - 2118.7 + K	3s ² 3p3d - 3s ² 3p4f	¹ P° - ¹ D	1 - 2		970
		173.73	62.8521 - 638.46	3s ² 3p ² - 3s ² 3p3d	¹ D - ¹ F°	2 - 3		240
		174.99	14.9175 - 586.41	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	1 - 2		240

NI XV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
20		176.10	14.9175 - 582.76	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3D^\circ$	1 - 1		240	
		176.70	0. - 565.93	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3P^\circ$	0 - 1		240	
		178.75	14.9175 - 574.33	$3s^23p^2 - 3s^23p3d$	$g^3P - ^1D^\circ$	1 - 2		240	
		178.87	27.3765 - 586.41	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3D^\circ$	2 - 2		240	
		179.28	27.3765 - 585.16	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3D^\circ$	2 - 3		240,856	
		180.06	27.3765 - 582.76	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3D^\circ$	2 - 1		240	
		184.89	14.9175 - 555.84	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3P^\circ$	1 - 2		240	
		189.21	27.3765 - 555.84	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3P^\circ$	2 - 2		240	
		195.52	62.8521 - 574.33	$3s^23p^2 - 3s^23p3d$	$^1D - ^1D^\circ$	2 - 2		240	
		209.18	0. - 478.01	$3s^23p^2 - 3s3p^3$	$g^3P - ^3S^\circ$	0 - 1		240	
		215.94	14.9175 - 478.01	$3s^23p^2 - 3s3p^3$	$g^3P - ^3S^\circ$	1 - 1		240	
		221.93	27.3765 - 478.01	$3s^23p^2 - 3s3p^3$	$g^3P - ^3S^\circ$	2 - 1		240	
		224.04	62.8521 - 509.22	$3s^23p^2 - 3s3p^3$	$^1D - ^1P^\circ$	2 - 1		240	
		281.4	62.8521 - 418.24+M	$3s^23p^2 - 3s3p^3$	$^1D - ^1D^\circ$	2 - 2	P	375	
		284.2	27.3765 - 379.24+L	$3s^23p^2 - 3s3p^3$	$g^3P - ^3P^\circ$	2 - 2	P	375	
		311.73	14.9175 - 335.70	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^\circ$	1 - 2		240	
	200		319.03	27.3765 - 340.84	$3s^23p^2 - 3s3p^3$	$g^3P - ^3D^\circ$	2 - 3		437
			1033.	14.9175 - 111.7029+S	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1S$	1 - 0	F,P	375,1108
		1186.	27.3765 - 111.7029+S	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1S$	2 - 0	F,P	375,1108	

NICKEL XVI (Ni^{15+}), Z = 28
Ground State $1s^22s^22p^63s^23p(^2P_{1/2}^\circ)$ (13 electrons)
Ionization Potential [4 020 000] cm^{-1} ; [499] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
30		47.184	0.0 - 2119.36	$3s^23p - 3s^24d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$		854	
		47.772	27.7614 - 2121.04	$3s^23p - 3s^24d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		854	
		57.137	1749.82+S - 3500.00+S	$3s3p3d - 3s3p4f$	$^4F - ^4G$	$\frac{1}{2} - \frac{1}{2}$		854	
		57.257	1753.49+S - 3500.00+S	$3s3p3d - 3s3p4f$	$^4F - ^4G$	$\frac{3}{2} - \frac{3}{2}$		854	
		57.349	1756.29+S - 3500.00+S	$3s3p3d - 3s3p4f$	$^4F - ^4G$	$\frac{5}{2} - \frac{5}{2}$		854	
		59.217	539.87 - 2228.57	$3s^23d - 3s^24f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		854	
		59.336	543.12 - 2228.49	$3s^23d - 3s^24f$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		854	
		185.23	0.0 - 539.87	$3s^23p - 3s^23d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{1}{2}$		240	
		194.04	27.7614 - 543.12	$3s^23p - 3s^23d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		240	
		218.39	0.0 - 457.90	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		240	
		223.09	0.0 - 448.23	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		240	
		232.48	27.7614 - 457.90	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	$\frac{5}{2} - \frac{5}{2}$		437	
	50		237.84	27.7614 - 448.23	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		437
			239.53	0.0 - 417.48	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		240
			309.40	27.7614 - 350.97	$3s^23p - 3s3p^2$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		240

NICKEL XVII (Ni¹⁶⁺), Z = 28
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential 4 607 800 cm⁻¹; 571.30 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	30	12.830	0.0 - 7794.2	3s ² - 2p ⁵ 3s ² 3d	g ¹ S - ¹ P°	0 - 1		716
		30.91	0.0 - 3235.2	3s ² - 3s5p	g ¹ S - ¹ P°	0 - 1		266
	6	33.249	264.62 - 3272.23	3s3p - 3s5d	³ P° - ³ D	0 - 1		237
	3	33.340	272.70 - 3272.10	3s3p - 3s5d	³ P° - ³ D	1 - 2		237
	3	33.567	293.77 - 3272.89	3s3p - 3s5d	³ P° - ³ D	2 - 3		237
		33.96	775.70 - 3720.4	3s3d - 3s6f	³ D - ³ F°	3 - 4		266
		35.698	293.77 - 3095.05	3s3p - 3s5s	³ P° - ³ S	2 - 1		851
		38.96	864.52 - 3431.2	3s3d - 3s5f	¹ D - ¹ F°	2 - 3		266
	3	39.346	771.23 - 3312.78	3s3d - 3s5f	³ D - ³ F°	1 - 2		237
	6	39.373	773.02 - 3312.81	3s3d - 3s5f	³ D - ³ F°	2 - 3		237
	10	39.415	775.70 - 3312.83	3s3d - 3s5f	³ D - ³ F°	3 - 4		237
		42.0	293.77 - 2674.8	3s3p - 3p4p	³ P° - ³ D	2 - 3		851
	20	42.855	0.0 - 2333.45	3s ² - 3s4p	g ¹ S - ¹ P°	0 - 1		237
	6	44.850	264.62 - 2494.25	3s3p - 3s4d	³ P° - ³ D	0 - 1		237
	10	44.995	272.70 - 2495.34	3s3p - 3s4d	³ P° - ³ D	1 - 2		237
	1	45.018	272.70 - 2494.25	3s3p - 3s4d	³ P° - ³ D	1 - 1		237
	20	45.382	293.77 - 2497.35	3s3p - 3s4d	³ P° - ³ D	2 - 3		237
	6	45.424	293.77 - 2495.34	3s3p - 3s4d	³ P° - ³ D	2 - 2		237
		47.663	401.316 - 2499.38	3s3p - 3s4d	¹ P° - ¹ D	1 - 2		854
		50.958	638.87 - 2601.27	3p ² - 3s4f	¹ D - ¹ F°	2 - 3		854
	6	52.000	264.62 - 2187.70	3s3p - 3s4s	³ P° - ³ S	0 - 1		237
	10	52.224	272.70 - 2187.70	3s3p - 3s4s	³ P° - ³ S	1 - 1		237
	6	52.802	293.77 - 2187.70	3s3p - 3s4s	³ P° - ³ S	2 - 1		237
		54.384	1059.55 + N - 2898.32 + N	3p3d - 3p4f	³ F° - ³ F	3 - 4		970
		54.451	1062.60 + D - 2899.11 + D	3p3d - 3p4f	³ F° - ³ G	4 - 5		970
		54.628	1059.55 + N - 2890.11 + N	3p3d - 3p4f	³ F° - ³ G	3 - 4		970
		55.007	1111.00 + L - 2928.95 + L	3p3d - 3p4f	¹ D° - ¹ F	2 - 3		970
	6	55.136	771.23 - 2584.93	3s3d - 3s4f	³ D - ³ F°	1 - 2		970,237
	10	55.186	773.02 - 2585.07	3s3d - 3s4f	³ D - ³ F°	2 - 3		970,237
	20	55.258	775.70 - 2585.39	3s3d - 3s4f	³ D - ³ F°	3 - 4		970,237
		55.361	1080.00 + P - 2886.33 + P	3p3d - 3p4f	³ P° - ³ D	0 - 1		970
		55.511	1100.00 + P - 2901.44 + P	3p3d - 3p4f	³ P° - ³ D	1 - 2		970
		55.606	1105.00 + N - 2903.37 + N	3p3d - 3p4f	³ D° - ³ D	2 - 3		970
		55.887	1109.00 + N - 2898.32 + N	3p3d - 3p4f	³ D° - ³ F	3 - 4		970
		55.933	1099.00 + N - 2886.85 + N	3p3d - 3p4f	³ D° - ³ F	1 - 2		970
		56.08	1105.00 + N - 2888.10 + N	3p3d - 3p4f	³ D° - ³ G	2 - 3		970
		57.348	1200.00 + S - 2943.74 + S	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		970
		57.573	864.52 - 2601.27	3s3d - 3s4f	¹ D - ¹ F°	2 - 3		970
		197.39	264.62 - 771.23	3s3p - 3s3d	³ P° - ³ D	0 - 1		854
		199.87	272.70 - 773.02	3s3p - 3s3d	³ P° - ³ D	1 - 2		854
		200.59	272.70 - 771.23	3s3p - 3s3d	³ P° - ³ D	1 - 1	P	854
		207.50	293.77 - 775.70	3s3p - 3s3d	³ P° - ³ D	2 - 3		854
		208.66	293.77 - 773.02	3s3p - 3s3d	³ P° - ³ D	2 - 2		854
		215.89	401.316 - 864.52	3s3p - 3s3d	¹ P° - ¹ D	1 - 2		854
		249.180	0.0 - 401.316	3s ² - 3s3p	g ¹ S - ¹ P°	0 - 1		240
		251.97	272.70 - 669.52	3s3p - 3p ²	³ P° - ³ P	1 - 2		854
		263.7	264.62 - 643.84	3s3p - 3p ²	³ P° - ³ P	0 - 1	P	854
		266.15	293.77 - 669.52	3s3p - 3p ²	³ P° - ³ P	2 - 2		854
		269.44	272.70 - 643.84	3s3p - 3p ²	³ P° - ³ P	1 - 1		854
		273.10	272.70 - 638.87	3s3p - 3p ²	³ P° - ¹ D	1 - 2	P	375,854
		281.50	272.70 - 627.94	3s3p - 3p ²	³ P° - ³ P	1 - 0		854
		283.	401.316 - 754.7	3s3p - 3p ²	¹ P° - ¹ S	1 - 0	P	375,988
		285.66	293.77 - 643.84	3s3p - 3p ²	³ P° - ³ P	2 - 1		854
		289.77	293.77 - 638.87	3s3p - 3p ²	³ P° - ¹ D	2 - 2	P	375,854

NI XVII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	12	366.7 420.96	0.0 - 272.70 401.316 - 638.87	$3s^2 - 3s3p$ $3s3p - 3p^2$	$g^1S - ^3P^o$ $^1P^o - ^1D$	0 - 1 1 - 2	P	1131 854

NICKEL XVIII (Ni¹⁷⁺), Z = 28
Ground State $1s^2 2s^2 2p^6 3s(^2S_{1/2})$ (11 electrons)
Ionization Potential 4 896 200 cm^{-1} ; 607.06 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		14.10	0.0 - 7092.	$2p^6 3s - 2p^6 3s^2$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		265
		14.37	0.0 - 6959.	$2p^6 3s - 2p^6 3s^2$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		265
	1	24.881	311.976 - 4330.99	$2p^6 3p - 2p^6 8d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	3	25.070	342.501 - 4331.29	$2p^6 3p - 2p^6 8d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		237
	6	26.020	0.0 - 3843.2	$2p^6 3s - 2p^6 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		237
	3	26.046	0.0 - 3839.36	$2p^6 3s - 2p^6 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		237
	10	26.218	342.501 - 4156.63	$2p^6 3p - 2p^6 7d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{5}{2}$		237
		27.98	765.64 - 4339.53	$2p^6 3d - 2p^6 8f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		237
	20	27.982	311.976 - 3885.59	$2p^6 3p - 2p^6 6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	3	28.018	770.30 - 4339.33	$2p^6 3d - 2p^6 8f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		237
	35	28.220	342.501 - 3886.05	$2p^6 3p - 2p^6 6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	3	29.383	765.64 - 4168.88	$2p^6 3d - 2p^6 7f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{5}{2}$		237
	3	29.422	770.30 - 4169.02	$2p^6 3d - 2p^6 7f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		237
	35	29.779	0.0 - 3358.07	$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		237
	20	29.829	0.0 - 3352.44	$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		237
	20	31.845	765.64 - 3905.76	$2p^6 3d - 2p^6 6f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		237
	20	31.890	770.30 - 3905.98	$2p^6 3d - 2p^6 6f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		237
	60	32.034	311.976 - 3433.54	$2p^6 3p - 2p^6 5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	90	32.340	342.501 - 3434.60	$2p^6 3p - 2p^6 5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{5}{2}$		237
	60	36.990	765.64 - 3468.25	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		237
	60	37.049	770.30 - 3468.29	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		237
	125	41.015	0.0 - 2438.13	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		237
	90	41.218	0.0 - 2426.12	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		237
	200	43.814	311.976 - 2594.35	$2p^6 3p - 2p^6 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	250	44.365	342.501 - 2596.53	$2p^6 3p - 2p^6 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{5}{2}$		237
	35	44.405	342.501 - 2594.35	$2p^6 3p - 2p^6 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		237
	20	50.253	311.976 - 2301.63	$2p^6 3p - 2p^6 4s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		237
	35	51.042	342.501 - 2301.63	$2p^6 3p - 2p^6 4s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		237
	200	52.615	765.64 - 2666.24	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		237
	250	52.720	770.30 - 2667.11	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		237
		59.950	770.30 - 2438.13	$2p^6 3d - 2p^6 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		854
		60.212	765.64 - 2426.12	$2p^6 3d - 2p^6 4p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		854
	110	114.46	2594.35 - 3468.25	$2p^6 4d - 2p^6 5f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		1091
	110	114.74	2596.53 - 3468.29	$2p^6 4d - 2p^6 5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		1091
	200	123.965	2666.24 - 3472.92	$2p^6 4f - 2p^6 5g$	$^2F^o - ^2G$	$\frac{1}{2} - \frac{3}{2}$	P	753,1091
	200	124.050	2667.11 - 3473.24	$2p^6 4f - 2p^6 5g$	$^2F^o - ^2G$	$\frac{1}{2} - \frac{5}{2}$	P	753,1091
	85	220.428	311.976 - 765.64	$2p^6 3p - 2p^6 3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		753,730
	150	233.756	342.501 - 770.30	$2p^6 3p - 2p^6 3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		753,730
	3	236.36	342.501 - 765.64	$2p^6 3p - 2p^6 3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		237
	350	291.970	0.0 - 342.501	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		753,730
	300	320.537	0.0 - 311.976	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		753,437

NICKEL XIX (Ni¹⁸⁺), Z = 28
Ground State 1s²2s²2p⁶(¹S₀) (10 electrons)
Ionization Potential 12 430 000 cm⁻¹; 1541 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		8.487	0.0 - 11783.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})8d	g ¹ S - (³ / ₂) ^o	0 - 1	P	643
		8.512	0.0 - 11748.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})7d	g ¹ S - (³ / ₂) ^o	0 - 1	P	643
		8.614	0.0 - 11609.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})7d	g ¹ S - (³ / ₂) ^o	0 - 1	P	643
10		8.725	0.0 - 11461.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})6d	g ¹ S - (³ / ₂) ^o	0 - 1		716
20		8.838	0.0 - 11315.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})6d	g ¹ S - (³ / ₂) ^o	0 - 1		716
30		9.130	0.0 - 10953.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})5d	g ¹ S - (³ / ₂) ^o	0 - 1		716
		9.140	0.0 - 10941.	2s ² 2p ⁶ - 2s2p ⁶ 4p	g ¹ S - ¹ P ^o	0 - 1		1094
		9.153	0.0 - 10925.	2s ² 2p ⁶ - 2s2p ⁶ 4p	g ¹ S - ³ P ^o	0 - 1		1094
30		9.236	0.0 - 10827.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})5d	g ¹ S - (³ / ₂) ^o	0 - 1		716
		9.262	0.0 - 10797.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})5d	g ¹ S - (³ / ₂) ^o	0 - 1		1094
8		9.441						1089
15		9.545						1089
30		9.967	0.0 - 10033.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4d	g ¹ S - (³ / ₂) ^o	0 - 1	P	643,716
30		10.102	0.0 - 9899.0	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4d	g ¹ S - (³ / ₂) ^o	0 - 1		716
		10.157	0.0 - 9845.4	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4d	g ¹ S - (³ / ₂) ^o	0 - 1		1094
20		10.306	0.0 - 9703.1	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4s	g ¹ S - (³ / ₂) ^o	0 - 1		716
20		10.417	0.0 - 9599.7	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4s	g ¹ S - (³ / ₂) ^o	0 - 1		716
90		11.529	0.0 - 8673.8	2s ² 2p ⁶ - 2s2p ⁶ 3p	g ¹ S - ¹ P ^o	0 - 1		643
70		11.587	0.0 - 8630.4	2s ² 2p ⁶ - 2s2p ⁶ 3p	g ¹ S - ³ P ^o	0 - 1		643
150		12.430	0.0 - 8045.0	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})3p	g ¹ S - (³ / ₂) ^o	0 - 1		643
120		12.654	0.0 - 7902.6	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3d	g ¹ S - (³ / ₂) ^o	0 - 1		643
50		12.809	0.0 - 7807.0	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3d	g ¹ S - (³ / ₂) ^o	0 - 1		643
80		13.777	0.0 - 7258.5	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})3s	g ¹ S - (³ / ₂) ^o	0 - 1		643
100		14.040	0.0 - 7122.5	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3s	g ¹ S - (³ / ₂) ^o	0 - 1		643
36		14.081	0.0 - 7101.8	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3s	g ¹ S - (³ / ₂) ^o	0 - 2	F	464
		33.25	7925.9 + C - 10933. + C	2s ² 2p ³ 3d - 2s ² 2p ⁵ (² P _{3/2})5f	³ F ^o - ³ F ^o	4 - 5	P	1055
		40.650	7436.2 + C - 9896.2 + C	2s ² 2p ³ 3p - 2s ² 2p ⁵ 4d	¹ P - ¹ D ^o	1 - 2		395
		40.731	7404.2 + C - 9859.3 + C	2s ² 2p ³ 3p - 2s ² 2p ⁵ 4d	³ D - ³ D ^o	2 - 3		395
		41.132	7428.1 + C - 9859.3 + C	2s ² 2p ³ 3p - 2s ² 2p ⁵ 4d	³ D - ³ F ^o	3 - 4		395
		41.385	7453.9 + C - 9870.2 + C	2s ² 2p ³ 3p - 2s ² 2p ⁵ 4d	³ P - ³ F ^o	2 - 3		395

NICKEL XX (Ni¹⁹⁺), Z = 28
Ground State 1s²2s²2p⁵(²P_{3/2}) (9 electrons)
Ionization Potential [13 290 000] cm⁻¹; [1648] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10		9.338	143.980 - 10853.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)4d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		1094,716
30		9.366	0.0 - 10677.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)4d	g ² P ^o - ² F	$\frac{1}{2} - \frac{5}{2}$		1094,716
		9.385	0.0 - 10655.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)4d	g ² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		1094
		9.385	0.0 - 10655.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)4d	g ² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		1094
10		9.446	0.0 - 10581.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ² P	$\frac{3}{2} - \frac{3}{2}$	Q	716
		9.455	0.0 - 10576.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		1094
20		9.497	143.980 - 10674.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)4d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		1094,716
30		9.558	0.0 - 10462.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		1094,716
		9.581	143.980 - 10581.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ² P	$\frac{3}{2} - \frac{3}{2}$		1094
10		9.630	143.980 - 10530.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ⁴ F	$\frac{3}{2} - \frac{7}{2}$	Q	716
10		9.693	0.0 - 10317.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4s	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		1094,716
		9.821	0.0 - 10182.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4s	g ² P ^o - ² P	$\frac{3}{2} - \frac{3}{2}$		1094

NI XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		10.772	0.0 - 9283.3	$2s^2 2p^5 - 2s 2p^5(^1P^o)3p$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		10.918	143.980 - 9303.2	$2s^2 2p^5 - 2s 2p^5(^1P^o)3p$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		10.936	143.980 - 9288.1	$2s^2 2p^5 - 2s 2p^5(^1P^o)3p$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094
		10.982	143.980 - 9249.8	$2s^2 2p^5 - 2s 2p^5(^1P^o)3p$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		11.158	0.0 - 8962.2	$2s^2 2p^5 - 2s 2p^5(^3P^o)3p$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094
		11.176	143.980 - 9091.7	$2s^2 2p^5 - 2s 2p^5(^3P^o)3p$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094
		11.226	143.980 - 9051.9	$2s^2 2p^5 - 2s 2p^5(^3P^o)3p$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		11.282	143.980 - 9007.7	$2s^2 2p^5 - 2s 2p^5(^3P^o)3p$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$		1094
6		11.733	143.980 - 8667.0	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		964
21		11.779	0.0 - 8495.4	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094,964
		11.787	0.0 - 8483.7	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		1094
32		11.832	0.0 - 8451.7	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1094,964
		11.846	0.0 - 8441.7	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094
18		11.874	0.0 - 8422.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1094,964
21		11.961	0.0 - 8360.5	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094,964
22		11.974	0.0 - 8353.5	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094,964
		11.991	143.980 - 8483.7	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		1094
8		12.006	0.0 - 8329.2	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		1094,964
10		12.042	0.0 - 8304.3	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		1094,964
10		12.079	143.980 - 8422.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094,964
18		12.112	0.0 - 8256.3	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^2F$	$\frac{1}{2} - \frac{5}{2}$		1094,964
15		12.130	0.0 - 8244.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094,964
8		12.157	0.0 - 8225.7	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094,964
6		12.181	143.980 - 8353.5	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094,964
		12.345	143.980 - 8244.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	Q	1094
9		12.927	0.0 - 7735.7	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{5}{2}$		1094,964
5		13.032	0.0 - 7673.3	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094,964
6		13.075	0.0 - 7648.2	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094,964
		13.135	0.0 - 7613.2	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$		1094
7		13.161	143.980 - 7742.2	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		1094,964
8		13.256	0.0 - 7543.8	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094,964
5		13.282	143.980 - 7673.3	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094,964
10		13.309	0.0 - 7513.7	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094,716
		13.39	1202.211 - 8671. + K	$2s 2p^6 - 2s 2p^5(^3P^o)3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	P	375
300		83.180	0.0 - 1202.211	$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	1104,1091
300		94.497	143.980 - 1202.211	$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	1104,1091
		694.54	0.0 - 143.980	$2s^2 2p^5 - 2s^2 2p^5$	$g^2P^o - g^2P^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	1120,1104

NICKEL XXI (Ni^{20+}), Z = 28
Ground State $1s^2 2s^2 2p^4(^3P_2)$ (8 electrons)
Ionization Potential [14 160 000] cm^{-1} ; [1756] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		8.775	128.290 - 11524.	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$g^3P - ^3D^o$	1 - 2		1094
		8.802	128.290 - 11489.	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$g^3P - ^3P^o$	1 - 1		1094
		8.849	0.0 - 11301.	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)4d$	$g^3P - ^3D^o$	2 - 3		1094
10		8.886	128.290 - 11394.	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$g^3P - ^3D^o$	1 - 1	Q	716
		8.960	212.190 - 11373.	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$^1D - ^3F^o$	2 - 3		1094
20		9.016	0.0 - 11091.	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3		1094,716

NI XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		9.139	128.290 - 11070.	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2		1094
20	11.023	11.023	0.0 - 9071.2	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^1F^o$	2 - 3	Q	716
0	11.073	11.073	92.814 - 9123.7	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^1P^o$	0 - 1	Q	716
20	11.123	11.123	0.0 - 8999.8	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	2 - 1	Q	716
20	11.159	11.159	128.290 - 9086.1	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^1D^o$	1 - 2	Q	716
30	11.203	11.203	0.0 - 8924.6	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	2 - 2	Q	716
		11.229	128.290 - 9033.8	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^3D^o$	1 - 2		1094
		11.239	0.0 - 8895.1	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^1F^o$	2 - 3		1094
30	11.262	11.262	212.190 - 9086.1	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^1D^o$	2 - 2	Q	716
		11.272	128.290 - 8999.8	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	1 - 1		1094
		11.288	212.190 - 9071.2	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^1F^o$	2 - 3		634
40	11.302	11.302	0.0 - 8853.5	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3D^o$	2 - 2		1094,716
		11.310	0.0 - 8850.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^1P^o$	2 - 1		634
		11.318	0.0 - 8835.5	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3D^o$	2 - 3		1094
214	11.336	11.336	0.0 - 8819.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	2 - 2		1067
		11.345	0.0 - 8814.5	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^1P^o$	2 - 1		634
		11.416	0.0 - 8759.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3F^o$	2 - 3		634
		11.435	128.290 - 8872.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3S^o$	1 - 1		634
		11.452	212.190 - 8944.3	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^3F^o$	2 - 2		634
		11.478	212.190 - 8924.6	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^3P^o$	2 - 2		1094
		11.517	212.190 - 8895.1	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$^1D - ^1F^o$	2 - 3		1094
		11.539	0.0 - 8666.3	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 3		1094
		11.656	92.814 - 8672.1	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	0 - 1		634
20	11.691	11.691	212.190 - 8759.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$^1D - ^3F^o$	2 - 3	Q	716
		11.818	212.190 - 8674.1	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3d$	$^1D - ^3D^o$	2 - 2	Q	716
		12.079	128.290 - 8407.1	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$g^3P - ^3P^o$	1 - 2		1094
		12.181	212.190 - 8421.8	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$^1D - ^1P^o$	2 - 1		1094
		12.208	0.0 - 8191.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	2 - 3		1094
		12.245	128.290 - 8294.9	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$g^3P - ^3P^o$	1 - 0		1094
		12.277	0.0 - 8145.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	2 - 2		1094
		12.370	128.290 - 8211.0	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^1D^o$	1 - 2		1094
		12.435	0.0 - 8035.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1		1094
30	12.472	12.472	128.290 - 8145.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	1 - 2		1094,716
		12.502	212.190 - 8211.0	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$^1D - ^1D^o$	2 - 2		1094
		12.592	92.814 - 8035.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	0 - 1		1094
		12.656	128.290 - 8035.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1 - 1		1094
50	69.62	69.62	0.0 - 1436.35	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^1P^o$	2 - 1		1091
10	74.43	74.43	92.814 - 1436.35	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^1P^o$	0 - 1		1091
4	76.45	76.45	128.290 - 1436.35	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^1P^o$	1 - 1		1091
30	78.28	78.28	1125.98 - 2403.45	$2s2p^5 - 2p^6$	$^3P^o - ^1S$	1 - 0		1091
250	81.69	81.69	212.190 - 1436.35	$2s^2 2p^4 - 2s2p^5$	$^1D - ^1P^o$	2 - 1		1091
250	88.81	88.81	0.0 - 1125.98	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 1		1091
200	93.91	93.91	128.290 - 1193.14	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 0		1091
375	95.85	95.85	0.0 - 1043.27	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 2		1091
250	96.79	96.79	92.814 - 1125.98	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	0 - 1		1091
110	97.13	97.13	406.75 - 1436.35	$2s^2 2p^4 - 2s2p^5$	$^1S - ^1P^o$	0 - 1		1091
150	100.23	100.23	128.290 - 1125.98	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 1		1091
250	103.40	103.40	1436.35 - 2403.45	$2s2p^5 - 2p^6$	$^1P^o - ^1S$	1 - 0		1091
300	109.29	109.29	128.290 - 1043.27	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 2		1091
4	109.44	109.44	212.190 - 1125.98	$2s^2 2p^4 - 2s2p^5$	$^1D - ^3P^o$	2 - 1		1091
80	120.33	120.33	212.190 - 1043.27	$2s^2 2p^4 - 2s2p^5$	$^1D - ^3P^o$	2 - 2		1091
		245.9	0.0 - 406.75	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1104
		359.1	128.290 - 406.75	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1120
		471.3	0.0 - 212.190	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F	1120

NI XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		514.0	212.190 - 406.75	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1104
		779.5	0.0 - 128.290	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F	1120
		837.69	92.814 - 212.190	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1104
		1077.	0.0 - 92.814	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1104
		1192.	128.290 - 212.190	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 2	F,P	375,1104

NICKEL XXII (Ni^{21+}), $Z = 28$
Ground State $1s^2 2s^2 2p^3 (^4S_{3/2})$ (7 electrons)
Ionization Potential [15 280 000] cm^{-1} ; [1894] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	140	10.791	0.0 - 9267.0	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$g^4S^\circ - ^4P$			1067
	20	10.820	400.12 - 9642.3	$2s^2 2p^3 - 2s^2 2p^2(^1S)3d$	$^2P^\circ - ^2D$			716
	20	10.841	209.38 - 9426.0	$2s^2 2p^3 - 2s^2 2p^2(^1D)3d$	$^2D^\circ - ^2D$		Q	716
		10.94	209.38 - 9350.2	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2D^\circ - ^2D$		P	877
	20	11.002	209.38 - 9300.3	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2D^\circ - ^2F$		Q	716
		11.170	400.12 - 9350.2	$2s^2 2p^3 - 2s^2 2p^2(^3P)3d$	$^2P^\circ - ^2D$		Q	634
	10	71.48	0.0 - 1398.94	$2s^2 2p^3 - 2s^2 2p^4$	$g^4S^\circ - ^2P$			1091
	4	71.54	943.04 - 2340.89	$2s^2 2p^4 - 2p^5$	$^4P - ^2P^\circ$			1091
	30	72.52	157.52 - 1536.48	$2s^2 2p^3 - 2s^2 2p^4$	$^2D^\circ - ^2P$			1091
	4	74.37	0.0 - 1344.63	$2s^2 2p^3 - 2s^2 2p^4$	$g^4S^\circ - ^2S$			1091
	10	74.49	848.10 - 2190.55	$2s^2 2p^4 - 2p^5$	$^4P - ^2P^\circ$			1091
	4	80.16	943.04 - 2190.55	$2s^2 2p^4 - 2p^5$	$^4P - ^2P^\circ$			1091
	50	80.55	157.52 - 1398.94	$2s^2 2p^3 - 2s^2 2p^4$	$^2D^\circ - ^2P$			1091
	4	81.04	302.45 - 1536.48	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2P$			1091
	250	84.06	209.38 - 1398.94	$2s^2 2p^3 - 2s^2 2p^4$	$^2D^\circ - ^2P$			1091
	110	84.24	157.52 - 1344.63	$2s^2 2p^3 - 2s^2 2p^4$	$^2D^\circ - ^2S$			1091
	30	85.02	0.0 - 1176.18	$2s^2 2p^3 - 2s^2 2p^4$	$g^4S^\circ - ^2D$			1091
	50	85.86	1176.18 - 2340.89	$2s^2 2p^4 - 2p^5$	$^2D - ^2P^\circ$			1091
	250	88.00	400.12 - 1536.48	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2P$			1091
	50	91.20	302.45 - 1398.94	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2P$			1091
	150	95.95	302.45 - 1344.63	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2S$			1091
	300	98.16	157.52 - 1176.18	$2s^2 2p^3 - 2s^2 2p^4$	$^2D^\circ - ^2D$			1091
	80	98.58	1176.18 - 2190.55	$2s^2 2p^4 - 2p^5$	$^2D - ^2P^\circ$			1091
	80	100.12	400.12 - 1398.94	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2P$			1091
	300	100.60	209.38 - 1203.46	$2s^2 2p^3 - 2s^2 2p^4$	$^2D^\circ - ^2D$			1091
	150	101.31	1203.46 - 2190.55	$2s^2 2p^4 - 2p^5$	$^2D - ^2P^\circ$			1091
	110	103.31	0.0 - 967.96	$2s^2 2p^3 - 2s^2 2p^4$	$g^4S^\circ - ^4P$			1091
	4	105.88	400.12 - 1344.63	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2S$			1091
	375	106.04	0.0 - 943.04	$2s^2 2p^3 - 2s^2 2p^4$	$g^4S^\circ - ^4P$			1091
	80	106.16	1398.94 - 2340.89	$2s^2 2p^4 - 2p^5$	$^2P - ^2P^\circ$			1091
	110	114.45	302.45 - 1176.18	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2D$			1091
	300	117.91	0.0 - 848.10	$2s^2 2p^3 - 2s^2 2p^4$	$g^4S^\circ - ^4P$			1091
	30	118.21	1344.63 - 2190.55	$2s^2 2p^4 - 2p^5$	$^2S - ^2P^\circ$			1091
	50	124.31	1536.48 - 2340.89	$2s^2 2p^4 - 2p^5$	$^2P - ^2P^\circ$			1091
	30	124.48	400.12 - 1203.46	$2s^2 2p^3 - 2s^2 2p^4$	$^2P^\circ - ^2D$			1091
	110	126.32	1398.94 - 2190.55	$2s^2 2p^4 - 2p^5$	$^2P - ^2P^\circ$			1091
		249.9	0.0 - 400.12	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^\circ - ^2P^\circ$		F,P	375,1091
		330.6	0.0 - 302.45	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^\circ - ^2P^\circ$		F,P	375,1091
		412.2	157.52 - 400.12	$2s^2 2p^3 - 2s^2 2p^3$	$^2D^\circ - ^2P^\circ$		F,P	375,1120
		477.6	0.0 - 209.38	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^\circ - ^2D^\circ$		F	1120
		524.3	209.38 - 400.12	$2s^2 2p^3 - 2s^2 2p^3$	$^2D^\circ - ^2P^\circ$		F,P	375,1091
		634.8	0.0 - 157.52	$2s^2 2p^3 - 2s^2 2p^3$	$g^4S^\circ - ^2D^\circ$		F	1120

NI XXII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		689.9	157.52 - 302.45	$2s^2 2p^3 - 2s^2 2p^3$	$^2D^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1091
		1024.	302.45 - 400.12	$2s^2 2p^3 - 2s^2 2p^3$	$^2P^\circ - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F,P	375,1091
		1074.	209.38 - 302.45	$2s^2 2p^3 - 2s^2 2p^3$	$^2D^\circ - ^2P^\circ$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,1091
		1928.	157.52 - 209.38	$2s^2 2p^3 - 2s^2 2p^3$	$^2D^\circ - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	F,P	375,1120

NICKEL XXIII (Ni^{22+}), Z = 28
Ground State $1s^2 2s^2 2p^2 (^3P_0)$ (6 electrons)
Ionization Potential [16 220 000] cm^{-1} ; [2011] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	10.450	161.99 - 9739.7	$2s^2 2p^2 - 2s^2 2p^3 d$	$g^3P - ^3D^\circ$	2 - 3	Q	716
	10	10.49	324.64 - 9857.4	$2s^2 2p^2 - 2s^2 2p^3 d$	$^1D - ^1F^\circ$	2 - 3	Q	716
		10.71	941.29 - 10277.7	$2s^2 p^3 - 2s^2 p^2 (^4P) 3d$	$^3D^\circ - ^3F$	3 - 4		877
	20	10.967	109.77 - 9227.7	$2s^2 2p^2 - 2s^2 2p^3 s$	$g^3P - ^1P^\circ$	1 - 1		716
	20	11.403	463.77 - 9227.7	$2s^2 2p^2 - 2s^2 2p^3 s$	$^1S - ^1P^\circ$	0 - 1	Q	716
	30	12.693	1864.71 - 9739.7	$2p^4 - 2s^2 2p^3 d$	$^3P - ^3D^\circ$	2 - 3	Q	716
	10	74.07	109.77 - 1459.67	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^1P^\circ$	1 - 1		1091
	4	78.21	586.10 - 1864.71	$2s^2 p^3 - 2p^4$	$^5S^\circ - ^3P$	2 - 2		1091
	10	79.99	0.0 - 1250.54	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3S^\circ$	0 - 1		1091
	50	87.50	161.99 - 1304.59	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^1D^\circ$	2 - 2		1091
	110	87.66	109.77 - 1250.54	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3S^\circ$	1 - 1		1091
	10	87.77	941.29 - 2080.63	$2s^2 p^3 - 2p^4$	$^3D^\circ - ^1D$	3 - 2		1091
	80	88.11	324.64 - 1459.67	$2s^2 2p^2 - 2s^2 p^3$	$^1D - ^1P^\circ$	2 - 1		1091
	30	90.49	894.24 - 1999.42	$2s^2 p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 1		1091
	10	90.96	900.06 - 1999.42	$2s^2 p^3 - 2p^4$	$^3D^\circ - ^3P$	2 - 1		1091
	150	91.83	161.99 - 1250.54	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3S^\circ$	2 - 1		1091
	10	92.32	894.24 - 1977.49	$2s^2 p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 0		1091
	10	92.75	0.0 - 1078.52	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3P^\circ$	0 - 1		1091
	80	100.42	463.77 - 1459.67	$2s^2 2p^2 - 2s^2 p^3$	$^1S - ^1P^\circ$	0 - 1		1091
	30	100.50	109.77 - 1104.93	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3P^\circ$	1 - 2		1091
	300	102.08	324.64 - 1304.59	$2s^2 2p^2 - 2s^2 p^3$	$^1D - ^1D^\circ$	2 - 2		1091
	4	102.50	1104.93 - 2080.63	$2s^2 p^3 - 2p^4$	$^3P^\circ - ^1D$	2 - 2		1091
	10	103.07	894.24 - 1864.71	$2s^2 p^3 - 2p^4$	$^3D^\circ - ^3P$	1 - 2		1091
	110	103.23	109.77 - 1078.52	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3P^\circ$	1 - 1		1091
	50	103.67	900.06 - 1864.71	$2s^2 p^3 - 2p^4$	$^3D^\circ - ^3P$	2 - 2		1091
	30	104.70	109.77 - 1064.86	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3P^\circ$	1 - 0		1091
	375	106.02	161.99 - 1104.93	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3P^\circ$	2 - 2		1091
	4	107.00	1064.86 - 1999.42	$2s^2 p^3 - 2p^4$	$^3P^\circ - ^3P$	0 - 1		1091
	150	108.27	941.29 - 1864.71	$2s^2 p^3 - 2p^4$	$^3D^\circ - ^3P$	3 - 2		1091
	10	109.06	161.99 - 1078.52	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3P^\circ$	2 - 1		1091
	80	111.23	1078.52 - 1977.49	$2s^2 p^3 - 2p^4$	$^3P^\circ - ^3P$	1 - 0		1091
	80	111.78	1104.93 - 1999.42	$2s^2 p^3 - 2p^4$	$^3P^\circ - ^3P$	2 - 1		1091
	200	111.86	0.0 - 894.24	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3D^\circ$	0 - 1		1091
	30	112.55	1459.67 - 2348.17	$2s^2 p^3 - 2p^4$	$^1P^\circ - ^1S$	1 - 0		1091
	110	126.54	109.77 - 900.06	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3D^\circ$	1 - 2		1091
	10	127.21	1078.52 - 1864.71	$2s^2 p^3 - 2p^4$	$^3P^\circ - ^3P$	1 - 2		1091
	4	127.46	109.77 - 894.24	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3D^\circ$	1 - 1		1091
	110	128.30	161.99 - 941.29	$2s^2 2p^2 - 2s^2 p^3$	$g^3P - ^3D^\circ$	2 - 3		1091
	200	128.87	1304.59 - 2080.63	$2s^2 p^3 - 2p^4$	$^1D^\circ - ^1D$	2 - 2		1091
	10	131.60	1104.93 - 1864.71	$2s^2 p^3 - 2p^4$	$^3P^\circ - ^3P$	2 - 2		1091
	30	133.54	1250.54 - 1999.42	$2s^2 p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 1		1091
	10	137.55	1250.54 - 1977.49	$2s^2 p^3 - 2p^4$	$^3S^\circ - ^3P$	1 - 0		1091

NI XXIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		235.8	161.99 - 586.10	$2s^2 2p^2 - 2s 2p^3$	$g^3 P - ^5 S^o$	2 - 2	P	375,1091
		282.5	109.77 - 463.77	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - ^1 S$	1 - 0	F,P	375,1091
		308.0	0.0 - 324.64	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - ^1 D$	0 - 2	F,P	375,1120
		331.4	161.99 - 463.77	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - ^1 S$	2 - 0	F,P	375,1120
		465.4	109.77 - 324.64	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - ^1 D$	1 - 2	F	1120
		614.8	161.99 - 324.64	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - ^1 D$	2 - 2	F	1120
		617.3	0.0 - 161.99	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - g^3 P$	0 - 2	F,P	375,1120
		718.8	324.64 - 463.77	$2s^2 2p^2 - 2s^2 2p^2$	$^1 D - ^1 S$	2 - 0	F,P	375,1120
		911.0	0.0 - 109.77	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - g^3 P$	0 - 1	F	1120
		1915.0	109.77 - 161.99	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - g^3 P$	1 - 2	F	1120

NICKEL XXIV (Ni^{23+}), Z = 28
Ground State $1s^2 2s^2 2p(^2P_{1/2}^o)$ (5 electrons)
Ionization Potential [17 190 000] cm^{-1} ; [2131] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		9.69	0.0 - 10320.	$2s^2 2p - 2s 2p(^3P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$	P	877
		9.74	163.950 - 10431.	$2s^2 2p - 2s 2p(^3P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	P	877
0	9.883	843.81 - 10951.	$2s 2p^2 - 2s 2p(^1P^o) 3d$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$	Q	716	
		9.90	0.0 - 10101.	$2s^2 2p - 2s 2p(^3P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	P	877
		9.92	163.950 - 10244.	$2s^2 2p - 2s 2p(^3P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	P	877
2	9.933	884.25 - 10951.	$2s 2p^2 - 2s 2p(^1P^o) 3d$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$		1089	
		9.966	610.08 + L - 10644. + L	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^4 P - ^4 D^o$	$\frac{5}{2} - \frac{7}{2}$		1089
		10.00	884.25 - 10884.	$2s 2p^2 - 2s 2p(^1P^o) 3d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{3}{2}$	P	877
		10.10	610.08 + L - 10511. + L	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^4 P - ^4 P^o$	$\frac{5}{2} - \frac{5}{2}$	P	877
20	10.195	1143.08 - 10951.	$2s 2p^2 - 2s 2p(^1P^o) 3d$	$^2 P - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$	Q	716	
10	10.261	843.81 - 10581.	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{3}{2}$	Q	716	
		10.35	884.25 - 10546.	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$	P	877
		10.680	1143.08 - 10511. + L	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2 P - ^4 P^o$	$\frac{3}{2} - \frac{5}{2}$	Q	716
60	11.946	1872.97 - 10244.	$2p^1 - 2s 2p(^3P^o) 3p$	$^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	Q	716	
50	87.50	0.0 - 1143.08	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1091	
4	88.54	0.0 - 1129.65	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$		1091	
110	97.17	843.81 - 1872.97	$2s 2p^2 - 2p^1$	$^2 D - ^2 P^o$	$\frac{3}{2} - \frac{3}{2}$		1091	
4	98.39	610.08 + L - 1626.44	$2s 2p^2 - 2p^1$	$^4 P - ^2 D^o$	$\frac{5}{2} - \frac{3}{2}$	Q	1091	
		101.13	884.25 - 1872.97	$2s 2p^2 - 2p^1$	$^2 D - ^2 P^o$	$\frac{5}{2} - \frac{3}{2}$		1091
300	102.11	163.950 - 1143.08	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1091	
250	103.43	458.10 + L - 1424.94 + L	$2s 2p^2 - 2p^1$	$^4 P - ^4 S^o$	$\frac{1}{2} - \frac{3}{2}$		1091	
110	103.53	163.950 - 1129.65	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1091	
110	104.64	0.0 - 955.73	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$		1091	
30	106.68	843.81 - 1781.17	$2s 2p^2 - 2p^1$	$^2 D - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$		1091	
		109.03	955.73 - 1872.97	$2s 2p^2 - 2p^1$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$		1091
50	113.14	541.08 + L - 1424.94 + L	$2s 2p^2 - 2p^1$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{3}{2}$		1091	
80	118.52	0.0 - 843.81	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1091	
4	121.15	955.73 - 1781.17	$2s 2p^2 - 2p^1$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{1}{2}$		1091	
80	122.72	610.08 + L - 1424.94 + L	$2s 2p^2 - 2p^1$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{3}{2}$		1091	
10	127.78	843.81 - 1626.44	$2s 2p^2 - 2p^1$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$		1091	
		134.53	1129.65 - 1872.97	$2s 2p^2 - 2p^1$	$^2 P - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$		1091
50	134.73	884.25 - 1626.44	$2s 2p^2 - 2p^1$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$		1091	
10	135.47	843.81 - 1582.01	$2s 2p^2 - 2p^1$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$		1091	
10	137.01	1143.08 - 1872.97	$2s 2p^2 - 2p^1$	$^2 P - ^2 P^o$	$\frac{3}{2} - \frac{3}{2}$		1091	
50	138.80	163.950 - 884.25	$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1091	
10	143.30	884.25 - 1582.01	$2s 2p^2 - 2p^1$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$		1091	

NI XXIV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	4	159.69 609.9	955.73 - 1582.01 0.0 - 163.950	$2s2p^2 - 2p^3$ $2s^22p - 2s^22p$	$^2S - ^3D^\circ$ $g^2P^\circ - g^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$	F	1091 1120

NICKEL XXV (Ni^{24+}), Z = 28
Ground State $1s^22s^2(^1S_0)$ (4 electrons)
Ionization Potential [18 510 000] cm^{-1} ; [2295] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	9.194	419.19 - 11306.	$1s^22s2p - 1s^22p3p$	$^3P^\circ - ^3S$	1 - 1	Q	1089
	0	9.215	419.19 - 11271.	$1s^22s2p - 1s^22p3p$	$^3P^\circ - ^3P$	1 - 2		643
	5	9.238	378.63 - 11206.	$1s^22s2p - 1s^22p3p$	$^3P^\circ - ^3P$	0 - 1	Q	1089
	11	9.297	549.98 - 11306.	$1s^22s2p - 1s^22p3p$	$^3P^\circ - ^3S$	2 - 1		1057
	16	9.306	549.98 - 11296.	$1s^22s2p - 1s^22p3p$	$^3P^\circ - ^3D$	2 - 3		1057
	12	9.316	419.19 - 11153.	$1s^22s2p - 1s^22p3p$	$^3P^\circ - ^3D$	1 - 2		1057
	15	9.340	0.0 - 10707.	$1s^22s^2 - 1s^22s3p$	$g^1S - ^1P^\circ$	0 - 1		1057
	30	9.355	378.63 - 11068.	$1s^22s2p - 1s^22p3p$	$^3P^\circ - ^3D$	0 - 1		643
	8	9.39	0.0 - 10650.	$1s^22s^2 - 1s^22s3p$	$g^1S - ^3P^\circ$	0 - 1		1057
	10	9.407	848.10 - 11478.	$1s^22s2p - 1s^22s3s$	$^1P^\circ - ^1S$	1 - 0		643
		9.471	848.10 - 11407.	$1s^22s2p - 1s^22p3p$	$^1P^\circ - ^1D$	1 - 2	P	619
	18	9.601	378.63 - 10795.	$1s^22s2p - 1s^22s3d$	$^3P^\circ - ^3D$	0 - 1		1057
	30	9.633	419.19 - 10800.	$1s^22s2p - 1s^22s3d$	$^3P^\circ - ^3D$	1 - 2		1057
	30	9.695	848.10 - 11163.	$1s^22s2p - 1s^22p3p$	$^1P^\circ - ^1P$	1 - 1		643
	18	9.707	1154.73 - 11456.	$1s^22p^2 - 1s^22p3d$	$^3P - ^3P^\circ$	1 - 2		1057
	45	9.744	549.98 - 10812.	$1s^22s2p - 1s^22s3d$	$^3P^\circ - ^3D$	2 - 3		1057
	20	9.753	549.98 - 10800.	$1s^22s2p - 1s^22s3d$	$^3P^\circ - ^3D$	2 - 2		1057
	20	9.759	1208.29 - 11456.	$1s^22p^2 - 1s^22p3d$	$^3P - ^3P^\circ$	2 - 2		1057
	45	9.776	1208.29 - 11437.	$1s^22p^2 - 1s^22p3d$	$^3P - ^3D^\circ$	2 - 3		1057
	60	9.860	1379.65 - 11521.	$1s^22p^2 - 1s^22p3d$	$^1D - ^1F^\circ$	2 - 3		1057
	30	9.873	1208.29 - 11343.	$1s^22p^2 - 1s^22p3d$	$^3P - ^3D^\circ$	2 - 2		1057
	20	9.934	1208.29 - 11270.	$1s^22p^2 - 1s^22p3d$	$^3P - ^3F^\circ$	2 - 3		643
	80	9.967	848.10 - 10878.	$1s^22s2p - 1s^22s3d$	$^1P^\circ - ^1D$	1 - 2		643
	80	10.103	549.98 - 10449.	$1s^22s2p - 1s^22s3s$	$^3P^\circ - ^3S$	2 - 1		643
	10	10.276	1379.65 - 11110.	$1s^22p^2 - 1s^22p3s$	$^1D - ^1P^\circ$	2 - 1		643
	20	10.354	1048.75 - 10707.	$1s^22p^2 - 1s^22s3p$	$^3P - ^1P^\circ$	0 - 1	Q	716
	20	10.529	1611.52 - 11110.	$1s^22p^2 - 1s^22p3s$	$^1S - ^1P^\circ$	0 - 1		643
	10	10.724	1379.65 - 10707.	$1s^22p^2 - 1s^22s3p$	$^1D - ^1P^\circ$	2 - 1	Q	716
	300	117.91	0.0 - 848.10	$1s^22s^2 - 1s^22s2p$	$g^1S - ^1P^\circ$	0 - 1		1091
	30	120.53	549.98 - 1379.65	$1s^22s2p - 1s^22p^2$	$^3P^\circ - ^1D$	2 - 2		1091
	30	126.73	419.19 - 1208.29	$1s^22s2p - 1s^22p^2$	$^3P^\circ - ^3P$	1 - 2		1091
	200	128.85	378.63 - 1154.73	$1s^22s2p - 1s^22p^2$	$^3P^\circ - ^3P$	0 - 1		1091
	10	130.99	848.10 - 1611.52	$1s^22s2p - 1s^22p^2$	$^1P^\circ - ^1S$	1 - 0		1091
	10	135.95	419.19 - 1154.73	$1s^22s2p - 1s^22p^2$	$^3P^\circ - ^3P$	1 - 1		1091
	30	151.90	549.98 - 1208.29	$1s^22s2p - 1s^22p^2$	$^3P^\circ - ^3P$	2 - 2		1091
	4	158.84	419.19 - 1048.75	$1s^22s2p - 1s^22p^2$	$^3P^\circ - ^3P$	1 - 0		1091
	10	165.36	549.98 - 1154.73	$1s^22s2p - 1s^22p^2$	$^3P^\circ - ^3P$	2 - 1		1091
	10	188.13	848.10 - 1379.65	$1s^22s2p - 1s^22p^2$	$^1P^\circ - ^1D$	1 - 2		1091
		238.56	0.0 - 419.19	$1s^22s^2 - 1s^22s2p$	$g^1S - ^3P^\circ$	0 - 1	P	375,1091

NICKEL XXVI (Ni²⁵⁺), Z = 28
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential 19 351 000 cm⁻¹; 2399.2 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		6.811	0.0 - 14682.	1s ² 2s - 1s ² 4p	g ² S - ³ P°	$\frac{1}{2} - \frac{3}{2}$	P	977
		6.821	0.0 - 14661.	1s ² 2s - 1s ² 4p	g ² S - ³ P°	$\frac{1}{2} - \frac{1}{2}$	P	977
		7.006	426.98 - 14700.	1s ² 2p - 1s ² 4d	³ P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	977
		7.048	426.98 - 14615.	1s ² 2p - 1s ² 4s	³ P° - ² S	$\frac{1}{2} - \frac{1}{2}$	P	977
		7.091	604.52 - 14707.	1s ² 2p - 1s ² 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	977
		7.138	604.52 - 14615.	1s ² 2p - 1s ² 4s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	P	977
14	9.061		0.0 - 11036.	1s ² 2s - 1s ² 3p	g ² S - ³ P°	$\frac{1}{2} - \frac{3}{2}$		1057
9	9.105		0.0 - 10983.	1s ² 2s - 1s ² 3p	g ² S - ³ P°	$\frac{1}{2} - \frac{1}{2}$		1057
27	9.390		426.98 - 11077.	1s ² 2p - 1s ² 3d	³ P° - ² D	$\frac{1}{2} - \frac{3}{2}$		1057
39	9.535		604.52 - 11092.	1s ² 2p - 1s ² 3d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		1057
9	9.55		604.52 - 11077.	1s ² 2p - 1s ² 3d	² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		1057
2	9.564		426.98 - 10880.	1s ² 2p - 1s ² 3s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$	Q	1089
4	9.732		604.52 - 10880.	1s ² 2p - 1s ² 3s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		1057
	165.42		0.0 - 604.52	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		730
85	234.20		0.0 - 426.98	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		730

NICKEL XXVII (Ni²⁶⁺), Z = 28
Ground State 1s²(¹S₀) (2 electrons)
Ionization Potential 82 990 000 cm⁻¹; 10289.5 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.238	0.0 - 80745.	1s ² - 1s6p	g ¹ S - ³ P°	0 - 1	P	728
		1.254	0.0 - 79762.64	1s ² - 1s5p	g ¹ S - ³ P°	0 - 1	P	728
		1.283	0.0 - 77938.24	1s ² - 1s4p	g ¹ S - ³ P°	0 - 1	P	728
		1.350	0.0 - 74076.25	1s ² - 1s3p	g ¹ S - ¹ P°	0 - 1	P	728
		1.352	0.0 - 73985.01	1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	P	728
3	1.588		0.0 - 62961.52	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	P	856
		1.596	0.0 - 62644.18	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	P	839
		1.603	0.0 - 62367.86	1s ² - 1s2s	g ¹ S - ³ S	0 - 1	F,P	1105

NICKEL XXVIII (Ni²⁷⁺), Z = 28
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 86 908 200 cm⁻¹; 10775.3 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.198	0.0 - 83456.7830	1s - 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.227	0.0 - 81513.5300	1s - 4p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.293	0.0 - 77315.6040	1s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.295	0.0 - 77247.1100	1s - 3p	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	1042
		1.530	0.0 - 65343.7700	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.536	0.0 - 65112.8100	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	1042

NI XXVIII — Continued

Triplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		5.453	65118.9400 - 83456.7830	2s - 5p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	1042
		5.519	65343.7700 - 83461.5951	2p - 5d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	1042
		6.100	65118.9400 - 81513.5300	2s - 4p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	1042
		6.181	65343.7700 - 81522.9289	2p - 4d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	1042
		8.199	65118.9400 - 77315.6040	2s - 3p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	1042
		8.337	65343.7700 - 77337.8641	2p - 3d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	1042

COPPER, Z = 29
Unclassified Lines

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	8.450						716
	10	8.524						716
	0	9.040						716
	0	9.060						716
	10	9.280						716
	10	9.309						716
	10	9.448						716
	0	9.582						716
	0	9.640						716
	0	9.653						716
	0	9.670						716
	0	9.752						716
	0	9.792						716
	0	9.906						716
	10	10.010						716
	10	10.037						716
	10	10.057						716
	10	10.123						716
	10	10.267						716
	10	10.769						716
	30	10.933						716
	40	11.479						716
	50	11.518						716
	30	11.678						716
	10	11.904						716
	10	12.003						716
	10	12.328						716
	0	12.439						716
	120	109.215						356
	120	112.532						356
	150	120.594						356
	200	127.105						356
	250	128.123						356
	300	128.255						356
	100	129.398						356
	400	129.567						356
	200	129.697						356
	150	131.533						356
	350	131.590						356
	400	133.916						356
	600	134.550						356
	30	135.846						356
	15	136.572						302
	450	136.724						356
	400	136.936						356
	300	141.694						356
	200	142.158						356
	600	142.892						356
	500	143.033						356
	150	143.634						356
	250	144.728						356
	350	145.651						356
	100	145.671						356
	1000	146.669						356

CU UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	147.544						356
	800	148.846						356
	800	149.703						356
	400	154.785						356
	150	155.718						356
	200	156.557						356
	200	156.847						356
	400	157.359						356
	100	159.072						356
	100	159.462						356
	500	160.763						356
	300	161.551						356
	250	161.748						356
	200	162.078						356
	100	162.651						356
	20	162.926						356
	300	163.271						356
	250	163.598						356
	200	164.259						356
	300	165.127						356
	120	166.308						356
	100	166.645						356
	10	167.392						356
	150	168.111						356
	150	169.488						356
	150	169.765						356
	150	170.007						356
	400	172.036						356
	100	173.193						356
	300	175.484						356
	250	175.633						356
	150	176.232						356
	100	176.824						356
	200	177.466						356
	150	178.489						356
	150	179.223						356
	15	179.630						356
	200	180.986						356
	7	184.938						356
	150	186.296						356
	7	192.585						356
	100	196.363						356
	30	196.585						356
	300	197.128						356
	300	197.598						356
	100	199.723						356
	150	201.329						356
	200	201.615						356
	200	202.065						356
	150	204.056						356
	60	205.278						356
	300	205.610						356
	600	206.355						356
	350	206.842						356

CU UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	207.282						356
	350	207.925						356
	15	208.502						356
	300	209.648						356
	150	210.217						356
	150	210.612						356
	50	211.109						356
	200	211.707						356
	8	213.617						356
	500	215.611						356
	50	216.063						356
	250	216.454						356
	200	217.743						356
	6	219.927						356
	25	225.497						356
	30	235.299						356
	5	236.343						356
	150	241.583						356
	150	249.415						356
	100	249.908						356
	300	250.400						356
	20	251.278						356
	200	251.670						356
	200	251.947						356
	150	252.223						356
	750	252.780						356
	150	253.465						356
	150	253.786						356
	500	254.510						356
	700	254.772						356
	350	255.417						356
	300	256.365						356
	400	256.898						356
	200	257.315						356
	200	257.626						356
	150	258.004						356
	450	258.265						356
	800	258.927						356
	200	259.199						356
	250	259.871						356
	250	260.245						356
	300	261.606						356
	200	261.806						356
	200	262.442						356
	150	264.029						356
	200	266.061						356
	100	266.584						356
	250	267.562						356
	600	268.309						356
	500	268.773						356
	400	269.044						356
	200	269.653						356
	200	270.740						356
	150	272.424						356

CU UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	272.807						356
	200	273.417						356
	150	274.601						356
	100	275.244						356
	100	277.761						356
	100	279.150						356
	100	285.873						356
	0	289.358						356
	100	293.257						356
	20	310.380						356
	70	324.485						356
	30	329.805						356
	10	339.038						356
	20	342.432						356
	150	348.413						356
	8	350.421						356
	5	355.977						356
	100	357.897						356
	3	393.172						356

COPPER I (Cu⁰⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s(²S_{1/2}) (29 electrons)
Ionization Potential 62 317.44 cm⁻¹; 7.7264 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1146.61	0.0 - 87.2136	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)11p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	A	848
		1147.25	0.0 - 87.1649	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)11p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1151.43	0.0 - 86.8485	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)10p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	A	848
		1152.33	0.0 - 86.7807	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)10p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1158.52	0.0 - 86.3170	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)9p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	A	848
		1159.93	0.0 - 86.2120	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)9p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1162.71	0.0 - 86.0059	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)21p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1163.17	0.0 - 85.9719	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)20p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1163.79	0.0 - 85.9262	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)19p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1164.42	0.0 - 85.8797	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)18p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1165.24	0.0 - 85.8192	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)17p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1166.18	0.0 - 85.7501	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)14f	g ² S - ⁴ D°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1166.29	0.0 - 85.7420	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)16p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1167.39	0.0 - 85.6612	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)13f	g ² S - ⁴ D°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1167.53	0.0 - 85.6509	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)15p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1168.95	0.0 - 85.5468	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)12f	g ² S - ⁴ D°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1169.11	0.0 - 85.5351	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)14p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1169.64	0.0 - 85.4964	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)8p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	A	848
		1170.95	0.0 - 85.4007	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)11f	g ² S - ⁴ D°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1171.14	0.0 - 85.3869	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)13p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1172.07	0.0 - 85.3191	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(¹ D)8p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1173.58	0.0 - 85.2094	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)10f	g ² S - ⁴ D°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1173.99	0.0 - 85.1796	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)12p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	A	848
		1177.16	0.0 - 84.9502	3d ¹⁰ (¹ S)4s - 3d ⁹ 4s(³ D ₁)9f	g ² S - ⁴ D°	$\frac{1}{2} - \frac{1}{2}$	A	848

CU I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1177.70	0.0 - 84.9113	$3d^{10}(^1S)4s - 3d^24s(^3D_1)11p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1178.49	0.0 - 84.8543	$3d^{10}(^1S)4s - 3d^24s(^3D_2)21p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1179.00	0.0 - 84.8176	$3d^{10}(^1S)4s - 3d^24s(^3D_2)20p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1179.60	0.0 - 84.7745	$3d^{10}(^1S)4s - 3d^24s(^3D_2)19p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1180.25	0.0 - 84.7278	$3d^{10}(^1S)4s - 3d^24s(^3D_2)18p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1181.10	0.0 - 84.6668	$3d^{10}(^1S)4s - 3d^24s(^3D_2)17p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1181.97	0.0 - 84.6045	$3d^{10}(^1S)4s - 3d^24s(^3D_2)16p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1182.21	0.0 - 84.5873	$3d^{10}(^1S)4s - 3d^24s(^3D_1)8f$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1182.97	0.0 - 84.5330	$3d^{10}(^1S)4s - 3d^24s(^3D_1)10p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1183.30	0.0 - 84.5094	$3d^{10}(^1S)4s - 3d^24s(^3D_2)13f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1183.49	0.0 - 84.4958	$3d^{10}(^1S)4s - 3d^24s(^3D_2)15p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1184.91	0.0 - 84.3946	$3d^{10}(^1S)4s - 3d^24s(^3D_2)12f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1185.16	0.0 - 84.3768	$3d^{10}(^1S)4s - 3d^24s(^3D_2)14p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1186.95	0.0 - 84.2495	$3d^{10}(^1S)4s - 3d^24s(^3D_2)11f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1187.25	0.0 - 84.2282	$3d^{10}(^1S)4s - 3d^24s(^3D_2)13p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1188.62	0.0 - 84.1312	$3d^{10}(^1S)4s - 3d^24s(^1D)7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1189.70	0.0 - 84.0547	$3d^{10}(^1S)4s - 3d^24s(^3D_2)10f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1189.93	0.0 - 84.0385	$3d^{10}(^1S)4s - 3d^24s(^3D_1)7f$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1190.12	0.0 - 84.0251	$3d^{10}(^1S)4s - 3d^24s(^3D_2)12p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1190.82	0.0 - 83.9757	$3d^{10}(^1S)4s - 3d^24s(^3D_1)9p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1191.36	0.0 - 83.9377	$3d^{10}(^1S)4s - 3d^24s(^3D_3)21p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1191.87	0.0 - 83.9018	$3d^{10}(^1S)4s - 3d^24s(^3D_3)20p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1192.45	0.0 - 83.8609	$3d^{10}(^1S)4s - 3d^24s(^3D_3)19p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1193.07	0.0 - 83.8174	$3d^{10}(^1S)4s - 3d^24s(^1D)7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1193.31	0.0 - 83.8005	$3d^{10}(^1S)4s - 3d^24s(^3D_3)18p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1193.94	0.0 - 83.7563	$3d^{10}(^1S)4s - 3d^24s(^3D_2)11p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1194.46	0.0 - 83.7198	$3d^{10}(^1S)4s - 3d^24s(^3D_3)17p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1195.02	0.0 - 83.6806	$3d^{10}(^1S)4s - 3d^24s(^3D_3)14f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1195.11	0.0 - 83.6743	$3d^{10}(^1S)4s - 3d^24s(^3D_3)16p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1196.31	0.0 - 83.5904	$3d^{10}(^1S)4s - 3d^24s(^3D_3)13f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1196.39	0.0 - 83.5848	$3d^{10}(^1S)4s - 3d^24s(^3D_3)15p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1197.92	0.0 - 83.4780	$3d^{10}(^1S)4s - 3d^24s(^3D_3)12f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1198.03	0.0 - 83.4704	$3d^{10}(^1S)4s - 3d^24s(^3D_3)14p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1198.54	0.0 - 83.4348	$3d^{10}(^1S)4s - 3d^24s(^3D_2)8f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1199.30	0.0 - 83.3820	$3d^{10}(^1S)4s - 3d^24s(^3D_2)10p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1200.00	0.0 - 83.3333	$3d^{10}(^1S)4s - 3d^24s(^3D_3)11f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1200.24	0.0 - 83.3167	$3d^{10}(^1S)4s - 3d^24s(^3D_3)13p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1201.40	0.0 - 83.2362	$3d^{10}(^1S)4s - 3d^24s(^3D_1)6f$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1203.22	0.0 - 83.1103	$3d^{10}(^1S)4s - 3d^24s(^3D_3)12p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1206.23	0.0 - 82.9031	$3d^{10}(^1S)4s - 3d^24s(^3D_2)7f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1206.58	0.0 - 82.8789	$3d^{10}(^1S)4s - 3d^24s(^3D_3)9f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1206.77	0.0 - 82.8657	$3d^{10}(^1S)4s - 3d^24s(^3D_3)11p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1207.53	0.0 - 82.8137	$3d^{10}(^1S)4s - 3d^24s(^3D_2)9p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1211.89	0.0 - 82.5157	$3d^{10}(^1S)4s - 3d^24s(^3D_3)8f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1212.38	0.0 - 82.4824	$3d^{10}(^1S)4s - 3d^24s(^3D_3)10p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1217.66	0.0 - 82.1247	$3d^{10}(^1S)4s - 3d^24s(^3D_2)6f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1218.26	0.0 - 82.0841	$3d^{10}(^1S)4s - 3d^24s(^3D_3)7f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1219.72	0.0 - 81.9860	$3d^{10}(^1S)4s - 3d^24s(^3D_2)8p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1219.95	0.0 - 81.9706	$3d^{10}(^1S)4s - 3d^24s(^3D_3)9p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1221.29	0.0 - 81.8806	$3d^{10}(^1S)4s - 3d^24s(^3D_1)5f$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1221.39	0.0 - 81.8739	$3d^{10}(^1S)4s - 3d^24s(^3D_1)5f$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1224.85	0.0 - 81.6424	$3d^{10}(^1S)4s - 3d^24s(^3D_1)7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1225.29	0.0 - 81.6133	$3d^{10}(^1S)4s - 3d^24s(^1D)6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1232.09	0.0 - 81.1630	$3d^{10}(^1S)4s - 3d^24s(^3D_3)6f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848

CU I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1233.28	0.0 - 81.0846	$3d^{10}(^1S)4s - 3d^94s(^3D_3)8p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1235.42	0.0 - 80.9443	$3d^{10}(^1S)4s - 3d^94s(^1D)6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1242.57	0.0 - 80.4783	$3d^{10}(^1S)4s - 3d^94s(^3D_2)7p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1243.40	0.0 - 80.4246	$3d^{10}(^1S)4s - 3d^94s(^3D_2)5f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1253.15	0.0 - 79.7986	$3d^{10}(^1S)4s - 3d^94s(^3D_3)5f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1255.53	0.0 - 79.6476	$3d^{10}(^1S)4s - 3d^94s(^3D_3)7p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1260.12	0.0 - 79.3575	$3d^{10}(^1S)4s - 3d^94s(^3D_1)4f$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1267.10	0.0 - 78.9204	$3d^{10}(^1S)4s - 3d^94s(^3D_1)6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1267.55	0.0 - 78.8923	$3d^{10}(^1S)4s - 3d^94s(^3D_1)6p$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1271.12					A	848
		1287.28	0.0 - 77.6832	$3d^{10}(^1S)4s - 3d^94s(^3D_2)6p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1288.28	0.0 - 77.6229	$3d^{10}(^1S)4s - 3d^94s(^3D_2)4f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1293.71	0.0 - 77.2971	$3d^{10}(^1S)4s - 3d^94s(^3D_3)4f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1293.88	0.0 - 77.2869	$3d^{10}(^1S)4s - 3d^94s(^3D_3)4f$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1300.17	0.0 - 76.9118	$3d^{10}(^1S)4s - 3d^94s(^3D_3)6p$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1331.72	0.0 - 75.09124	$3d^{10}(^1S)4s - 3d^94s(^1D)5p$	$g^2S - w^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1346.63	0.0 - 74.25942	$3d^{10}(^1S)4s - 3d^94s(^1D)5p$	$g^2S - w^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1374.80	0.0 - 72.7378	$3d^{10}(^1S)4s - 3d^94s(^3D_1)5p$	$g^2S - x^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1377.38	0.0 - 72.6016	$3d^{10}(^1S)4s - 3d^94s(^3D_1)5p$	$g^2S - x^4D^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1389.88					A	848
		1390.54	0.0 - 71.9145	$3d^{10}(^1S)4s - 3d^94s(^3D)5p$	$g^2S - x^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
		1393.76					A	848
		1408.42	0.0 - 71.0015	$3d^{10}(^1S)4s - 3d^94s(^3D_2)5p$	$g^2S - x^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A	848
		1422.87	0.0 - 70.2805	$3d^{10}(^1S)4s - 3d^94s(^3D_3)5p$	$g^2S - x^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A	848
	0	1504.091						672
	0	1522.252						672
	1	1523.371						672
	0	1523.851						672
	8	1579.650	11.202565 - 74.50777	$3d^94s^2 - 3d^94s(^1D)5p$	$m^2D - w^2D^o$	$\frac{5}{2} - \frac{5}{2}$	A	1079
32	15	1583.797	11.202565 - 74.34199	$3d^94s^2 - 3d^94s(^1D)5p$	$m^2D - w^2F^o$	$\frac{5}{2} - \frac{7}{2}$	A	1079
31	4	1585.871	11.202565 - 74.25942	$3d^94s^2 - 3d^94s(^1D)5p$	$m^2D - w^2P^o$	$\frac{5}{2} - \frac{3}{2}$	A	1079
	1	1605.623	0.0 - 62.28111	$3d^{10}(^1S)4s - 3d^{10}(^1S)57p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	1	1605.658	0.0 - 62.27978	$3d^{10}(^1S)4s - 3d^{10}(^1S)56p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	2	1605.694	0.0 - 62.27836	$3d^{10}(^1S)4s - 3d^{10}(^1S)55p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	3	1605.736	0.0 - 62.27672	$3d^{10}(^1S)4s - 3d^{10}(^1S)54p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	4	1605.776	0.0 - 62.27518	$3d^{10}(^1S)4s - 3d^{10}(^1S)53p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	5	1605.820	0.0 - 62.27348	$3d^{10}(^1S)4s - 3d^{10}(^1S)52p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	6	1605.864	0.0 - 62.27178	$3d^{10}(^1S)4s - 3d^{10}(^1S)51p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	7	1605.915	0.0 - 62.26980	$3d^{10}(^1S)4s - 3d^{10}(^1S)50p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	8	1605.969	0.0 - 62.26771	$3d^{10}(^1S)4s - 3d^{10}(^1S)49p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	9	1606.024	0.0 - 62.26557	$3d^{10}(^1S)4s - 3d^{10}(^1S)48p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	10	1606.085	0.0 - 62.26319	$3d^{10}(^1S)4s - 3d^{10}(^1S)47p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	15	1606.149	0.0 - 62.26072	$3d^{10}(^1S)4s - 3d^{10}(^1S)46p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	20	1606.218	0.0 - 62.25805	$3d^{10}(^1S)4s - 3d^{10}(^1S)45p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	30	1606.293	0.0 - 62.25513	$3d^{10}(^1S)4s - 3d^{10}(^1S)44p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	40	1606.372	0.0 - 62.25207	$3d^{10}(^1S)4s - 3d^{10}(^1S)43p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	50	1606.457	0.0 - 62.24880	$3d^{10}(^1S)4s - 3d^{10}(^1S)42p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	60	1606.549	0.0 - 62.24523	$3d^{10}(^1S)4s - 3d^{10}(^1S)41p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	70	1606.649	0.0 - 62.24136	$3d^{10}(^1S)4s - 3d^{10}(^1S)40p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	80	1606.756	0.0 - 62.23720	$3d^{10}(^1S)4s - 3d^{10}(^1S)39p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	90	1606.873	0.0 - 62.23266	$3d^{10}(^1S)4s - 3d^{10}(^1S)38p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	100	1607.001	0.0 - 62.22772	$3d^{10}(^1S)4s - 3d^{10}(^1S)37p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	150	1607.140	0.0 - 62.22235	$3d^{10}(^1S)4s - 3d^{10}(^1S)36p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	200	1607.290	0.0 - 62.21654	$3d^{10}(^1S)4s - 3d^{10}(^1S)35p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079

CU I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	215	1607.454	0.0 - 62.21017	$3d^{10}(^1S)4s - 3d^{10}(^1S)34p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	225	1607.636	0.0 - 62.20312	$3d^{10}(^1S)4s - 3d^{10}(^1S)33p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	245	1607.837	0.0 - 62.19537	$3d^{10}(^1S)4s - 3d^{10}(^1S)32p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	260	1608.060	0.0 - 62.18674	$3d^{10}(^1S)4s - 3d^{10}(^1S)31p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	275	1608.306	0.0 - 62.17723	$3d^{10}(^1S)4s - 3d^{10}(^1S)30p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	290	1608.580	0.0 - 62.16662	$3d^{10}(^1S)4s - 3d^{10}(^1S)29p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	300	1608.887	0.0 - 62.15475	$3d^{10}(^1S)4s - 3d^{10}(^1S)28p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	310	1609.232	0.0 - 62.14146	$3d^{10}(^1S)4s - 3d^{10}(^1S)27p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	320	1609.619	0.0 - 62.12652	$3d^{10}(^1S)4s - 3d^{10}(^1S)26p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	330	1610.059	0.0 - 62.10953	$3d^{10}(^1S)4s - 3d^{10}(^1S)25p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	340	1610.561	0.0 - 62.09018	$3d^{10}(^1S)4s - 3d^{10}(^1S)24p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	360	1611.136	0.0 - 62.06802	$3d^{10}(^1S)4s - 3d^{10}(^1S)23p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	375	1611.800	0.0 - 62.04245	$3d^{10}(^1S)4s - 3d^{10}(^1S)22p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	390	1612.573	0.0 - 62.01271	$3d^{10}(^1S)4s - 3d^{10}(^1S)21p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	420	1613.479	0.0 - 61.97786	$3d^{10}(^1S)4s - 3d^{10}(^1S)20p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	440	1614.552	0.0 - 61.93669	$3d^{10}(^1S)4s - 3d^{10}(^1S)19p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1615.2	0.0 - 61.91023	$3d^{10}(^1S)4s - 3d^{10}(^1S)19s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
	460	1615.834	0.0 - 61.88755	$3d^{10}(^1S)4s - 3d^{10}(^1S)18p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1616.7	0.0 - 61.85569	$3d^{10}(^1S)4s - 3d^{10}(^1S)18s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
36	20	1616.924	13.245423 - 75.09124	$3d^9 4s^2 - 3d^9 4s(^1D)5p$	$m^2D - w^2P^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079
	485	1617.384	0.0 - 61.82824	$3d^{10}(^1S)4s - 3d^{10}(^1S)17p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1618.4	0.0 - 61.78933	$3d^{10}(^1S)4s - 3d^{10}(^1S)17s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
	510	1619.282	0.0 - 61.75575	$3d^{10}(^1S)4s - 3d^{10}(^1S)16p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1620.5	0.0 - 61.70767	$3d^{10}(^1S)4s - 3d^{10}(^1S)16s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
32	20	1621.296	13.245423 - 74.9237	$3d^9 4s^2 - 3d^9 4s(^1D)5p$	$m^2D - w^2F^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079
	540	1621.642	0.0 - 61.66589	$3d^{10}(^1S)4s - 3d^{10}(^1S)15p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1623.2	0.0 - 61.60536	$3d^{10}(^1S)4s - 3d^{10}(^1S)15s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
	560	1624.625	0.0 - 61.55267	$3d^{10}(^1S)4s - 3d^{10}(^1S)14p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1626.7	0.0 - 61.47512	$3d^{10}(^1S)4s - 3d^{10}(^1S)14s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
	460	1628.466	0.0 - 61.40750	$3d^{10}(^1S)4s - 3d^{10}(^1S)13p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	460	1628.485	0.0 - 61.40675	$3d^{10}(^1S)4s - 3d^{10}(^1S)13p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1631.2	0.0 - 61.30540	$3d^{10}(^1S)4s - 3d^{10}(^1S)13s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
	10	1632.323	13.245423 - 74.50777	$3d^9 4s^2 - 3d^9 4s(^1D)5p$	$m^2D - w^2D^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079
	460	1633.537	0.0 - 61.21688	$3d^{10}(^1S)4s - 3d^{10}(^1S)12p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	460	1633.583	0.0 - 61.21513	$3d^{10}(^1S)4s - 3d^{10}(^1S)12p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1637.2	0.0 - 61.07894	$3d^{10}(^1S)4s - 3d^{10}(^1S)12s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
13	480	1640.436	0.0 - 60.95929	$3d^{10}(^1S)4s - 3d^{10}(^1S)11p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
13	480	1640.518	0.0 - 60.95624	$3d^{10}(^1S)4s - 3d^{10}(^1S)11p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
		1645.6	0.0 - 60.76665	$3d^{10}(^1S)4s - 3d^{10}(^1S)11s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
	0	1647.030						672
12	510	1650.133	0.0 - 60.60121	$3d^{10}(^1S)4s - 3d^{10}(^1S)10p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
12	510	1650.299	0.0 - 60.59506	$3d^{10}(^1S)4s - 3d^{10}(^1S)10p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
30	50	1651.720	11.202565 - 71.74556	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079
29	100	1655.318	11.202565 - 71.61391	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079
		1657.8	0.0 - 60.31997	$3d^{10}(^1S)4s - 3d^{10}(^1S)10s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{3}{2}$	F,P	375
11	540	1664.313	0.0 - 60.08479	$3d^{10}(^1S)4s - 3d^{10}(^1S)9p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
11	540	1664.719	0.0 - 60.07010	$3d^{10}(^1S)4s - 3d^{10}(^1S)9p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	1	1664.819	0.0 - 60.06659	$3d^{10}(^1S)4s - 3d^{10}(^1S)8d$	$g^2S - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F,A	1079
28	12	1671.483	11.202565 - 71.02976	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079
29	15	1673.440	11.202565 - 70.95980	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079
28	20	1684.674	11.202565 - 70.5612	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^4D^o$	$\frac{3}{2} - \frac{5}{2}$		672
10	560	1685.695	0.0 - 59.32271	$3d^{10}(^1S)4s - 3d^{10}(^1S)8p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
10	560	1687.053	0.0 - 59.27497	$3d^{10}(^1S)4s - 3d^{10}(^1S)8p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	4	1687.749	0.0 - 59.25052	$3d^{10}(^1S)4s - 3d^{10}(^1S)7d$	$g^2S - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F,A	1079

CU I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
28	2	1687.784	0.0 - 59.24930	$3d^{10}(^1S)4s - 3d^{10}(^1S)7d$	$g^2S - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F,A	1079
	25	1688.077	11.202565 - 70.44157	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^4D^o$	$\frac{3}{2} - \frac{7}{2}$	A	1079
27	25	1688.849	11.202565 - 70.41450	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^4F^o$	$\frac{3}{2} - \frac{7}{2}$	A	1079
27	35	1691.064	11.202565 - 70.33694	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^4F^o$	$\frac{5}{2} - \frac{7}{2}$	A	1079
	5	1692.654						672
30	1	1701.291	13.245423 - 72.02432	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A	1079
	8	44	1703.843	0.0 - 58.69086	$3d^{10}(^1S)4s - 3d^9 4s(^1D)4p$	$g^2S - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$	A
8	5	1707.391	0.0 - 58.56892	$3d^{10}(^1S)4s - 3d^{10}(^1S)8s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F	672
		1709.397	13.245423 - 71.74556	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079,1
	7	56	1713.365	0.0 - 58.36473	$3d^{10}(^1S)4s - 3d^9 4s(^1D)4p$	$g^2S - y^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A
9	56	1725.668	0.0 - 57.94857	$3d^{10}(^1S)4s - 3d^{10}(^1S)7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079
	8	1727.260	0.0 - 57.89516	$3d^{10}(^1S)4s - 3d^{10}(^1S)6d$	$g^2S - ^2D$	$\frac{1}{2} - \frac{5}{2}$	F,A	1079
29	4	1727.321	0.0 - 57.89311	$3d^{10}(^1S)4s - 3d^{10}(^1S)6d$	$g^2S - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F,A	1079
	1	1730.570	13.245423 - 71.02976	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A	1079
	2	1731.32						672
9	1	1732.668	13.245423 - 70.95980	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^2F^o$	$\frac{3}{2} - \frac{5}{2}$	A	1079,5
	56	1741.576	0.0 - 57.41926	$3d^{10}(^1S)4s - 3d^{10}(^1S)7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	1079
7	2	1749.202	13.245423 - 70.41450	$3d^9 4s^2 - 3d^9 4s(^3D)5p$	$m^2D - x^4F^o$	$\frac{3}{2} - \frac{3}{2}$		672
	10	1764.540	0.0 - 56.671387	$3d^{10}(^1S)4s - 3d^{10}(^1S)7s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F	672
7	58	1774.826	0.0 - 56.34374	$3d^{10}(^1S)4s - 3d^9 4s(^1D)4p$	$g^2S - y^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079,5
	10	1805.341	0.0 - 55.39121	$3d^{10}(^1S)4s - 3d^{10}(^1S)5d$	$g^2S - ^2D$	$\frac{1}{2} - \frac{5}{2}$	F,A	1079
	5	1805.454	0.0 - 55.38772	$3d^{10}(^1S)4s - 3d^{10}(^1S)5d$	$g^2S - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F,A	1079
6	56	1817.265	0.0 - 55.02775	$3d^{10}(^1S)4s - 3d^{10}(^1S)6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A	1079
	58	1825.349	0.0 - 54.78403	$3d^{10}(^1S)4s - 3d^{10}(^1S)6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A	1079,5
6		1892.192	0.0 - 52.848749	$3d^{10}(^1S)4s - 3d^{10}(^1S)6s$	$g^2S - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F,P	375,487
	2	1978.13	11.202565 - 61.75575	$3d^9 4s^2 - 3d^{10}(^1S)16p$	$m^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$	A	1079
	3	1981.65	11.202565 - 61.66589	$3d^9 4s^2 - 3d^{10}(^1S)15p$	$m^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$	A	1079
	4	1986.112	11.202565 - 61.55267	$3d^9 4s^2 - 3d^{10}(^1S)14p$	$m^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	A	1079
	6	1991.876	11.202565 - 61.40675	$3d^9 4s^2 - 3d^{10}(^1S)13p$	$m^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$	A	1079
	10	1999.50	11.202565 - 61.21513	$3d^9 4s^2 - 3d^{10}(^1S)12p$	$m^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$	A	1079

COPPER II (Cu¹⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰(¹S₀) (28 electrons)
Ionization Potential 163 665.6 cm⁻¹; 20.2921 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
8	2	675.6020	0.0 - 148.016146	$3d^{10} - 3d^9(^2D)5f$	$g^1S - ^3D^o$	0 - 1		612
	8	685.1406	0.0 - 145.955437	$3d^{10} - 3d^9(^2D)5f$	$g^1S - ^1P^o$	0 - 1		612
2	2	685.3968	0.0 - 145.900895	$3d^{10} - 3d^9(^2D)5f$	$g^1S - ^3P^o$	0 - 1		612
	10	709.3129	0.0 - 140.981503	$3d^{10} - 3d^9(^2D)6p$	$g^1S - ^1P^o$	0 - 1		612
10	10	718.1787	0.0 - 139.241123	$3d^{10} - 3d^9(^2D)6p$	$g^1S - ^3P^o$	0 - 1		612
	15	724.4887	0.0 - 138.028377	$3d^{10} - 3d^9(^2D)4f$	$g^1S - ^3D^o$	0 - 1		612
20	20	735.5203	0.0 - 135.958178	$3d^{10} - 3d^9(^2D)4f$	$g^1S - ^1P^o$	0 - 1		612
	25	736.0319	0.0 - 135.863674	$3d^{10} - 3d^9(^2D)4f$	$g^1S - ^3P^o$	0 - 1		612
0	0	752.80						612
	0	763.29						612
	0	768.48						612
	0	776.48						612

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	967.8729	21.928754 - 125.248109	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^3D - x^3P^o$	3 - 2		612
	25	968.0343	21.928754 - 125.23087	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^3D - x^3P^o$	3 - 3		612
	2	972.2674	26.264567 - 129.116934	$3d^2(^2D)4s - 3d^4s(^2D)4p$	$^1D - y^3D^o$	2 - 3		612
	2	973.4995	22.847131 - 125.56932	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^3D - x^3P^o$	2 - 1		612
	20	974.7589	26.264567 - 128.854034	$3d^2(^2D)4s - 3d^4s(^2D)4p$	$^1D - y^3D^o$	2 - 2		612
	10	976.5532	22.847131 - 125.248109	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^3D - x^3P^o$	2 - 2		612
	10	976.7176	22.847131 - 125.23087	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^3D - x^3P^o$	2 - 3		612
	25	977.5674	26.264567 - 128.559308	$3d^2(^2D)4s - 3d^4s(^2D)4p$	$^1D - y^3F^o$	2 - 3		612
	5	979.4209	26.264567 - 128.365720	$3d^2(^2D)4s - 3d^4s(^2D)4p$	$^1D - y^3F^o$	2 - 2		612
	1	983.9802	21.928754 - 123.556816	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^1D^o$	3 - 2		612
	10	984.5336	23.998381 - 125.56932	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^3D - x^3P^o$	1 - 1		612
	10	987.6570	23.998381 - 125.248109	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^3D - x^3P^o$	1 - 2		612
	8	989.2365	21.928754 - 123.016816	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^1F^o$	3 - 3		612
	25	992.9532	22.847131 - 123.556816	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^1D^o$	2 - 2		612
	8	998.3060	22.847131 - 123.016816	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^1F^o$	2 - 3		612
	5	999.7940	22.847131 - 122.867732	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^1P^o$	2 - 1		612
	8	1001.0130	22.847131 - 122.745938	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3F^o$	2 - 2		612
	30	1004.0554	21.928754 - 121.524856	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3D^o$	3 - 3		612
	1	1006.9841	23.998381 - 123.304814	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3D^o$	1 - 1		612
	30	1008.5688	21.928754 - 121.079149	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	3 - 3		612
	30	1008.7284	22.847131 - 121.981885	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3D^o$	2 - 2		612
	30	1010.2690	26.264567 - 125.248109	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^1D - x^3P^o$	2 - 2		612
	10	1010.4450	26.264567 - 125.23087	$3d^2(^2D)4s - 3d^4s(^4P)4p$	$^1D - x^3P^o$	2 - 3		612
	3	1010.6395	21.928754 - 120.876009	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1D^o$	3 - 2		612
	2	1011.4358	23.998381 - 122.867732	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^1P^o$	1 - 1		612
	25	1012.5971	21.928754 - 120.684711	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3F^o$	3 - 3		612
	3	1012.6833	23.998381 - 122.745938	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3F^o$	1 - 2		612
	1	1013.3999	22.847131 - 121.524856	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3D^o$	2 - 3		612
	15	1017.9980	22.847131 - 121.079149	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	2 - 3		612
	15	1018.0642	23.998381 - 122.224011	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3P^o$	1 - 0		612
	50	1018.7073	21.928754 - 120.092375	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3P^o$	3 - 2		612
	15	1019.6545	22.847131 - 120.919563	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3P^o$	2 - 1		612
	15	1020.1076	22.847131 - 120.876009	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1D^o$	2 - 2		612
	5	1022.1021	22.847131 - 120.684711	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3F^o$	2 - 3		612
	50	1027.8311	26.264567 - 123.556816	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^1D^o$	2 - 2		612
	25	1028.3279	22.847131 - 120.092375	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3P^o$	2 - 2		612
	10	1029.7508	21.928754 - 119.039630	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	3 - 2		612
	20	1030.2633	21.928754 - 118.991325	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1G^o$	3 - 4		612
	8	1031.7662	23.998381 - 120.919563	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^3D - ^3P^o$	1 - 1		612
	10	1033.5677	26.264567 - 123.016816	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^1F^o$	2 - 3		612
	8	1035.1628	26.264567 - 122.867732	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^1P^o$	2 - 1		612
	60	1036.4695	26.264567 - 122.745938	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^3F^o$	2 - 2		612
	60	1039.3477	21.928754 - 118.142947	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	3 - 3		612
	60	1039.5821	22.847131 - 119.039630	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	2 - 2		612
	80	1044.5188	21.928754 - 117.666619	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	3 - 4		612
	80	1044.7435	26.264567 - 121.981885	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^3D^o$	2 - 2		612
	20	1049.3640	22.847131 - 118.142947	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	2 - 3		612
	50	1049.7554	26.264567 - 121.524856	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^3D^o$	2 - 3		612
	10	1050.1536	22.847131 - 118.071300	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1D^o$	2 - 1		612
	10	1050.4028	21.928754 - 117.130332	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1D^o$	3 - 2		612
	20	1052.1747	23.998381 - 119.039630	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1F^o$	1 - 2		612
	60	1054.6901	26.264567 - 121.079149	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - z^1F^o$	2 - 3		612
	40	1055.7968	21.928754 - 116.643945	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^1G^o$	3 - 3		612
	60	1056.9546	26.264567 - 120.876009	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - z^1D^o$	2 - 2		612

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
40	1058.7988		21.928754 - 116.375403	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^3D^{\circ}$	3 - 3		612
60	1059.0960		26.264567 - 120.684711	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^3F^{\circ}$	2 - 3		612
60	1060.6343		22.847131 - 117.130332	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^3D^{\circ}$	2 - 2		612
60	1063.0052		23.998381 - 118.071300	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^3D^{\circ}$	1 - 1		612
20	1065.7821		26.264567 - 120.092375	$3d^2(^2D)4s - 3d^2(^2D)5p$	$^1D - ^3P^{\circ}$	2 - 2		612
20	1066.1343		22.847131 - 116.643945	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^3G^{\circ}$	2 - 3		612
50	1069.1954		22.847131 - 116.375403	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^3D^{\circ}$	2 - 3		612
15	1070.3112		21.928754 - 115.359524	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^3G^{\circ}$	3 - 4		612
30	1073.7454		23.998381 - 117.130332	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - z^3D^{\circ}$	1 - 2		612
1	1077.8759		26.264567 - 119.039630	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - z^3F^{\circ}$	2 - 2		612
5	1086.1102		21.928754 - 114.000439	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^3F^{\circ}$	3 - 3		612
20	1088.3953		26.264567 - 118.142947	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - z^3F^{\circ}$	2 - 3		612
3	1089.2447		26.264567 - 118.071300	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - z^3D^{\circ}$	2 - 1		612
5	1091.2916		22.847131 - 114.481669	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5F^{\circ}$	2 - 2		612
30	1094.4025		21.928754 - 113.302813	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5F^{\circ}$	3 - 4		612
25	1097.0329		22.847131 - 114.000439	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^3F^{\circ}$	2 - 3		612
1	1101.8362		23.998381 - 114.755971	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5F^{\circ}$	1 - 1		612
5	1105.1765		23.998381 - 114.481669	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5F^{\circ}$	1 - 2		612
3	1106.4471		26.264567 - 116.643945	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - z^3G^{\circ}$	2 - 3		612
1	1109.7445		26.264567 - 116.375403	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - z^3D^{\circ}$	2 - 3		612
0	1111.7577		21.928754 - 111.876407	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5G^{\circ}$	3 - 3		612
5	1112.407							612
15	1119.9470		21.928754 - 111.218697	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5G^{\circ}$	3 - 4		612
5	1123.2260		22.847131 - 111.876407	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5G^{\circ}$	2 - 3		612
1	1130.8853		23.998381 - 112.42468	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5G^{\circ}$	1 - 2		612
1	1130.8978		67.916555 - 156.341872	$3d^2(^2D)4p - 3d^2(^2D)9s$	$^3P^{\circ} - ^1D$	1 - 2		612
20	1142.6405		22.847131 - 110.363719	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5D^{\circ}$	2 - 2		612
30	1144.8556		21.928754 - 109.276015	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5D^{\circ}$	3 - 3		612
8	1147.7617		23.998381 - 111.1245	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5D^{\circ}$	1 - 1		612
5	1157.0206		22.847131 - 109.276015	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5D^{\circ}$	2 - 3		612
8	1157.8719		23.998381 - 110.363719	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5D^{\circ}$	1 - 2		612
8	1157.8807		67.916555 - 154.281240	$3d^2(^2D)4p - 3d^2(^2D)9s$	$^3P^{\circ} - ^3D$	1 - 2		612
3	1162.6010		21.928754 - 107.942787	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^3D - ^5D^{\circ}$	3 - 4		612
2	1185.8991		66.418687 - 150.742894	$3d^2(^2D)4p - 3d^2(^2D)8s$	$^3P^{\circ} - ^3D$	2 - 3		612
2	1192.261							612
2	1201.6258		68.447741 - 151.668325	$3d^2(^2D)4p - 3d^2(^2D)7d$	$^3F^{\circ} - ^3G$	3 - 4		612
1	1204.6158		68.730893 - 151.744913	$3d^2(^2D)4p - 3d^2(^2D)7d$	$^3F^{\circ} - ^3F$	4 - 4		612
1	1204.6356		68.730893 - 151.743552	$3d^2(^2D)4p - 3d^2(^2D)7d$	$^3F^{\circ} - ^3F$	4 - 3		612
1	1204.6531		26.264567 - 109.276015	$3d^2(^2D)4s - 3d^4s(^2F)4p$	$^1D - ^3D^{\circ}$	2 - 3		612
0	1205.1467		68.730893 - 151.708343	$3d^2(^2D)4p - 3d^2(^2D)7d$	$^3F^{\circ} - ^3D$	4 - 3		612
0	1205.1944		70.841470 - 153.815633	$3d^2(^2D)4p - 3d^2(^2D)7d$	$^3D^{\circ} - ^1F$	3 - 3		612
0	1205.2024		73.353292 - 156.32691	$3d^2(^2D)4p - 3d^2(^2D)9s$	$^1D^{\circ} - ^3D$	2 - 1		612
2	1205.9029		68.730893 - 151.656312	$3d^2(^2D)4p - 3d^2(^2D)7d$	$^3F^{\circ} - ^3G$	4 - 5		612
0	1206.7691		67.916555 - 150.782450	$3d^2(^2D)4p - 3d^2(^2D)8s$	$^3P^{\circ} - ^3D$	1 - 2		612
1	1214.5399		71.920102 - 154.255811	$3d^2(^2D)4p - 3d^2(^2D)9s$	$^1F^{\circ} - ^3D$	3 - 3		612
1	1214.5546		68.447741 - 150.782450	$3d^2(^2D)4p - 3d^2(^2D)8s$	$^3F^{\circ} - ^3D$	3 - 2		612
1	1219.3337		68.730893 - 150.742894	$3d^2(^2D)4p - 3d^2(^2D)8s$	$^3F^{\circ} - ^3D$	4 - 3		612
0	1235.8729		69.867983 - 150.782450	$3d^2(^2D)4p - 3d^2(^2D)8s$	$^3F^{\circ} - ^3D$	2 - 2		612
1	1240.0272		67.916555 - 148.559947	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^{\circ} - ^1D$	1 - 2		612
2	1241.9641		66.418687 - 146.936315	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3P^{\circ} - ^1D$	2 - 2		612
1	1243.0857		67.916555 - 148.361531	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^{\circ} - ^1P$	1 - 1		612
5	1248.7916		66.418687 - 146.496097	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^{\circ} - ^3D$	2 - 3		612
10	1250.0483		66.418687 - 146.415597	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^{\circ} - ^3P$	2 - 2		612
5	1253.1809		66.418687 - 146.215629	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^{\circ} - ^3S$	2 - 1		612

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1255.1571	68.850260 - 148.521562	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^o - ^3D$	0 - 1		612
	1	1257.6833	68.850260 - 148.361531	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^o - ^1P$	0 - 1		612
	0	1261.2154	71.493853 - 150.782450	$3d^2(^2D)4p - 3d^2(^2D)8s$	$^3D^o - ^3D$	2 - 2		612
	3	1262.9249	67.916555 - 147.097830	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^o - ^3P$	1 - 0		612
	15	1265.5062	67.916555 - 146.936315	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3P^o - ^1D$	1 - 2		612
	10	1266.3101	67.916555 - 146.886154	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3P^o - ^3D$	1 - 1		612
	0	1268.6686	71.920102 - 150.742894	$3d^2(^2D)4p - 3d^2(^2D)8s$	$^1F^o - ^3D$	3 - 3		612
	1	1269.4464	69.867983 - 148.642477	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3F$	2 - 2		612
	2	1271.3178	67.916555 - 146.575091	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^o - ^3D$	1 - 2		612
	8	1272.0417	69.867983 - 148.481757	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3G$	2 - 3		612
	2	1273.7007	67.916555 - 146.427934	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3P^o - ^3P$	1 - 1		612
	3	1274.0708	68.447741 - 146.936315	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3F^o - ^1D$	3 - 2		612
	3	1274.4651	66.418687 - 144.882979	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3P^o - ^3D$	2 - 2		612
	30	1275.5717	66.418687 - 144.814906	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3P^o - ^3D$	2 - 3		612
	0	1279.9615	68.447741 - 146.575091	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3D$	3 - 2		612
	5	1280.2682	68.447741 - 146.556374	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3F$	3 - 3		612
	3	1281.2570	68.447741 - 146.496097	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3D$	3 - 3		612
	8	1281.4616	68.850260 - 146.886154	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3P^o - ^3D$	0 - 1		612
	15	1282.4547	68.447741 - 146.423204	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3G$	3 - 4		612
	1	1283.8298	69.704699 - 147.596646	$3d^2(^2D)4p - 3d^2(^2D)7p$	$^3F - ^3F^o$	4 - 4		612
	8	1284.8712	68.730893 - 146.559706	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3F$	4 - 4		612
	1	1285.5186	70.841470 - 148.631090	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^1F$	3 - 3		612
	1	1285.9222	68.730893 - 146.496097	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3D$	4 - 3		612
	15	1287.4683	68.730893 - 146.402708	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3G$	4 - 5		612
	2	1297.5498	69.867983 - 146.936315	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3F^o - ^1D$	2 - 2		612
	1	1297.978						612
	15	1298.3949	69.867983 - 146.886154	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3F^o - ^3D$	2 - 1		612
	1	1298.9053	71.493853 - 148.481757	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3G$	2 - 3		612
	10	1299.2678	67.916555 - 144.882979	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3P^o - ^3D$	1 - 2		612
	2	1303.6602	69.867983 - 146.575091	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3D$	2 - 2		612
	2	1303.9783	69.867983 - 146.556374	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3F^o - ^3F$	2 - 3		612
	5	1305.5608	71.920102 - 148.515539	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^1F^o - ^1G$	3 - 4		612
	30	1308.2971	68.447741 - 144.882979	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3F^o - ^3D$	3 - 2		612
	15	1309.4633	68.447741 - 144.814906	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3F^o - ^3D$	3 - 3		612
	1	1311.7947	71.531539 - 147.762982	$3d^2(^2D)4p - 3d^2(^2D)7p$	$^3F - ^3D^o$	3 - 3		612
	15	1314.1495	70.841470 - 146.936315	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3D^o - ^1D$	3 - 2		612
	30	1314.3366	68.730893 - 144.814906	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3F^o - ^3D$	4 - 3		612
	10	1320.6858	70.841470 - 146.559706	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3F$	3 - 4		612
	5	1321.7962	70.841470 - 146.496097	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3D$	3 - 3		612
	6	1322.6326	73.595813 - 149.202599	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^1P^o - ^1S$	1 - 0		612
	3	1323.2042	70.841470 - 146.415597	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3P$	3 - 2		612
	6	1323.7943	73.102038 - 148.642477	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3F$	1 - 2		612
	1	1325.2421	73.102038 - 148.559947	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^1D$	1 - 2		612
	3	1325.5135	71.493853 - 146.936315	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3D^o - ^1D$	2 - 2		612
	10	1326.3954	71.493853 - 146.886154	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^3D^o - ^3D$	2 - 1		612
	5	1328.4129	73.353292 - 148.631090	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^1D^o - ^1F$	2 - 3		612
	1	1329.6696	73.353292 - 148.559947	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^1D^o - ^1D$	2 - 2		612
	5	1331.8907	71.493853 - 146.575091	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3D$	2 - 2		612
	5	1332.2228	71.493853 - 146.556374	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3F$	2 - 3		612
	20	1333.0452	71.920102 - 146.936315	$3d^2(^2D)4p - 3d^2(^2D)7s$	$^1F^o - ^1D$	3 - 2		612
	2	1334.5063	71.493853 - 146.427934	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^3D^o - ^3P$	2 - 1		612
	2	1334.6546	73.595813 - 148.521562	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^1P^o - ^3D$	1 - 1		612
	0	1337.5114	73.595813 - 148.361531	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^1P^o - ^1P$	1 - 1		612
	0	1339.4952	71.920102 - 146.575091	$3d^2(^2D)4p - 3d^2(^2D)6d$	$^1F^o - ^3D$	3 - 2		612

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
5	1339.7713	71.920102 - 146.559706		$3d^9(^2D)4p - 3d^9(^2D)6d$	$^1F^\circ - ^3F$	3 - 4		612
3	1340.9141	71.920102 - 146.496097		$3d^9(^2D)4p - 3d^9(^2D)6d$	$^1F^\circ - ^3D$	3 - 3		612
15	1350.5938	70.841470 - 144.882979		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^3D^\circ - ^3D$	3 - 2		612
25	1351.8366	70.841470 - 144.814906		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^3D^\circ - ^3D$	3 - 3		612
15	1355.3053	73.102038 - 146.886154		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^3D^\circ - ^3D$	1 - 1		612
30	1358.7730	0.0 - 73.595813		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^1P^\circ$	0 - 1		612
20	1359.0091	73.353292 - 146.936315		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^1D^\circ - ^1D$	2 - 2		612
5	1359.9362	73.353292 - 146.886154		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^1D^\circ - ^3D$	2 - 1		612
20	1362.5997	71.493853 - 144.882979		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^3D^\circ - ^3D$	2 - 2		612
5	1363.5031	73.595813 - 146.936315		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^1P^\circ - ^1D$	1 - 2		612
25	1367.9509	0.0 - 73.102038		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3D^\circ$	0 - 1		612
1	1370.2520	73.595813 - 146.575091		$3d^9(^2D)4p - 3d^9(^2D)6d$	$^1P^\circ - ^3D$	1 - 2		612
2	1370.5600	71.920102 - 144.882979		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^1F^\circ - ^3D$	3 - 2		612
2	1371.451							612
20	1371.8399	71.920102 - 144.814906		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^1F^\circ - ^3D$	3 - 3		612
3	1375.5019	66.418687 - 139.119420		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^1F$	2 - 3		612
3	1377.477							612
10	1393.1275	73.102038 - 144.882979		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^3D^\circ - ^3D$	1 - 2		612
10	1398.6419	69.704699 - 141.202631		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^1F^\circ$	4 - 3		612
3	1399.3527	73.353292 - 144.814906		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^1D^\circ - ^3D$	2 - 3		612
15	1402.7770	73.595813 - 144.882979		$3d^9(^2D)4p - 3d^9(^2D)7s$	$^1P^\circ - ^3D$	1 - 2		612
15	1407.1689	67.916555 - 138.981230		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^1D$	1 - 2		612
2	1408.8124	67.916555 - 138.898326		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3D$	1 - 1		612
1	1410.002							612
2	1410.570							612
10	1414.8980	67.916555 - 138.593030		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^1P$	1 - 1		612
25	1418.4265	66.418687 - 136.919342		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3D$	2 - 3		612
2	1419.7455	68.447741 - 138.882898		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^\circ - ^1G$	3 - 4		612
5	1421.3737	66.418687 - 136.773162		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3P$	2 - 1		612
25	1421.7589	66.418687 - 136.754099		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3P$	2 - 2		612
10	1427.5912	68.850260 - 138.898326		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3D$	0 - 1		612
20	1427.8290	69.704699 - 139.741095		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3D^\circ$	4 - 3		612
25	1428.3580	71.531539 - 141.541998		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^1D^\circ$	3 - 2		612
40	1430.2428	66.418687 - 136.336884		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3S$	2 - 1		612
10	1433.8404	68.850260 - 138.593030		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^1P$	0 - 1		612
15	1434.7699	67.916555 - 137.614143		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3P$	1 - 0		612
125	1434.9037	69.704699 - 139.395786		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3F^\circ$	4 - 4		612,371
10	1435.3155	71.531539 - 141.202631		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^1F^\circ$	3 - 3		612
25	1436.2359	69.704699 - 139.331146		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3F^\circ$	4 - 3		612,371
5	1442.1386	66.418687 - 135.760151		$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^\circ - ^1D$	2 - 2		612,371
3	1443.5419	69.867983 - 139.142035		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^\circ - ^3F$	2 - 2		612
2	1444.1304	66.418687 - 135.664510		$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^\circ - ^3D$	2 - 1		612
20	1445.9835	67.916555 - 137.073638		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3D$	1 - 2		612
1	1446.9006	69.867983 - 138.981230		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^\circ - ^1D$	2 - 2		612
1	1448.6383	69.867983 - 138.898326		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^\circ - ^3D$	2 - 1		612
20	1449.0580	72.723817 - 141.734167		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3F^\circ$	2 - 2		612
40	1450.3035	69.867983 - 138.819066		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^\circ - ^3G$	2 - 3		612
20	1452.2935	67.916555 - 136.773162		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3P$	1 - 1		612
0	1452.6956	67.916555 - 136.754099		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3P$	1 - 2		612
3	1455.6624	69.704699 - 138.401946		$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - v^3G^\circ$	4 - 3		612
10	1457.1759	68.447741 - 137.073638		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^\circ - ^3D$	3 - 2		612
15	1458.0016	68.447741 - 137.034770		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^\circ - ^3F$	3 - 3		612,371
25	1459.4117	72.723817 - 141.244576		$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3D^\circ$	2 - 1		612
15	1461.5539	67.916555 - 136.336884		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3P^\circ - ^3S$	1 - 1		612

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	1463.7515	68.447741 - 136.765350	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^o - ^3G$	3 - 4		612,371
	25	1463.8381	68.730893 - 137.044458	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^o - ^3F$	4 - 4		612,371
	15	1465.5408	69.704699 - 137.938898	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - v^3F^o$	4 - 4		612
	70	1466.0702	71.531539 - 139.741095	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3D^o$	3 - 3		612,371
	4	1466.5240	68.730893 - 136.919342	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^o - ^3D$	4 - 3		612,371
	5	1466.7284	71.531539 - 139.710488	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3D^o$	3 - 2		612
	15	1469.6928	70.841470 - 138.882898	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^1G$	3 - 4		612
	150	1470.6974	68.730893 - 136.725846	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^o - ^3G$	4 - 5		612,371
	15	1472.3950	0.0 - 67.916555	$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3P^o$	0 - 1		612,371
	8	1473.5299	71.531539 - 139.395786	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3F^o$	3 - 4		612,371
	25	1473.9785	67.916555 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^o - ^1D$	1 - 2		612
	40	1474.9348	71.531539 - 139.331146	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3F^o$	3 - 3		612,371
	60	1475.846						612
	25	1476.0593	67.916555 - 135.664510	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^o - ^3D$	1 - 1		612,371
	2	1478.2363	71.493853 - 139.142035	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3F$	2 - 2		612
	10	1481.5438	71.531539 - 139.028698	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - v^3D^o$	3 - 2		612,371
	6	1485.3277	71.493853 - 138.819066	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3G$	2 - 3		612,371
	2	1485.6102	68.447741 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^1D$	3 - 2		612,371
	6	1485.6778	66.418687 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^o - ^3D$	2 - 2		612,371
	900	1488.6372	66.418687 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^o - ^3D$	2 - 3		612,371
	10	1488.8311	69.867983 - 137.034770	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^o - ^3F$	2 - 3		612,371
	4	1492.1525	72.723817 - 139.741095	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3D^o$	2 - 3		612,371
	5	1492.6817	73.595813 - 140.589334	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^o - ^1S$	1 - 0		612,371
	40	1492.8343	72.723817 - 139.710488	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3D^o$	2 - 2		612,371
	20	1493.3665	71.920102 - 138.882898	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1F^o - ^1G$	3 - 4		612,371
	5	1494.6526	69.867983 - 136.773162	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3F^o - ^3P$	2 - 1		612
	20	1495.4298	71.531539 - 138.401946	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - v^3G^o$	3 - 3		612,371
	50	1496.6867	68.850260 - 135.664510	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^o - ^3D$	0 - 1		612,371
	1	1497.956						612
	3	1498.5756	71.531539 - 138.261570	$3d^84s^2 - 3d^9(^2D)4f$	$^3F - ^3G^o$	3 - 3		612
	3	1499.5132	71.531539 - 138.219849	$3d^84s^2 - 3d^9(^2D)4f$	$^3F - ^1G^o$	3 - 4		612,371
	5	1501.3363	72.723817 - 139.331146	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3F^o$	2 - 3		612,371
	10	1503.3682	72.723817 - 139.241123	$3d^84s^2 - 3d^9(^2D)6p$	$^3F - ^3P^o$	2 - 1		612,371
	30	1504.7571	69.704699 - 136.160606	$3d^84s^2 - 3d^9(^2D)4f$	$^3F - ^3G^o$	4 - 5		612,371
	10	1505.3878	69.704699 - 136.132766	$3d^84s^2 - 3d^9(^2D)4f$	$^3F - ^3F^o$	4 - 4		612,371
	5	1505.8572	71.531539 - 137.938898	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - v^3F^o$	3 - 4		612
	15	1508.1846	72.723817 - 139.028698	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - v^3D^o$	2 - 2		612,371
	10	1508.6323	69.704699 - 135.989904	$3d^84s^2 - 3d^9(^2D)4f$	$^3F - ^3F^o$	4 - 3		612,371
	30	1510.5058	70.841470 - 137.044458	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3F$	3 - 4		612,371
	5	1512.1739	69.704699 - 135.834661	$3d^84s^2 - 3d^84s(^2G)4p$	$^3F - u^3F^o$	4 - 4		612,371
	4	1512.4646	71.531539 - 137.648790	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - w^1D^o$	3 - 2		612,371
	15	1513.3659	70.841470 - 136.919342	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3D$	3 - 3		612,371
	4	1514.2339	73.102038 - 139.142035	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3F$	1 - 2		612,371
	200	1514.4924	69.704699 - 135.733422	$3d^84s^2 - 3d^84s(^2G)4p$	$^3F - u^3F^o$	4 - 3		612,371
	5	1516.9010	70.841470 - 136.765350	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3G$	3 - 4		612
	5	1517.1599	70.841470 - 136.754099	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3P$	3 - 2		612,371
	10	1517.6310	69.867983 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^1D$	2 - 2		612,371
	4	1517.9300	73.102038 - 138.981230	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^1D$	1 - 2		612,371
	100	1519.4918	67.916555 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3P^o - ^3D$	1 - 2		612,371
	200	1519.8371	69.867983 - 135.664510	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^3D$	2 - 1		612,371
	15	1520.5396	73.353292 - 139.119420	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^1F$	2 - 3		612,371
	7	1522.5768	72.723817 - 138.401946	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - v^3G^o$	2 - 3		612,371
	3	1523.7413	73.353292 - 138.981230	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^1D$	2 - 2		612,371
	15	1524.8601	71.493853 - 137.073638	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3D$	2 - 2		612,371

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	1525.6312	71.531539 - 137.078181	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3G^\circ$	3 - 3		612
	10	1525.6409	73.595813 - 139.142035	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^\circ - ^3F$	1 - 2		612
	10	1525.6686	73.353292 - 138.898326	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^\circ - ^3D$	2 - 1		612
	15	1525.7645	71.493853 - 137.034770	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^\circ - ^3F$	2 - 3		612,371
	8	1525.8381	72.723817 - 138.261570	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3G^\circ$	2 - 3		612,371
	5	1526.9276	73.102038 - 138.593030	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^\circ - ^1P$	1 - 1		612
	5	1527.8126	72.723817 - 138.176869	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^\circ$	2 - 2		612
	2	1528.8952	72.723817 - 138.130522	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^1F^\circ$	2 - 3		612
	400	1531.8559	68.447741 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^\circ - ^3D$	3 - 2		612,371
	90	1532.1306	71.531539 - 136.800128	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3F^\circ$	3 - 2		612,371
	30	1533.9865	72.723817 - 137.913441	$3d^8 4s^2 - 3d^8 4s(^2P)4p$	$^3F - w^3S^\circ$	2 - 1		612,371
	150	1535.0023	68.447741 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^\circ - ^3D$	3 - 3		612,371
	10	1535.5238	71.920102 - 137.044458	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1F^\circ - ^3F$	3 - 4		612,371
	400	1537.5590	69.704699 - 134.742853	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3H^\circ$	4 - 4		612,371
	10	1538.4795	71.920102 - 136.919342	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1F^\circ - ^3D$	3 - 3		612
	10	1540.2394	72.723817 - 137.648790	$3d^8 4s^2 - 3d^8 4s(^2P)4p$	$^3F - w^1D^\circ$	2 - 2		612,371
	100	1540.3887	70.841470 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^\circ - ^1D$	3 - 2		612,371
	200	1540.5883	71.531539 - 136.441806	$3d^8 4s^2 - 3d^8 4s(^4F)4p$	$^3F - v^3D^\circ$	3 - 3		612,371
	1000	1541.7032	68.730893 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^\circ - ^3D$	4 - 3		612,371
	15	1541.7560	85.388770 - 150.249875	$3d^8 4s^2 - 3d^8 4s(^4F)4p$	$^1D - v^3F^\circ$	2 - 2		612,371
	150	1544.6771	71.531539 - 136.269987	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3G^\circ$	3 - 4		612,371
	6	1547.9582	71.531539 - 136.132766	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^\circ$	3 - 4		612,371
	2	1549.6252	88.925995 - 153.457729	$3d^8 4s^2 - 3d^9(^2D)6f$	$^3P - ^3D^\circ$	0 - 1		612
	3	1550.2967	71.531539 - 136.035321	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3D^\circ$	3 - 3		612
	25	1550.6533	72.723817 - 137.212765	$3d^8 4s^2 - 3d^8 4s(^2P)4p$	$^3F - w^1P^\circ$	2 - 1		612,371
	90	1551.3890	71.531539 - 135.989904	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^\circ$	3 - 3		612,371
	300	1552.6464	69.704699 - 134.110862	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3H^\circ$	4 - 5		612,371
	90	1553.8962	72.723817 - 137.078181	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3G^\circ$	2 - 3		612,371
	200	1555.1344	71.531539 - 135.834661	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3F^\circ$	3 - 4		612,371
	300	1555.7030	69.704699 - 133.984320	$3d^8 4s^2 - 3d^8 4s(^2P)4p$	$^3F - w^1D^\circ$	4 - 3		612,371
	8	1556.0255	71.493853 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^\circ - ^1D$	2 - 2		612,371
	20	1557.5867	71.531539 - 135.733422	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3F^\circ$	3 - 3		612
	80	1558.3447	71.493853 - 135.664510	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^\circ - ^3D$	2 - 1		612,371
	5	1563.1937	73.102038 - 137.073638	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^\circ - ^3D$	1 - 2		612
	100	1565.9243	69.867983 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^\circ - ^3D$	2 - 2		612,371
	150	1566.4148	71.920102 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1F^\circ - ^1D$	3 - 2		612,371
	4	1569.2123	69.867983 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^\circ - ^3D$	2 - 3		612,371
	4	1569.4155	72.723817 - 136.441806	$3d^8 4s^2 - 3d^8 4s(^4F)4p$	$^3F - v^3D^\circ$	2 - 3		612
	2	1570.3153	73.353292 - 137.034770	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^\circ - ^3F$	2 - 3		612
	3	1570.5707	73.102038 - 136.773162	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^\circ - ^3P$	1 - 1		612
	0	1573.1668	73.353292 - 136.919342	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^\circ - ^3D$	2 - 3		612
	5	1575.3533	73.595813 - 137.073638	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^\circ - ^3D$	1 - 2		612
	0	1577.2670	73.353292 - 136.754099	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^\circ - ^3P$	2 - 2		612
	6	1579.4918	72.723817 - 136.035321	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3D^\circ$	2 - 3		612,371
	15	1580.0250	72.723817 - 136.013956	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3D^\circ$	2 - 2		612
	8	1580.6257	72.723817 - 135.989904	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^\circ$	2 - 3		612,371
	0	1581.4066	73.102038 - 136.336884	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^\circ - ^3S$	1 - 1		612
	0	1581.4187	72.723817 - 135.958178	$3d^8 4s^2 - 3d^9(^2D)4f$	$^3F - ^1P^\circ$	2 - 1		612
	15	1581.9953	71.531539 - 134.742853	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3H^\circ$	3 - 4		612,371
	3	1582.8458	73.595813 - 136.773162	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^\circ - ^3P$	1 - 1		612,371
	80	1583.6823	71.531539 - 134.675515	$3d^8 4s^2 - 3d^8 4s(^2P)4p$	$^3F - w^3D^\circ$	3 - 2		612,371
	1	1587.0035	88.361997 - 151.373829	$3d^8 4s^2 - 3d^9(^2D)6f$	$^3P - ^1P^\circ$	2 - 1		612
	1	1587.0596	72.723817 - 135.733422	$3d^8 4s^2 - 3d^8 4s(^2G)4p$	$^3F - u^3F^\circ$	2 - 3		612
	0	1587.7151	73.353292 - 136.336884	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^\circ - ^3S$	2 - 1		612

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
80	1590.1649		70.841470 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	3 - 2		612,371
500	1593.5556		70.841470 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	3 - 3		612,371
1	1596.7458		85.388770 - 148.016146	$3d^84s^2 - 3d^9(^2D)5f$	$^1D - ^3D^o$	2 - 1		612
200	1598.4023		73.102038 - 135.664510	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	1 - 1		612,371
1	1601.2097		71.531539 - 133.984320	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - w^3D^o$	3 - 3		612
6	1602.2729		72.723817 - 135.135157	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - w^3D^o$	2 - 1		612,371
150	1602.3880		73.353292 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1D^o - ^1D$	2 - 2		612,371
50	1604.8475		73.353292 - 135.664510	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1D^o - ^3D$	2 - 1		612,371
200	1605.2813		71.531539 - 133.825916	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - w^3P^o$	3 - 2		612,371
300	1606.8341		71.493853 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	2 - 2		612,371
70	1608.6393		73.595813 - 135.760151	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1P^o - ^1D$	1 - 2		612,371
5	1610.2964		71.493853 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	2 - 3		612,371
2	1611.1181		73.595813 - 135.664510	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1P^o - ^3D$	1 - 1		612,371
1	1614.1608		72.723817 - 134.675515	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - w^3D^o$	2 - 2		612
8	1617.9154		71.920102 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1F^o - ^3D$	3 - 2		612,371
300	1621.4256		71.920102 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1F^o - ^3D$	3 - 3		612,371
100	1622.4278		72.723817 - 134.359840	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - w^3P^o$	2 - 1		612,371
20	1623.1732		69.704699 - 131.312416	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2D^o$	4 - 4		612,371
20	1630.2681		69.704699 - 131.044304	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2D^o$	4 - 3		612,371
10	1636.6050		72.723817 - 133.825916	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - w^3P^o$	2 - 2		612
25	1649.4575		73.102038 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	1 - 2		612
20	1656.3219		73.353292 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1D^o - ^3D$	2 - 2		612
25	1660.0009		73.353292 - 133.594222	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1D^o - ^3D$	2 - 3		612,371
60	1663.0020		73.595813 - 133.728031	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1P^o - ^3D$	1 - 2		612,371
10	1672.7757		71.531539 - 131.312416	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2D^o$	3 - 4		612
1	1680.3118		71.531539 - 131.044304	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2D^o$	3 - 3		612
40	1683.1549		69.704699 - 129.116934	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2D^o$	4 - 3		612
40	1683.1585		71.531539 - 130.943649	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2D^o$	3 - 2		612
40	1683.1884		88.605090 - 148.016146	$3d^84s^2 - 3d^9(^2D)5f$	$^3P - ^3D^o$	1 - 1		612
60	1699.0953		71.531539 - 130.38639	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2P^o$	3 - 2		612
30	1699.1023		69.704699 - 128.559308	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2F^o$	4 - 3		612
0	1714.6633		72.723817 - 131.044304	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2D^o$	2 - 3		612
15	1717.7214		72.723817 - 130.940476	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2D^o$	2 - 1		612
3	1734.2272		72.723817 - 130.38639	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2P^o$	2 - 2		612
10	1736.5514		71.531539 - 129.116934	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2D^o$	3 - 3		612
20	1744.5158		71.531539 - 128.854034	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2D^o$	3 - 2		612
20	1744.5269		88.605090 - 145.927222	$3d^84s^2 - 3d^9(^2D)5f$	$^3P - ^3P^o$	1 - 2		612
15	1753.2811		72.723817 - 129.759738	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2P^o$	2 - 1		612
1	1759.5045		71.531539 - 128.365720	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2F^o$	3 - 2		612
5	1790.6603		72.723817 - 128.569138	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - y^2D^o$	2 - 1		612
2	1800.9526		69.704699 - 125.23087	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2P^o$	4 - 3		612
15	1807.8410		88.925995 - 144.2406	$3d^84s^2 - 3d^84s(^2F)4p$	$^3P - v^3D^o$	0 - 1		612
0	1856.9291		85.388770 - 139.241123	$3d^84s^2 - 3d^9(^2D)6p$	$^1D - ^3P^o$	2 - 1		612
0	1861.6229		71.531539 - 125.248109	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - x^2P^o$	3 - 2		612
1	1882.2085		88.605090 - 141.734167	$3d^84s^2 - 3d^9(^2D)6p$	$^3P - ^3F^o$	1 - 2		612
5	1920.6718		66.418687 - 118.483804	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^1F$	2 - 3		612
5	1922.1425		71.531539 - 123.556816	$3d^84s^2 - 3d^9(^2D)5p$	$^3F - ^1D^o$	3 - 2		612
1	1928.45							612
25	1929.6081		85.388770 - 137.212765	$3d^84s^2 - 3d^84s(^2P)4p$	$^1D - w^1P^o$	2 - 1		612
25	1929.7510		69.704699 - 121.524856	$3d^84s^2 - 3d^9(^2D)5p$	$^3F - ^3D^o$	4 - 3		612
40	1944.5970		21.928754 - 73.353292	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1D^o$	3 - 2		612
10	1946.4929		69.704699 - 121.079149	$3d^84s^2 - 3d^84s(^2F)4p$	$^3F - z^2F^o$	4 - 3		612
5	1952.5758		71.531539 - 122.745938	$3d^84s^2 - 3d^9(^2D)5p$	$^3F - ^3F^o$	3 - 2		612
20	1957.5176		69.704699 - 120.789807	$3d^84s^2 - 3d^9(^2D)5p$	$^3F - ^3F^o$	4 - 4		612

CU II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1968.0118	66.418687 - 117.231391	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^\circ - ^1P$	2 - 1		612
	15	1970.4946	22.847131 - 73.595813	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1P^\circ$	2 - 1		612
	0	1974.4681	85.388770 - 136.035321	$3d^8 4s^2 - 3d^9(^2D)4f$	$^1D - ^3D^\circ$	2 - 3		612
	15	1977.0270	72.723817 - 123.304814	$3d^8 4s^2 - 3d^9(^2D)5p$	$^3F - ^3D^\circ$	2 - 1		612
	200	1979.9565	22.847131 - 73.353292	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1D^\circ$	2 - 2		612
	1	1984.7643	88.361997 - 138.745813	$3d^8 4s^2 - 3d^9(^2D)6p$	$^3P - ^3P^\circ$	2 - 2		612
	90	1989.8554	22.847131 - 73.102038	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	2 - 1		612
	1	1990.1804	67.916555 - 118.163257	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^\circ - ^1D$	1 - 2		612
	1	1993.81						612

COPPER III (Cu²⁺), Z = 29
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9(^2D_{5/2})$ (27 electrons)
Ionization Potential 297 140 cm⁻¹; 36.841 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	505.722						724
	10	514.566						724
	3	526.684	62.06509 - 251.93236	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^1P^\circ)$	$a^4F - x^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	4	526.783	60.80522 - 250.63695	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^1P^\circ)$	$a^4F - x^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	2	527.387	60.80522 - 250.41948	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^1P^\circ)$	$a^4F - x^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	2	528.882	60.80522 - 249.8833	$3d^8(^3F_4)4s - 3d^7 4s 4p$	$a^4F - 7^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	1	530.915	62.06509 - 250.41948	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^1P^\circ)$	$a^4F - x^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	3	535.407	60.80522 - 247.57866	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^1P^\circ)$	$a^4F - x^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		724
	1	537.785	62.06509 - 248.01384	$3d^8(^3F_4)4s - 3d^7 4s 4p$	$a^4F - 3^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	5	538.105	62.06509 - 247.90205	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^1P^\circ)$	$a^4F - x^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		724
	1	538.487	60.80522 - 246.51054	$3d^8(^3F_4)4s - 3d^7(^2D)4s4p(^3P^\circ)$	$a^4F - w^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	1	539.382	60.80522 - 246.20265	$3d^8(^3F_4)4s - 3d^7 4s 4p$	$a^4F - 1^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	0	540.513	63.88651 - 248.89692	$3d^8(^3F_2)4s - 3d^7(^2D)4s4p(^3P^\circ)$	$a^4F - w^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	25	540.930	60.80522 - 245.67135	$3d^8(^3F_4)4s - 3d^7(^2D)4s4p(^3P^\circ)$	$a^4F - v^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	0	541.185						724
	0	541.345						724
	1	542.312	63.88651 - 248.28196	$3d^8(^3F_2)4s - 3d^7(^2D)4s4p(^3P^\circ)$	$a^4F - w^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	20	542.378	62.06509 - 246.43920	$3d^8(^3F_4)4s - 3d^7(^2H)4s4p(^3P^\circ)$	$a^4F - w^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		724
	40	542.493	60.80522 - 245.13994	$3d^8(^3F_4)4s - 3d^7(^2H)4s4p(^3P^\circ)$	$a^4F - w^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		724
	75	542.902	0.000 - 184.19712	$3d^9 - 3d^8(^1S)4p$	$ga^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	3	547.324						724
	1	547.833	62.06509 - 244.60261	$3d^8(^3F_4)4s - 3d^7(^2P)4s4p(^3P^\circ)$	$a^4F - w^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	2	548.159	60.80522 - 243.23410	$3d^8(^3F_4)4s - 3d^7(^2P)4s4p(^3P^\circ)$	$a^4F - w^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	4	549.075	2.07169 - 184.19712	$3d^9 - 3d^8(^1S)4p$	$ga^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	1	549.669						724
	4	549.987						724
	50	553.012	2.07169 - 182.90011	$3d^9 - 3d^8(^1S)4p$	$ga^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
	15	556.231						724
	30	559.279	60.80522 - 239.60685	$3d^8(^3F_4)4s - 3d^7(^2G)4s4p(^3P^\circ)$	$a^4F - y^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	3	559.836						724
	3	560.155						724
	2	569.648						724
	3	570.683						724
	1	582.657	60.80522 - 232.43596	$3d^8(^3F_4)4s - 3d^8(^3P)5p$	$a^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	15	589.328						724
	1	595.662						724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	598.680	62.06509 - 229.09847	$3d^8(^3F_4)4s - 3d^8(^1D)5p$	$a^4F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	3	601.433	67.01671 - 233.28596	$3d^8(^3F_3)4s - 3d^8(^3P)5p$	$a^2F - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	50	602.507	67.01671 - 232.98962	$3d^8(^3F_3)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^2F - z^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	50	603.549	68.96378 - 234.65041	$3d^8(^3F_2)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^2F - z^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	3	604.441	67.01671 - 232.45810	$3d^8(^3F_3)4s - 3d^8(^3P)5p$	$a^2F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	3	605.516				$\frac{7}{2} - \frac{5}{2}$		724
	150	605.625	60.80522 - 225.92390	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	2	605.792	63.88651 - 228.96005	$3d^8(^3F_2)4s - 3d^8(^1D)5p$	$a^4F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	100	606.131	89.04671 - 254.03084	$3d^8(^1G)4s - 3d^8(^3P)4f$	$a^2G - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		724
	125	606.821	62.06509 - 226.85754	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	40	608.453	63.14377 - 227.49485	$3d^8(^3F_3)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		724
	10	609.468	63.88651 - 227.96402	$3d^8(^3F_2)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
	10	609.661	68.96378 - 232.98962	$3d^8(^3F_2)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^2F - z^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	50	611.543				$\frac{5}{2} - \frac{5}{2}$		724
	3	612.282						724
	5	613.728						724
	20	614.129	85.44729 - 248.28196	$3d^8(^3P)4s - 3d^7(^2D)4s4p(^3P^\circ)$	$a^2P - w^4F^\circ$	$\frac{1}{2} - \frac{5}{2}$		724
	3	615.246				$\frac{1}{2} - \frac{5}{2}$		724
	200	615.670	60.80522 - 223.22990	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		724
	150	616.031	60.80522 - 223.13465	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	1	616.971	67.01671 - 229.09847	$3d^8(^3F_3)4s - 3d^8(^1D)5p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	125	617.349	62.06509 - 224.04802	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4G^\circ$	$\frac{7}{2} - \frac{9}{2}$		724
	100	619.174	62.06509 - 223.57061	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	5	619.674	89.04671 - 250.41948	$3d^8(^1G)4s - 3d^7(^4F)4s4p(^1P^\circ)$	$a^2G - x^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	50	619.775	63.88651 - 225.23539	$3d^8(^3F_2)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	75	619.936	63.14377 - 224.45045	$3d^8(^3F_3)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	30	620.230				$\frac{5}{2} - \frac{5}{2}$		724
	20	620.850	62.06509 - 223.13465	$3d^8(^3F_4)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		724
	4	622.806	63.88651 - 224.45045	$3d^8(^3F_2)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	5	623.337	63.14377 - 223.57061	$3d^8(^3F_3)4s - 3d^7(^4F)4s4p(^3P^\circ)$	$a^4F - z^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		724
	30	651.000	0.000 - 153.60987	$3d^9 - 3d^8(^1G)4p$	$ga^2D - y^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		724
	1	653.871	62.06509 - 215.00050	$3d^8(^3F_4)4s - 3d^8(^3F_3)5p$	$a^4F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	2	655.638	62.06509 - 214.58827	$3d^8(^3F_4)4s - 3d^8(^3F_3)5p$	$a^4F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		724
	10	657.074	60.80522 - 212.99516	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	3	658.342	63.88651 - 215.78296	$3d^8(^3F_2)4s - 3d^8(^3F_2)5p$	$a^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	0	658.609	89.01830 - 240.85275	$3d^8(^1G)4s - 3d^8(^1G)5p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	0	659.022	89.04671 - 240.78648	$3d^8(^1G)4s - 3d^8(^1G)5p$	$a^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	15	659.110	60.80522 - 212.52535	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		724
	3	659.533	63.14377 - 214.76634	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	5	659.587	60.80522 - 212.41520	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	2	659.810	63.14377 - 214.70278	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^4F - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	4	659.935	63.88651 - 215.41725	$3d^8(^3F_2)4s - 3d^8(^3F_2)5p$	$a^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	0	661.053	63.88651 - 215.16074	$3d^8(^3F_2)4s - 3d^8(^3F_2)5p$	$a^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
	8	661.169	62.06509 - 213.31178	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	5	661.312	63.14377 - 214.35795	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^4F - ^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	5	661.445	63.14377 - 214.32803	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		724
	0	661.681	77.96825 - 229.09847	$3d^8(^1D)4s - 3d^8(^1D)5p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	20	662.180	60.80522 - 211.82100	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	10	662.424	62.06509 - 213.02570	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
	0	662.556	62.06509 - 212.99516	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	1	663.213	80.55214 - 231.33300	$3d^8(^3P)4s - 3d^8(^3P)5p$	$a^4P - ^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	5	664.651	77.96825 - 228.42350	$3d^8(^1D)4s - 3d^8(^1D)5p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	2	665.114	62.06509 - 212.41520	$3d^8(^3F_4)4s - 3d^8(^3F_4)5p$	$a^4F - ^4G^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	1	665.868	78.78000 - 228.96005	$3d^8(^1D)4s - 3d^8(^1D)5p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
10	3	666.116	89.01830 - 239.14242	$3d^8(^1G)4s - 3d^8(^1G)5p$	$a^2G - ^2H^{\circ}$	0 1 2 1 2 3		724	
	4	667.819	89.04671 - 238.78816	$3d^8(^1G)4s - 3d^8(^1G)5p$	$a^2G - ^2H^{\circ}$	0 1 2 1 2 3		724	
	50	672.668	0.000 - 148.66385	$3d^9 - 3d^8(^1G)4p$	$ga^2D - ^2F^{\circ}$	0 1 2 1 2 3		724	
	0	675.312	78.78000 - 226.85754	$3d^8(^1D)4s - 3d^7(^4F)4s4p(^3P^{\circ})$	$b^2D - z^4D^{\circ}$	0 1 2 1 2 3		724	
	3	675.753	67.01671 - 215.00050	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^2F - ^2F^{\circ}$	0 1 2 1 2 3		724	
10	10	675.884	77.96825 - 225.92390	$3d^8(^1D)4s - 3d^7(^4F)4s4p(^3P^{\circ})$	$b^2D - z^4D^{\circ}$	0 1 2 1 2 3		724	
	75	676.566	0.000 - 147.80669	$3d^9 - 3d^8(^1G)4p$	$ga^2D - ^2F^{\circ}$	0 1 2 1 2 3		724	
	2	677.115	67.01671 - 214.70278	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^2F - ^2D^{\circ}$	0 1 2 1 2 3		724	
	3	677.502	68.96378 - 216.56574	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^2F - ^2F^{\circ}$	0 1 2 1 2 3		724	
	3	677.640	67.01671 - 214.58827	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^2F - ^2G^{\circ}$	0 1 2 1 2 3		724	
	1	678.578	85.44729 - 232.81429	$3d^8(^3P)4s - 3d^8(^3P)5p$	$a^2P - ^2P^{\circ}$	0 1 2 1 2 3		724	
	3	679.401	80.30574 - 227.49485	$3d^8(^3P)4s - 3d^7(^4F)4s4p(^3P^{\circ})$	$a^4P - z^4D^{\circ}$	0 1 2 1 2 3		724	
	3	679.940	80.42354 - 227.49485	$3d^8(^3P)4s - 3d^7(^4F)4s4p(^3P^{\circ})$	$a^4P - z^4D^{\circ}$	0 1 2 1 2 3		724	
	5	680.022	68.96378 - 216.01768	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^2F - ^2G^{\circ}$	0 1 2 1 2 3		724	
	125	682.166	2.07169 - 148.66385	$3d^9 - 3d^8(^1G)4p$	$ga^2D - ^2F^{\circ}$	0 1 2 1 2 3		724	
	10	20	682.357	80.30574 - 226.85754	$3d^8(^3P)4s - 3d^7(^4F)4s4p(^3P^{\circ})$	$a^4P - z^4D^{\circ}$	0 1 2 1 2 3		724
1		685.024	67.01671 - 212.99516	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^2F - ^4F^{\circ}$	0 1 2 1 2 3		724	
5		686.128	2.07169 - 147.81732	$3d^9 - 3d^8(^3P)4p$	$ga^2D - z^4S^{\circ}$	0 1 2 1 2 3		724	
50		686.902	2.07169 - 147.65336	$3d^9 - 3d^8(^3P)4p$	$ga^2D - z^4S^{\circ}$	0 1 2 1 2 3		724	
2		687.763	67.01671 - 212.41520	$3d^8(^3F_3)4s - 3d^8(^3F_3)5p$	$a^2F - ^4G^{\circ}$	0 1 2 1 2 3		724	
5		687.896	80.55214 - 225.92390	$3d^8(^3P)4s - 3d^7(^4F)4s4p(^3P^{\circ})$	$a^4P - z^4D^{\circ}$	0 1 2 1 2 3		724	
9		150	687.981	0.000 - 145.35384	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^2P^{\circ}$	0 1 2 1 2 3		724
8		40	690.249	0.000 - 144.87629	$3d^9 - 3d^8(^3P)4p$	$ga^2D - x^2D^{\circ}$	0 1 2 1 2 3		724
9		50	691.549	2.07169 - 146.67534	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^2P^{\circ}$	0 1 2 1 2 3		724
8		40	693.510	0.000 - 144.19535	$3d^9 - 3d^8(^3P)4p$	$ga^2D - x^2D^{\circ}$	0 1 2 1 2 3		724
	9	20	697.926	2.07169 - 145.35384	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^2P^{\circ}$	0 1 2 1 2 3		724
	40	700.186	0.000 - 142.82001	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^4D^{\circ}$	0 1 2 1 2 3		724	
	8	50	700.261	2.07169 - 144.87629	$3d^9 - 3d^8(^3P)4p$	$ga^2D - x^2D^{\circ}$	0 1 2 1 2 3		724
	20	701.688	0.000 - 142.51320	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^4D^{\circ}$	0 1 2 1 2 3		724	
	25	702.118	0.000 - 142.42710	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^4D^{\circ}$	0 1 2 1 2 3		724	
8	30	703.612	2.07169 - 144.19535	$3d^9 - 3d^8(^3P)4p$	$ga^2D - x^2D^{\circ}$	0 1 2 1 2 3		724	
	15	711.853	2.07169 - 142.55075	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^4D^{\circ}$	0 1 2 1 2 3		724	
	20	712.043	2.07169 - 142.51320	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^4D^{\circ}$	0 1 2 1 2 3		724	
	35	712.481	2.07169 - 142.42710	$3d^9 - 3d^8(^3P)4p$	$ga^2D - y^4D^{\circ}$	0 1 2 1 2 3		724	
	30	713.264	0.000 - 140.20172	$3d^9 - 3d^8(^1D)4p$	$ga^2D - z^2P^{\circ}$	0 1 2 1 2 3		724	
7	150	715.532	0.000 - 139.75746	$3d^9 - 3d^8(^1D)4p$	$ga^2D - y^2D^{\circ}$	0 1 2 1 2 3		724	
6	75	719.489	0.000 - 138.98901	$3d^9 - 3d^8(^1D)4p$	$ga^2D - y^2D^{\circ}$	0 1 2 1 2 3		724	
	75	719.520	0.000 - 138.98286	$3d^9 - 3d^8(^1D)4p$	$ga^2D - y^2F^{\circ}$	0 1 2 1 2 3		724	
	35	723.961	2.07169 - 140.20172	$3d^9 - 3d^8(^1D)4p$	$ga^2D - z^2P^{\circ}$	0 1 2 1 2 3		724	
	50	724.197	0.000 - 138.08498	$3d^9 - 3d^8(^1D)4p$	$ga^2D - y^2F^{\circ}$	0 1 2 1 2 3		724	
	30	726.296	2.07169 - 139.75746	$3d^9 - 3d^8(^1D)4p$	$ga^2D - y^2D^{\circ}$	0 1 2 1 2 3		724	
	10	728.920	2.07169 - 139.26152	$3d^9 - 3d^8(^1D)4p$	$ga^2D - z^2P^{\circ}$	0 1 2 1 2 3		724	
7	125	730.375	2.07169 - 138.98901	$3d^9 - 3d^8(^1D)4p$	$ga^2D - y^2D^{\circ}$	0 1 2 1 2 3		724	
5	100	732.029	0.000 - 136.60785	$3d^9 - 3d^8(^3P)4p$	$ga^2D - z^4P^{\circ}$	0 1 2 1 2 3		724	
5	25	732.693	0.000 - 136.48363	$3d^9 - 3d^8(^3P)4p$	$ga^2D - z^4P^{\circ}$	0 1 2 1 2 3		724	
6	100	735.229	2.07169 - 138.08498	$3d^9 - 3d^8(^1D)4p$	$ga^2D - y^2F^{\circ}$	0 1 2 1 2 3		724	
5	100	743.298	2.07169 - 136.60785	$3d^9 - 3d^8(^3P)4p$	$ga^2D - z^4P^{\circ}$	0 1 2 1 2 3		724	
5	35	743.986	2.07169 - 136.48363	$3d^9 - 3d^8(^3P)4p$	$ga^2D - z^4P^{\circ}$	0 1 2 1 2 3		724	
3	150	777.119	0.000 - 128.67985	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2F^{\circ}$	0 1 2 1 2 3		724	
	4	75	778.599	0.000 - 128.43561	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2D^{\circ}$	0 1 2 1 2 3		724
	4	250	788.071	0.000 - 126.89224	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2D^{\circ}$	0 1 2 1 2 3		724
	3	250	788.460	0.000 - 126.82976	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2F^{\circ}$	0 1 2 1 2 3		724
	3	100	789.837	2.07169 - 128.67985	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2F^{\circ}$	0 1 2 1 2 3		724
	4	250	791.365	2.07169 - 128.43561	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2D^{\circ}$	0 1 2 1 2 3		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
2	100	793.055	0.000 - 126.09414	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2G^o$	$\frac{3}{2} - \frac{7}{2}$		724
1	15	795.261	0.000 - 125.74481	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		724
1	75	797.559	0.000 - 125.38209	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		724
4	150	801.145	2.07169 - 126.89224	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^2D^o$	$\frac{3}{2} - \frac{5}{2}$		724
1	100	802.840	0.000 - 124.55785	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{7}{2}$		724
1	40	808.579	2.07169 - 125.74481	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		724
	10	810.105	0.000 - 123.44069	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4G^o$	$\frac{3}{2} - \frac{5}{2}$		724
	20	810.959	2.07169 - 125.38209	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$		724
	12	816.297	0.000 - 122.50409	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4G^o$	$\frac{3}{2} - \frac{7}{2}$		724
	0	820.591	0.000 - 121.86448	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		724
	100	829.345	0.000 - 120.57785	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$		724
	10	829.429	2.07169 - 122.63726	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$		724
	3	830.394	118.86485 - 239.29003	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4D^o - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724
	5	833.654	118.86485 - 238.81898	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4D^o - ^4P$	$\frac{7}{2} - \frac{5}{2}$		724
	3	834.262	118.86485 - 238.73093	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4D^o - ^4D$	$\frac{7}{2} - \frac{7}{2}$		724
	15	834.782	2.07169 - 121.86448	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$		724
	0	836.632	121.86448 - 241.39160	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^4D^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	1	836.922	120.57785 - 240.06288	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$		724
	4	837.415	118.86485 - 238.28009	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4D^o - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724
	1	840.269	146.53451 - 265.54410	$3d^8(^1G)4p - 3d^8(^1G)5d$	$z^2H^o - ^2I$	$\frac{9}{2} - \frac{11}{2}$		724
	4	841.300	0.000 - 118.86485	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$		724
	0	842.113	120.57785 - 239.32697	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	3	842.828	123.44069 - 242.08867	$3d^8(^3F)4p - 3d^8(^3F_2)5d$	$z^4G^o - ^4H$	$\frac{3}{2} - \frac{7}{2}$		724
	1	843.414	123.44069 - 242.00656	$3d^8(^3F)4p - 3d^8(^3F_2)5d$	$z^4G^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$		724
	12	843.843	2.07169 - 120.57785	$3d^9 - 3d^8(^3F)4p$	$ga^2D - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$		724
	5	844.106	122.50409 - 240.97255	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^4G^o - ^4H$	$\frac{3}{2} - \frac{5}{2}$		724
	1	844.160	121.86448 - 240.32565	$3d^8(^3F)4p - 3d^8(^3F_3)6s$	$z^4D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
	0	847.022	120.57785 - 238.63849	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4D^o - ^4F$	$\frac{3}{2} - \frac{7}{2}$		724
	4	847.801	121.33772 - 239.29003	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4G^o - ^4F$	$\frac{3}{2} - \frac{9}{2}$		724
	2	847.874	147.64787 - 265.58957	$3d^8(^1G)4p - 3d^8(^1G)5d$	$z^2H^o - ^2I$	$\frac{11}{2} - \frac{13}{2}$		724
	2	848.740	122.50409 - 240.32565	$3d^8(^3F)4p - 3d^8(^3F_3)6s$	$z^4G^o - ^4F$	$\frac{7}{2} - \frac{5}{2}$		724
	10	849.081	121.33772 - 239.11204	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4G^o - ^4H$	$\frac{9}{2} - \frac{11}{2}$		724
	2	850.760	121.69908 - 239.24010	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4G^o - ^4G$	$\frac{11}{2} - \frac{11}{2}$		724
	2	851.530						724
	3	852.508	121.33772 - 238.63849	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4G^o - ^4F$	$\frac{9}{2} - \frac{7}{2}$		724
	20	852.548	121.69908 - 238.99408	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4G^o - ^4H$	$\frac{11}{2} - \frac{13}{2}$		724
	1	855.124	121.33772 - 238.28009	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4G^o - ^4F$	$\frac{9}{2} - \frac{9}{2}$		724
	3	856.360	124.44277 - 241.21561	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^2G^o - ^2G$	$\frac{9}{2} - \frac{9}{2}$		724
	2	856.846	125.38209 - 242.08867	$3d^8(^3F)4p - 3d^8(^3F_2)5d$	$z^4F^o - ^4H$	$\frac{3}{2} - \frac{7}{2}$		724
	20	857.767	121.69908 - 238.28009	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4G^o - ^4F$	$\frac{11}{2} - \frac{9}{2}$		724
	3	858.036	125.74481 - 242.29002	$3d^8(^3F)4p - 3d^8(^3F_2)5d$	$z^4F^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$		724
	15	858.241	124.44277 - 240.96052	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^2G^o - ^2H$	$\frac{9}{2} - \frac{11}{2}$		724
	2	858.995	124.55785 - 240.97255	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^4F^o - ^4H$	$\frac{7}{2} - \frac{9}{2}$		724
	4	860.554	126.09414 - 242.29751	$3d^8(^3F)4p - 3d^8(^3F_2)5d$	$z^2G^o - ^2H$	$\frac{3}{2} - \frac{9}{2}$		724
	3	861.934	123.55038 - 239.56888	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4F^o - ^4G$	$\frac{9}{2} - \frac{9}{2}$		724
	5	863.105	124.44277 - 240.30320	$3d^8(^3F)4p - 3d^8(^3F_3)6s$	$z^2G^o - ^2F$	$\frac{9}{2} - \frac{7}{2}$		724
	0	863.798	124.55785 - 240.32565	$3d^8(^3F)4p - 3d^8(^3F_3)6s$	$z^4F^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$		724
	1	864.008	123.55038 - 239.29003	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4F^o - ^4F$	$\frac{9}{2} - \frac{9}{2}$		724
	12	864.378	123.55038 - 239.24010	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4F^o - ^4G$	$\frac{9}{2} - \frac{11}{2}$		724
	1	864.768	138.98286 - 254.62028	$3d^8(^1D)4p - 3d^8(^1D)6s$	$y^2F^o - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
	2	865.047	126.09414 - 241.69354	$3d^8(^3F)4p - 3d^8(^3F_2)6s$	$z^2G^o - ^2F$	$\frac{7}{2} - \frac{3}{2}$		724
	1	868.646	126.09414 - 241.21561	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^2G^o - ^2G$	$\frac{7}{2} - \frac{9}{2}$		724
	1	868.804	128.67985 - 243.78033	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^2F^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$		724
	2	868.898	123.55038 - 238.63849	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4F^o - ^4F$	$\frac{9}{2} - \frac{7}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	869.478	124.55785 - 239.56888	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4F^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		724
	1	870.451	124.55785 - 239.44071	$3d^8(^3F)4p - 3d^8(^3F_4)5d$	$z^4F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
	10	871.611	123.55038 - 238.28009	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4F^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		724
	1	874.230	126.82976 - 241.21561	$3d^8(^3F)4p - 3d^8(^3F_3)5d$	$z^2F^\circ - ^2G$	$\frac{7}{2} - \frac{5}{2}$		724
	2	876.569	124.55785 - 238.63849	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^4F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
	3	877.729	128.67985 - 242.61005	$3d^8(^3F)4p - 3d^8(^3F_2)5d$	$z^2F^\circ - ^2G$	$\frac{5}{2} - \frac{7}{2}$		724
	2	881.260	126.82976 - 240.30320	$3d^8(^3F)4p - 3d^8(^3F_3)6s$	$z^2F^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		724
	3	884.845	128.67985 - 241.69354	$3d^8(^3F)4p - 3d^8(^3F_2)6s$	$z^2F^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		724
	2	894.888	126.89224 - 238.63849	$3d^8(^3F)4p - 3d^8(^3F_4)6s$	$z^2D^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		724
	1	941.369	77.96825 - 184.19712	$3d^8(^1D)4s - 3d^8(^1S)4p$	$b^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	3	960.431	78.78000 - 182.90011	$3d^8(^1D)4s - 3d^8(^1S)4p$	$b^2D - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
	5	964.789						724
	1	1012.608						724
	2	1012.665	85.44729 - 184.19712	$3d^8(^3P)4s - 3d^8(^1S)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	5	1033.419	86.13366 - 182.90011	$3d^8(^3P)4s - 3d^8(^1S)4p$	$a^2P - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
	10	1042.934	118.86485 - 214.74799	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^4D^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724
	40	1048.880						724
	1	1052.287	126.82976 - 221.86115	$3d^8(^3F)4p - 3d^8(^1G)4d$	$z^2F^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		724
	1	1058.542	126.09414 - 220.56389	$3d^8(^3F)4p - 3d^8(^1G)5s$	$z^2G^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		724
	10	1060.815	120.57785 - 214.84487	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^4D^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		724
	3	1062.854	118.86485 - 212.95103	$3d^8(^3F)4p - 3d^8(^3P)5s$	$z^4D^\circ - ^4P$	$\frac{7}{2} - \frac{5}{2}$		724
	4	1072.974	128.67985 - 221.87897	$3d^8(^3F)4p - 3d^8(^1G)4d$	$z^2F^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		724
	10	1073.822	121.86448 - 214.98962	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
	1	1078.350	120.57785 - 213.31219	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^4D^\circ - ^4D$	$\frac{5}{2} - \frac{3}{2}$		724
	5	1080.380	122.63726 - 215.19718	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^4D^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		724
	2	1080.513	120.57785 - 213.12707	$3d^8(^3F)4p - 3d^8(^3P)5s$	$z^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	5	1081.679	118.86485 - 211.31362	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^4D^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		724
	1	1082.569	120.57785 - 212.95103	$3d^8(^3F)4p - 3d^8(^3P)5s$	$z^4D^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		724
	20	1083.732						724
	1	1089.246						724
	1	1095.742	121.86448 - 213.12707	$3d^8(^3F)4p - 3d^8(^3P)5s$	$z^4D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	1	1097.134						724
	1	1098.775	118.86485 - 209.87515	$3d^8(^3F)4p - 3d^8(^1D)5s$	$z^4D^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
	1	1107.574	124.55785 - 214.84487	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^4F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
		1123.01	0.000 - 89.04671	$3d^9 - 3d^8(^1G)4s$	$ga^2D - a^2G$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,724
		1123.36	0.000 - 89.01830	$3d^9 - 3d^8(^1G)4s$	$ga^2D - a^2G$	$\frac{5}{2} - \frac{9}{2}$	F,P	375,724
	3	1132.874	126.82976 - 215.10044	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^2F^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
	3	1142.133	128.67985 - 216.23532	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^2F^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		724
	1	1147.815	124.55785 - 211.67961	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^4F^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
	1	1149.405	60.80522 - 147.80669	$3d^8(^3F_4)4s - 3d^8(^1G)4p$	$a^4F - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
		1149.75	2.07169 - 89.04671	$3d^9 - 3d^8(^1G)4s$	$ga^2D - a^2G$	$\frac{3}{2} - \frac{7}{2}$	F,P	375,724
	5	1154.825	67.01671 - 153.60987	$3d^8(^3F_3)4s - 3d^8(^1G)4p$	$a^2F - y^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	20	1157.149	138.08498 - 224.50361	$3d^8(^1D)4p - 3d^8(^1G)4d$	$y^2F^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		724
	1	1158.697	126.82976 - 213.13365	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^2F^\circ - ^4D$	$\frac{7}{2} - \frac{5}{2}$		724
		1160.99	0.000 - 86.13366	$3d^9 - 3d^8(^3P)4s$	$ga^2D - a^2P$	$\frac{5}{2} - \frac{1}{2}$	F,P	375,724
	2	1161.993	126.89224 - 212.95103	$3d^8(^3F)4p - 3d^8(^3P)5s$	$z^2D^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		724
	2	1165.037						724
	5	1166.295	62.06509 - 147.80669	$3d^8(^3F_4)4s - 3d^8(^1G)4p$	$a^4F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	3	1166.954						724
	1	1169.022	125.74481 - 211.28605	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^4F^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
	0	1169.312	63.14377 - 148.66385	$3d^8(^3F_3)4s - 3d^8(^1G)4p$	$a^4F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		724
	5	1169.376	138.98901 - 224.50361	$3d^8(^1D)4p - 3d^8(^1G)4d$	$y^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
		1170.31	0.000 - 85.44729	$3d^9 - 3d^8(^3P)4s$	$ga^2D - a^2P$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,724
	20	1174.588	128.67985 - 213.81569	$3d^8(^3F)4p - 3d^74s^2$	$z^2F^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	4	1177.311						724
	3	1178.554	126.82976 - 211.67961	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2F^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
	25	1179.186	138.98286 - 223.78707	$3d^8(^1D)4p - 3d^8(^1G)4d$	$y^2F^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
	3	1179.270	138.98901 - 223.78707	$3d^8(^1D)4p - 3d^8(^1G)4d$	$y^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
	4	1179.807	126.89224 - 211.65205	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2D^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$		724
	2	1180.559	128.43561 - 213.14165	$3d^8(^3F)4p - 3d^8(^3P)4d$	$z^2D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		724
	1	1181.391	68.96378 - 153.60987	$3d^8(^3F_2)4s - 3d^8(^1G)4p$	$a^2F - y^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		724
	15	1182.887	169.60826 - 254.14719	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	3	1183.606						724
	20	1183.747	166.15936 - 250.63695	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	3	1184.635	125.74481 - 210.15914	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^4F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
	2	1185.638						724
	2	1186.223	140.20172 - 224.50361	$3d^8(^1D)4p - 3d^8(^1G)4d$	$z^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
	1	1186.405	125.74481 - 210.03319	$3d^8(^3F)4p - 3d^8(^1D)5s$	$z^4F^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
	50	1186.801	166.15936 - 250.41948	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	15	1187.006	168.85696 - 253.10260	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		724
	3	1187.393	138.98286 - 223.20087	$3d^8(^1D)4p - 3d^8(^1G)4d$	$y^2F^\circ - ^2G$	$\frac{3}{2} - \frac{9}{2}$		724
	40	1187.746	167.73909 - 251.93236	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	20	1188.981	169.60826 - 253.71329	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
		1189.60	2.07169 - 86.13366	$3d^9 - 3d^8(^3P)4s$	$ga^2D - a^2P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,724
	25	1190.054	139.75746 - 223.78707	$3d^8(^1D)4p - 3d^8(^1G)4d$	$y^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
	1	1196.385	140.20172 - 223.78707	$3d^8(^1D)4p - 3d^8(^1G)4d$	$z^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
	18	1196.450	168.85696 - 252.43763	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	1	1197.235						724
	10	1197.535						724
	8	1197.685	169.60826 - 253.10260	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
		1199.39	2.07169 - 85.44729	$3d^9 - 3d^8(^3P)4s$	$ga^2D - a^2P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,724
	35	1199.793	126.89224 - 210.23988	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
	1	1200.374						724
	1	1200.449						724
	50	1200.956	126.89224 - 210.15914	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
	10	1201.287	128.43561 - 211.67961	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
	3	1203.472						724
	25	1203.725	168.85696 - 251.93236	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	3	1203.782						724
	5	1204.791						724
	20	1205.067	126.89224 - 209.87515	$3d^8(^3F)4p - 3d^8(^1D)5s$	$z^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
	10	1206.014	166.15936 - 249.07707	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	20	1206.303	167.73909 - 250.63695	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	10	1206.996	128.43561 - 211.28605	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
	5	1207.300	169.60826 - 252.43763	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	2	1212.073						724
	4	1212.342	138.08498 - 220.56948	$3d^8(^1D)4p - 3d^8(^1G)5s$	$y^2F^\circ - ^2G$	$\frac{3}{2} - \frac{7}{2}$		724
	3	1212.941	128.67985 - 211.12391	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2F^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
	5	1213.163	167.73909 - 250.16806	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	15	1214.005						724
	1	1214.173						724
	1	1214.323	118.86485 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
	2	1214.709	169.60826 - 251.93236	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	5	1216.176						724
	12	1216.395	63.14377 - 145.35384	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^4F - y^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		724
	2	1216.532	166.15936 - 248.36045	$3d^74s^2 - 3d^74s4p$	$^4F - 4^\circ$	$\frac{3}{2} - \frac{9}{2}$		724
	5	1217.361	167.73909 - 249.8833	$3d^74s^2 - 3d^74s4p$	$^4F - 7^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	50	1217.580	62.06509 - 144.19535	$3d^8(^3F_4)4s - 3d^8(^3P)4p$	$a^4F - x^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
2		1217.703	139.75746 - 221.87897	$3d^8(^1D)4p - 3d^8(^1G)4d$	$y^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
5		1218.371	142.42710 - 224.50361	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^4D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$		724
300		1219.299	60.80522 - 142.82001	$3d^8(^3F_4)4s - 3d^8(^3P)4p$	$a^4F - y^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{7}{2} - \frac{1}{2}$		724
4		1219.511						724
30		1219.725						724
5		1220.493						724
5		1221.678	166.15936 - 248.01384	$3d^74s^2 - 3d^74s4p$	$^4F - 3^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
10		1221.742						724
30		1222.796	168.85696 - 250.63695	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$ $\frac{7}{2} - \frac{7}{2}$ $\frac{9}{2} - \frac{7}{2}$		724
3		1223.019	166.15936 - 247.92426	$3d^74s^2 - 3d^74s4p$	$^4F - 2^\circ$	$\frac{3}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{7}{2} - \frac{1}{2}$		724
25		1223.217						724
75		1223.347	166.15936 - 247.90205	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$ $\frac{7}{2} - \frac{9}{2}$		724
10		1223.507	63.14377 - 144.87629	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^4F - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$		724
40		1223.639	128.43561 - 210.15914	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$		724
25		1223.959						724
35		1224.253	167.73909 - 249.42155	$3d^74s^2 - 3d^74s4p$	$^4F - 6^\circ$	$\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
25		1224.784	67.01671 - 148.66385	$3d^8(^3F_3)4s - 3d^8(^1G)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$		724
3		1224.870						724
1		1225.269	167.73909 - 249.35393	$3d^74s^2 - 3d^74s4p$	$^4F - 5^\circ$	$\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
20		1225.526	128.43561 - 210.03319	$3d^8(^3F)4p - 3d^8(^1D)5s$	$z^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
20		1225.778	138.98286 - 220.56389	$3d^8(^1D)4p - 3d^8(^1G)5s$	$y^2F^\circ - ^2G$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
10		1226.091	128.67985 - 210.23988	$3d^8(^3F)4p - 3d^8(^1D)4d$	$z^2F^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
15		1227.830	169.60826 - 251.05276	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
150		1228.210	166.15936 - 247.57866	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
3		1229.108	142.42710 - 223.78707	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^4D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
50		1229.439	167.73909 - 249.07707	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
3		1229.771	166.15936 - 247.47526	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^\circ)$	$^4F - w^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
25		1229.847	168.85696 - 250.16806	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^\circ)$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
1		1230.412	142.51320 - 223.78707	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^4D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
1		1232.469						724
3		1233.309						724
30		1233.788	63.14377 - 144.19535	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^4F - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$		724
1		1234.932						724
20		1235.071	142.82001 - 223.78707	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^4D^\circ - ^2D$	$\frac{7}{2} - \frac{3}{2}$		724
30		1235.326						724
15		1235.643						724
50		1236.131						724
1		1236.260						724
5		1236.776						724
50		1237.204						724
1		1237.441	139.75746 - 220.56948	$3d^8(^1D)4p - 3d^8(^1G)5s$	$y^2D^\circ - ^2G$	$\frac{3}{2} - \frac{7}{2}$		724
20		1237.745						724
50		1237.780	67.01671 - 147.80669	$3d^8(^3F_3)4s - 3d^8(^1G)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$ $\frac{9}{2} - \frac{7}{2}$		724
10		1237.905						724
60		1238.323	62.06509 - 142.82001	$3d^8(^3F_4)4s - 3d^8(^3P)4p$	$a^4F - y^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$ $\frac{9}{2} - \frac{7}{2}$		724
8		1239.927						724
6		1240.126	120.57785 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$		724
15		1240.216						724
40		1240.363	167.73909 - 248.36045	$3d^74s^2 - 3d^74s4p$	$^4F - 4^\circ$	$\frac{7}{2} - \frac{9}{2}$ $\frac{9}{2} - \frac{9}{2}$ $\frac{11}{2} - \frac{9}{2}$		724
30		1241.244	168.85696 - 249.42155	$3d^74s^2 - 3d^74s4p$	$^4F - 6^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
		1241.43	0.000 - 80.55214	$3d^9 - 3d^8(^3P)4s$	$ga^2D - a^4P$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{1}{2}$ $\frac{5}{2} - \frac{1}{2}$ $\frac{7}{2} - \frac{1}{2}$ $\frac{9}{2} - \frac{1}{2}$ $\frac{11}{2} - \frac{1}{2}$	F,P	375,724
5		1241.574	167.73909 - 248.28196	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^\circ)$	$^4F - w^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
20		1242.282	168.85696 - 249.35393	$3d^74s^2 - 3d^74s4p$	$^4F - 5^\circ$	$\frac{3}{2} - \frac{3}{2}$ $\frac{5}{2} - \frac{3}{2}$ $\frac{7}{2} - \frac{3}{2}$ $\frac{9}{2} - \frac{3}{2}$ $\frac{11}{2} - \frac{3}{2}$		724
2		1242.439						724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	1243.016	1243.42	0.000 - 80.42354	$3d^9 - 3d^8(^3P)4s$	$g^2D - a^4P$	$\frac{3}{2} - \frac{1}{2}$	F,P	724 375,724
2	1244.082	1244.378	142.82001 - 223.20087	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^4D - ^2G$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
200	1244.538	1244.841	62.06509 - 142.42710	$3d^8(^3F_4)4s - 3d^8(^3P)4p$	$a^4F - y^4D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
75	1244.538		166.15936 - 246.51054	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
18	1244.841							724
15	1245.204	1245.24	144.19535 - 224.50361	$3d^8(^3P)4p - 3d^8(^1G)4d$	$x^2D - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$	F,P	724 375,724
5	1245.643	1245.724	0.000 - 80.30574	$3d^9 - 3d^8(^3P)4s$	$g^2D - a^4P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
30	1245.724	1247.113	166.15936 - 246.43920	$3d^74s^2 - 3d^7(^2H)4s4p(^3P^o)$	$^4F - w^4G^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
12	1247.113	1247.463	167.73909 - 248.01384	$3d^74s^2 - 3d^74s4p$	$^4F - 3^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
10	1247.463		167.73909 - 247.92426	$3d^74s^2 - 3d^74s4p$	$^4F - 2^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
			167.73909 - 247.90205	$3d^74s^2 - 3d^7(^4F)4s4p(^1P^o)$	$^4F - x^4F^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
3	1248.198							724
15	1249.108							724
5	1249.322	1249.376	166.15936 - 246.20265	$3d^74s^2 - 3d^74s4p$	$^4F - 1^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
20	1249.376		168.85696 - 248.89692	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
15	1250.429							724
20	1251.681	1252.073	136.48363 - 216.37627	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^2F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
1	1252.073	1252.783	121.86448 - 201.73215	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
1	1252.783	1252.884	118.86485 - 198.68718	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D - ^2H$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
50	1252.884	1253.261						724
20	1253.261	1253.631	137.04160 - 216.83351	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^2P$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
30	1253.631	1253.984	136.60785 - 216.37627	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^2F$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
25	1253.984		169.60826 - 249.35393	$3d^74s^2 - 3d^74s4p$	$^4F - 5^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
25	1254.136	1254.711	167.73909 - 247.47526	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
100	1254.711	1254.777	68.96378 - 148.66385	$3d^8(^3F_2)4s - 3d^8(^1G)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
20	1254.777	1254.875						724
12	1254.875	1255.082						724
15	1255.082	1255.314	63.14377 - 142.82001	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^4F - y^4D$	$\frac{5}{2} - \frac{3}{2}$ $\frac{3}{2} - \frac{5}{2}$		724
35	1255.314		136.48363 - 216.14505	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^4P$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
35	1255.848	1256.409	144.87629 - 224.50361	$3d^8(^3P)4p - 3d^8(^1G)4d$	$x^2D - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
20	1256.409	1256.822	144.19535 - 223.78707	$3d^8(^3P)4p - 3d^8(^1G)4d$	$x^2D - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
20	1256.822	1257.273						724
50	1257.273	1257.672	136.60785 - 216.14505	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^4P$	$\frac{5}{2} - \frac{3}{2}$ $\frac{3}{2} - \frac{5}{2}$		724
75	1257.672	1259.052	166.15936 - 245.67135	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^o)$	$^4F - v^4D$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
50	1259.052		168.85696 - 248.28196	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
12	1259.503							724
8	1259.576							724
150	1259.934	1260.226	63.14377 - 142.51320	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^4F - y^4D$	$\frac{5}{2} - \frac{3}{2}$ $\frac{3}{2} - \frac{5}{2}$		724
15	1260.226	1260.658	121.86448 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
15	1260.658	1261.204	136.48363 - 215.80735	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^4P$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
30	1261.204		169.60826 - 248.89692	$3d^74s^2 - 3d^7(^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
60	1261.301	1261.388	63.14377 - 142.42710	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^4F - y^4D$	$\frac{5}{2} - \frac{3}{2}$ $\frac{3}{2} - \frac{5}{2}$		724
40	1261.388	1261.616	136.48363 - 215.76154	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^4P$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
2	1261.616	1261.928						724
3	1261.928	1262.637						724
40	1262.637	1262.725	136.60785 - 215.80735	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^4P$	$\frac{5}{2} - \frac{3}{2}$ $\frac{3}{2} - \frac{5}{2}$		724
2	1262.725		137.04160 - 216.23532	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
1	1264.305	1265.164	122.63726 - 201.73215	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
10	1265.164	1266.134	142.82001 - 221.86115	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^4D - ^2F$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
40	1266.134	1266.380	166.15936 - 245.13994	$3d^74s^2 - 3d^7(^2H)4s4p(^3P^o)$	$^4F - w^4G^o$	$\frac{3}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
15	1266.380	1267.252						724
10	1267.252	1267.855	144.87629 - 223.78707	$3d^8(^3P)4p - 3d^8(^1G)4d$	$x^2D - ^2D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		724
15	1267.855							724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
4		1268.346	68.96378 - 147.80669	$3d^8(^3F_2)4s - 3d^8(^1G)4p$	$a^2F - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		724
4		1269.254						724
		1269.36	0.000 - 78.78000	$3d^9 - 3d^8(^1D)4s$	$ga^2D - b^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,724
60		1269.587	137.04160 - 215.80735	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		724
8		1270.181	118.86485 - 197.59369	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^o - ^4H$	$\frac{2}{2} - \frac{2}{2}$		724
20		1270.327	137.04160 - 215.76154	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		724
2		1270.484	122.50409 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
20		1270.646	167.73909 - 246.43920	$3d^7 4s^2 - 3d^7(^2H)4s4p(^3P^o)$	$^4F - w^4G^o$	$\frac{3}{2} - \frac{3}{2}$		724
8		1271.071	169.60826 - 248.28196	$3d^7 4s^2 - 3d^7(^2D)4s4p(^3P^o)$	$^4F - w^4F^o$	$\frac{3}{2} - \frac{5}{2}$		724
100		1271.231	63.88651 - 142.55075	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{1}{2}$		724
75		1271.826	63.88651 - 142.51320	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		724
40		1271.988	136.48363 - 215.10044	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
2		1272.449	136.60785 - 215.19718	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^o - ^4F$	$\frac{5}{2} - \frac{3}{2}$		724
8		1272.710						724
30		1273.129						724
15		1273.231	63.88651 - 142.42710	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		724
35		1273.703	118.86485 - 197.37585	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^o - ^2G$	$\frac{7}{2} - \frac{9}{2}$		724
10		1273.790	136.48363 - 214.98962	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^o - ^4F$	$\frac{2}{2} - \frac{4}{2}$		724
2		1273.904						724
25		1274.007	136.60785 - 215.10044	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$		724
15		1274.476	167.73909 - 246.20265	$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - 1^o$	$\frac{3}{2} - \frac{3}{2}$		724
30		1274.969	145.35384 - 223.78707	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
5		1275.808	136.60785 - 214.98962	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
20		1276.280	120.57785 - 198.93042	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^o - ^2G$	$\frac{3}{2} - \frac{7}{2}$		724
		1276.29	2.07169 - 80.42354	$3d^9 - 3d^8(^3P)4s$	$ga^2D - a^4P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,724
5		1276.691						724
30		1277.081						724
		1278.22	2.07169 - 80.30574	$3d^9 - 3d^8(^3P)4s$	$ga^2D - a^4P$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,724
12		1278.928	118.86485 - 197.05518	$3d^8(^3P)4p - 3d^8(^3F_3)4d$	$z^4D^o - ^2F$	$\frac{7}{2} - \frac{7}{2}$		724
100		1279.142	60.80522 - 138.98286	$3d^8(^3F_4)4s - 3d^8(^1D)4p$	$a^4F - y^2F^o$	$\frac{5}{2} - \frac{7}{2}$		724
8		1279.422						724
18		1281.064	138.08498 - 216.14505	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2F^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		724
3		1281.617						724
		1282.57	0.000 - 77.96825	$3d^9 - 3d^8(^1D)4s$	$ga^2D - b^2D$	$\frac{5}{2} - \frac{5}{2}$	F,P	375,724
2		1283.744						724
2		1283.829	138.08498 - 215.97694	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2F^o - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724
18		1284.259	118.86485 - 196.73075	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^o - ^4F$	$\frac{7}{2} - \frac{5}{2}$		724
35		1284.877	146.67534 - 224.50361	$3d^8(^3P)4p - 3d^8(^1G)4d$	$y^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		724
15		1285.677	136.48363 - 214.26450	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		724
8		1286.276	142.82001 - 220.56389	$3d^8(^3P)4p - 3d^8(^1G)5s$	$y^4D^o - ^2G$	$\frac{7}{2} - \frac{9}{2}$		724
12		1286.631	138.08498 - 215.80735	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2F^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		724
50		1287.139	62.06509 - 139.75746	$3d^8(^3F_4)4s - 3d^8(^1D)4p$	$a^4F - y^2D^o$	$\frac{5}{2} - \frac{7}{2}$		724
12		1287.256						724
2		1289.123	139.26152 - 216.83351	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		724
3		1289.647						724
35		1290.598	120.57785 - 198.06123	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^o - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724
2		1291.504						724
3		1291.773						724
10		1291.860	120.57785 - 197.98557	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^o - ^4F$	$\frac{5}{2} - \frac{3}{2}$		724
12		1292.011						724
10		1292.201	138.98901 - 216.37627	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
2		1293.286	120.57785 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$		724
15		1295.206	136.60785 - 213.81569	$3d^8(^3P)4p - 3d^7 4s^2$	$z^4P^o - ^2F$	$\frac{3}{2} - \frac{7}{2}$		724
60		1295.701	67.01671 - 144.19535	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^2F - x^2D^o$	$\frac{7}{2} - \frac{5}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1295.852						724
	30	1295.944	118.86485 - 196.02866	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		724
	20	1296.075	138.98901 - 216.14505	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4P$	$\frac{3}{2} - \frac{4}{2}$		724
	30	1297.438	166.15936 - 243.23410	$3d^74s^2 - 3d^7(^3P)4s4p(^3P^\circ)$	$^4F - w^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		724
	5	1297.580						724
	10	1297.729	63.14377 - 140.20172	$3d^8(^3F_3)4s - 3d^8(^1D)4p$	$a^4F - z^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		724
	2	1297.809						724
	40	1298.433	120.57785 - 197.59369	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^\circ - ^4H$	$\frac{5}{2} - \frac{7}{2}$		724
	3	1298.653	144.87629 - 221.87897	$3d^8(^3P)4p - 3d^8(^1G)4d$	$x^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
	20	1299.216						724
	20	1299.807	136.48363 - 213.41817	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		724
	30	1299.987	118.86485 - 195.78865	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4D^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		724
	15	1300.093	62.06509 - 138.98286	$3d^8(^3F_4)4s - 3d^8(^1D)4p$	$a^4F - y^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
	1	1300.272	136.60785 - 213.51478	$3d^8(^3P)4p - 3d^74s^2$	$z^4P^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		724
	15	1301.005	167.73909 - 244.60261	$3d^74s^2 - 3d^7(^3P)4s4p(^3P^\circ)$	$^4F - w^4D^\circ$	$\frac{9}{2} - \frac{9}{2}$		724
	15	1301.235	147.65336 - 224.50361	$3d^8(^3P)4p - 3d^8(^1G)4d$	$z^2S^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		724
	2	1301.603	136.48363 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	15	1301.699	120.57785 - 197.40019	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4D^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		724
	2	1301.779	138.98901 - 215.80735	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4P$	$\frac{3}{2} - \frac{4}{2}$		724
	35	1302.547	138.98901 - 215.76154	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4P$	$\frac{3}{2} - \frac{4}{2}$		724
		1303.64	2.07169 - 78.78000	$3d^9 - 3d^8(^1D)4s$	$ga^2D - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,724
	12	1303.708	136.60785 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	5	1303.945	118.86485 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4D^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
	35	1304.362	146.53451 - 223.20087	$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^\circ - ^2G$	$\frac{9}{2} - \frac{9}{2}$		724
	35	1304.504	124.55785 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
	50	1304.572	118.86485 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		724
	40	1304.634	136.48363 - 213.13365	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1304.743	136.48363 - 213.12707	$3d^8(^3F)4p - 3d^8(^3P)5s$	$z^4P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	40	1304.804	146.53451 - 223.17515	$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		724
	12	1304.944	140.20172 - 216.83351	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
	40	1305.161	139.75746 - 216.37627	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		724
	100	1306.246	146.53451 - 223.08988	$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^\circ - ^2H$	$\frac{9}{2} - \frac{9}{2}$		724
	20	1306.409	139.26152 - 215.80735	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	10	1306.750	136.60785 - 213.13365	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	12	1306.864	136.60785 - 213.12707	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	2	1307.117						724
	5	1307.186	139.26152 - 215.76154	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		724
	100	1307.573	120.57785 - 197.05518	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		724
	50	1307.610	118.86485 - 195.34040	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4D$	$\frac{7}{2} - \frac{5}{2}$		724
	15	1309.069	68.96378 - 145.35384	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^2F - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	25	1309.113	139.75746 - 216.14505	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		724
	50	1309.882	136.60785 - 212.95103	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	60	1311.124	137.04160 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		724
	75	1311.847	120.57785 - 196.80622	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^4D$	$\frac{5}{2} - \frac{3}{2}$		724
	10	1312.001	139.75746 - 215.97694	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^2F$	$\frac{3}{2} - \frac{7}{2}$		724
	200	1312.391	118.86485 - 195.06188	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724
	5	1312.630	122.50409 - 198.68718	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4G^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		724
	30	1312.867	121.86448 - 198.03360	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^\circ - ^2P$	$\frac{7}{2} - \frac{7}{2}$		724
	30	1312.950	120.57785 - 196.74234	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^4G$	$\frac{5}{2} - \frac{7}{2}$		724
	75	1313.295	136.60785 - 212.75239	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	50	1313.697	121.86448 - 197.98557	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
	50	1314.062	137.04160 - 213.14165	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		724
	25	1314.933	139.75746 - 215.80735	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4P$	$\frac{5}{2} - \frac{5}{2}$		724
	5	1315.208	140.20172 - 216.23532	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
40	1315.455	62.06509 - 138.08498		$3d^8(^3F_4)s - 3d^8(^1D)4p$	$a^4F - y^2F^o$	1-3		724
100	1316.131	147.80669 - 223.78707		$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^o - ^2D$	1-3		724
20	1317.312	68.96378 - 144.87629		$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^2F - x^2D^o$	1-1		724
	1317.58	2.07169 - 77.96825		$3d^o - 3d^8(^1D)4s$	$ga^2D - b^2D$	1-1	F,P	375,724
20	1318.483	63.14377 - 138.98901		$3d^8(^3F_4)4s - 3d^8(^1D)4p$	$a^4F - y^2D^o$	1-1		724
60	1318.574	63.14377 - 138.98286		$3d^8(^3F_4)4s - 3d^8(^1D)4p$	$a^4F - y^2F^o$	1-1		724
30	1318.689	125.38209 - 201.21500		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^o - ^2D$	3-3		724
25	1319.204	67.01671 - 142.82001		$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^2F - y^4D^o$	1-1		724
15	1319.870	138.98286 - 214.74799		$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2F^o - ^4F$	1-1		724
4	1320.208	168.85696 - 244.60261		$3d^74s^2 - 3d^7(^3P)4s4p(^3P^o)$	$^4F - w^4D^o$	1-1		724
40	1320.469	138.08498 - 213.81569		$3d^8(^1D)4p - 3d^74s^2$	$y^2F^o - ^2F$	1-1		724
50	1320.513					1-1		724
25	1320.697	121.33772 - 197.05518		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^2F$	2-2		724
10	1320.985	121.33772 - 197.03862		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^2H$	2-2		724
2	1321.859					2-2		724
30	1322.655	140.20172 - 215.80735		$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^o - ^4P$	3-3		724
20	1323.456	140.20172 - 215.76154		$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^o - ^4P$	3-3		724
20	1323.501	122.50409 - 198.06123		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^2F$	2-2		724
40	1323.575	147.64787 - 223.20087		$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^o - ^2G$	1-1		724
50	1324.025	147.64787 - 223.17515		$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^o - ^2H$	1-1		724
25	1324.108	120.57785 - 196.10020		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^o - ^2P$	3-3		724
3	1324.502					3-3		724
5	1324.594	167.73909 - 243.23410		$3d^74s^2 - 3d^7(^3P)4s4p(^3P^o)$	$^4F - w^4D^o$	1-1		724
35	1324.685	123.44069 - 198.93042		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^2G$	2-2		724
40	1325.042	139.26152 - 214.73018		$3d^8(^1D)4p - 3d^8(^3P)5s$	$z^2P^o - ^2P$	1-1		724
20	1325.241	121.33772 - 196.79553		$3d^8(^3F)4p - 3d^74s^2$	$z^4G^o - ^2H$	1-1		724
40	1325.521	147.64787 - 223.08988		$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^o - ^2H$	1-1		724
20	1325.734	138.08498 - 213.51478		$3d^8(^1D)4p - 3d^74s^2$	$y^2F^o - ^2F$	1-1		724
10	1326.080	67.01671 - 142.42710		$3d^8(^3F_4)4s - 3d^8(^3P)4p$	$a^2F - y^4D^o$	1-1		724
15	1326.174	121.33772 - 196.74234		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^4G$	2-2		724
15	1326.314	122.50409 - 197.90051		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^4G$	2-2		724
75	1326.362	147.80669 - 223.20087		$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^o - ^2G$	2-2		724
8	1326.453					2-2		724
15	1326.828	147.80669 - 223.17434		$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^o - ^2G$	2-2		724
150	1327.171	122.63726 - 197.98557		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^o - ^4F$	1-1		724
20	1327.265	139.75746 - 215.10044		$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^o - ^2D$	2-2		724
75	1327.399	121.86448 - 197.19963		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^o - ^4D$	2-2		724
8	1327.551	146.53451 - 221.86115		$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^o - ^2F$	1-1		724
50	1328.316	147.80669 - 223.08988		$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^o - ^2H$	2-2		724
25	1328.854	118.86485 - 194.11714		$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4D^o - ^4F$	1-1		724
25	1329.230	68.96378 - 144.19535		$3d^8(^3F_4)4s - 3d^8(^3P)4p$	$a^2F - x^2D^o$	1-1		724
60	1329.861	136.48363 - 211.67961		$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^o - ^2D$	3-3		724
75	1330.352	136.48363 - 211.65205		$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^o - ^2P$	3-3		724
15	1331.147	148.66385 - 223.78707		$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^o - ^2D$	1-1		724
20	1331.187	126.09414 - 201.21500		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^o - ^2D$	1-1		724
50	1331.741	122.50409 - 197.59369		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^o - ^4H$	1-1		724
75	1332.062	136.60785 - 211.67961		$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^o - ^2D$	3-3		724
5	1332.469	138.08498 - 213.13365		$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2F^o - ^4D$	2-2		724
40	1332.554	136.60785 - 211.65205		$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^o - ^2P$	3-3		724
300	1332.971	118.86485 - 193.88530		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^o - ^4P$	1-1		724
3	1333.280	139.26152 - 214.26450		$3d^8(^1D)4p - 3d^8(^3P)5s$	$z^2P^o - ^2P$	1-1		724
60	1333.735	120.57785 - 195.55512		$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4D^o - ^4F$	1-1		724
150	1334.367	63.14377 - 138.08498		$3d^8(^3F_4)4s - 3d^8(^1D)4p$	$a^4F - y^2F^o$	1-1		724
10	1334.685					1-1		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10	1334.832							724
0	1335.181		122.50409 - 197.40019	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4G^\circ - ^2F$	$\frac{1}{2} - \frac{3}{2}$		724
60	1336.184		126.89224 - 201.73215	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		724
30	1336.310		138.98286 - 213.81569	$3d^8(^1D)4p - 3d^74s^2$	$y^2F^\circ - ^2F$	$\frac{1}{2} - \frac{3}{2}$		724
40	1336.859		136.48363 - 211.28605	$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
3	1337.116		140.20172 - 214.98962	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
50	1337.508		120.57785 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		724
150	1337.567		120.57785 - 195.34040	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		724
75	1338.849		121.33772 - 196.02866	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^\circ - ^4H$	$\frac{3}{2} - \frac{5}{2}$		724
30	1339.271		138.08498 - 212.75239	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2F^\circ - ^4D$	$\frac{5}{2} - \frac{7}{2}$		724
20	1339.345		136.60785 - 211.27132	$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		724
200	1339.484		118.86485 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		724
60	1339.761		136.48363 - 211.12391	$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
15	1340.880		121.86448 - 196.44214	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
100	1341.157		122.63726 - 197.19963	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4D^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		724
100	1341.470		123.44069 - 197.98557	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4G^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
100	1341.515		62.06509 - 136.60785	$3d^8(^3F_4)4s - 3d^8(^3P)4p$	$a^4F - z^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
5	1341.766		140.20172 - 214.73018	$3d^8(^1D)4p - 3d^8(^3P)5s$	$z^2P^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$		724
25	1341.817		138.98901 - 213.51478	$3d^8(^1D)4p - 3d^74s^2$	$y^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
40	1341.997		136.60785 - 211.12391	$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		724
75	1342.093		148.66385 - 223.17434	$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		724
150	1342.177		118.86485 - 193.37076	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
3	1342.503		124.44277 - 198.93042	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2G^\circ - ^2G$	$\frac{3}{2} - \frac{5}{2}$		724
100	1343.007		123.44069 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4G^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		724
25	1343.164		121.33772 - 195.78865	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4G^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
100	1343.721		121.33772 - 195.75794	$3d^8(^3F)4p - 3d^74s^2$	$z^4G^\circ - ^2H$	$\frac{3}{2} - \frac{5}{2}$		724
100	1344.351		126.82976 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
80	1345.483		126.89224 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2D^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		724
100	1346.050		122.50409 - 196.79553	$3d^8(^3F)4p - 3d^74s^2$	$z^4G^\circ - ^2H$	$\frac{3}{2} - \frac{5}{2}$		724
60	1346.903		124.44277 - 198.68718	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2G^\circ - ^2H$	$\frac{3}{2} - \frac{5}{2}$		724
100	1347.013		122.50409 - 196.74234	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^\circ - ^4G$	$\frac{7}{2} - \frac{5}{2}$		724
75	1347.059		121.86448 - 196.10020	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$		724
60	1348.061		121.33772 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		724
30	1348.268		122.63726 - 196.80622	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^4D$	$\frac{7}{2} - \frac{5}{2}$		724
150	1348.566		123.44069 - 197.59369	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4G^\circ - ^4H$	$\frac{5}{2} - \frac{3}{2}$		724
40	1348.714		138.98901 - 213.13365	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		724
50	1348.831		138.98901 - 213.12707	$3d^8(^1D)4p - 3d^8(^3P)5s$	$y^2D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		724
300	1349.420		120.57785 - 194.68369	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4P$	$\frac{5}{2} - \frac{3}{2}$		724
40	1349.851		137.04160 - 211.12391	$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		724
20	1350.032		147.80669 - 221.87897	$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^\circ - ^2F$	$\frac{7}{2} - \frac{5}{2}$		724
40	1350.208		140.20172 - 214.26450	$3d^8(^1D)4p - 3d^8(^3P)5s$	$z^2P^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$		724
80	1350.280		121.69908 - 195.75794	$3d^8(^3F)4p - 3d^74s^2$	$z^4G^\circ - ^2H$	$\frac{11}{2} - \frac{9}{2}$		724
150	1350.364		147.80669 - 221.86115	$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^\circ - ^2F$	$\frac{7}{2} - \frac{5}{2}$		724
3	1350.557		123.55038 - 197.59369	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4F^\circ - ^4H$	$\frac{3}{2} - \frac{5}{2}$		724
60	1350.712		146.53451 - 220.56948	$3d^8(^1G)4p - 3d^8(^1G)5s$	$z^2H^\circ - ^2G$	$\frac{9}{2} - \frac{7}{2}$		724
15	1350.816		146.53451 - 220.56389	$3d^8(^1G)4p - 3d^8(^1G)5s$	$z^2H^\circ - ^2G$	$\frac{9}{2} - \frac{7}{2}$		724
150	1351.244		121.33772 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
2	1352.085		123.44069 - 197.40019	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4G^\circ - ^2F$	$\frac{5}{2} - \frac{3}{2}$		724
4	1352.691							724
50	1353.545		139.26152 - 213.14165	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		724
100	1353.943		121.86448 - 195.72278	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		724
30	1354.658		121.69908 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4G$	$\frac{11}{2} - \frac{9}{2}$		724
30	1354.923		122.63726 - 196.44214	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4D^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		724
100	1355.442		146.53451 - 220.31120	$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^\circ - ^2I$	$\frac{9}{2} - \frac{11}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
20		1355.631						724
150		1356.406	121.33772 - 195.06188	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4F$	2 4		724
40		1357.023	121.86448 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4D^\circ - ^4F$	2 4		724
50		1357.308	136.48363 - 210.15914	$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^\circ - ^2F$	2 4		724
75		1358.105	136.60785 - 210.23988	$3d^8(^3P)4p - 3d^8(^1D)4d$	$z^4P^\circ - ^2F$	2 4		724
75		1358.428	123.44069 - 197.05518	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^\circ - ^2F$	2 4		724
8		1359.298	138.08498 - 211.65205	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2P$	2 4		724
5		1359.355						724
15		1359.529	139.75746 - 213.31219	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4D$	2 4		724
75		1359.615	142.42710 - 215.97694	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^2F$	2 4		724
75		1359.815	120.57785 - 194.11714	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4D^\circ - ^4F$	2 4		724
25		1360.087	122.50409 - 196.02866	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^\circ - ^4H$	2 4		724
25		1360.454	123.55038 - 197.05518	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^2F$	2 4		724
25		1360.761	123.55038 - 197.03862	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^2H$	2 4		724
75		1360.902	121.33772 - 194.81837	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4G$	2 4		724
60		1360.987	121.86448 - 195.34040	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4D$	2 4		724
50		1361.224	68.96378 - 142.42710	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^2F - y^4D^\circ$	2 4		724
30		1361.517	166.15936 - 239.60685	$3d^7 4s^2 - 3d^7(^2G)4s4p(^3P^\circ)$	$^4F - y^4F^\circ$	2 4		724
50		1362.559	136.48363 - 209.87515	$3d^8(^3P)4p - 3d^8(^1D)5s$	$z^4P^\circ - ^2D$	2 4		724
50		1362.840	139.75746 - 213.13365	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4D$	2 4		724
40		1362.960	139.75746 - 213.12707	$3d^8(^1D)4p - 3d^8(^3P)5s$	$y^2D^\circ - ^4P$	2 4		724
150		1363.083	121.69908 - 195.06188	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4F$	2 4		724
30		1363.516	63.14377 - 136.48363	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^4F - z^4P^\circ$	2 4		724
15		1364.014	140.20172 - 213.51478	$3d^8(^1D)4p - 3d^7 4s^2$	$z^2P^\circ - ^2F$	2 4		724
40		1364.117	120.57785 - 193.88530	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4P$	2 4		724
100		1364.227	123.44069 - 196.74234	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^\circ - ^4G$	2 4		724
50		1364.440	123.44069 - 196.73075	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^\circ - ^4F$	2 4		724
5		1364.548	122.50409 - 195.78865	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4G^\circ - ^2F$	2 4		724
60		1364.867	136.60785 - 209.87515	$3d^8(^3P)4p - 3d^8(^1D)5s$	$z^4P^\circ - ^2D$	2 4		724
20		1365.275	123.55038 - 196.79553	$3d^8(^3F)4p - 3d^7 4s^2$	$z^4F^\circ - ^2H$	2 4		724
60		1365.836	148.66385 - 221.87897	$3d^8(^1G)4p - 3d^8(^1G)4d$	$^2F^\circ - ^2F$	2 4		724
40		1366.241	139.75746 - 212.95103	$3d^8(^1D)4p - 3d^8(^3P)5s$	$y^2D^\circ - ^4P$	2 4		724
100		1366.375	138.08498 - 211.27132	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2G$	2 4		724
150		1367.627	121.69908 - 194.81837	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4G$	2 4		724
30		1367.791	140.20172 - 213.31219	$3d^8(^1D)4p - 3d^8(^3P)4d$	$z^2P^\circ - ^4D$	2 4		724
50		1368.257	122.63726 - 195.72278	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4D^\circ - ^4P$	2 4		724
3		1368.778	80.55214 - 153.60987	$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^4P - y^2G^\circ$	2 4		724
100		1368.898	122.50409 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4G^\circ - ^4F$	2 4		724
40		1369.130	138.08498 - 211.12391	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2D$	2 4		724
50		1369.189	124.55785 - 197.59369	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4H$	2 4		724
100		1369.593	122.50409 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4G$	2 4		724
50		1369.838	123.44069 - 196.44214	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4G^\circ - ^4F$	2 4		724
60		1369.958	139.75746 - 212.75239	$3d^8(^1D)4p - 3d^8(^3P)4d$	$y^2D^\circ - ^4D$	2 4		724
30		1370.855	139.26152 - 212.20863	$3d^8(^1D)4p - 3d^8(^1D)4d$	$z^2P^\circ - ^2S$	2 4		724
40		1370.936	120.57785 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4D$	2 4		724
75		1371.123	124.44277 - 197.37585	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^2G$	2 4		724
25		1371.267	140.20172 - 213.12707	$3d^8(^1D)4p - 3d^8(^3P)5s$	$z^2P^\circ - ^4P$	2 4		724
50		1371.441	147.64787 - 220.56389	$3d^8(^1G)4p - 3d^8(^1G)5s$	$z^2H^\circ - ^2G$	2 4		724
75		1372.878	122.50409 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4F$	2 4		724
100		1372.947	126.09414 - 198.93042	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2G^\circ - ^2G$	2 4		724
75		1373.282	124.55785 - 197.37585	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^2G$	2 4		724
75		1374.014	121.33772 - 194.11714	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4G^\circ - ^4F$	2 4		724
100		1374.275	147.64787 - 220.41354	$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^\circ - ^2I$	2 4		724
25		1374.436	147.80669 - 220.56389	$3d^8(^1G)4p - 3d^8(^1G)5s$	$^2F^\circ - ^2G$	2 4		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
100	1374.751		67.01671 - 139.75746	$3d^8(^3F_3)4s - 3d^8(^1D)4p$	$a^2F^\circ - y^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
3	1375.108		63.88651 - 136.60785	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^4F - z^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		724
2	1375.337					$\frac{7}{2} - \frac{5}{2}$		724
150	1375.598		121.33772 - 194.03326	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4H$	$\frac{9}{2} - \frac{11}{2}$		724
40	1375.693		138.98901 - 211.67961	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2D$	$\frac{7}{2} - \frac{5}{2}$		724
30	1375.824		142.51320 - 215.19718	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
100	1375.909		125.38209 - 198.06123	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4F^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		724
30	1376.208		147.64787 - 220.31120	$3d^8(^1G)4p - 3d^8(^1G)4d$	$z^2H^\circ - ^2I$	$\frac{11}{2} - \frac{11}{2}$		724
10	1376.278		123.44069 - 196.10020	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4G^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		724
50	1376.530		142.55075 - 215.19718	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
300	1376.787		121.69908 - 194.33179	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4H$	$\frac{11}{2} - \frac{13}{2}$		724
40	1377.174		124.44277 - 197.05518	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^2F$	$\frac{9}{2} - \frac{7}{2}$		724
200	1377.489		124.44277 - 197.03862	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		724
75	1377.548		126.09414 - 198.68718	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2G^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		724
30	1377.656		142.51320 - 215.10044	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724
60	1378.124		142.42710 - 214.98962	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		724
75	1378.214		122.50409 - 195.06188	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724
75	1378.644		128.67985 - 201.21500	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^2D$	$\frac{5}{2} - \frac{5}{2}$		724
75	1379.362		124.55785 - 197.05518	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		724
60	1379.726		123.55038 - 196.02866	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^4H$	$\frac{9}{2} - \frac{9}{2}$		724
70	1379.769		142.51320 - 214.98962	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		724
100	1380.883		142.42710 - 214.84487	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4F$	$\frac{3}{2} - \frac{7}{2}$		724
50	1381.395		139.26152 - 211.65205	$3d^8(^1D)4p - 3d^8(^1D)4d$	$z^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		724
30	1381.437					$\frac{1}{2} - \frac{3}{2}$		724
50	1382.120		124.44277 - 196.79553	$3d^8(^3F)4p - 3d^74s^2$	$z^2G^\circ - ^2H$	$\frac{9}{2} - \frac{9}{2}$		724
20	1382.211		123.44069 - 195.78865	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4G^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724
40	1382.472		121.69908 - 194.03326	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4H$	$\frac{11}{2} - \frac{11}{2}$		724
100	1382.542		138.98286 - 211.31362	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		724
50	1382.811		125.74481 - 198.06123	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724
10	1383.136		124.44277 - 196.74234	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^4G$	$\frac{9}{2} - \frac{7}{2}$		724
30	1383.184		138.98901 - 211.28605	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
40	1383.341		138.98286 - 211.27132	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2G$	$\frac{7}{2} - \frac{7}{2}$		724
75	1384.264		125.74481 - 197.98557	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4F^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		724
100	1384.324		124.55785 - 196.79553	$3d^8(^3F)4p - 3d^74s^2$	$z^4F^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		724
15	1384.718		142.51320 - 214.73018	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
150	1384.822		125.38209 - 197.59369	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4F^\circ - ^4H$	$\frac{5}{2} - \frac{7}{2}$		724
100	1384.897		123.55038 - 195.75794	$3d^8(^3F)4p - 3d^74s^2$	$z^4F^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		724
60	1385.366		121.33772 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4D$	$\frac{9}{2} - \frac{7}{2}$		724
100	1385.896		125.74481 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4F^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		724
35	1386.292		138.98901 - 211.12391	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
50	1386.689		123.44069 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4G^\circ - ^4F$	$\frac{5}{2} - \frac{5}{2}$		724
50	1386.948		126.82976 - 198.93042	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2F^\circ - ^2G$	$\frac{7}{2} - \frac{7}{2}$		724
60	1387.459		138.08498 - 210.15914	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2F$	$\frac{5}{2} - \frac{5}{2}$		724
25	1387.992		122.63726 - 194.68369	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		724
40	1388.153		126.89224 - 198.93042	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^2G$	$\frac{3}{2} - \frac{7}{2}$		724
80	1388.254		121.33772 - 193.37076	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4G^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		724
50	1388.412		142.82001 - 214.84487	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
30	1388.485		121.86448 - 193.88530	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		724
150	1389.508		123.55038 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4G$	$\frac{9}{2} - \frac{9}{2}$		724
60	1389.551		67.01671 - 138.98286	$3d^8(^3F_3)4s - 3d^8(^1D)4p$	$a^2F - y^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		724
15	1389.708		144.87629 - 216.83351	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
40	1389.877		138.08498 - 210.03319	$3d^8(^1D)4p - 3d^8(^1D)5s$	$y^2F^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		724
150	1390.272		142.82001 - 214.74799	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724
30	1390.389		139.75746 - 211.67961	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2D$	$\frac{5}{2} - \frac{5}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References																																																								
60	1390.715	1390.827	148.66385 - 220.56948	$3d^8(^1G)4p - 3d^8(^1G)5s$	$^2F^\circ - ^2G$	$\frac{5}{2} - \frac{7}{2}$		724																																																								
									1390.923	123.44069 - 195.34040	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4D$	$\frac{5}{2} - \frac{7}{2}$		724																																																	
																1391.443	139.75746 - 211.65205	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$		724																																										
																							1391.551	167.73909 - 239.60685	$3d^74s^2 - 3d^7(^3G)4s4p(^3P^\circ)$	$^4F - y^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		724																																			
																														1391.647	139.26152 - 211.12391	$3d^8(^1D)4p - 3d^8(^1D)4d$	$z^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		724																												
																																					1392.036	126.82976 - 198.68718	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2F^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		724																					
																																												1392.631	142.42710 - 214.26450	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^2P$	$\frac{5}{2} - \frac{7}{2}$		724														
																																																			1392.885	126.09414 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2G^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		724							
																																																										1392.944	123.55038 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4F$	$\frac{9}{2} - \frac{11}{2}$		724
1394.428	144.19535 - 215.97694	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724																																																										
							1395.250	142.55075 - 214.26450	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^2P$	$\frac{5}{2} - \frac{7}{2}$		724																																																			
														1395.567	121.69908 - 193.37076	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4G^\circ - ^4F$	$\frac{11}{2} - \frac{13}{2}$		724																																												
																					1396.394	125.74481 - 197.40019	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4F^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724																																					
																												1398.333	122.50409 - 194.11714	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4G^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724																														
																																			1398.379	139.75746 - 211.27132	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2G$	$\frac{5}{2} - \frac{7}{2}$		724																							
																																										1398.602	123.55038 - 195.06188	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4F$	$\frac{9}{2} - \frac{11}{2}$		724																
																																																	1399.000	144.87629 - 216.37627	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724									
																																																								1399.035	145.35384 - 216.83351	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$		724		
																																																															1399.171	140.20172 - 211.67961
1399.485	124.55785 - 196.02866	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		724																																																										
							1399.574	125.74481 - 197.19963	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^4F^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		724																																																			
														1400.081	140.20172 - 211.65205	$3d^8(^1D)4p - 3d^8(^1D)4d$	$z^2P^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$		724																																												
																					1400.81	125.38209 - 196.80622	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^4D$	$\frac{5}{2} - \frac{7}{2}$		724																																					
																												1400.783	142.42710 - 213.81569	$3d^8(^3P)4p - 3d^74s^2$	$y^4D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724																														
																																			1400.926	122.50409 - 193.88530	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4P$	$\frac{7}{2} - \frac{9}{2}$		724																							
																																										1401.333	125.38209 - 196.74234	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^4G$	$\frac{3}{2} - \frac{5}{2}$		724																
																																																	1401.364	144.87629 - 216.23532	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724									
																																																								1401.566	125.38209 - 196.73075	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^4F$	$\frac{5}{2} - \frac{7}{2}$		724		
																																																															1401.623	124.44277 - 195.78865
1402.226	124.44277 - 195.75794	$3d^8(^3F)4p - 3d^74s^2$	$z^2G^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		724																																																										
							1402.407	126.09414 - 197.40019	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^2G^\circ - ^2F$	$\frac{7}{2} - \frac{9}{2}$		724																																																			
														1402.885	126.09414 - 197.37585	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^2G$	$\frac{7}{2} - \frac{9}{2}$		724																																												
																					1403.152	123.55038 - 194.81837	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4G$	$\frac{9}{2} - \frac{11}{2}$		724																																					
																												1403.371	138.98286 - 210.23988	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2F$	$\frac{7}{2} - \frac{9}{2}$		724																														
																																			1403.750	68.96378 - 140.20172	$3d^8(^3F_2)4s - 3d^8(^1D)4p$	$a^2F - z^2P^\circ$	$\frac{5}{2} - \frac{7}{2}$		724																							
																																										1403.873	126.82976 - 198.06123	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2F^\circ - ^2F$	$\frac{7}{2} - \frac{9}{2}$		724																
																																																	1404.963	138.98286 - 210.15914	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2F^\circ - ^2F$	$\frac{7}{2} - \frac{9}{2}$		724									
																																																								1405.082	138.98901 - 210.15914	$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724		
																																																															1405.099	126.89224 - 198.06123
1406.708	142.42710 - 213.51478	$3d^8(^3P)4p - 3d^74s^2$	$y^4D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724																																																										
							1406.946	124.44277 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2G^\circ - ^4G$	$\frac{9}{2} - \frac{11}{2}$		724																																																			
														1407.044	126.82976 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2F^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		724																																												
																					1407.105	67.01671 - 138.08498	$3d^8(^3F_3)4s - 3d^8(^1D)4p$	$a^2F - y^2F^\circ$	$\frac{7}{2} - \frac{9}{2}$		724																																					
																												1407.574	138.98901 - 210.03319	$3d^8(^1D)4p - 3d^8(^1D)5s$	$y^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724																														
																																			1408.006	145.35384 - 216.37627	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		724																							
																																										1408.119	122.50409 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4D$	$\frac{7}{2} - \frac{9}{2}$		724																
																																																	1408.291	126.89224 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		724									
																																																								1408.505	124.55785 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4F^\circ - ^4F$	$\frac{7}{2} - \frac{9}{2}$		724		
																																																															1409.224	124.55785 - 195.51843
1409.637	144.87629 - 215.80735	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		724																																																										
							1410.336	144.19535 - 215.10044	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		724																																																			
														1410.377						724																																												

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
50	1410.415	124.44277 - 195.34379		$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2G^\circ - ^4F$	2-2		724
75	1410.597	138.98286 - 209.87515		$3d^8(^1D)4p - 3d^8(^1D)5s$	$y^2F^\circ - ^2D$	2-2		724
40	1410.732	142.42710 - 213.31219		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
30	1411.085	142.55075 - 213.41817		$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^4P$	2-2		724
15	1412.451	142.51320 - 213.31219		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
40	1412.555	68.96378 - 139.75746		$3d^8(^3F_2)4s - 3d^8(^1D)4p$	$a^2F - y^2D^\circ$	2-2		724
30	1412.605	145.35384 - 216.14505		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^4P$	2-2		724
75	1412.709	124.55785 - 195.34379		$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4F$	2-2		724
60	1412.776	124.55785 - 195.34040		$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4D$	2-2		724
75	1412.997	139.26152 - 210.03319		$3d^8(^1D)4p - 3d^8(^1D)5s$	$z^2P^\circ - ^2D$	2-2		724
2	1413.147	126.82976 - 197.59369		$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2F^\circ - ^4H$	2-2		724
1	1413.190	142.55075 - 213.31219		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
60	1414.060	125.38209 - 196.10020		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^2P$	2-2		724
8	1414.291	142.42710 - 213.13365		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
75	1414.399	126.09414 - 196.79553		$3d^8(^3F)4p - 3d^8(^3F_2)4s$	$z^2G^\circ - ^2H$	2-2		724
65	1414.481	125.74481 - 196.44214		$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^4F^\circ - ^4F$	2-2		724
20	1415.439	144.19535 - 214.84487		$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^4F$	2-2		724
30	1415.464	126.09414 - 196.74234		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^4G$	2-2		724
35	1415.695	126.09414 - 196.73075		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^4F$	2-2		724
10	1415.855	142.51320 - 213.14165		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
20	1416.025	142.51320 - 213.13365		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
40	1416.153	142.51320 - 213.12707		$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^4P$	2-2		724
20	1416.610	142.55075 - 213.14165		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
15	1416.906	142.55075 - 213.12707		$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^4P$	2-2		724
40	1417.024	126.82976 - 197.40019		$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^2F^\circ - ^2F$	2-2		724
50	1417.096	123.55038 - 194.11714		$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4F^\circ - ^4F$	2-2		724
100	1417.513	126.82976 - 197.37585		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^2G$	2-2		724
30	1417.960	142.42710 - 212.95103		$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^4P$	2-2		724
15	1418.279	126.89224 - 197.40019		$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^2D^\circ - ^2F$	2-2		724
50	1418.358	124.55785 - 195.06188		$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4F$	2-2		724
100	1418.782	139.75746 - 210.23988		$3d^8(^1D)4p - 3d^8(^1D)4d$	$y^2D^\circ - ^2F$	2-2		724
5	1419.378	145.35384 - 215.80735		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^4P$	2-2		724
3	1419.552	123.44069 - 193.88530		$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4G^\circ - ^4P$	2-2		724
10	1419.691	142.51320 - 212.95103		$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^4P$	2-2		724
30	1420.316	125.38209 - 195.78865		$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4F^\circ - ^2F$	2-2		724
30	1420.945	124.44277 - 194.81837		$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2G^\circ - ^4G$	2-2		724
10	1421.353	125.74481 - 196.10020		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^2P$	2-2		724
3	1421.701					2-2		724
30	1421.963	142.42710 - 212.75239		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
5	1422.049	144.87629 - 215.19718		$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^4F$	2-2		724
40	1422.202	142.82001 - 213.13365		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	2-2		724
30	1422.964	139.75746 - 210.03319		$3d^8(^1D)4p - 3d^8(^1D)5s$	$y^2D^\circ - ^2D$	2-2		724
150	1423.475	128.67985 - 198.93042		$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2F^\circ - ^2G$	2-2		724
75	1423.984	126.82976 - 197.05518		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^2F$	2-2		724
75	1425.050	125.38209 - 195.55512		$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4F^\circ - ^4F$	2-2		724
50	1425.253	126.89224 - 197.05518		$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2D^\circ - ^2F$	2-2		724
20	1425.352	146.67534 - 216.83351		$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^2P$	2-2		724
50	1425.904	142.82001 - 212.95103		$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^4D^\circ - ^4P$	2-2		724
10	1425.997					2-2		724
30	1426.171	139.75746 - 209.87515		$3d^8(^1D)4p - 3d^8(^1D)5s$	$y^2D^\circ - ^2D$	2-2		724
20	1426.259	144.87629 - 214.98962		$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^4F$	2-2		724
60	1427.161	144.19535 - 214.26450		$3d^8(^3P)4p - 3d^8(^3P)5s$	$x^2D^\circ - ^2P$	2-2		724
20	1427.762	167.73909 - 237.77899		$3d^7 4s^2 - 3d^8(^3F_2)4f$	$^4F - ^2H^\circ$	2-2		724
150	1428.064	68.96378 - 138.98901		$3d^8(^3F_2)4s - 3d^8(^1D)4p$	$a^2F - y^2D^\circ$	2-2		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	75	1429.020	125.74481 - 195.72278	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^4F^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		724
	100	1429.179	123.55038 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		724
	100	1429.904	126.09414 - 196.02866	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2G^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		724
	80	1429.960	142.82001 - 212.75239	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^4D^\circ - ^4D$	$\frac{7}{2} - \frac{7}{2}$		724
	60	1430.330	126.89224 - 196.80622	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2D^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	40	1430.364	126.82976 - 196.74234	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^4G$	$\frac{7}{2} - \frac{7}{2}$		724
	5	1430.587	126.82976 - 196.73075	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^4F$	$\frac{7}{2} - \frac{5}{2}$		724
	100	1430.948	78.78000 - 148.66385	$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		724
	20	1431.550	144.87629 - 214.73018	$3d^8(^3P)4p - 3d^8(^3P)5s$	$x^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
	100	1431.662	77.96825 - 147.81732	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	75	1431.875	77.96825 - 147.80669	$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		724
	50	1432.017	140.20172 - 210.03319	$3d^8(^1D)4p - 3d^8(^1D)5s$	$z^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
	100	1432.249	123.55038 - 193.37076	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4F^\circ - ^4F$	$\frac{9}{2} - \frac{9}{2}$		724
	30	1432.453	125.74481 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^4F^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		724
	8	1432.759						724
	2	1432.847						724
	30	1433.760	145.35384 - 215.10044	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
	75	1434.831	126.09414 - 195.78865	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^2G^\circ - ^2F$	$\frac{7}{2} - \frac{7}{2}$		724
	30	1435.265	140.20172 - 209.87515	$3d^8(^1D)4p - 3d^8(^1D)5s$	$z^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
	50	1436.251	128.43561 - 198.06123	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		724
	60	1436.363	144.19535 - 213.81569	$3d^8(^3P)4p - 3d^74s^2$	$x^2D^\circ - ^2F$	$\frac{5}{2} - \frac{7}{2}$		724
	100	1436.820	128.43561 - 198.03360	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
	100	1436.973	67.01671 - 136.60785	$3d^8(^3F_3)4s - 3d^8(^3P)4p$	$a^2F - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	75	1437.518	153.60987 - 223.17434	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2G$	$\frac{7}{2} - \frac{7}{2}$		724
	100	1437.623	124.55785 - 194.11714	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4F^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
	20	1437.817	128.43561 - 197.98557	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		724
	80	1439.264	153.60987 - 223.08988	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2H$	$\frac{7}{2} - \frac{9}{2}$		724
	20	1439.572	128.43561 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^4G$	$\frac{3}{2} - \frac{7}{2}$		724
	75	1440.417	126.09414 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2G^\circ - ^4G$	$\frac{7}{2} - \frac{9}{2}$		724
	75	1441.076	153.80822 - 223.20087	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2G$	$\frac{9}{2} - \frac{9}{2}$		724
	40	1441.163	144.87629 - 214.26450	$3d^8(^3P)4p - 3d^8(^3P)5s$	$x^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		724
	40	1441.306	128.67985 - 198.06123	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2F^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1441.411	145.35384 - 214.73018	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
	75	1441.611	153.80822 - 223.17515	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2H$	$\frac{9}{2} - \frac{11}{2}$		724
	100	1442.414						724
	40	1442.968	125.38209 - 194.68369	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4P$	$\frac{5}{2} - \frac{3}{2}$		724
	30	1443.384	153.80822 - 223.08988	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2H$	$\frac{9}{2} - \frac{9}{2}$		724
	10	1444.053	126.09414 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2G^\circ - ^4F$	$\frac{7}{2} - \frac{7}{2}$		724
	15	1444.565	142.42710 - 211.65205	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2P$	$\frac{5}{2} - \frac{3}{2}$		724
	50	1444.653	128.67985 - 197.90051	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2F^\circ - ^4G$	$\frac{3}{2} - \frac{3}{2}$		724
	60	1444.919	126.89224 - 196.10020	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2D^\circ - ^2P$	$\frac{7}{2} - \frac{7}{2}$		724
	40	1445.108	126.82976 - 196.02866	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^4H$	$\frac{7}{2} - \frac{9}{2}$		724
	35	1445.217						724
	40	1445.501	147.65336 - 216.83351	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^2S^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		724
	5	1446.508	146.67534 - 215.80735	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		724
	25	1446.737	68.96378 - 138.08498	$3d^8(^3F_2)4s - 3d^8(^1D)4p$	$a^2F - y^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	25	1446.824	144.19535 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	5	1447.147	142.55075 - 211.65205	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		724
	20	1447.636	124.44277 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2G^\circ - ^4D$	$\frac{9}{2} - \frac{7}{2}$		724
	60	1448.493	78.78000 - 147.81732	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	10	1448.933	147.81732 - 216.83351	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
		1450.04	0.000 - 68.96378	$3d^9 - 3d^8(^3F_2)4s$	$ga^2D - a^2F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,724
	20	1452.228	142.82001 - 211.67961	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2D$	$\frac{7}{2} - \frac{3}{2}$		724
	10	1452.544	142.42710 - 211.27132	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2G$	$\frac{7}{2} - \frac{7}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
15	1453.213		124.55785 - 193.37076	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4F^\circ - ^4F$	2 - 1		724
2	1453.525		167.73909 - 236.53718	$3d^7 4s^2 - 3d^8(^3F_3)4f$	$^4F - ^2G^\circ$	2 - 1		724
15	1454.246		128.43561 - 197.19963	$3d^8(^3F)4p - 3d^8(^3F_2)4d$	$z^2D^\circ - ^4D$	2 - 1		724
25	1454.425		144.19535 - 212.95103	$3d^8(^3P)4p - 3d^8(^3P)5s$	$x^2D^\circ - ^4P$	2 - 1		724
25	1454.861		125.38209 - 194.11714	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^4F^\circ - ^4F$	2 - 1		724
10	1455.063		126.82976 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^2F^\circ - ^4F$	2 - 1		724
50	1455.174		128.67985 - 197.40019	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^2F^\circ - ^2F$	2 - 1		724
15	1455.669		142.42710 - 211.12391	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2D$	2 - 1		724
40	1455.842		126.82976 - 195.51843	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2F^\circ - ^4G$	2 - 1		724
15	1456.390		126.89224 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_3)5s$	$z^2D^\circ - ^4F$	2 - 1		724
45	1456.905		144.87629 - 213.51478	$3d^8(^3P)4p - 3d^7 4s^2$	$x^2D^\circ - ^2F$	2 - 1		724
8	1457.499		142.51320 - 211.12391	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2D$	2 - 1		724
30	1458.370		147.80669 - 216.37627	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^\circ - ^2F$	2 - 1		724
60	1458.602		147.81732 - 216.37627	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^2F$	2 - 1		724
50	1459.556		126.82976 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2F^\circ - ^4F$	2 - 1		724
20	1459.630		126.82976 - 195.34040	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2F^\circ - ^4D$	2 - 1		724
10	1459.778		125.38209 - 193.88530	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4P$	2 - 1		724
20	1459.991		142.82001 - 211.31362	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2G$	2 - 1		724
75	1460.893		126.89224 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2D^\circ - ^4F$	2 - 1		724
10	1460.953		126.89224 - 195.34040	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2D^\circ - ^4D$	2 - 1		724
15	1461.604		147.81732 - 216.23532	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^2D$	2 - 1		724
4	1462.511		128.67985 - 197.05518	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^2F$	2 - 1		724
60	1462.885		80.30574 - 148.66385	$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^4P - ^2F^\circ$	2 - 1		724
60	1463.537		147.81732 - 216.14505	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^2P$	2 - 1		724
50	1464.234		128.43561 - 196.73075	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2D^\circ - ^4F$	2 - 1		724
50	1464.792		153.60987 - 221.87897	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2F$	2 - 1		724
3	1465.040		144.87629 - 213.13365	$3d^8(^3P)4p - 3d^8(^3P)4d$	$x^2D^\circ - ^4D$	2 - 1		724
20	1465.174		153.60987 - 221.86115	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2F$	2 - 1		724
15	1466.919		147.80669 - 215.97694	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^\circ - ^2F$	2 - 1		724
35	1467.118		145.35384 - 213.51478	$3d^8(^3P)4p - 3d^7 4s^2$	$y^2P^\circ - ^2F$	2 - 1		724
15	1467.188							724
5	1467.596		125.38209 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^4F^\circ - ^4D$	2 - 1		724
30	1467.857		128.67985 - 196.80622	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^4D$	2 - 1		724
40	1469.238		128.67985 - 196.74234	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^\circ - ^4G$	2 - 1		724
40	1469.406		146.67534 - 214.73018	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^2P^\circ - ^2P$	2 - 1		724
50	1469.452		153.80822 - 221.86115	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^\circ - ^2F$	2 - 1		724
10	1470.502							724
60	1470.807		147.81732 - 215.80735	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^4P$	2 - 1		724
10	1471.488		145.35384 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^4D$	2 - 1		724
45	1471.797		147.81732 - 215.76154	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^4P$	2 - 1		724
100	1472.858		78.78000 - 146.67534	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^\circ$	2 - 1		724
8	1474.796							724
50	1475.113		126.89224 - 194.68369	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2D^\circ - ^4P$	2 - 1		724
10	1475.189		145.35384 - 213.14165	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^4D$	2 - 1		724
20	1475.369		145.35384 - 213.13365	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^\circ - ^4D$	2 - 1		724
25	1475.509		145.35384 - 213.12707	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^2P^\circ - ^4P$	2 - 1		724
20	1475.747		128.67985 - 196.44214	$3d^8(^3F)4p - 3d^8(^3F_2)5s$	$z^2F^\circ - ^4F$	2 - 1		724
10	1476.405		142.42710 - 210.15914	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^\circ - ^2F$	2 - 1		724
40	1477.876		128.43561 - 196.10020	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2D^\circ - ^2P$	2 - 1		724
40	1478.325		68.96378 - 136.60785	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^2F - z^4P^\circ$	2 - 1		724
15	1479.351		145.35384 - 212.95103	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^2P^\circ - ^4P$	2 - 1		724
15	1479.524		146.67534 - 214.26450	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^2P^\circ - ^2P$	2 - 1		724
50	1479.917		148.66385 - 216.23532	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^\circ - ^2D$	2 - 1		724
50	1481.050		68.96378 - 136.48363	$3d^8(^3F_2)4s - 3d^8(^3P)4p$	$a^2F - z^4P^\circ$	2 - 1		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
300	1481.229		80.30574 - 147.81732	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	3-3		724
4	1482.622		142.42710 - 209.87515	$3d^8(^3P)4p - 3d^8(^1D)5s$	$y^4D^o - ^2D$	3-1		724
4	1483.084		126.09414 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2G^o - ^4D$	3-3		724
40	1483.232		128.67985 - 196.10020	$3d^8(^3F)4p - 3d^8(^3F_3)4d$	$z^2F^o - ^2P$	3-1		724
150	1483.816		80.42354 - 147.81732	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	3-3		724
75	1483.997		77.96825 - 145.35384	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^o$	2-3		724
40	1484.831		80.30574 - 147.65336	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^2S^o$	3-1		724
5	1485.022		142.82001 - 210.15914	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^4D^o - ^2F$	3-1		724
20	1485.170		144.87629 - 212.20863	$3d^8(^3P)4p - 3d^8(^1D)4d$	$x^2D^o - ^2S$	3-1		724
15	1485.595		148.66385 - 215.97694	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^o - ^2F$	3-3		724
50	1486.021		147.80669 - 215.10044	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^o - ^2D$	3-1		724
40	1486.165		126.82976 - 194.11714	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^2F^o - ^4F$	3-3		724
35	1486.257		147.81732 - 215.10044	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^o - ^2D$	3-3		724
5	1486.396		126.09414 - 193.37076	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^2G^o - ^4F$	3-1		724
150	1486.655		80.55214 - 147.81732	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	3-3		724
100	1486.892		80.55214 - 147.80669	$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^4P - ^2F^o$	3-3		724
5	1487.282					3-1		724
60	1487.541		126.89224 - 194.11714	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^2D^o - ^4F$	3-2		724
30	1488.471		147.80669 - 214.98962	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^o - ^4F$	3-1		724
10	1488.706		147.81732 - 214.98962	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^o - ^4F$	3-3		724
20	1489.347		148.66385 - 215.80735	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^o - ^4P$	3-1		724
40	1489.880		128.43561 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^2D^o - ^4F$	3-3		724
15	1490.344		122.50409 - 189.60262	$3d^8(^3F)4p - 3d^8 4s^2$	$z^4G^o - ^2G$	3-3		724
15	1490.844		144.19535 - 211.27132	$3d^8(^3P)4p - 3d^8(^1D)4d$	$x^2D^o - ^2G$	3-2		724
40	1491.300		126.82976 - 193.88530	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2F^o - ^4P$	3-1		724
	1492.16		0.000 - 67.01671	$3d^9 - 3d^8(^3F_4)4s$	$ga^2D - a^2F$	3-1	F,P	375,724
60	1493.437		153.60987 - 220.56948	$3d^8(^1G)4p - 3d^8(^1G)5s$	$y^2G^o - ^2G$	3-1		724
2	1493.559		153.60987 - 220.56389	$3d^8(^1G)4p - 3d^8(^1G)5s$	$y^2G^o - ^2G$	3-1		724
40	1493.843		147.80669 - 214.74799	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^o - ^4F$	3-1		724
5	1494.481		147.81732 - 214.73018	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4S^o - ^2P$	3-1		724
60	1494.590		77.96825 - 144.87629	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^o$	3-3		724
	1494.94		2.07169 - 68.96378	$3d^9 - 3d^8(^3F_4)4s$	$ga^2D - a^2F$	3-1	F,P	375,724
10	1495.320		128.67985 - 195.55512	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^2F^o - ^4F$	3-3		724
20	1495.778		145.35384 - 212.20863	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^2P^o - ^2S$	3-2		724
2	1496.545					3-1		724
4	1496.927		144.87629 - 211.67961	$3d^8(^3P)4p - 3d^8(^1D)4d$	$x^2D^o - ^2D$	3-2		724
35	1497.548		144.87629 - 211.65205	$3d^8(^3P)4p - 3d^8(^1D)4d$	$x^2D^o - ^2P$	3-3		724
40	1497.900		121.33772 - 188.09772	$3d^8(^3F)4p - 3d^8 4s^2$	$z^4G^o - ^2G$	3-3		724
75	1498.004		153.80822 - 220.56389	$3d^8(^1G)4p - 3d^8(^1G)5s$	$y^2G^o - ^2G$	3-1		724
50	1498.604					3-1		724
6	1499.452		126.82976 - 193.52075	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2F^o - ^4D$	3-1		724
40	1500.060		128.67985 - 195.34379	$3d^8(^3F)4p - 3d^8(^3F_4)4d$	$z^2F^o - ^4F$	3-1		724
10	1500.670		146.67534 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^o - ^4D$	3-3		724
100	1501.171		62.06509 - 128.67985	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	3-3		724
20	1501.255		147.65336 - 214.26450	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^2S^o - ^2P$	3-3		724
100	1502.093		78.78000 - 145.35384	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^o$	3-3		724
15	1502.832		126.82976 - 193.37076	$3d^8(^3F)4p - 3d^8(^3F_4)5s$	$z^2F^o - ^4F$	3-3		724
10	1503.691		153.80822 - 220.31120	$3d^8(^1G)4p - 3d^8(^1G)4d$	$y^2G^o - ^2I$	3-1		724
15	1504.521		146.67534 - 213.14165	$3d^8(^3P)4p - 3d^8(^3P)4d$	$y^2P^o - ^4D$	3-3		724
15	1504.853		146.67534 - 213.12707	$3d^8(^3P)4p - 3d^8(^3P)5s$	$y^2P^o - ^4P$	3-3		724
15	1504.955		147.81732 - 214.26450	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4S^o - ^2P$	3-3		724
5	1505.197		148.66385 - 215.10044	$3d^8(^1G)4p - 3d^8(^3P)4d$	$^2F^o - ^2D$	3-3		724
5	1505.804		144.87629 - 211.28605	$3d^8(^3P)4p - 3d^8(^1D)4d$	$x^2D^o - ^2P$	3-3		724
50	1506.716		80.30574 - 146.67534	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^o$	3-3		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1507.711	145.35384 - 211.67961	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1508.336	145.35384 - 211.65205	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		724
	1	1508.830	166.15936 - 232.43596	$3d^74s^2 - 3d^8(^3P)5p$	$^4F - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
	40	1509.392	80.42354 - 146.67534	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1509.484	128.43561 - 194.68369	$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	125	1509.955	77.96825 - 144.19535	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		724
	20	1512.948	78.78000 - 144.87629	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	100	1514.593	60.80522 - 126.82976	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
	20	1514.946	147.80669 - 213.81569	$3d^8(^1G)4p - 3d^74s^2$	$^2F^\circ - ^2F$	$\frac{3}{2} - \frac{1}{2}$		724
	40	1515.063	128.67985 - 194.68369	$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2F^\circ - ^4P$	$\frac{5}{2} - \frac{3}{2}$		724
	10	1516.711	145.35384 - 211.28605	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		724
	3	1523.023	147.65336 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^2S^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		724
	50	1523.549						724
	5	1523.921						724
	8	1524.372	147.81732 - 213.41817	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		724
	4	1524.539	122.50409 - 188.09772	$3d^8(^3F)4p - 3d^74s^2$	$z^4G^\circ - ^2G$	$\frac{7}{2} - \frac{1}{2}$		724
	100	1525.884	63.14377 - 128.67985	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	20	1525.945	146.67534 - 212.20863	$3d^8(^3P)4p - 3d^8(^1D)4d$	$y^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		724
	25	1526.839	147.81732 - 213.31219	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	35	1526.998	147.65336 - 213.14165	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^2S^\circ - ^4D$	$\frac{1}{2} - \frac{1}{2}$		724
	10	1528.695	78.78000 - 144.19535	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	5	1531.002	147.81732 - 213.13365	$3d^8(^3P)4p - 3d^8(^3P)4d$	$z^4S^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		724
	20	1531.159	147.81732 - 213.12707	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1531.588	63.14377 - 128.43561	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	10	1531.653	60.80522 - 126.09414	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
	2	1535.310	147.81732 - 212.95103	$3d^8(^3P)4p - 3d^8(^3P)5s$	$z^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		724
	1	1537.332	80.30574 - 145.35384	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
		1539.76	2.07169 - 67.01671	$3d^9 - 3d^8(^3F)4s$	$ga^2D - a^2F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,724
	100	1541.976	77.96825 - 142.82001	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	15	1542.569	62.06509 - 126.89224	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	20	1543.172	80.55214 - 145.35384	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	100	1543.366	63.88651 - 128.67985	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
32	200	1543.455	89.01830 - 153.80822	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
	15	1544.056	62.06509 - 126.82976	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
32	50	1544.132	89.04671 - 153.80822	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
32	150	1548.877	89.04671 - 153.60987	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
	50	1549.215	63.88651 - 128.43561	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	2	1549.306	77.96825 - 142.51320	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	20	1554.617	80.55214 - 144.87629	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
14	100	1561.793	62.06509 - 126.09414	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	125	1565.202	80.30574 - 144.19535	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	5	1568.118	78.78000 - 142.55075	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
13	50	1568.567	60.80522 - 124.55785	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
	40	1568.669	63.14377 - 126.89224	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	40	1569.044	78.78000 - 142.51320	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	200	1570.204	63.14377 - 126.82976	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	1	1570.975	124.44277 - 188.09772	$3d^8(^3F)4p - 3d^74s^2$	$z^2G^\circ - ^2G$	$\frac{3}{2} - \frac{1}{2}$		724
	75	1571.166	78.78000 - 142.42710	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
	20	1571.265	80.55214 - 144.19535	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
14	40	1571.402	60.80522 - 124.44277	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		724
13	75	1579.361	62.06509 - 125.38209	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$		724
	1	1581.863	85.44729 - 148.66385	$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^2P - ^2F^\circ$	$\frac{1}{2} - \frac{1}{2}$		724
		1583.69	0.000 - 63.14377	$3d^9 - 3d^8(^3F)4s$	$ga^2D - a^4F$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,724
14	75	1588.554	63.14377 - 126.09414	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
13	500	1593.748	60.80522 - 123.55038	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
	50	1597.425	63.14377 - 125.74481	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
13	400	1600.185	62.06509 - 124.55785	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
14	300	1603.134	62.06509 - 124.44277	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	2-2		724
25	200	1605.960	80.55214 - 142.82001	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	2-2		724
	20	1606.557	80.30574 - 142.55075	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	2-2		724
13	300	1606.723	63.14377 - 125.38209	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
	40	1606.850	77.96825 - 140.20172	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^o$	2-2		724
25	100	1607.524	80.30574 - 142.51320	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	2-2		724
28	100	1607.559	85.44729 - 147.65336	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^2S^o$	2-2		724
25	100	1609.597	80.42354 - 142.55075	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	2-2		724
25	200	1609.748	80.30574 - 142.42710	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	2-2		724
25	150	1610.570	80.42354 - 142.51320	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	1-1		724
25	50	1616.161	80.55214 - 142.42710	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	2-2		724
13	200	1616.605	63.88651 - 125.74481	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
		1617.73	2.07169 - 63.88651	$3d^9 - 3d^8(^3F_2)4s$	$ga^2D - a^4F$	2-2	F,P	375,724
	50	1618.406	77.96825 - 139.75746	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^o$	2-2		724
12	15	1620.774	60.80522 - 122.50409	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2-2		724
	40	1621.718	67.01671 - 128.67985	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	2-2		724
	30	1625.496	86.13366 - 147.65336	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^2S^o$	2-2		724
13	300	1626.130	63.88651 - 125.38209	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
13	300	1626.405	62.06509 - 123.55038	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
	100	1628.085	78.78000 - 140.20172	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^o$	2-2		724
13	300	1628.290	63.14377 - 124.55785	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	2-2		724
12	20	1629.313	62.06509 - 123.44069	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2-2		724
	75	1630.356	122.86082 - 184.19712	$3d^8(^1S)4s - 3d^8(^1S)4p$	$^2S - ^2P^o$	1-1		724
	3	1632.176	126.82976 - 188.09772	$3d^8(^3F)4p - 3d^74s^2$	$z^2F^o - ^2G$	2-2		724
	8	1633.239	85.44729 - 146.67534	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^2P^o$	2-2		724
		1637.41	2.07169 - 63.14377	$3d^9 - 3d^8(^3F_2)4s$	$ga^2D - a^4F$	2-2	F,P	375,724
	8	1638.788	77.96825 - 138.98901	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^o$	2-2		724
22	300	1638.945	77.96825 - 138.98286	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^o$	2-2		724
	30	1639.950	78.78000 - 139.75746	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^o$	2-2		724
	1	1641.419	128.67985 - 189.60262	$3d^8(^3F)4p - 3d^74s^2$	$z^2F^o - ^2G$	2-2		724
12	1000	1642.206	60.80522 - 121.69908	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2-2		724
		1644.60	0.000 - 60.80522	$3d^9 - 3d^8(^3F_4)4s$	$ga^2D - a^4F$	2-2	F,P	375,724
	50	1651.754	86.13366 - 146.67534	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^2P^o$	2-2		724
12	500	1652.003	60.80522 - 121.33772	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2-2		724
	75	1653.400	78.78000 - 139.26152	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^o$	2-2		724
12	300	1654.559	62.06509 - 122.50409	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2-2		724
12	300	1658.457	63.14377 - 123.44069	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2-2		724
	100	1660.885	78.78000 - 138.98901	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^o$	2-2		724
	3	1663.431	77.96825 - 138.08498	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^o$	2-2		724
	50	1665.576	122.86082 - 182.90011	$3d^8(^1S)4s - 3d^8(^1S)4p$	$^2S - ^2P^o$	1-1		724
		1666.85	2.07169 - 62.06509	$3d^9 - 3d^8(^3F_2)4s$	$ga^2D - a^4F$	2-2	F,P	375,724
	40	1669.267	85.44729 - 145.35384	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^2P^o$	2-2		724
19	200	1670.130	67.01671 - 126.89224	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	2-2		724
18	250	1671.873	67.01671 - 126.82976	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	2-2		724
	5	1672.850	80.42354 - 140.20172	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	2-2		724
18	200	1674.588	68.96378 - 128.67985	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	2-2		724
	100	1676.452	80.55214 - 140.20172	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	2-2		724
31	150	1677.365	89.04671 - 148.66385	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - ^2F^o$	2-2		724
12	300	1679.139	63.88651 - 123.44069	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2-2		724
18	150	1681.462	68.96378 - 128.43561	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	2-2		724
24	50	1682.034	80.30574 - 139.75746	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	2-2		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
26	100	1682.680	85.44729 - 144.87629	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		724
12	250	1684.624	63.14377 - 122.50409	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$		724
22	200	1686.194	78.78000 - 138.08498	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		724
12	300	1687.115	62.06509 - 121.33772	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	$\frac{5}{2} - \frac{3}{2}$		724
27	50	1688.609	86.13366 - 145.35384	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^2P^o$	$\frac{1}{2} - \frac{3}{2}$		724
24	100	1689.032	80.55214 - 139.75746	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		724
17	200	1692.686	67.01671 - 126.09414	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$		724
	75	1696.183	80.30574 - 139.26152	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$		724
	3	1699.574	80.42354 - 139.26152	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		724
31	200	1701.011	89.01830 - 147.80669	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2F^o$	$\frac{3}{2} - \frac{7}{2}$		724
11	400	1702.104	63.88651 - 122.63726	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		724
26	300	1702.183	85.44729 - 144.19535	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$		724
26	35	1702.334	86.13366 - 144.87629	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	$\frac{1}{2} - \frac{3}{2}$		724
11	300	1702.971	63.14377 - 121.86448	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1704.061	80.30574 - 138.98901	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		724
21	150	1705.319	77.96825 - 136.60785	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		724
20	200	1705.620	89.01830 - 147.64787	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	$\frac{3}{2} - \frac{1}{2}$		724
	20	1707.483	80.42354 - 138.98901	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$		724
21	100	1708.935						724
11	300	1709.026	62.06509 - 120.57785	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$		724
	75	1711.245	80.55214 - 138.98901	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		724
	100	1711.423	80.55214 - 138.98286	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		724
16	30	1713.336	67.01671 - 125.38209	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$		724
	100	1716.390	78.78000 - 137.04160	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		724
11	500	1722.369	60.80522 - 118.86485	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{9}{2} - \frac{7}{2}$		724
	75	1724.795	63.88651 - 121.86448	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1726.265	68.96378 - 126.89224	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$		724
18	150	1728.125	68.96378 - 126.82976	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	$\frac{3}{2} - \frac{7}{2}$		724
	5	1730.724	80.30574 - 138.08498	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		724
	50	1732.988	78.78000 - 136.48363	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		724
16	100	1737.888	67.01671 - 124.55785	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$		724
	100	1738.142	80.55214 - 138.08498	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		724
30	75	1738.646	89.01830 - 146.53451	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	$\frac{3}{2} - \frac{9}{2}$		724
30	300	1739.505	89.04671 - 146.53451	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	$\frac{3}{2} - \frac{9}{2}$		724
	75	1741.131	63.14377 - 120.57785	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		724
17	600	1741.368	67.01671 - 124.44277	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	$\frac{7}{2} - \frac{9}{2}$		724
17	400	1750.386	68.96378 - 126.09414	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	$\frac{5}{2} - \frac{7}{2}$		724
	100	1755.006	85.44729 - 142.42710	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$		724
	75	1760.580	62.06509 - 118.86485	$3d^8(^3F_4)4s - 3d^8(^3F)4p$	$a^4F - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$		724
16	75	1761.155	68.96378 - 125.74481	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		724
	100	1762.555	80.30574 - 137.04160	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		724
	1	1763.948	63.88651 - 120.57785	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		724
	50	1766.221	80.42354 - 137.04160	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$		724
	200	1768.861	67.01671 - 123.55038	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{3}{2} - \frac{9}{2}$		724
	2	1772.299	67.01671 - 123.44069	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	$\frac{7}{2} - \frac{7}{2}$		724
	50	1772.483	68.96378 - 125.38209	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		724
	20	1773.697	86.13366 - 142.51320	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		724
	75	1776.129	80.30574 - 136.60785	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		724
	30	1780.059	80.30574 - 136.48363	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		724
	75	1783.792	80.42354 - 136.48363	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$		724
	30	1783.941	80.55214 - 136.60785	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		724
	10	1787.902	80.55214 - 136.48363	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		724
	30	1798.757	68.96378 - 124.55785	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		724
	100	1826.339	85.44729 - 140.20172	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		724

CU III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
15	2	1835.643	68.96378 - 123.44069	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^4G^\circ$	2-2		724
	200	1840.913	67.01671 - 121.33772	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4G^\circ$	2-2		724
	15	1849.525	86.13366 - 140.20172	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^\circ$	2-2		724
	5	1858.251	85.44729 - 139.26152	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^\circ$	2-2		724
	20	1858.678	89.01830 - 142.82001	$3d^8(^1G)4s - 3d^8(^3P)4p$	$a^2G - y^4D^\circ$	2-2		724
	2	1867.023	67.01671 - 120.57785	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4D^\circ$	2-2		724
15	100	1867.747	68.96378 - 122.50409	$3d^8(^3F_2)4s - 3d^8(^3F)4p$	$a^2F - z^4G^\circ$	2-2		724
	0	1873.343	89.04671 - 142.42710	$3d^8(^1G)4s - 3d^8(^3P)4p$	$a^2G - y^4D^\circ$	2-2		724
	40	1882.252	86.13366 - 139.26152	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^\circ$	2-2		724
	2	1889.888	142.42710 - 195.34040	$3d^8(^3P)4p - 3d^8(^3F_4)4d$	$y^4D^\circ - ^4D$	2-2		724
	20	1890.340	68.96378 - 121.86448	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4D^\circ$	2-2		724
	2	1891.960	86.13366 - 138.98901	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - y^2D^\circ$	2-2		724
	2	1904.024	142.82001 - 195.34040	$3d^8(^3P)4p - 3d^8(^3F_4)4d$	$y^4D^\circ - ^4D$	2-2		724
	2	1913.644	142.42710 - 194.68369	$3d^8(^3P)4p - 3d^8(^3F_4)4d$	$y^4D^\circ - ^4P$	2-2		724
	75	1928.714	67.01671 - 118.86485	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4D^\circ$	2-2		724
	50	1937.462	68.96378 - 120.57785	$3d^8(^3F_3)4s - 3d^8(^3F)4p$	$a^2F - z^4D^\circ$	2-2		724
	20	1954.630	85.44729 - 136.60785	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4P^\circ$	2-2		724
	10	1958.282	142.82001 - 193.88530	$3d^8(^3P)4p - 3d^8(^3F_4)4d$	$y^4D^\circ - ^4P$	2-2		724
	30	1959.386	85.44729 - 136.48363	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4P^\circ$	2-2		724
	20	1964.336	86.13366 - 137.04160	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4P^\circ$	2-2		724
	3	1968.026						724
	100	1971.948	77.96825 - 128.67985	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2F^\circ$	2-2		724
	3	1972.370	142.82001 - 193.52075	$3d^8(^3P)4p - 3d^8(^3F_4)4d$	$y^4D^\circ - ^4D$	2-2		724
	3	1978.211	142.82001 - 193.37076	$3d^8(^3P)4p - 3d^8(^3F_4)5s$	$y^4D^\circ - ^4F$	2-2		724
20	1981.478	77.96825 - 128.43561	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2D^\circ$	2-2		724	
3	1986.104	86.13366 - 136.48363	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4P^\circ$	2-2		724	

COPPER IV (Cu³⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁶3d⁸(³F₄) (26 electrons)
Ionization Potential 462 800 cm⁻¹; 57.38 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
260	360.864		0 - 277.1090	$3d^8 - 3d^7(b^2D)4p$	$ga^3F - u^3D^\circ$	4 - 3		921
200	364.814		1.8614 - 275.9706	$3d^8 - 3d^7(b^2D)4p$	$ga^3F - u^3D^\circ$	3 - 2		921
220	366.849		3.0776 - 275.6732	$3d^8 - 3d^7(b^2D)4p$	$ga^3F - u^3D^\circ$	2 - 1		921
230	370.038		0 - 270.2398	$3d^8 - 3d^7(b^2D)4p$	$ga^3F - v^3F^\circ$	4 - 4		921
240	374.399		1.8614 - 268.9566	$3d^8 - 3d^7(b^2D)4p$	$ga^3F - v^3F^\circ$	3 - 3		921
190	377.459		3.0776 - 268.0063	$3d^8 - 3d^7(b^2D)4p$	$ga^3F - v^3F^\circ$	2 - 2		921
170	388.482		19.6966 - 277.1090	$3d^8 - 3d^7(b^2D)4p$	$a^3P - u^3D^\circ$	2 - 3		921
20	390.205		19.6966 - 275.9706	$3d^8 - 3d^7(b^2D)4p$	$a^3P - u^3D^\circ$	2 - 2		921
30	390.819		20.0966 - 275.9706	$3d^8 - 3d^7(b^2D)4p$	$a^3P - u^3D^\circ$	1 - 2		921
10	391.274		20.0966 - 275.6732	$3d^8 - 3d^7(b^2D)4p$	$a^3P - u^3D^\circ$	1 - 1		921
10	391.773		20.4226 - 275.6732	$3d^8 - 3d^7(b^2D)4p$	$a^3P - u^3D^\circ$	0 - 1		921
20	399.655		16.2480 - 266.4612	$3d^8 - 3d^7(b^2D)4p$	$a^1D - w^3P^\circ$	2 - 1		921
20	399.686		26.9130 - 277.1090	$3d^8 - 3d^7(b^2D)4p$	$a^1G - u^3D^\circ$	4 - 3		921
140	400.080		16.2480 - 266.1968	$3d^8 - 3d^7(b^2D)4p$	$a^1D - w^3P^\circ$	2 - 2		921
300	405.242		19.6966 - 266.4612	$3d^8 - 3d^7(b^2D)4p$	$a^3P - w^3P^\circ$	2 - 1		921
310	405.377		20.0966 - 266.7753	$3d^8 - 3d^7(b^2D)4p$	$a^3P - w^3P^\circ$	1 - 0		921
550	405.674		19.6966 - 266.1968	$3d^8 - 3d^7(b^2D)4p$	$a^3P - w^3P^\circ$	2 - 2		921
220	405.898		20.0966 - 266.4612	$3d^8 - 3d^7(b^2D)4p$	$a^3P - w^3P^\circ$	1 - 1		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	440	406.333	20.0966 - 266.1968	$3d^8 - 3d^7(b^2D)4p$	$a^3P - w^3P^o$	1 - 2		921
	750	406.447	26.9130 - 272.9440	$3d^8 - 3d^7(b^2D)4p$	$a^1G - w^1F^o$	4 - 3		921
	90	407.819	0. - 245.2046	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - x^1G^o$	4 - 4		921
	180	408.571	0. - 244.7534	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3F^o$	4 - 4		921
	170	408.709	0. - 244.6717	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3G^o$	4 - 5		921
	390	409.132	0. - 244.4174	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - v^3D^o$	4 - 3		921
	270	410.292	0. - 243.7256	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3F^o$	4 - 3		921
	160	411.469	0. - 243.0292	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3G^o$	4 - 4		921
	340	411.599	1.8614 - 244.8131	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - v^3D^o$	3 - 2		921
	130	411.700	1.8614 - 244.7534	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3F^o$	3 - 4		921
	80	412.855	1.8614 - 244.0719	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3F^o$	3 - 2		921
	80	413.144	26.9130 - 268.9566	$3d^8 - 3d^7(b^2D)4p$	$a^1G - v^3F^o$	4 - 3		921
	410	413.447	1.8614 - 243.7256	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3F^o$	3 - 3		921
	110	414.933	3.0776 - 244.0719	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3F^o$	2 - 2		921
	120	415.503	1.8614 - 242.5301	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3G^o$	3 - 3		921
	20	417.613	3.0776 - 242.5301	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - w^3G^o$	2 - 3		921
	210	418.797	3.0776 - 241.8552	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - x^1D^o$	2 - 2		921
	260	426.665	16.2480 - 250.6231	$3d^8 - 3d^7(a^2F)4p$	$a^1D - x^1F^o$	2 - 3		921
	170	433.040	19.6966 - 250.6231	$3d^8 - 3d^7(a^2F)4p$	$a^3P - x^1F^o$	2 - 3		921
	110	437.671	0. - 228.4800	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3H^o$	4 - 5		921
	110	437.696	1.8614 - 230.3314	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - y^1F^o$	3 - 3		921
	310	438.270	16.2480 - 244.4174	$3d^8 - 3d^7(a^2F)4p$	$a^1D - v^3D^o$	2 - 3		921
	470	438.935	16.2480 - 244.0719	$3d^8 - 3d^7(a^2F)4p$	$a^1D - w^3F^o$	2 - 2		921
	350	439.604	16.2480 - 243.7256	$3d^8 - 3d^7(a^2F)4p$	$a^1D - w^3F^o$	2 - 3		921
	90	442.283	1.8614 - 227.9598	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - y^1D^o$	3 - 2		921
	150	442.752	0. - 225.8592	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^o$	4 - 3		921
	590	443.247	16.2480 - 241.8552	$3d^8 - 3d^7(a^2F)4p$	$a^1D - x^1D^o$	2 - 2		921
	690	443.681	0. - 225.3872	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^o$	4 - 4		921
	30	443.954	19.6966 - 244.9433	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^o$	2 - 1		921
	450	444.214	19.6966 - 244.8131	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^o$	2 - 2		921
	400	444.746	20.0966 - 244.9433	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^o$	1 - 1		921
	780	444.999	19.6966 - 244.4174	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^o$	2 - 3		921
	440	445.392	20.4226 - 244.9433	$3d^8 - 3d^7(a^2F)4p$	$a^3P - v^3D^o$	0 - 1		921
	290	445.610	1.8614 - 226.2716	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^o$	3 - 2		921
	410	446.262	3.0776 - 227.1599	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - z^1P^o$	2 - 1		921
	670	446.369	19.6966 - 243.7256	$3d^8 - 3d^7(a^2F)4p$	$a^3P - w^3F^o$	2 - 3		921
	540	446.431	1.8614 - 225.8592	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^o$	3 - 3		921
	770	447.007	26.9130 - 250.6231	$3d^8 - 3d^7(a^2F)4p$	$a^1G - x^1F^o$	4 - 3		921
	40	447.182	0. - 223.6233	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3G^o$	4 - 3		921
	230	447.373	1.8614 - 225.3872	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^o$	3 - 4		921
	40	447.467	3.0776 - 226.5583	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - y^3S^o$	2 - 1		921
	410	448.039	3.0776 - 226.2716	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - x^3F^o$	2 - 2		921
	750	448.429	0. - 223.0003	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^o$	4 - 3		921
	120	449.641	0. - 222.3980	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3G^o$	4 - 4		921
	750	450.025	1.8614 - 224.0709	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^o$	3 - 2		921
	190	450.934	1.8614 - 223.6233	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3G^o$	3 - 3		921
	820	451.160	0. - 221.6503	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - x^3D^o$	4 - 3		921
	560	452.202	1.8614 - 223.0003	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^o$	3 - 3		921
	570	452.502	3.0776 - 224.0709	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^o$	2 - 2		921
	890	452.656	0. - 220.9173	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3G^o$	4 - 5		921
	710	453.127	3.0776 - 223.7644	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^o$	2 - 1		921
	910	453.417	3.0776 - 223.6233	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3G^o$	2 - 3		921
	910	453.441	1.8614 - 222.3980	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - y^3G^o$	3 - 4		921
	150	454.702	3.0776 - 223.0003	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - w^3D^o$	2 - 3		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
720	454.796		1.8614 - 221.7388	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^o$	3 - 2		921
150	454.981		1.8614 - 221.6503	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - x^3D^o$	3 - 3		921
360	455.780		0. - 219.4030	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3F^o$	4 - 3		921
250	456.080		3.0776 - 222.3362	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - x^3D^o$	2 - 1		921
390	456.734		0. - 218.9451	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^o$	4 - 4		921
240	457.005		0. - 218.8148	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3H^o$	4 - 5		921
500	457.760		1.8614 - 220.3159	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3P^o$	3 - 2		921
550	458.101		26.9130 - 245.2046	$3d^8 - 3d^7(a^2F)4p$	$a^1G - x^1G^o$	4 - 4		921
380	458.306		3.0776 - 221.2719	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3P^o$	2 - 1		921
480	458.425		0. - 218.1379	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^o$	4 - 3		921
700	458.715		0. - 217.9998	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^o$	4 - 5		921
220	459.050		26.9130 - 244.7534	$3d^8 - 3d^7(a^2F)4p$	$a^1G - w^3F^o$	4 - 4		921
690	459.514		0. - 217.6214	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - z^3P^o$	4 - 3		921
220	459.680		1.8614 - 219.4030	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3F^o$	3 - 3		921
40	459.757		26.9130 - 244.4174	$3d^8 - 3d^7(a^2F)4p$	$a^1G - v^3D^o$	4 - 3		921
790	459.885		0. - 217.4449	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3G^o$	4 - 4		921
590	460.653		1.8614 - 218.9451	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^o$	3 - 4		921
350	461.116		1.8614 - 218.7265	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^o$	3 - 2		921
70	461.229		26.9130 - 243.7256	$3d^8 - 3d^7(a^2F)4p$	$a^1G - w^3F^o$	4 - 3		921
690	461.324		1.8614 - 218.6283	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^o$	3 - 3		921
40	462.267		3.0776 - 219.4030	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3F^o$	2 - 3		921
150	462.372		1.8614 - 218.1379	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^o$	3 - 3		921
610	462.548		16.2480 - 232.4421	$3d^8 - 3d^7(a^2D)4p$	$a^1D - y^1P^o$	2 - 1		921
220	462.713		26.9130 - 243.0292	$3d^8 - 3d^7(a^2F)4p$	$a^1G - w^3G^o$	4 - 4		921
590	463.533		0. - 215.7342	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3H^o$	4 - 4		921
780	463.717		3.0776 - 218.7265	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^o$	2 - 2		921
170	463.858		1.8614 - 217.4449	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - z^3G^o$	3 - 4		921
520	463.928		3.0776 - 218.6283	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - x^3G^o$	2 - 3		921
810	464.645		1.8614 - 217.0795	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^o$	3 - 3		921
840	464.828		0. - 215.1331	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^o$	4 - 4		921
110	464.985		3.0776 - 218.1379	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^o$	2 - 3		921
320	465.186		16.2480 - 231.2166	$3d^8 - 3d^7(a^2D)4p$	$a^1D - x^3P^o$	2 - 1		921
300	465.472		0. - 214.8356	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - z^3H^o$	4 - 5		921
100	466.042		3.0776 - 217.6499	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - z^3D^o$	2 - 2		921
380	466.595		0. - 214.3190	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - y^3D^o$	4 - 4		921
50	466.817		61.4564 - 275.6732	$3d^8 - 3d^7(b^2D)4p$	$a^1S - u^3D^o$	0 - 1		921
700	467.108		16.2480 - 230.3314	$3d^8 - 3d^7(a^2D)4p$	$a^1D - y^1F^o$	2 - 3		921
430	467.286		3.0776 - 217.0795	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^o$	2 - 3		921
360	468.502		16.2480 - 229.6945	$3d^8 - 3d^7(a^2D)4p$	$a^1D - x^3P^o$	2 - 2		921
410	468.885		1.8614 - 215.1331	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - y^3F^o$	3 - 4		921
250	470.048		19.6966 - 232.4421	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^1P^o$	2 - 1		921
160	470.933		20.0966 - 232.4421	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^1P^o$	1 - 1		921
400	472.305		20.0966 - 231.8255	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^o$	1 - 0		921
740	472.342		16.2480 - 227.9598	$3d^8 - 3d^7(a^2D)4p$	$a^1D - y^1D^o$	2 - 2		921
400	472.770		19.6966 - 231.2166	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^o$	2 - 1		921
210	473.667		20.0966 - 231.2166	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^o$	1 - 1		921
460	474.131		16.2480 - 227.1599	$3d^8 - 3d^7(a^2P)4p$	$a^1D - z^3P^o$	2 - 1		921
470	474.170		61.4564 - 272.3527	$3d^8 - 3d^7(b^2D)4p$	$a^1S - x^1P^o$	0 - 1		921
200	474.400		20.4226 - 231.2166	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^o$	0 - 1		921
250	474.757		19.6966 - 230.3314	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^1F^o$	2 - 3		921
430	475.491		16.2480 - 226.5583	$3d^8 - 3d^7(a^2P)4p$	$a^1D - y^3S^o$	2 - 1		921
130	476.143		16.2480 - 226.2716	$3d^8 - 3d^7(a^2D)4p$	$a^1D - x^3F^o$	2 - 2		921
630	476.197		19.6966 - 229.6945	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^o$	2 - 2		921
430	477.075		16.2480 - 225.8592	$3d^8 - 3d^7(a^2D)4p$	$a^1D - x^3F^o$	2 - 3		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	430	477.108	20.0966 - 229.6945	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3P^o$	1 - 2		921
	50	481.088	20.0966 - 227.9598	$3d^8 - 3d^7(a^2D)4p$	$a^3P - y^3D^o$	1 - 2		921
	220	481.889	16.2480 - 223.7644	$3d^8 - 3d^7(a^2D)4p$	$a^1D - w^3D^o$	2 - 1		921
	310	482.013	19.6966 - 227.1599	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	2 - 1		921
	210	482.219	16.2480 - 223.6233	$3d^8 - 3d^7(a^2H)4p$	$a^1D - y^3G^o$	2 - 3		921
	100	482.944	20.0966 - 227.1599	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	1 - 1		921
	430	483.418	19.6966 - 226.5583	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3S^o$	2 - 1		921
	260	483.673	16.2480 - 223.0003	$3d^8 - 3d^7(a^2D)4p$	$a^1D - w^3D^o$	2 - 3		921
	230	483.708	20.4226 - 227.1599	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	0 - 1		921
	370	484.355	20.0966 - 226.5583	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3S^o$	1 - 1		921
	800	484.531	26.9130 - 233.2989	$3d^8 - 3d^7(a^2H)4p$	$a^1G - y^1H^o$	4 - 5		921
	50	485.027	20.0966 - 226.2716	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3F^o$	1 - 2		921
	200	485.055	19.6966 - 225.8592	$3d^8 - 3d^7(a^2D)4p$	$a^3P - x^3F^o$	2 - 3		921
	10	485.123	20.4226 - 226.5583	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3S^o$	0 - 1		921
	200	485.229	16.2480 - 222.3362	$3d^8 - 3d^7(a^2P)4p$	$a^1D - x^3D^o$	2 - 1		921
	60	486.639	16.2480 - 221.7388	$3d^8 - 3d^7(a^4P)4p$	$a^1D - y^3D^o$	2 - 2		921
	70	486.848	16.2480 - 221.6503	$3d^8 - 3d^7(a^2P)4p$	$a^1D - x^3D^o$	2 - 3		921
	130	487.750	16.2480 - 221.2719	$3d^8 - 3d^7(a^4P)4p$	$a^1D - y^3P^o$	2 - 1		921
	50	489.298	19.6966 - 224.0709	$3d^8 - 3d^7(a^2D)4p$	$a^3P - w^3D^o$	2 - 2		921
	250	490.035	16.2480 - 220.3159	$3d^8 - 3d^7(a^4P)4p$	$a^1D - y^3P^o$	2 - 2		921
	280	490.260	20.0966 - 224.0709	$3d^8 - 3d^7(a^2D)4p$	$a^3P - w^3D^o$	1 - 2		921
	200	490.796	20.0966 - 223.8477	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^o$	1 - 0		921
	580	491.598	26.9130 - 230.3314	$3d^8 - 3d^7(a^2D)4p$	$a^1G - y^1F^o$	4 - 3		921
	400	491.783	20.4226 - 223.7644	$3d^8 - 3d^7(a^2D)4p$	$a^3P - w^3D^o$	0 - 1		921
	870	491.828	26.9130 - 230.2362	$3d^8 - 3d^7(a^2H)4p$	$a^1G - y^1G^o$	4 - 4		921
	520	491.877	19.6966 - 223.0003	$3d^8 - 3d^7(a^2D)4p$	$a^3P - w^3D^o$	2 - 3		921
	710	492.235	16.2480 - 219.4030	$3d^8 - 3d^7(a^2G)4p$	$a^1D - z^3F^o$	2 - 3		921
	240	493.488	19.6966 - 222.3362	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	2 - 1		921
	30	493.816	20.0966 - 222.6028	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	1 - 2		921
	590	494.121	16.2480 - 218.6283	$3d^8 - 3d^7(a^2G)4p$	$a^1D - x^3G^o$	2 - 3		921
	100	494.463	20.0966 - 222.3362	$3d^8 - 3d^7(a^2P)4p$	$a^3P - x^3D^o$	1 - 1		921
	290	494.682	26.9130 - 229.0643	$3d^8 - 3d^7(a^2H)4p$	$a^1G - y^3H^o$	4 - 4		921
	230	494.950	19.6966 - 221.7388	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	2 - 2		921
	130	495.242	16.2480 - 218.1710	$3d^8 - 3d^7(a^4P)4p$	$a^1D - z^3P^o$	2 - 1		921
	430	496.097	19.6966 - 221.2719	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^o$	2 - 1		921
	430	496.118	26.9130 - 228.4800	$3d^8 - 3d^7(a^2H)4p$	$a^1G - y^3H^o$	4 - 5		921
	890	496.995	0. - 201.2112	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	4 - 3		921
	280	497.892	20.4226 - 221.2719	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^o$	0 - 1		921
	430	498.453	19.6966 - 220.3159	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^o$	2 - 2		921
	820	498.758	1.8614 - 202.3609	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	3 - 2		921
	280	498.868	16.2480 - 216.7032	$3d^8 - 3d^7(a^2P)4p$	$a^1D - z^3P^o$	2 - 2		921
	250	499.456	20.0966 - 220.3159	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^o$	1 - 2		921
	740	499.848	3.0776 - 203.1398	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	2 - 1		921
	190	500.738	19.6966 - 219.4030	$3d^8 - 3d^7(a^2G)4p$	$a^3P - z^3F^o$	2 - 3		921
	20	501.801	3.0776 - 202.3609	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^o$	2 - 2		921
	580	502.005	0. - 199.2026	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	4 - 4		921
	340	502.651	26.9130 - 225.8592	$3d^8 - 3d^7(a^2D)4p$	$a^1G - x^3F^o$	4 - 3		921
	340	502.687	19.6966 - 218.6283	$3d^8 - 3d^7(a^2G)4p$	$a^3P - x^3G^o$	2 - 3		921
	160	502.874	1.8614 - 200.7203	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	3 - 2		921
	420	503.474	1.8614 - 200.4829	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	3 - 3		921
	300	503.846	26.9130 - 225.3872	$3d^8 - 3d^7(a^2D)4p$	$a^1G - x^3F^o$	4 - 4		921
	510	503.928	19.6966 - 218.1379	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	2 - 3		921
	370	504.524	20.4226 - 218.6314	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	0 - 1		921
	910	504.596	0. - 198.1795	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	4 - 4		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	504.633	16.2480 - 214.4137	$3d^8 - 3d^7(a^4P)4p$	$a^1D - z^3S^o$	2 - 1		921
	370	504.864	20.0966 - 218.1710	$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	1 - 1		921
	370	505.236	19.6966 - 217.6214	$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	2 - 3		921
	880	505.723	1.8614 - 199.5991	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	3 - 3		921
	860	505.968	3.0776 - 200.7203	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	2 - 2		921
	200	506.555	19.6966 - 217.1096	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	2 - 1		921
	560	506.574	3.0776 - 200.4829	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	2 - 3		921
	680	506.740	1.8614 - 199.2026	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	3 - 4		921
	780	506.781	0. - 197.3253	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	4 - 5		921
	740	507.583	19.6966 - 216.7032	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	2 - 2		921
	620	507.601	19.6966 - 216.7032	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	2 - 2		921
	210	508.424	20.4226 - 217.1096	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	0 - 1		921
	50	508.635	20.0966 - 216.7032	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	1 - 2		921
	650	508.853	3.0776 - 199.5991	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	2 - 3		921
	720	509.379	1.8614 - 198.1795	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	3 - 4		921
	260	511.211	26.9130 - 222.5277	$3d^8 - 3d^7(a^2H)4p$	$a^1G - z^3I^o$	4 - 5		921
	470	512.681	0. - 195.0552	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	4 - 4		921
	540	513.571	19.6966 - 214.4137	$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3S^o$	2 - 1		921
	510	514.570	0. - 194.3394	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	4 - 5		921
	430	514.628	20.0966 - 214.4137	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3S^o$	1 - 1		921
	160	515.491	20.4226 - 214.4137	$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3S^o$	0 - 1		921
	340	515.551	1.8614 - 195.8273	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	3 - 2		921
	370	516.308	1.8614 - 195.5444	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	3 - 3		921
	410	516.361	19.6966 - 213.3607	$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	2 - 1		921
	230	517.431	20.0966 - 213.3607	$3d^8 - 3d^7(a^2P)4p$	$a^3P - y^3D^o$	1 - 1		921
	340	518.810	3.0776 - 195.8273	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3G^o$	2 - 2		921
	420	519.509	26.9130 - 219.4030	$3d^8 - 3d^7(a^2G)4p$	$a^1G - z^3F^o$	4 - 3		921
	830	521.106	26.9130 - 218.8148	$3d^8 - 3d^7(a^2G)4p$	$a^1G - z^3H^o$	4 - 5		921
	210	521.614	26.9130 - 218.6283	$3d^8 - 3d^7(a^2G)4p$	$a^1G - x^3G^o$	4 - 3		921
	170	523.320	26.9130 - 217.9998	$3d^8 - 3d^7(a^2G)4p$	$a^1G - x^3G^o$	4 - 5		921
	180	524.786	0. - 190.5539	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^o$	4 - 4		921
	160	537.310	16.2480 - 202.3609	$3d^8 - 3d^7(a^4F)4p$	$a^1D - z^3D^o$	2 - 2		921
	360	540.647	16.2480 - 201.2112	$3d^8 - 3d^7(a^4F)4p$	$a^1D - z^3D^o$	2 - 3		921
	280	546.319	20.0966 - 203.1398	$3d^8 - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	1 - 1		921
	340	547.294	20.4226 - 203.1398	$3d^8 - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	0 - 1		921
	250	547.454	19.6966 - 202.3609	$3d^8 - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	2 - 2		921
	510	548.652	20.0966 - 202.3609	$3d^8 - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	1 - 2		921
	600	550.921	19.6966 - 201.2112	$3d^8 - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	2 - 3		921
	100	555.854	19.6966 - 199.5991	$3d^8 - 3d^7(a^4F)4p$	$a^3P - z^3F^o$	2 - 3		921
		571.974	0. - 174.8330	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - a^1F$	4 - 3	F,P	375,921
		578.130	1.8614 - 174.8330	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - a^1F$	3 - 3	F,P	375,921
	180	584.852	61.4564 - 232.4421	$3d^8 - 3d^7(a^2D)4p$	$a^1S - y^1P^o$	0 - 1		921
		586.095	0. - 170.6207	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	4 - 4	F,P	375,921
		587.270	0. - 170.2794	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	4 - 3	F,P	375,921
		587.999	0. - 170.0682	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	4 - 2	F,P	375,921
		592.560	1.8614 - 170.6207	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	3 - 4	F,P	375,921
		593.761	1.8614 - 170.2794	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	3 - 3	F,P	375,921
		594.506	1.8614 - 170.0682	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	3 - 2	F,P	375,921
		596.861	3.0776 - 170.6207	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	2 - 4	F,P	375,921
		598.836	3.0776 - 170.0682	$3d^8 - 3d^7(a^2F)4s$	$ga^3F - c^3F$	2 - 2	F,P	375,921
		630.577	16.2480 - 174.8330	$3d^8 - 3d^7(a^2F)4s$	$a^1D - a^1F$	2 - 3	F,P	375,921
		634.768	0. - 157.5378	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - b^1D$	4 - 2	F,P	375,921
		642.358	1.8614 - 157.5378	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - b^1D$	3 - 2	F,P	375,921
		647.783	16.2480 - 170.6207	$3d^8 - 3d^7(a^2F)4s$	$a^1D - c^3F$	2 - 4	F,P	375,921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		649.218	16.2480 - 170.2794	$3d^8 - 3d^7(a^2F)4s$	$a^1D - c^3F$	2 - 3	F,P	375,921
		650.970	1.8614 - 155.4784	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - a^3D$	3 - 1	F,P	375,921
		651.986	0. - 153.3774	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - a^3D$	4 - 2	F,P	375,921
		656.164	3.0776 - 155.4784	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - a^3D$	2 - 1	F,P	375,921
		656.886	0. - 152.2334	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - a^3D$	4 - 3	F,P	375,921
		659.996	1.8614 - 153.3774	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - a^3D$	3 - 2	F,P	375,921
		665.017	1.8614 - 152.2334	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - a^3D$	3 - 3	F,P	375,921
		665.337	3.0776 - 153.3774	$3d^8 - 3d^7(a^2D)4s$	$ga^3F - a^3D$	2 - 2	F,P	375,921
		671.761	0. - 148.8624	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - b^1G$	4 - 4	F,P	375,921
		676.041	26.9130 - 174.8330	$3d^8 - 3d^7(a^2F)4s$	$a^1G - a^1F$	4 - 3	F,P	375,921
		680.268	1.8614 - 148.8624	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - b^1G$	3 - 4	F,P	375,921
		685.943	3.0776 - 148.8624	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - b^1G$	2 - 4	F,P	375,921
		690.843	0. - 144.7507	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - a^3G$	4 - 4	F,P	375,921
		694.119	0. - 144.0676	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - a^3G$	4 - 5	F,P	375,921
		695.796	1.8614 - 145.5816	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - a^3G$	3 - 3	F,P	375,921
		695.857	26.9130 - 170.6207	$3d^8 - 3d^7(a^2F)4s$	$a^1G - c^3F$	4 - 4	F,P	375,921
		697.514	26.9130 - 170.2794	$3d^8 - 3d^7(a^2F)4s$	$a^1G - c^3F$	4 - 3	F,P	375,921
		698.543	26.9130 - 170.0682	$3d^8 - 3d^7(a^2F)4s$	$a^1G - c^3F$	4 - 2	F,P	375,921
		699.842	1.8614 - 144.7507	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - a^3G$	3 - 4	F,P	375,921
		701.735	3.0776 - 145.5816	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - a^3G$	2 - 3	F,P	375,921
		703.204	1.8614 - 144.0676	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - a^3G$	3 - 5	F,P	375,921
		705.850	3.0776 - 144.7507	$3d^8 - 3d^7(a^2G)4s$	$ga^3F - a^3G$	2 - 4	F,P	375,921
		707.765	16.2480 - 157.5378	$3d^8 - 3d^7(a^2D)4s$	$a^1D - b^1D$	2 - 2	F,P	375,921
		725.472	19.6966 - 157.5378	$3d^8 - 3d^7(a^2D)4s$	$a^3P - b^1D$	2 - 2	F,P	375,921
		727.584	20.0966 - 157.5378	$3d^8 - 3d^7(a^2D)4s$	$a^3P - b^1D$	1 - 2	F,P	375,921
		729.238	16.2480 - 153.3774	$3d^8 - 3d^7(a^2D)4s$	$a^1D - a^3D$	2 - 2	F,P	375,921
		729.314	20.4226 - 157.5378	$3d^8 - 3d^7(a^2D)4s$	$a^3P - b^1D$	0 - 2	F,P	375,921
		734.463	16.2480 - 152.4019	$3d^8 - 3d^7(a^2P)4s$	$a^1D - a^1P$	2 - 1	F,P	375,921
		735.373	16.2480 - 152.2334	$3d^8 - 3d^7(a^2D)4s$	$a^1D - a^3D$	2 - 3	F,P	375,921
		738.652	20.0966 - 155.4784	$3d^8 - 3d^7(a^2D)4s$	$a^3P - a^3D$	1 - 1	F,P	375,921
		740.435	20.4226 - 155.4784	$3d^8 - 3d^7(a^2D)4s$	$a^3P - a^3D$	0 - 1	F,P	375,921
		748.051	19.6966 - 153.3774	$3d^8 - 3d^7(a^2D)4s$	$a^3P - a^3D$	2 - 2	F,P	375,921
		750.296	20.0966 - 153.3774	$3d^8 - 3d^7(a^2D)4s$	$a^3P - a^3D$	1 - 2	F,P	375,921
		752.135	20.4226 - 153.3774	$3d^8 - 3d^7(a^2D)4s$	$a^3P - a^3D$	0 - 2	F,P	375,921
		753.549	19.6966 - 152.4019	$3d^8 - 3d^7(a^2P)4s$	$a^3P - a^1P$	2 - 1	F,P	375,921
		754.507	19.6966 - 152.2334	$3d^8 - 3d^7(a^2D)4s$	$a^3P - a^3D$	2 - 3	F,P	375,921
		755.828	20.0966 - 152.4019	$3d^8 - 3d^7(a^2P)4s$	$a^3P - a^1P$	1 - 1	F,P	375,921
		756.791	20.0966 - 152.2334	$3d^8 - 3d^7(a^2D)4s$	$a^3P - a^3D$	1 - 3	F,P	375,921
20		758.816	190.5539 - 322.3382	$3d^7(a^4F)4p - 3d^7(a^4P)5s$	$z^3F^o - ^3P$	4 - 3		1092
		762.077	0. - 131.2203	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	4 - 2	F,P	375,921
20		764.364						1092
20		767.965	200.7203 - 330.936 + M	$3d^7(a^4F)4p - 3d^6(a^3G)4s^2$	$z^3F^o - ^3G$	2 - 3	Q	1092
		768.864	0. - 130.0620	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	4 - 3	F,P	375,921
		769.395	19.6966 - 149.6689	$3d^8 - 3d^7(a^4P)4s$	$a^3P - c^3P$	2 - 1	F,P	375,921
20		771.694	192.7531 - 322.3382	$3d^7(a^4F)4p - 3d^7(a^4P)5s$	$z^3D^o - ^3P$	4 - 3		1092
		771.770	20.0966 - 149.6689	$3d^8 - 3d^7(a^4P)4s$	$a^3P - c^3P$	1 - 1	F,P	375,921
		771.918	26.9130 - 156.4604	$3d^8 - 3d^7(a^2H)4s$	$a^1G - a^1H$	4 - 5	F,P	375,921
		773.043	1.8614 - 131.2203	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	3 - 2	F,P	375,921
		773.716	20.4226 - 149.6689	$3d^8 - 3d^7(a^4P)4s$	$a^3P - c^3P$	0 - 1	F,P	375,921
		773.942	19.6966 - 148.9053	$3d^8 - 3d^7(a^4P)4s$	$a^3P - c^3P$	2 - 2	F,P	375,921
50		774.129	198.1795 - 327.3567	$3d^7(a^4F)4p - 3d^7(a^2H)4d$	$z^3F^o - ^3F$	4 - 4		1092
50		774.462	199.5991 - 328.7200	$3d^7(a^4F)4p - 3d^7(a^2H)4d$	$z^3F^o - ^3F$	3 - 3		1092
50		774.462	222.3980 - 351.5202	$3d^7(a^2H)4p - 3d^7(a^2F)5s$	$y^3G^o - ^3F$	4 - 3		1092
		776.345	20.0966 - 148.9053	$3d^8 - 3d^7(a^4P)4s$	$a^3P - c^3P$	1 - 2	F,P	375,921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References	
40	777.471	777.471	200.7203 - 329.3412	$3d^7(a^4F)4p - 3d^7(a^2H)4d$	$z^3F^o - ^3F$	2 - 2		1092	
	777.975	777.975	19.6966 - 148.2355	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	2 - 0	F,P	375,921	
	778.315	778.315	20.4226 - 148.9053	$3d^8 - 3d^7(a^4P)4s$	$a^3P - c^3P$	0 - 2	F,P	375,921	
	779.150	779.150	0. - 128.3450	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	4 - 4	F,P	375,921	
	779.819	779.819	19.6966 - 147.9315	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	2 - 1	F,P	375,921	
	780.028	780.028	1.8614 - 130.0620	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	3 - 3	F,P	375,921	
	780.380	780.380	3.0776 - 131.2203	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	2 - 2	F,P	375,921	
	780.403	780.403	20.0966 - 148.2355	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	1 - 0	F,P	375,921	
	780.996	780.996	19.6966 - 147.7383	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	2 - 2	F,P	375,921	
	782.259	782.259	20.0966 - 147.9315	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	1 - 1	F,P	375,921	
	783.443	783.443	20.0966 - 147.7383	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	1 - 2	F,P	375,921	
	20	784.189	784.189	195.0862 - 322.6081	$3d^7(a^4F)4p - 3d^7(a^4P)5s$	$z^3D^o - ^5P$	2 - 2		1092
	784.259	784.259	20.4226 - 147.9315	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	0 - 1	F,P	375,921	
	785.449	785.449	20.4226 - 147.7383	$3d^8 - 3d^7(a^2P)4s$	$a^3P - b^3P$	0 - 2	F,P	375,921	
787.498	787.498	3.0776 - 130.0620	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	2 - 3	F,P	375,921		
70	788.331	788.331						1092	
60	789.744	789.744						1092	
	790.616	790.616	1.8614 - 128.3450	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	3 - 4	F,P	375,921	
120	792.548	792.548						1092	
20	792.731	792.731	201.2112 - 327.3567	$3d^7(a^4F)4p - 3d^7(a^2H)4d$	$z^3D^o - ^3F$	3 - 4		1092	
	798.292	798.292	3.0776 - 128.3450	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - b^3F$	2 - 4	F,P	375,921	
90	805.097	805.097	195.6846 - 319.892 + M	$3d^7(a^4F)4p - 3d^7(a^2P)4d$	$z^3D^o - ^1D$	1 - 2	Q	1092	
170	813.891	813.891	195.5444 - 318.410 + M	$3d^7(a^4F)4p - 3d^7(a^2P)4d$	$z^3G^o - ^3P$	3 - 2		1092	
80	816.802	816.802	244.4174 - 366.845 + M	$3d^7(a^2F)4p - 3d^6(b^3F)4s^2$	$v^3D^o - ^3F$	3 - 4	Q	1092	
	820.012	820.012	26.9130 - 148.8624	$3d^8 - 3d^7(a^2G)4s$	$a^1G - b^1G$	4 - 4	F,P	375,921	
	826.990	826.990	0. - 120.9204	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	4 - 4	F,P	375,921	
30	828.001	828.001						1092	
	832.847	832.847	1.8614 - 121.9315	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	3 - 3	F,P	375,921	
	835.882	835.882	0. - 119.6341	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	4 - 5	F,P	375,921	
	836.205	836.205	3.0776 - 122.6655	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	2 - 2	F,P	375,921	
320	836.313	836.313	157.5378 - 277.1090	$3d^7(a^2D)4s - 3d^7(b^2D)4p$	$b^1D - u^3D^o$	2 - 3		1092	
100	836.939	836.939						1092	
40	837.007	837.007						1092	
110	837.657	837.657	203.8692 - 323.2490	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5S^o - ^5P$	2 - 1		1092	
100	839.300	839.300						1092	
	839.920	839.920	1.8614 - 120.9204	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	3 - 4	F,P	375,921	
120	841.138	841.138	190.5280 - 309.4139	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^5F^o - ^5F$	5 - 5		1092	
290	841.321	841.321	190.5539 - 309.4139	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^5F^o - ^5F$	4 - 5		1092	
	841.369	841.369	3.0776 - 121.9315	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	2 - 3	F,P	375,921	
200	842.179	842.179	203.8692 - 322.6081	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5S^o - ^5P$	2 - 2		1092	
40	842.649	842.649						1092	
180	843.399	843.399	193.9481 - 312.5149	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^5G^o - ^3H$	6 - 6		1092	
440	844.098	844.098	203.8692 - 322.3382	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5S^o - ^5P$	2 - 3		1092	
270	844.150	844.150	220.9173 - 339.3788	$3d^7(a^2H)4p - 3d^7(a^2F)4d$	$y^3G^o - ^3H$	5 - 6		1092	
230	845.475	845.475						1092	
	848.588	848.588	3.0776 - 120.9204	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	2 - 4	F,P	375,921	
	849.093	849.093	1.8614 - 119.6341	$3d^8 - 3d^7(a^4F)4s$	$ga^3F - a^3F$	3 - 5	F,P	375,921	
100	853.824	853.824	217.4449 - 334.5648	$3d^7(a^2G)4p - 3d^7(a^2H)5s$	$z^1G^o - ^1H$	4 - 5		1092	
180	854.606	854.606	230.2362 - 347.2487	$3d^7(a^2H)4p - 3d^7(a^2F)4d$	$y^1G^o - ^1G$	4 - 4		1092	
90	856.622	856.622	192.7531 - 309.4904	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^o - ^3F$	4 - 4		1092	
50	856.963	856.963						1092	
160	857.185	857.185	192.7531 - 309.4139	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^o - ^3F$	4 - 5		1092	
250	857.780	857.780						1092	
240	857.798	857.798	222.3980 - 338.9748	$3d^7(a^2H)4p - 3d^7(a^2F)4d$	$y^3G^o - ^3H$	4 - 5		1092	

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	140	858.112	200.4829 - 317.0170	$3d^7(a^4F)4p - 3d^7(a^2P)4d$	$z^3G^\circ - ^1F$	3 - 3		1092
	410	858.240	195.5444 - 312.0614	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3G^\circ - ^3F$	3 - 2		1092
	70	859.825	216.7032 - 333.0057	$3d^7(a^2P)4p - 3d^7(a^2D)5s$	$z^3P^\circ - ^3D$	2 - 3		1092
	50	860.220	199.2026 - 315.4500	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^3G^\circ - ^3F$	4 - 3		1092
	20	861.514	221.6503 - 337.724 + M	$3d^7(a^2P)4p - 3d^6(a^3D)4s^2$	$x^3D^\circ - ^3D$	3 - 2	Q	1092
	30	861.933						1092
	110	863.111						1092
	150	865.641	194.1327 - 309.6531	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^\circ - ^5F$	3 - 3		1092
	170	866.866	194.1327 - 309.4904	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^\circ - ^5F$	3 - 4		1092
	20	868.902						1092
		869.775	16.2480 - 131.2203	$3d^8 - 3d^7(a^4F)4s$	$a^1D - b^3F$	2 - 2	F,P	375,921
	30	870.280	230.3314 - 345.238 + M	$3d^7(a^2D)4p - 3d^7(a^2F)4d$	$y^1F^\circ - ^1D$	3 - 2	Q	1092
	20	870.952						1092
	100	871.239	195.0862 - 309.8647	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^\circ - ^5F$	2 - 2		1092
	210	872.849	195.0862 - 309.6531	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^\circ - ^5F$	2 - 3		1092
	70	874.335	195.6846 - 310.0571	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^\circ - ^5F$	1 - 1		1092
	60	876.230	195.9323 - 310.0571	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^\circ - ^5F$	0 - 1		1092
	50	878.583	198.1795 - 311.9983	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^3F^\circ - ^3G$	4 - 5		1092
		878.626	16.2480 - 130.0620	$3d^8 - 3d^7(a^4F)4s$	$a^1D - b^3F$	2 - 3	F,P	375,921
	120	878.907	201.2112 - 314.9878	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^3D^\circ - ^3F$	3 - 4		1092
	50	879.102	199.2026 - 312.9568	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3G^\circ - ^5D$	4 - 3		1092
	30	879.377	190.5280 - 304.2449	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	5 - 4		1092
	30	881.264						1092
	20	881.606	226.2716 - 339.7017 + M	$3d^7(a^2D)4p - 3d^7(a^2F)4d$	$x^3F^\circ - ^3D$	2 - 3	Q	1092
	80	883.228	218.8148 - 332.0359	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$z^1H^\circ - ^1G$	5 - 4		1092
	60	884.054	192.7413 - 305.8560	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	2 - 3		1092
	50	884.862						1092
	20	887.236						1092
	200	887.929	198.1795 - 310.8002	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^3F^\circ - ^3D$	4 - 3		1092
	20	888.525						1092
	20	888.707	217.1096 - 329.6328	$3d^7(a^2P)4p - 3d^7(a^2P)5s$	$z^3P^\circ - ^3P$	1 - 1		1092
	170	889.033	191.7621 - 304.2449	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	3 - 4		1092
	170	889.051	216.7032 - 329.1817	$3d^7(a^2P)4p - 3d^7(a^2P)5s$	$z^3P^\circ - ^3P$	2 - 2		1092
	20	889.882	192.7413 - 305.1160	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^5F$	2 - 1		1092
	200	891.078	215.1331 - 327.3567	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$y^3F^\circ - ^3F$	4 - 4		1092
	80	891.527	222.3980 - 334.5648	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$y^3G^\circ - ^1H$	4 - 5		1092
	310	891.834	190.5539 - 302.6823	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^5F$	4 - 4		1092
		892.084	16.2480 - 128.3450	$3d^8 - 3d^7(a^4F)4s$	$a^1D - b^3F$	2 - 4	F,P	375,921
	30	892.283	217.1096 - 329.1817	$3d^7(a^2P)4p - 3d^7(a^2P)5s$	$z^3P^\circ - ^3P$	1 - 2		1092
	450	892.565	191.7621 - 303.7984	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^5F$	3 - 3		1092
	500	894.005	195.0862 - 306.9418	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	2 - 2		1092
	120	894.342	224.0709 - 335.8855	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$w^3D^\circ - ^1D$	2 - 2		1092
	20	894.522	130.0620 - 241.8552	$3d^7(a^4F)4s - 3d^7(a^2F)4p$	$b^3F - x^1D^\circ$	3 - 2		1092
	20	895.066	194.1327 - 305.8560	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	3 - 3		1092
	20	895.311	217.6499 - 329.3412	$3d^7(a^2P)4p - 3d^7(a^2H)4d$	$z^1D^\circ - ^3F$	2 - 2		1092
	160	895.406	193.4347 - 305.1160	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^5F$	1 - 1		1092
	20	895.459	199.5991 - 311.2740	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^3F^\circ - ^3D$	3 - 2		1092
	90	895.727	217.0795 - 328.7200	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$y^3F^\circ - ^3F$	3 - 3		1092
	40	896.603	217.6499 - 329.1817	$3d^7(a^2P)4p - 3d^7(a^2P)5s$	$z^1D^\circ - ^3P$	2 - 2		1092
	490	896.700	220.9173 - 332.4364	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$y^3G^\circ - ^3H$	5 - 6		1092
	230	896.924	192.7531 - 304.2449	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	4 - 4		1092
	20	897.529	201.2112 - 312.6299	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3D^\circ - ^5D$	3 - 4		1092
	20	897.789	227.9935 - 339.3788	$3d^7(a^2H)4p - 3d^7(a^2F)4d$	$y^3H^\circ - ^3H$	6 - 6		1092
	470	898.140	200.7203 - 312.0614	$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3F^\circ - ^3F$	2 - 2		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	530	898.850	221.6019 - 332.8547	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3H$	6 - 5		1092
	120	898.913	215.7342 - 326.9798	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^3H^\circ - ^1G$	4 - 4		1092
	200	899.570	193.4347 - 304.5997	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	1 - 2		1092
	50	899.863						1092
	750	900.053	190.5280 - 301.6320	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	5 - 5		1092
	630	900.266	190.5539 - 301.6320	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	4 - 5		1092
	400	900.436	192.7413 - 303.7984	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	2 - 3		1092
	490	901.547	191.7621 - 302.6823	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	3 - 4		1092
	20	902.243	221.6019 - 332.4364	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$z^3I^\circ - ^3H$	6 - 6		1092
	180	904.029	218.7265 - 329.3412	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$y^3F^\circ - ^3F$	2 - 2		1092
	400	904.867	215.7342 - 326.2475	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^3H^\circ - ^3G$	4 - 3		1092
	300	905.331	222.3980 - 332.8547	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3H$	4 - 5		1092
	450	905.875	214.8356 - 325.2259	$3d^7(a^2H)4p - 3d^7(a^2G)5s$	$z^3H^\circ - ^3G$	5 - 4		1092
	300	907.063	223.6233 - 333.8687	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$y^3G^\circ - ^3H$	3 - 4		1092
	20	908.161	194.1327 - 304.2449	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	3 - 4		1092
	100	908.325	215.1331 - 325.2259	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$y^3F^\circ - ^3G$	4 - 4		1092
	20	908.872	225.8592 - 335.8855	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$x^3F^\circ - ^1D$	3 - 2		1092
	310	909.043	223.0003 - 333.0057	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$w^3D^\circ - ^3D$	3 - 3		1092
	620	909.672	192.7531 - 302.6823	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	4 - 4		1092
	280	909.710	214.8356 - 324.7599	$3d^7(a^2H)4p - 3d^7(a^2G)5s$	$z^3H^\circ - ^3G$	5 - 5		1092
	90	909.913	217.0795 - 326.9798	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$y^3F^\circ - ^1G$	3 - 4		1092
	90	910.007	213.3607 - 323.2490	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	1 - 1		1092
	30	910.878	214.8356 - 324.6193	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$z^3H^\circ - ^3H$	5 - 5		1092
	610	910.993	222.6661 - 332.4364	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$z^3I^\circ - ^3H$	7 - 6		1092
	50	911.291	217.6214 - 327.3567	$3d^7(a^4P)4p - 3d^7(a^2H)4d$	$z^3P^\circ - ^3F$	3 - 4		1092
	20	911.457	213.5348 - 323.2490	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	2 - 1		1092
	570	911.858	194.1327 - 303.7984	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	3 - 3		1092
	400	912.183	215.1331 - 324.7599	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$y^3F^\circ - ^3G$	4 - 5		1092
	540	912.363	224.9594 - 334.5648	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$z^3I^\circ - ^1H$	6 - 5		1092
	90	912.950	217.4449 - 326.9798	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^1G^\circ - ^1G$	4 - 4		1092
	380	913.125	195.0862 - 304.5997	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	2 - 2		1092
	30	913.358	215.1331 - 324.6193	$3d^7(a^2G)4p - 3d^6(a^3H)4s^2$	$y^3F^\circ - ^3H$	4 - 5		1092
	150	913.807	195.6846 - 305.1160	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	1 - 1		1092
	40	914.776	220.3159 - 329.6328	$3d^7(a^4P)4p - 3d^7(a^2P)5s$	$y^3P^\circ - ^3P$	2 - 1		1092
	550	915.000	195.8273 - 305.1160	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3G^\circ - ^3F$	2 - 1		1092
	30	915.345	213.3607 - 322.6081	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	1 - 2		1092
	20	915.590	218.1379 - 327.3567	$3d^7(a^4P)4p - 3d^7(a^2H)4d$	$y^3D^\circ - ^3F$	3 - 4		1092
	40	915.879	195.9323 - 305.1160	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	0 - 1		1092
	150	916.426						1092
	420	916.816	213.5348 - 322.6081	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	2 - 2		1092
	630	916.960	195.5444 - 304.5997	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3G^\circ - ^3F$	3 - 2		1092
	50	917.096	217.6214 - 326.661 + M	$3d^7(a^4P)4p - 3d^6(a^3F)4s^2$	$z^3P^\circ - ^3F$	3 - 2	Q	1092
	40	917.514	242.5301 - 351.5202	$3d^7(a^2F)4p - 3d^7(a^2F)5s$	$w^3G^\circ - ^3F$	3 - 3		1092
	160	917.909	213.6652 - 322.6081	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	3 - 2		1092
	260	918.139	195.6846 - 304.5997	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	1 - 2		1092
	60	918.172	202.3609 - 311.2740	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^3D^\circ - ^3D$	2 - 2		1092
	280	918.449	192.7531 - 301.6320	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	4 - 5		1092
	40	918.815	214.4137 - 323.2490	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^3S^\circ - ^3P$	1 - 1		1092
	700	919.595	195.0552 - 303.7984	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3G^\circ - ^3F$	4 - 3		1092
	110	919.856	195.0862 - 303.7984	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	2 - 3		1092
	570	920.062	216.0716 - 324.7599	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^3H^\circ - ^3G$	6 - 5		1092
	190	920.188	213.6652 - 322.3382	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	3 - 3		1092
	380	921.244	194.1327 - 302.6823	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	3 - 4		1092
	30	921.735	243.0292 - 351.5202	$3d^7(a^2F)4p - 3d^7(a^2F)5s$	$w^3G^\circ - ^3F$	4 - 3		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
160	922.172		202.3609 - 310.8002	$3d^7(a^4F)4p - 3d^7(a^2G)4d$	$z^3D^\circ - ^3D$	2 - 3		1092
50	922.417		218.9451 - 327.3567	$3d^7(a^2G)4p - 3d^7(a^3H)4d$	$x^3G^\circ - ^3F$	4 - 4		1092
50	922.916		218.6283 - 326.9798	$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$x^3G^\circ - ^1G$	3 - 4		1092
740	922.986		194.3394 - 302.6823	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^2G^\circ - ^3F$	5 - 4		1092
20	923.908							1092
20	924.240							1092
70	924.357	243.7256 - 351.9088		$3d^7(a^2F)4p - 3d^7(a^2F)5s$	$w^3F^\circ - ^3F$	3 - 4		1092
500	924.512	218.8148 - 326.9798		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^1H^\circ - ^1G$	5 - 4		1092
290	924.668	217.0795 - 325.2259		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$y^3F^\circ - ^3G$	3 - 4		1092
480	925.756	214.3190 - 322.3382		$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	4 - 3		1092
100	926.560	227.9598 - 335.8855		$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$y^1D^\circ - ^1D$	2 - 2		1092
20	926.637	199.5991 - 307.5173		$3d^7(a^4F)4p - 3d^7(a^4P)4d$	$z^3F^\circ - ^3P$	3 - 3		1092
200	926.833	221.7388 - 329.6328		$3d^7(a^4P)4p - 3d^7(a^2P)5s$	$y^3D^\circ - ^3P$	2 - 1		1092
150	926.975	225.8592 - 333.7367		$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$x^3F^\circ - ^3D$	3 - 2		1092
590	927.816	217.4449 - 325.2259		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^1G^\circ - ^3G$	4 - 4		1092
770	928.637	193.9481 - 301.6320		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^2G^\circ - ^3F$	6 - 5		1092
550	929.207	218.6283 - 326.2475		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$x^3G^\circ - ^3G$	3 - 3		1092
260	929.567	219.4030 - 326.9798		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^1F^\circ - ^1G$	3 - 4		1092
300	929.957	221.6503 - 329.1817		$3d^7(a^2P)4p - 3d^7(a^2P)5s$	$x^3D^\circ - ^3P$	3 - 2		1092
280	930.047	218.7265 - 326.2475		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$y^3F^\circ - ^3G$	2 - 3		1092
30	931.835	217.4449 - 324.7599		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^1G^\circ - ^3G$	4 - 5		1092
90	931.944	218.9451 - 326.2475		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$x^3G^\circ - ^3G$	4 - 3		1092
50	932.161	223.7644 - 331.0419		$3d^7(a^2D)4p - 3d^7(a^2P)5s$	$w^3D^\circ - ^3P$	1 - 1		1092
30	932.269							1092
240	932.510	244.6717 - 351.9088		$3d^7(a^2F)4p - 3d^7(a^2F)5s$	$w^3G^\circ - ^3F$	5 - 4		1092
110	932.605	217.9998 - 325.2259		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$x^3G^\circ - ^3G$	5 - 4		1092
20	933.383	195.5444 - 302.6823		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^2G^\circ - ^3F$	3 - 4		1092
40	933.682	244.4174 - 351.5202		$3d^7(a^2F)4p - 3d^7(a^2F)5s$	$v^3D^\circ - ^3F$	3 - 3		1092
20	934.017							1092
30	934.738	221.7388 - 328.7200		$3d^7(a^4P)4p - 3d^7(a^2H)4d$	$y^3D^\circ - ^3F$	2 - 3		1092
20	934.812							1092
720	935.276	197.3253 - 304.2449		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3G^\circ - ^3F$	5 - 4		1092
90	935.941	219.4030 - 326.2475		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$z^1F^\circ - ^3G$	3 - 3		1092
80	936.352	217.6214 - 324.4187		$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^2P^\circ - ^3P$	3 - 2		1092
100	936.615	244.7534 - 351.5202		$3d^7(a^2F)4p - 3d^7(a^2F)5s$	$w^3F^\circ - ^3F$	4 - 3		1092
350	936.675	217.9998 - 324.7599		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$x^3G^\circ - ^3G$	5 - 5		1092
30	937.151	214.8356 - 321.5421		$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3H^\circ - ^3I$	5 - 6		1092
680	937.613	199.2026 - 305.8560		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3G^\circ - ^3F$	4 - 3		1092
70	937.908	217.9998 - 324.6193		$3d^7(a^2G)4p - 3d^6(a^3H)4s^2$	$x^3G^\circ - ^3H$	5 - 5		1092
20	938.101	218.6283 - 325.2259		$3d^7(a^2G)4p - 3d^7(a^2G)5s$	$x^3G^\circ - ^3G$	3 - 4		1092
20	938.296	195.0552 - 301.6320		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^2G^\circ - ^3F$	4 - 5		1092
20	938.559	216.7032 - 323.2490		$3d^7(a^2P)4p - 3d^7(a^4P)5s$	$z^3P^\circ - ^3P$	2 - 1		1092
60	939.061	170.6207 - 277.1090		$3d^7(a^2F)4s - 3d^7(b^2D)4p$	$c^3F - u^3D^\circ$	4 - 3		1092
550	939.323	200.4829 - 306.9418		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3G^\circ - ^3F$	3 - 2		1092
640	939.499	220.9173 - 327.3567		$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3F$	5 - 4		1092
20	939.908							1092
530	940.537	222.3980 - 328.7200		$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3F$	4 - 3		1092
240	940.901	218.1379 - 324.4187		$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3D^\circ - ^3P$	3 - 2		1092
440	941.113	199.5991 - 305.8560		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	3 - 3		1092
100	941.368	214.8356 - 321.0640		$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3H^\circ - ^3H$	5 - 5		1092
350	941.425	200.7203 - 306.9418		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^2F^\circ - ^3F$	2 - 2		1092
630	942.813	198.1795 - 304.2449		$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^\circ - ^3F$	4 - 4		1092
20	945.719							1092
450	945.911	223.6233 - 329.3412		$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3F$	3 - 2		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	200	946.011	221.6503 - 327.3567	$3d^7(a^2P)4p - 3d^7(a^2H)4d$	$x^3D^o - ^3F$	3 - 4		1092
	20	946.139	218.7265 - 324.4187	$3d^7(a^2G)4p - 3d^7(a^4P)5s$	$y^3F^o - ^3P$	2 - 2		1092
	20	946.910	170.0682 - 275.6732	$3d^7(a^2F)4s - 3d^7(b^2D)4p$	$c^3F - u^3D^o$	2 - 1		1092
	160	947.179	223.7644 - 329.3412	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$w^3D^o - ^3F$	1 - 2		1092
	170	947.380	230.3314 - 335.8855	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$y^1F^o - ^1D$	3 - 2		1092
	20	949.005	200.4829 - 305.8560	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3G^o - ^3F$	3 - 3		1092
	20	949.927	224.0709 - 329.3412	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$w^3D^o - ^3F$	2 - 2		1092
	20	950.113						1092
	40	950.381	218.0278 - 323.2490	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5P^o - ^5P$	2 - 1		1092
	20	950.880						1092
	120	951.150	200.7203 - 305.8560	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^o - ^3F$	2 - 3		1092
	20	951.663	218.1710 - 323.2490	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5P^o - ^5P$	1 - 1		1092
	140	952.501	217.6214 - 322.6081	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5P^o - ^5P$	3 - 2		1092
	20	953.644	227.9935 - 332.8547	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^3H$	6 - 5		1092
	300	954.156	229.0643 - 333.8687	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$y^3H^o - ^3H$	4 - 4		1092
	270	954.619	190.5539 - 295.3078	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5F^o - ^5D$	4 - 3		1092
	20	954.955	217.6214 - 322.3382	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5P^o - ^5P$	3 - 3		1092
	370	955.571	224.0709 - 328.7200	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$w^3D^o - ^3F$	2 - 3		1092
	480	955.608	199.5991 - 304.2449	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^o - ^3F$	3 - 4		1092
	80	956.198	218.0278 - 322.6081	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5P^o - ^5P$	2 - 2		1092
	80	956.292						1092
	100	956.911	198.1795 - 302.6823	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^o - ^5F$	4 - 4		1092
	440	957.461	227.9935 - 332.4364	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$y^3H^o - ^3H$	6 - 6		1092
	40	957.513	218.1710 - 322.6081	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$z^5P^o - ^5P$	1 - 2		1092
	350	958.085	228.4800 - 332.8547	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^3H$	5 - 5		1092
	240	958.253	223.0003 - 327.3567	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$w^3D^o - ^3F$	3 - 4		1092
	190	958.513	230.2362 - 334.5648	$3d^7(a^2H)4p - 3d^7(a^2H)5s$	$y^1G^o - ^1H$	4 - 5		1092
	20	958.686	220.9173 - 325.2259	$3d^7(a^2H)4p - 3d^7(a^2G)5s$	$y^3G^o - ^3G$	5 - 4		1092
	240	958.974	191.7621 - 296.0403	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5F^o - ^5D$	3 - 2		1092
	20	959.514	243.0292 - 347.2487	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^o - ^1G$	4 - 4		1092
	120	959.693	199.5991 - 303.7984	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3F^o - ^5F$	3 - 3		1092
	20	960.295	215.1331 - 319.2684	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$y^3F^o - ^1F$	4 - 3		1092
	20	960.328						1092
	160	960.588	220.3159 - 324.4187	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3P^o - ^3P$	2 - 2		1092
	40	961.149	229.6945 - 333.7367	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$x^3P^o - ^3D$	2 - 2		1092
	70	963.227	217.9998 - 321.818 + M	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$x^3G^o - ^3H$	5 - 4	Q	1092
	290	963.371	203.1398 - 306.9418	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^o - ^3F$	1 - 2		1092
	290	963.826	192.7413 - 296.4942	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5F^o - ^5D$	2 - 1		1092
	750	964.799	203.8692 - 307.5173	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^5S^o - ^5P$	2 - 3		1092
	370	965.025	190.5280 - 294.1520	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5F^o - ^5D$	5 - 4		1092
	100	965.270	190.5539 - 294.1520	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5F^o - ^5D$	4 - 4		1092
	20	965.963	243.7256 - 347.2487	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3F^o - ^1G$	3 - 4		1092
	340	966.230	202.3609 - 305.8560	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^o - ^3F$	2 - 3		1092
	30	966.327	213.5348 - 317.020 + M	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3D^o - ^3P$	2 - 1		1092
	40	966.591	121.9315 - 225.3872	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$a^5F - x^3F^o$	3 - 4		1092
	50	966.710	232.4421 - 335.8855	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$y^1P^o - ^1D$	1 - 2		1092
	50	967.509						1092
	30	967.699	217.4449 - 320.7817	$3d^7(a^2G)4p - 3d^7(a^2D)4d$	$z^1G^o - ^3G$	4 - 5		1092
	60	967.818	218.7265 - 322.0513	$3d^7(a^2G)4p - 3d^7(a^2D)4d$	$y^3F^o - ^1F$	2 - 3		1092
	90	967.954	229.6945 - 333.0057	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$x^3P^o - ^3D$	2 - 3		1092
	730	968.068	203.8692 - 307.1670	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^5S^o - ^5P$	2 - 2		1092
	60	968.358						1092
	20	968.403	217.6499 - 320.914 + M	$3d^7(a^2P)4p - 3d^6(a^3P)4s^2$	$z^1D^o - ^3P$	2 - 2	Q	1092
	100	968.456						1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
290	968.981		220.9173 - 324.1181	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$y^3G^\circ - ^3H$	5 - 6		1092
20	969.493		221.2719 - 324.4187	$3d^7(a^4P)4p - 3d^7(a^4P)5s$	$y^3P^\circ - ^3P$	1 - 2		1092
630	969.804		203.8692 - 306.9825	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^2S^\circ - ^3P$	2 - 1		1092
20	969.931							1092
230	970.164		226.5583 - 329.6328	$3d^7(a^2P)4p - 3d^7(a^2P)5s$	$y^3S^\circ - ^3P$	1 - 1		1092
420	970.552		201.2112 - 304.2449	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	3 - 4		1092
20	970.715		221.6019 - 324.6193	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$z^3I^\circ - ^3H$	6 - 5		1092
20	971.038							1092
20	972.187		225.8592 - 328.7200	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$x^3F^\circ - ^3F$	3 - 3		1092
20	972.499		222.3980 - 325.2259	$3d^7(a^2H)4p - 3d^7(a^2G)5s$	$y^3G^\circ - ^3G$	4 - 4		1092
20	973.064		221.6503 - 324.4187	$3d^7(a^2P)4p - 3d^7(a^4P)5s$	$x^3D^\circ - ^3P$	3 - 2		1092
20	973.140							1092
150	974.312							1092
30	974.433		226.5583 - 329.1817	$3d^7(a^2P)4p - 3d^7(a^2P)5s$	$y^3S^\circ - ^3P$	1 - 2		1092
40	974.483		230.2362 - 332.8547	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1G^\circ - ^3H$	4 - 5		1092
20	974.768		201.2112 - 303.7984	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	3 - 3		1092
20	974.821							1092
20	975.646		244.7534 - 347.2487	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3F^\circ - ^1G$	4 - 4		1092
20	977.284		218.6283 - 320.9527	$3d^7(a^2G)4p - 3d^7(a^2D)4d$	$x^3G^\circ - ^3G$	3 - 4		1092
20	977.567							1092
20	977.779							1092
150	978.266		222.3980 - 324.6193	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$y^3G^\circ - ^3H$	4 - 5		1092
20	978.437		222.5277 - 324.7314	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$z^3I^\circ - ^3H$	5 - 4		1092
20	978.919		221.6019 - 323.7548	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^1I$	6 - 6		1092
20	979.677							1092
210	979.965		245.2046 - 347.2487	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^1G^\circ - ^1G$	4 - 4		1092
70	980.688		225.3872 - 327.3567	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$x^3F^\circ - ^3F$	4 - 4		1092
20	980.836							1092
100	982.089		217.4449 - 319.2684	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$z^1G^\circ - ^1F$	4 - 3		1092
540	982.317		230.2362 - 332.0359	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1G^\circ - ^1G$	4 - 4		1092
30	982.688		148.8624 - 250.6231	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$b^1G - x^1F^\circ$	4 - 3		1092
320	983.149		174.8330 - 276.5462	$3d^7(a^2F)4s - 3d^7(b^2D)4p$	$a^1F - w^1D^\circ$	3 - 2		1092
120	983.236		230.3314 - 332.0359	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$y^1F^\circ - ^1G$	3 - 4		1092
80	983.908		221.7388 - 323.374 + M	$3d^7(a^4P)4p - 3d^7(a^2D)4d$	$y^3D^\circ - ^3G$	2 - 3	Q	1092
20	984.258		215.1331 - 316.7323	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$y^3F^\circ - ^3F$	4 - 4		1092
20	984.329		225.3872 - 326.9798	$3d^7(a^2D)4p - 3d^7(a^2G)5s$	$x^3F^\circ - ^1G$	4 - 4		1092
180	984.658		222.6028 - 324.162 + M	$3d^7(a^2P)4p - 3d^6(a^3P)4s^2$	$x^3D^\circ - ^3P$	2 - 1	Q	1092
120	984.737		219.4030 - 320.9527	$3d^7(a^2G)4p - 3d^7(a^2D)4d$	$z^1F^\circ - ^3G$	3 - 4		1092
20	985.233		225.8592 - 327.3567	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$x^3F^\circ - ^3F$	3 - 4		1092
70	985.495		201.2112 - 302.6823	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	3 - 4		1092
20	985.611		203.1398 - 304.5997	$3d^7(a^4F)4p - 3d^7(a^4F)5s$	$z^3D^\circ - ^3F$	1 - 2		1092
130	985.685		222.6661 - 324.1181	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$z^3I^\circ - ^3H$	7 - 6		1092
20	986.110		195.0862 - 296.4942	$3d^7(a^4F)4p - 3d^6(a^2D)4s^2$	$z^3D^\circ - ^3D$	2 - 1		1092
640	986.201		192.7531 - 294.1520	$3d^7(a^4F)4p - 3d^6(a^2D)4s^2$	$z^3D^\circ - ^3D$	4 - 4		1092
20	986.513		195.5444 - 296.9123	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^3F$	3 - 3		1092
20	986.564							1092
20	987.221		232.4421 - 333.7367	$3d^7(a^2D)4p - 3d^7(a^2D)5s$	$y^1P^\circ - ^3D$	1 - 2		1092
330	987.494		218.7265 - 319.9927	$3d^7(a^2G)4p - 3d^7(a^2D)4d$	$y^3F^\circ - ^3F$	2 - 3		1092
500	988.378		194.1327 - 295.3078	$3d^7(a^4F)4p - 3d^6(a^2D)4s^2$	$z^5D^\circ - ^3D$	3 - 3		1092
20	988.646							1092
70	988.772		144.0676 - 245.2046	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - x^1G^\circ$	5 - 4		1092
200	989.034		223.6233 - 324.7314	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$y^3G^\circ - ^3H$	3 - 4		1092
20	990.126		215.7342 - 316.7323	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$z^3H^\circ - ^3F$	4 - 4		1092
20	990.203							1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	260	990.543	195.0862 - 296.0403	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5D^\circ - ^5D$	2 - 2		1092
	20	990.799	123.1415 - 224.0709	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$a^5F - w^3D^\circ$	1 - 2		1092
	150	991.550						1092
	30	991.967	195.6846 - 296.4942	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5D^\circ - ^5D$	1 - 1		1092
	80	992.324	192.7413 - 293.5135	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^3G$	2 - 3		1092
	50	992.426	214.8356 - 315.5985	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^1G$	5 - 4		1092
	80	992.597	190.5539 - 291.2987	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^5G$	4 - 3		1092
	120	993.042	230.2362 - 330.936 + M	$3d^7(a^2H)4p - 3d^6(a^3G)4s^2$	$y^1G^\circ - ^3G$	4 - 3	Q	1092
	220	993.180	144.0676 - 244.7534	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - w^3F^\circ$	5 - 4		1092
	80	993.268	191.7621 - 292.4400	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^3G$	3 - 4		1092
	40	993.343	121.9315 - 222.6028	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^5F - x^3D^\circ$	3 - 2		1092
	70	993.567	222.6028 - 323.2490	$3d^7(a^2P)4p - 3d^7(a^4P)5s$	$x^3D^\circ - ^5P$	2 - 1		1092
	60	993.649	218.6283 - 319.2684	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$x^3G^\circ - ^1F$	3 - 3		1092
	170	993.783	220.9173 - 321.5421	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3I$	5 - 6		1092
	300	993.978	232.4421 - 333.047 + M	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$y^1P^\circ - ^1D$	1 - 2	Q	1092
	120	994.096	190.5539 - 291.1473	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^3G$	4 - 5		1092
	220	994.409	195.9323 - 296.4942	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5D^\circ - ^5D$	0 - 1		1092
	300	994.759						1092
	270	994.870						1092
	20	995.194						1092
	280	995.364	121.9315 - 222.3980	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$a^5F - y^3G^\circ$	3 - 4		1092
	50	996.339	195.5444 - 295.9104	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^3F$	3 - 4		1092
	460	996.452	195.6846 - 296.0403	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5D^\circ - ^5D$	1 - 2		1092
	70	996.562						1092
	120	996.839	215.1331 - 315.4500	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3F$	4 - 3		1092
	40	997.212	192.7413 - 293.0217	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^3D$	2 - 2		1092
	540	997.784	195.0862 - 295.3078	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5D^\circ - ^5D$	2 - 3		1092
	20	997.868	195.8273 - 296.0403	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5G^\circ - ^5D$	2 - 2		1092
	20	997.944	213.6652 - 313.8715	$3d^7(a^2P)4p - 3d^7(a^2G)4d$	$y^3D^\circ - ^3H$	3 - 4		1092
	70	998.082	191.7621 - 291.9539	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^3D$	3 - 3		1092
	40	998.192						1092
	20	998.312	244.4174 - 344.586 + M	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$v^3D^\circ - ^3P$	3 - 2	Q	1092
	40	998.391	192.7531 - 292.9133	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5H$	4 - 3		1092
	70	998.475	214.8356 - 314.9878	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3F$	5 - 4		1092
	60	998.519	270.2398 - 370.389 + M	$3d^7(b^2D)4p - 3d^7(b^2D)4d$	$v^3F^\circ - ^3F$	4 - 4	Q	1092
	100	998.668						1092
	190	998.733	222.3980 - 322.5240	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3I$	4 - 5		1092
	50	999.362						1092
	70	999.502						1092
	420	999.801	194.1327 - 294.1520	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5D^\circ - ^5D$	3 - 4		1092
	730	1000.031	120.9204 - 220.9173	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$a^5F - y^3G^\circ$	4 - 5		1092
	70	1000.113						1092
	800	1000.601	221.6019 - 321.5421	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3I$	6 - 6		1092
	310	1000.661	213.3607 - 313.2947	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^5D$	1 - 2		1092
	310	1000.824	190.5280 - 290.4454	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^5H$	5 - 6		1092
	470	1001.351	219.4030 - 319.2684	$3d^7(a^2G)4p - 3d^7(a^2H)4d$	$z^1F^\circ - ^1F$	3 - 3		1092
	470	1001.351	220.9173 - 320.7817	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^3G^\circ - ^3G$	5 - 5		1092
	220	1001.401						1092
	300	1001.454	215.1331 - 314.9878	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3F$	4 - 4		1092
	290	1001.770	231.2166 - 331.0419	$3d^7(a^2D)4p - 3d^7(a^2P)5s$	$x^3P^\circ - ^1P$	1 - 1		1092
	60	1001.868	194.3394 - 294.1520	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5G^\circ - ^5D$	5 - 4		1092
	560	1002.107	222.5277 - 322.3174	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^1H$	5 - 5		1092
	140	1002.370	195.5444 - 295.3078	$3d^7(a^4F)4p - 3d^6(a^5D)4s^2$	$z^5G^\circ - ^5D$	3 - 3		1092
	130	1002.394	213.5348 - 313.2947	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^5D$	2 - 2		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	90	1002.807	121.9315 - 221.6503	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^5F - x^3D^o$	3 - 3		1092
	630	1003.164	220.9173 - 320.6011	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^o - ^3H$	5 - 6		1092
	100	1003.270	218.1379 - 317.8105	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3D^o - ^3F$	3 - 3		1092
	100	1003.487	217.0795 - 316.7323	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$y^3F^o - ^3F$	3 - 4		1092
	90	1003.518						1092
	180	1003.717	213.6652 - 313.2947	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^5D$	3 - 2		1092
	300	1003.760	222.3362 - 321.960 + M	$3d^7(a^2P)4p - 3d^7(a^2D)4d$	$x^3D^o - ^3S$	1 - 1	Q	1092
	390	1003.795	145.5816 - 245.2046	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - x^1G^o$	3 - 4		1092
	20	1004.458	233.2989 - 332.8547	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1H^o - ^3H$	5 - 5		1092
	210	1004.654	191.7621 - 291.2987	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3G$	3 - 3		1092
	160	1005.048	268.0063 - 367.505 + M	$3d^7(b^2D)4p - 3d^7(b^2D)4d$	$v^3F^o - ^3D$	2 - 3	Q	1092
	20	1005.131	216.7032 - 316.1917	$3d^7(a^2P)4p - 3d^7(a^2G)4d$	$z^3P^o - ^3F$	2 - 2	Q	1092
	20	1005.218	195.8273 - 295.3078	$3d^7(a^4F)4p - 3d^6(a^3D)4s^2$	$z^3G^o - ^5D$	2 - 3		1092
	300	1005.408	221.6019 - 321.0640	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^o - ^3H$	6 - 5		1092
	170	1005.683						1092
	70	1005.811	213.5348 - 312.9568	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^5D$	2 - 3		1092
	140	1006.366	217.6499 - 317.0170	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^3D^o - ^1F$	2 - 3		1092
	140	1006.443						1092
	330	1007.133	213.6652 - 312.9568	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^5D$	3 - 3		1092
	80	1007.177	217.4449 - 316.7323	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$z^1G^o - ^3F$	4 - 4		1092
	20	1007.516	192.7413 - 291.9971	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5P$	2 - 2	Q	1092
	600	1007.967	216.7032 - 315.9122	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^3P^o - ^3D$	2 - 3		1092
	130	1008.057	192.7531 - 291.9539	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3D$	4 - 3		1092
	20	1008.218						1092
	50	1008.270	221.6019 - 320.7817	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$z^3I^o - ^3G$	6 - 5		1092
	220	1008.454						1092
	170	1008.481	224.9594 - 324.1181	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$z^1I^o - ^3H$	6 - 6		1092
	210	1008.643	216.7032 - 315.8460	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^3P^o - ^3D$	2 - 2		1092
	40	1008.787	215.1331 - 314.2622	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^o - ^1H$	4 - 5		1092
	160	1008.847	191.7621 - 290.8851	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5D$	3 - 3		1092
	570	1008.945	190.5280 - 289.6415	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5D$	5 - 4		1092
	310	1009.113	195.0552 - 294.1520	$3d^7(a^4F)4p - 3d^6(a^3D)4s^2$	$z^3G^o - ^5D$	4 - 4		1092
	50	1009.423	213.5348 - 312.6015	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3P$	2 - 2		1092
	430	1009.642	190.5280 - 289.5729	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5G$	5 - 5		1092
	130	1009.790	229.6945 - 328.727 + M	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$x^3P^o - ^3P$	2 - 1	Q	1092
	810	1009.910	190.5539 - 289.5729	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5G$	4 - 5		1092
	670	1009.986	191.7621 - 290.7735	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5P$	3 - 2		1092
	290	1010.216	192.7413 - 291.7300	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5G$	2 - 2		1092
	800	1010.350	144.7507 - 243.7256	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - w^3F^o$	4 - 3		1092
	40	1010.753	213.6652 - 312.6015	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3P$	3 - 2		1092
	80	1010.888	268.0063 - 366.930 + M	$3d^7(b^2D)4p - 3d^6(b^3F)4s^2$	$v^3F^o - ^3F$	2 - 3	Q	1092
	20	1011.044	222.3362 - 321.246 + M	$3d^7(a^2P)4p - 3d^7(a^2D)4d$	$x^3D^o - ^1P$	1 - 1	Q	1092
	20	1011.232	194.1327 - 293.0217	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3D$	3 - 2		1092
	40	1011.667	268.0063 - 366.853 + M	$3d^7(b^2D)4p - 3d^7(b^2D)4d$	$v^3F^o - ^3D$	2 - 1	Q	1092
	540	1011.843	192.7413 - 291.5708	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5D$	2 - 1		1092
	390	1012.059	192.7531 - 291.5616	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3H$	4 - 5		1092
	750	1012.194	224.9594 - 323.7548	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^o - ^1I$	6 - 6		1092
	800	1012.243	191.7621 - 290.5528	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5G$	3 - 4		1092
	70	1012.492	217.0795 - 315.8460	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$y^3F^o - ^3D$	3 - 2		1092
	20	1012.587						1092
	660	1012.794	217.1096 - 315.8460	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^3P^o - ^3D$	1 - 2		1092
	390	1012.834	198.1795 - 296.9123	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3F$	4 - 3		1092
	170	1013.390	170.2794 - 268.9566	$3d^7(a^2F)4s - 3d^7(b^2D)4p$	$c^3F - v^3F^o$	3 - 3		1092
	300	1013.522	222.3980 - 321.0640	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^o - ^3H$	4 - 5		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
20		1013.806	214.3190 - 312.9568	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5D$	4 - 3		1092
280		1014.350	197.3253 - 295.9104	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	5 - 4		1092
820		1014.641	192.7413 - 291.2987	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^5G$	2 - 3		1092
150		1014.738	192.7531 - 291.2987	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5G$	4 - 3		1092
200		1014.820	221.6019 - 320.1417	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^\circ - ^1K$	6 - 7		1092
400		1014.932	215.7342 - 314.2622	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^1H$	4 - 5		1092
80		1015.029	217.0795 - 315.5985	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^1G$	3 - 4		1092
330		1015.136						1092
760		1015.548	222.6661 - 321.1351	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^\circ - ^3I$	7 - 7		1092
130		1015.730						1092
150		1015.749						1092
30		1015.984	195.0862 - 293.5135	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^3G$	2 - 3		1092
440		1016.078	214.8356 - 313.2533	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3H$	5 - 5		1092
350		1016.319	192.7531 - 291.1473	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^3G$	4 - 5		1092
330		1016.562	217.0795 - 315.4500	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3F$	3 - 3		1092
180		1016.606	213.3607 - 311.7267	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^3P$	1 - 1		1092
570		1017.180	214.3190 - 312.6299	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5D$	4 - 4		1092
520		1017.216	194.1327 - 292.4400	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^3G$	3 - 4		1092
760		1017.353	193.4347 - 291.7300	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^5G$	1 - 2		1092
100		1017.504	144.7507 - 243.0292	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - w^3G^\circ$	4 - 4		1092
20		1017.577						1092
670		1017.671	217.6499 - 315.9122	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^1D^\circ - ^3D$	2 - 3		1092
280		1017.760	221.7388 - 319.9927	$3d^7(a^4P)4p - 3d^7(a^2D)4d$	$y^3D^\circ - ^3F$	2 - 3		1092
40		1017.850	221.6503 - 319.8961	$3d^7(a^2P)4p - 3d^7(a^2H)4d$	$x^3D^\circ - ^3G$	3 - 4		1092
20		1017.994						1092
80		1018.370	217.6499 - 315.8460	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^1D^\circ - ^3D$	2 - 2		1092
500		1018.453	214.4137 - 312.6015	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3S^\circ - ^3P$	1 - 2		1092
100		1018.506						1092
860		1018.643	190.5280 - 288.6978	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^5G$	5 - 6		1092
670		1018.810	217.4449 - 315.5985	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1G^\circ - ^1G$	4 - 4		1092
540		1018.912	145.5816 - 243.7256	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - w^3F^\circ$	3 - 3		1092
750		1018.982	215.7342 - 313.8715	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3H$	4 - 4		1092
460		1019.028	192.7531 - 290.8851	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5D$	4 - 3		1092
80		1019.122	215.1331 - 313.2570	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3G$	4 - 3		1092
120		1019.346	221.6019 - 319.7037	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^\circ - ^3K$	6 - 6		1092
250		1019.392	214.3190 - 312.4155	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$y^5D^\circ - ^3I$	4 - 5		1092
240		1019.410	214.3190 - 312.4155	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$y^5D^\circ - ^3I$	4 - 5		1092
150		1019.657	222.5277 - 320.6011	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^\circ - ^3H$	5 - 6		1092
620		1020.072	192.7413 - 290.7735	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^5P$	2 - 2		1092
820		1020.276	190.5539 - 288.5664	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^5F$	4 - 3		1092
180		1020.880	199.5991 - 297.5544	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	3 - 2		1092
180		1020.897	223.0003 - 320.9527	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$w^5D^\circ - ^3G$	3 - 4		1092
60		1020.980						1092
160		1021.030	170.0682 - 268.0063	$3d^7(a^2F)4s - 3d^7(b^2D)4p$	$c^3F - v^3F^\circ$	2 - 2		1092
310		1021.089	222.6661 - 320.6011	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^\circ - ^3H$	7 - 6		1092
200		1021.617	218.0278 - 315.9122	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$z^5P^\circ - ^3D$	2 - 3		1092
500		1021.667	191.7621 - 289.6415	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5D$	3 - 4		1092
280		1021.817	194.1327 - 291.9971	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5P$	3 - 2		1092
170		1021.987	241.8552 - 339.701 + M	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^1D^\circ - ^3D$	2 - 3	Q	1092
780		1022.191	220.9173 - 318.7461	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3G$	5 - 5		1092
180		1022.267	194.1327 - 291.9539	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^3D$	3 - 3		1092
400		1022.496	192.7531 - 290.5528	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5G$	4 - 4		1092
60		1022.562	213.9324 - 311.7267	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^3P$	0 - 1		1092
740		1022.835	191.7621 - 289.5297	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5F^\circ - ^5P$	3 - 3		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
800	1023.217		198.1795 - 295.9104	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	4 - 4		1092
160	1023.438		199.2026 - 296.9123	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	4 - 3		1092
90	1023.691		195.8273 - 293.5135	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	2 - 3		1092
40	1024.136		216.0716 - 313.7154	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^1I$	6 - 6		1092
370	1024.265		214.8356 - 312.4667	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3G$	5 - 4		1092
120	1024.446		219.4030 - 317.0170	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$z^1F^\circ - ^1F$	3 - 3		1092
780	1024.506		191.7621 - 289.3702	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	3 - 2		1092
80	1024.642		222.3980 - 319.9927	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^3G^\circ - ^3F$	4 - 3		1092
540	1024.797		214.8356 - 312.4155	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3I$	5 - 5		1092
320	1024.965		224.9594 - 322.5240	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^\circ - ^3I$	6 - 5		1092
200	1025.080		195.0862 - 292.6391	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3P$	2 - 1		1092
580	1025.192		217.4449 - 314.9878	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1G^\circ - ^3F$	4 - 4		1092
390	1025.243		241.8552 - 339.3927	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^1D^\circ - ^3G$	2 - 3		1092
350	1025.372		194.3394 - 291.8650	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3H$	5 - 6		1092
800	1025.436		215.7342 - 313.2533	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3H$	4 - 5		1092
60	1025.518		213.6652 - 311.1770	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$y^3D^\circ - ^3F$	3 - 4		1092
440	1025.660		222.3980 - 319.8961	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^3G$	4 - 4		1092
60	1025.898		222.6661 - 320.1417	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^1K$	7 - 7		1092
450	1026.002		218.7265 - 316.1917	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3F$	2 - 2		1092
30	1026.191		145.5816 - 243.0292	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - w^3G^\circ$	3 - 4		1092
40	1026.265							1092
180	1026.800		222.6028 - 319.9927	$3d^7(a^2P)4p - 3d^7(a^2D)4d$	$x^3D^\circ - ^3F$	2 - 3		1092
100	1026.855		195.0552 - 292.4400	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	4 - 4		1092
390	1027.025		195.5444 - 292.9133	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3H$	3 - 3		1092
830	1027.411		190.5280 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	5 - 4		1092
790	1027.606		214.4137 - 311.7267	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^3S^\circ - ^3P$	1 - 1		1092
790	1027.606		199.5991 - 296.9123	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	3 - 3		1092
850	1027.694		190.5539 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	4 - 4		1092
490	1027.787		225.8592 - 323.1553	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$x^3F^\circ - ^1G$	3 - 4		1092
350	1027.932		215.1331 - 312.4155	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3I$	4 - 5		1092
20	1028.137		270.2398 - 367.505 + M	$3d^7(b^2D)4p - 3d^7(b^2D)4d$	$v^3F^\circ - ^3D$	4 - 3	Q	1092
110	1028.253							1092
130	1028.317		153.3774 - 250.6231	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - x^1F^\circ$	2 - 3		1092
110	1028.368		195.0552 - 292.2967	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3H$	4 - 4		1092
650	1028.452		192.7413 - 289.9740	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	2 - 1		1092
140	1028.563		194.3394 - 291.5616	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3H$	5 - 5		1092
80	1028.752		147.7383 - 244.9433	$3d^7(a^2P)4s - 3d^7(a^2F)4p$	$b^3P - v^3D^\circ$	2 - 1		1092
580	1028.926		222.3980 - 319.5867	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^3G^\circ - ^3F$	4 - 4		1092
850	1029.058		222.5277 - 319.7037	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3K$	5 - 6		1092
680	1029.202		214.8356 - 311.9983	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3G$	5 - 5		1092
20	1029.523		243.0292 - 340.1619	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^\circ - ^3G$	4 - 5		1092
20	1029.650		218.7265 - 315.8460	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$y^3F^\circ - ^3D$	2 - 2		1092
840	1030.011		195.8273 - 292.9133	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3H$	2 - 3		1092
250	1030.161		200.4829 - 297.5544	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	3 - 2		1092
20	1030.462		128.3450 - 225.3872	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - x^3F^\circ$	4 - 4		1092
80	1030.530		222.6661 - 319.7037	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3K$	7 - 6		1092
20	1030.779		147.9315 - 244.9433	$3d^7(a^2P)4s - 3d^7(a^2F)4p$	$b^3P - v^3D^\circ$	1 - 1		1092
600	1031.009		223.0003 - 319.9927	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$w^3D^\circ - ^3F$	3 - 3		1092
600	1031.054		217.9998 - 314.9878	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^3F$	5 - 4		1092
600	1031.093							1092
110	1031.241		218.6283 - 315.5985	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^1G$	3 - 4		1092
640	1031.410		195.6846 - 292.6391	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3P$	1 - 1		1092
280	1031.452		145.5816 - 242.5301	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - w^3G^\circ$	3 - 3		1092
110	1031.769							1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	880	1031.900	221.6019 - 318.5100	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3K$	6 - 7		1092
	840	1032.035	223.0003 - 319.8961	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$w^3D^\circ - ^3G$	3 - 4		1092
	850	1032.113	192.7531 - 289.6415	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5D$	4 - 4		1092
	280	1032.279						1092
	730	1032.368	215.1331 - 311.9983	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3G$	4 - 5		1092
	670	1032.388	242.5301 - 339.3927	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^\circ - ^3G$	3 - 3		1092
	200	1032.522	218.1379 - 314.9878	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$y^3D^\circ - ^3F$	3 - 4		1092
	440	1032.637						1092
	820	1032.695	200.7203 - 297.5544	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	2 - 2		1092
	850	1032.844	218.6283 - 315.4500	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^3F$	3 - 3		1092
	820	1033.007	191.7621 - 288.5664	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	3 - 3		1092
	880	1033.145	190.5280 - 287.3195	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	5 - 5		1092
	360	1033.232	218.8148 - 315.5985	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1H^\circ - ^1G$	5 - 4		1092
	840	1033.304	192.7531 - 289.5297	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5P$	4 - 3		1092
	700	1033.426	190.5539 - 287.3195	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	4 - 5		1092
	880	1033.562	194.1327 - 290.8851	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5D$	3 - 3		1092
	170	1033.664	230.2362 - 326.9798	$3d^7(a^2H)4p - 3d^7(a^2G)5s$	$y^1G^\circ - ^1G$	4 - 4		1092
	350	1033.755	243.0292 - 339.7638	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^\circ - ^3G$	4 - 4		1092
	100	1033.865	218.7265 - 315.4500	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3F$	2 - 3		1092
	720	1034.044	199.2026 - 295.9104	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	4 - 4		1092
	260	1034.108	220.3159 - 317.0170	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3P^\circ - ^1F$	2 - 3		1092
	390	1034.156	213.3607 - 310.0571	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5F$	1 - 1		1092
	730	1034.318	215.7342 - 312.4155	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3I$	4 - 5		1092
	200	1034.490	222.6028 - 319.2684	$3d^7(a^2P)4p - 3d^7(a^2H)4d$	$x^3D^\circ - ^1F$	2 - 3		1092
	550	1034.620	218.9451 - 315.5985	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^1G$	4 - 4		1092
	800	1034.731	195.0862 - 291.7300	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5G$	2 - 2		1092
	810	1034.748	194.1327 - 290.7735	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5P$	3 - 2		1092
	660	1034.882	192.7413 - 289.3702	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	2 - 2		1092
	770	1034.929	250.6231 - 347.2487	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^1F^\circ - ^1G$	3 - 4		1092
	510	1035.337	223.0003 - 319.5867	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$w^3D^\circ - ^3F$	3 - 4		1092
	390	1035.369	224.9594 - 321.5421	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^1I^\circ - ^3I$	6 - 6		1092
	660	1035.850	193.4347 - 289.9740	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	1 - 1		1092
	110	1036.029	213.5348 - 310.0571	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5F$	2 - 1		1092
	160	1036.099	218.0278 - 314.545 + M	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$z^5P^\circ - ^1D$	2 - 2	Q	1092
	880	1036.199	195.0552 - 291.5616	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^5H$	4 - 5		1092
	700	1036.428	195.0862 - 291.5708	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5D$	2 - 1		1092
	60	1036.806						1092
	750	1036.880	216.0716 - 312.5149	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3H$	6 - 6		1092
	770	1037.121	194.1327 - 290.5528	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5G$	3 - 4		1092
	100	1037.292	218.1379 - 314.545 + M	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$y^3D^\circ - ^1D$	3 - 2	Q	1092
	200	1037.551						1092
	160	1037.771	218.6283 - 314.9878	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^3F$	3 - 4		1092
	170	1037.964	148.8624 - 245.2046	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$b^1G - x^1G^\circ$	4 - 4		1092
	550	1038.094	213.5348 - 309.8647	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5F$	2 - 2		1092
	740	1038.286	199.5991 - 295.9104	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3F$	3 - 4		1092
	40	1038.443	218.6314 - 314.931 + M	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^3D$	1 - 2	Q	1092
	30	1038.763	223.0003 - 319.2684	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$w^3D^\circ - ^1F$	3 - 3		1092
	260	1038.849	217.9998 - 314.2622	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^1H$	5 - 5		1092
	210	1038.917	216.7032 - 312.9568	$3d^7(a^2P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^5D$	2 - 3		1092
	550	1038.970	217.6214 - 313.8715	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$z^3P^\circ - ^3H$	3 - 4		1092
	800	1039.357	194.3394 - 290.5528	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^5G$	5 - 4		1092
	500	1039.416	130.0620 - 226.2716	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - x^3F^\circ$	3 - 2		1092
	210	1039.511	213.6652 - 309.8647	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5F$	3 - 2		1092
	580	1039.552	219.4030 - 315.5985	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3F^\circ - ^1G$	3 - 4		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	240	1039.636	195.5444 - 291.7300	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^5G$	3 - 2		1092
	220	1039.651	217.1096 - 313.2947	$3d^7(a^2P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^5D$	1 - 2		1092
	550	1039.745	217.0795 - 313.2570	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3G$	3 - 3		1092
	440	1039.826	195.8273 - 291.9971	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^5P$	2 - 2		1092
	680	1039.903	229.0643 - 325.2259	$3d^7(a^2H)4p - 3d^7(a^2G)5s$	$y^3H^\circ - ^3G$	4 - 4		1092
	400	1039.968	120.9204 - 217.0795	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^5F - y^3F^\circ$	4 - 3		1092
	390	1040.154	228.4800 - 324.6193	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$y^3H^\circ - ^3H$	5 - 5		1092
	730	1040.318	227.9935 - 324.1181	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$y^3H^\circ - ^3H$	6 - 6		1092
	780	1040.381	213.5348 - 309.6531	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5F$	2 - 3		1092
	880	1040.512	194.3394 - 290.4454	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^5H$	5 - 6		1092
	150	1040.614	191.7621 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^5F$	3 - 4		1092
	340	1040.666	195.0552 - 291.1473	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^3G$	4 - 5		1092
		1040.8	61.4564 - 157.5378	$3d^8 - 3d^7(a^2D)4s$	$a^1S - b^1D$	0 - 2	F,P	375,921
	30	1040.856	197.3253 - 293.3992	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3H$	5 - 5		1092
	340	1041.155	219.4030 - 315.4500	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1F^\circ - ^3F$	3 - 3		1092
	460	1041.176	215.1331 - 311.1770	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$y^3F^\circ - ^3F$	4 - 4		1092
	280	1041.248	243.7256 - 339.7638	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3F^\circ - ^3G$	3 - 4		1092
	230	1041.669	244.4174 - 340.416 + M	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$v^3D^\circ - ^3F$	3 - 3	Q	1092
	600	1041.795	213.6652 - 309.6531	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5F$	3 - 3		1092
	30	1042.057	122.6655 - 218.6283	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^5F - x^3G^\circ$	2 - 3		1092
	670	1042.259	243.0292 - 338.9748	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^\circ - ^3H$	4 - 5		1092
	20	1042.374	193.4347 - 289.3702	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^5F$	1 - 2		1092
	490	1042.466	216.0716 - 311.9983	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3G$	6 - 5		1092
	430	1042.497	224.0709 - 319.9927	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$w^3D^\circ - ^3F$	2 - 3		1092
	190	1042.640	244.4174 - 340.328 + M	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$v^3D^\circ - ^3F$	3 - 2	Q	1092
	480	1042.718	195.8273 - 291.7300	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^5G$	2 - 2		1092
	120	1042.768	216.7032 - 312.6015	$3d^7(a^2P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^3P$	2 - 2		1092
	260	1042.951						1092
	190	1042.997	215.1331 - 311.0107	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$y^3F^\circ - ^3F$	4 - 3		1092
	210	1043.259	200.7203 - 296.5734	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3P$	2 - 2		1092
	30	1043.366	222.6661 - 318.5100	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3K$	7 - 7		1092
	500	1043.517	195.0552 - 290.8851	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^\circ - ^5D$	4 - 3		1092
	820	1043.566	213.6652 - 309.4904	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^5D^\circ - ^5F$	3 - 4		1092
	520	1043.673	220.9173 - 316.7323	$3d^7(a^2H)4p - 3d^7(a^2P)4d$	$y^3G^\circ - ^3F$	5 - 4		1092
	410	1043.748	217.4449 - 313.2533	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1G^\circ - ^3H$	4 - 5		1092
	500	1043.847	195.0862 - 290.8851	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5D^\circ - ^5D$	2 - 3		1092
	870	1043.987	222.6661 - 318.4524	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3K$	7 - 8		1092
	620	1044.061	226.2716 - 322.0513	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$x^3F^\circ - ^1F$	2 - 3		1092
	70	1044.150	227.1599 - 322.931 + M	$3d^7(a^2P)4p - 3d^7(a^2D)4d$	$z^1P^\circ - ^3D$	1 - 1	Q	1092
	50	1044.266	227.9935 - 323.7548	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^\circ - ^1I$	6 - 6		1092
	730	1044.333	195.5444 - 291.2987	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^5G$	3 - 3		1092
	880	1044.491	193.9481 - 289.6882	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^5H$	6 - 7		1092
	110	1044.912	201.2112 - 296.9123	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3F$	3 - 3		1092
	110	1045.182	225.3872 - 321.0640	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$x^3F^\circ - ^3H$	4 - 5		1092
	630	1045.249	216.0716 - 311.7429	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3I$	6 - 6		1092
	790	1045.291	215.1331 - 310.8002	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3D$	4 - 3		1092
	20	1045.404						1092
	300	1045.541	223.6233 - 319.2684	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3G^\circ - ^1F$	3 - 3		1092
	300	1045.600	228.4800 - 324.1181	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$y^3H^\circ - ^3H$	5 - 6		1092
	20	1045.746	193.9481 - 289.5729	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^5G$	6 - 5		1092
	350	1046.033						1092
	160	1046.088	220.3159 - 315.9122	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3P^\circ - ^3D$	2 - 3		1092
	650	1046.350	202.3609 - 297.9310	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3P$	2 - 1		1092
	110	1046.413	225.3872 - 320.9527	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$x^3F^\circ - ^3G$	4 - 4		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
860	1046.499		216.0716 - 311.6280	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3I$	6 - 7		1092
330	1046.881		217.0795 - 312.6015	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$y^3F^\circ - ^3P$	3 - 2		1092
530	1046.911							1092
240	1046.966		148.9053 - 244.4174	$3d^7(a^4P)4s - 3d^7(a^2F)4p$	$c^3P - v^3D^\circ$	2 - 3		1092
590	1047.016		194.1327 - 289.6415	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3D$	3 - 4		1092
810	1047.142		195.0552 - 290.5528	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	4 - 4		1092
700	1047.215		244.6717 - 340.1619	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^\circ - ^3G$	5 - 5		1092
660	1047.443		195.8273 - 291.2987	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	2 - 3		1092
460	1047.654		214.4137 - 309.8647	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3S^\circ - ^3F$	1 - 2		1092
730	1047.695		218.8148 - 314.2622	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3H$	5 - 5		1092
380	1047.907		200.4829 - 295.9104	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	3 - 4		1092
150	1047.976							1092
240	1048.085		222.3980 - 317.8105	$3d^7(a^2H)4p - 3d^7(a^2P)4d$	$y^3G^\circ - ^3F$	4 - 3		1092
500	1048.121		244.7534 - 340.1619	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3F^\circ - ^3G$	4 - 5		1092
130	1048.213		226.5583 - 321.960 + M	$3d^7(a^2P)4p - 3d^7(a^2D)4d$	$y^3S^\circ - ^3S$	1 - 1	Q	1092
820	1048.276		225.3872 - 320.7817	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$x^3F^\circ - ^3G$	4 - 5		1092
820	1048.287							1092
430	1048.354		217.0795 - 312.4667	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3G$	3 - 4		1092
130	1048.439		216.7032 - 312.0825	$3d^7(a^2P)4p - 3d^7(a^2G)4d$	$z^3P^\circ - ^3F$	2 - 3		1092
780	1048.630		201.2112 - 296.5734	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3P$	3 - 2		1092
370	1048.804		244.4174 - 339.7638	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$v^3D^\circ - ^3G$	3 - 4		1092
250	1048.925		217.6214 - 312.9568	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^3D$	3 - 3		1092
540	1049.093		244.0719 - 339.3927	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3F^\circ - ^3G$	2 - 3		1092
750	1049.122		218.9451 - 314.2622	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^3H$	4 - 5		1092
420	1049.284		194.3394 - 289.6415	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3D$	5 - 4		1092
550	1049.553		221.7388 - 317.0170	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3D^\circ - ^3F$	2 - 3		1092
230	1049.623		149.6689 - 244.9433	$3d^7(a^4P)4s - 3d^7(a^2F)4p$	$c^3P - v^3D^\circ$	1 - 1	Q	1092
490	1049.683		218.0278 - 313.2947	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^3D$	2 - 2		1092
630	1049.934		218.6283 - 313.8715	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^3H$	3 - 4		1092
840	1050.040		194.3394 - 289.5729	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	5 - 5		1092
540	1050.160							1092
680	1050.328		222.6028 - 317.8105	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$x^3D^\circ - ^3F$	2 - 3		1092
860	1050.606		224.9594 - 320.1417	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^\circ - ^3K$	6 - 7		1092
480	1050.731		214.3190 - 309.4904	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^3F$	4 - 4		1092
210	1051.003		244.4174 - 339.565 + M	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$v^3D^\circ - ^3D$	3 - 2	Q	1092
370	1051.258		218.1710 - 313.2947	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^3D$	1 - 2		1092
140	1051.357		197.3253 - 292.4400	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	5 - 4		1092
860	1051.586		214.3190 - 309.4139	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^3F$	4 - 5		1092
760	1051.713		221.6503 - 316.7323	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$x^3D^\circ - ^3F$	3 - 4		1092
120	1051.897		215.7342 - 310.8002	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3D$	4 - 3		1092
170	1052.020		244.7534 - 339.8085	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3F^\circ - ^3H$	4 - 5		1092
30	1052.284		123.1415 - 218.1710	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - z^3P^\circ$	1 - 1		1092
150	1052.354		216.7032 - 311.7267	$3d^7(a^2P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^3P$	2 - 1		1092
240	1052.387		217.4449 - 312.4667	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3G^\circ - ^3G$	4 - 4		1092
780	1052.533		217.6214 - 312.6299	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^3D$	3 - 4		1092
340	1052.833		217.0795 - 312.0614	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$y^3F^\circ - ^3F$	3 - 2		1092
620	1052.950		217.4449 - 312.4155	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$zG^\circ - ^3I$	4 - 5		1092
300	1053.102		245.2046 - 340.1619	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^3G^\circ - ^3G$	4 - 5		1092
730	1053.415		218.0278 - 312.9568	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^\circ - ^3D$	2 - 3		1092
850	1053.731		218.8148 - 313.7154	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^\circ - ^3I$	5 - 6		1092
260	1054.591		200.4829 - 295.3078	$3d^7(a^4F)4p - 3d^6(a^2D)4s^2$	$z^3G^\circ - ^3D$	3 - 3		1092
140	1054.632		148.9053 - 243.7256	$3d^7(a^4P)4s - 3d^7(a^2F)4p$	$c^3P - w^3F^\circ$	2 - 3		1092
410	1054.946		203.1398 - 297.9310	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3P$	1 - 1		1092
850	1055.407		193.9481 - 288.6978	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	6 - 6		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
780	1055.885		244.6717 - 339.3788	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^o - ^3H$	5 - 6		1092
780	1055.968		201.2112 - 295.9104	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3F$	3 - 4		1092
560	1056.133		119.6341 - 214.3190	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F^o - y^3D^o$	5 - 4		921
50	1056.245		228.4800 - 323.1553	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^3H^o - ^1G$	5 - 4		1092
110	1056.326		218.6283 - 313.2947	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$x^3G^o - ^5D$	3 - 2		1092
100	1056.365		218.6314 - 313.2947	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^5D$	1 - 2		1092
250	1056.448		128.3450 - 223.0003	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - w^3D^o$	4 - 3		1092
50	1056.566		223.7644 - 318.410 + M	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$w^3D^o - ^3P$	1 - 2	Q	1092
630	1056.663		217.4449 - 312.0825	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1G^o - ^1F$	4 - 3		1092
470	1056.757		218.6283 - 313.2570	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^o - ^3G$	3 - 3		1092
340	1056.869		222.3980 - 317.0170	$3d^7(a^2H)4p - 3d^7(a^2P)4d$	$y^3G^o - ^1F$	4 - 3		1092
690	1057.036		245.2046 - 339.8085	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^1G^o - ^1H$	4 - 5		1092
50	1057.230		195.0552 - 289.6415	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^o - ^5D$	4 - 4		1092
40	1057.303		244.8131 - 339.3927	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$v^3D^o - ^3G$	2 - 3		1092
210	1057.377		221.2719 - 315.8460	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3P^o - ^3D$	1 - 2		1092
770	1057.456		192.7531 - 287.3195	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^5F$	4 - 5		1092
120	1057.552		245.2046 - 339.7638	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^1G^o - ^3G$	4 - 4		1092
730	1057.620		202.3609 - 296.9123	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3F$	2 - 3		1092
880	1057.751		197.3253 - 291.8650	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^o - ^3H$	5 - 6		1092
410	1057.853		218.7265 - 313.2570	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^o - ^3G$	2 - 3		1092
840	1058.023		217.9998 - 312.5149	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^o - ^3H$	5 - 6		1092
360	1058.097		225.3872 - 319.8961	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$x^3F^o - ^3G$	4 - 4		1092
610	1058.288		218.1379 - 312.6299	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^5D$	3 - 4		1092
480	1058.551		219.4030 - 313.8715	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1F^o - ^3H$	3 - 4		1092
160	1058.600		218.1379 - 312.6015	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3P$	3 - 2		1092
420	1058.818		195.0862 - 289.5297	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$z^3D^o - ^5P$	2 - 3		1092
300	1058.947		217.6499 - 312.0825	$3d^7(a^2P)4p - 3d^7(a^2G)4d$	$z^1D^o - ^1F$	2 - 3		1092
740	1059.149		203.1398 - 297.5544	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3F$	1 - 2		1092
50	1059.449							1092
40	1059.690							1092
230	1059.783		194.3394 - 288.6978	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^o - ^5G$	5 - 6		1092
730	1060.344		218.9451 - 313.2533	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^o - ^3H$	4 - 5		1092
110	1060.398		244.6717 - 338.9748	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3G^o - ^3H$	5 - 5		1092
200	1060.822							1092
720	1060.887		198.1795 - 292.4400	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3G$	4 - 4		1092
210	1061.159		197.3253 - 291.5616	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^o - ^5H$	5 - 5		1092
130	1061.211		218.7265 - 312.9568	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$y^3F^o - ^5D$	2 - 3		1092
490	1061.327		244.7534 - 338.9748	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$w^3F^o - ^3H$	4 - 5		1092
540	1061.428		202.3609 - 296.5734	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3P$	2 - 2		1092
870	1061.605		199.2026 - 293.3992	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^o - ^3H$	4 - 5		1092
160	1061.732		223.6233 - 317.8105	$3d^7(a^2H)4p - 3d^7(a^2P)4d$	$y^3G^o - ^3F$	3 - 3		1092
80	1061.862		221.7388 - 315.9122	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3D^o - ^3D$	2 - 3		1092
30	1062.158		195.8273 - 289.9740	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^o - ^5F$	2 - 1		1092
360	1062.503		198.1795 - 292.2967	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5H$	4 - 4		1092
20	1062.614		221.7388 - 315.8460	$3d^7(a^4P)4p - 3d^7(a^2P)4d$	$y^3D^o - ^3D$	2 - 2		1092
100	1062.725		216.7032 - 310.8002	$3d^7(a^2P)4p - 3d^7(a^2G)4d$	$z^3P^o - ^3D$	2 - 3		1092
160	1062.788		227.9598 - 322.0513	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$y^1D^o - ^1F$	2 - 3		1092
20	1063.128		203.8692 - 297.9310	$3d^7(a^4P)4p - 3d^7(a^4F)4d$	$z^5S^o - ^3P$	2 - 1		1092
30	1063.208		128.3450 - 222.3980	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$b^3F - y^3G^o$	4 - 4		1092
20	1063.273							1092
170	1063.343		195.9323 - 289.9740	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^5F$	0 - 1		1092
100	1063.405		225.8592 - 319.8961	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$x^3F^o - ^3G$	3 - 4		1092
100	1063.440		218.0278 - 312.0614	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^5P^o - ^3F$	2 - 2		1092
110	1063.478		241.8552 - 335.8855	$3d^7(a^2F)4p - 3d^7(a^2D)5s$	$x^1D^o - ^1D$	2 - 2		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	290	1063.719	130.0620 - 224.0709	$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^3F - w^3D^o$	3 - 2		1092
	750	1063.841	217.9998 - 311.9983	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^o - ^3G$	5 - 5		1092
	860	1064.036	200.4829 - 294.4644	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^o - ^3H$	3 - 4		1092
	500	1064.798	199.5991 - 293.5135	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3G$	3 - 3		1092
	110	1064.856						1092
	180	1065.066	218.1710 - 312.0614	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^o - ^3F$	1 - 2		1092
	20	1065.387						1092
	180	1065.478	219.4030 - 313.2570	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3F^o - ^3G$	3 - 3		1092
	110	1065.655	218.6283 - 312.4667	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^o - ^3G$	3 - 4		1092
	850	1065.840	197.3253 - 291.1473	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^o - ^3G$	5 - 5		1092
	80	1066.026	213.3607 - 307.1670	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3P$	1 - 2		1092
	480	1066.269	224.9594 - 318.7461	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$z^3I^o - ^3G$	6 - 5		1092
	710	1066.385	198.1795 - 291.9539	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3D$	4 - 3		1092
	170	1066.431	245.2046 - 338.9748	$3d^7(a^2F)4p - 3d^7(a^2F)4d$	$x^3G^o - ^3H$	4 - 5		1092
	220	1066.746	217.9998 - 311.7429	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^o - ^3I$	5 - 6		1092
	330	1066.772	224.0709 - 317.8105	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$w^3D^o - ^3F$	2 - 3		1092
	320	1066.784	224.0709 - 317.8105	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$w^3D^o - ^3F$	2 - 3		1092
	540	1066.924	194.1327 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3F$	3 - 4		1092
	30	1066.993	217.0795 - 310.8002	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^o - ^3D$	3 - 3		1092
	200	1067.064						1092
	340	1067.100	221.7388 - 315.4500	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$y^3D^o - ^3F$	2 - 3		1092
	20	1067.227	218.8148 - 312.5149	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3H^o - ^3H$	5 - 6		1092
	300	1067.395	195.6846 - 289.3702	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3F$	1 - 2		1092
	20	1067.580	200.4829 - 294.1520	$3d^7(a^4F)4p - 3d^6(a^3D)4s^2$	$z^3G^o - ^3D$	3 - 4		1092
	120	1067.734						1092
	240	1068.100	217.6499 - 311.2740	$3d^7(a^2P)4p - 3d^7(a^2G)4d$	$z^3D^o - ^3D$	2 - 2		1092
	300	1068.772	217.4449 - 311.0107	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$z^3G^o - ^3F$	4 - 3		1092
	280	1068.806	130.0620 - 223.6233	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$b^3F - y^3G^o$	3 - 3		1092
	630	1068.880	217.6214 - 311.1770	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^o - ^3F$	3 - 4		1092
	620	1069.267	194.3394 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^o - ^5F$	5 - 4		1092
	190	1069.394	195.0552 - 288.5664	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^o - ^5F$	4 - 3		1092
	10	1069.495	213.6652 - 307.1670	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3P$	3 - 2		1092
	330	1069.734	195.0862 - 288.5664	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3F$	2 - 3		1092
	440	1069.973	229.0643 - 322.5240	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^3I$	4 - 5		1092
	130	1070.038	218.6283 - 312.0825	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^o - ^1F$	3 - 3		1092
	510	1070.313	218.6314 - 312.0614	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3F$	1 - 2		1092
	730	1070.401	199.5991 - 293.0217	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3D$	3 - 2		1092
	100	1070.679	120.9204 - 214.3190	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^o$	4 - 4		921
	60	1070.857	198.1795 - 291.5616	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3H$	4 - 5		1092
	660	1070.982	193.9481 - 287.3195	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^5G^o - ^5F$	6 - 5		1092
	640	1071.110	217.6499 - 311.0107	$3d^7(a^2P)4p - 3d^7(a^4P)4d$	$z^3D^o - ^3F$	2 - 3		1092
	310	1071.174	217.4449 - 310.8002	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^3G^o - ^3D$	4 - 3		1092
	400	1071.372	221.6503 - 314.9878	$3d^7(a^2P)4p - 3d^7(a^2G)4d$	$x^3D^o - ^3F$	3 - 4		1092
	20	1071.574						1092
	30	1071.740	128.3450 - 221.6503	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - x^3D^o$	4 - 3		921
	530	1071.862	200.7203 - 294.0153	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3D$	2 - 1		1092
	230	1072.051	277.1090 - 370.389 + M	$3d^7(b^2D)4p - 3d^7(b^2D)4d$	$u^3D^o - ^3F$	3 - 4	Q	1092
	650	1072.345	201.2112 - 294.4644	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3H$	3 - 4		1092
	100	1072.462	222.6028 - 315.8460	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$x^3D^o - ^3D$	2 - 2		1092
	690	1072.527	199.2026 - 292.4400	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^o - ^3G$	4 - 4		1092
	30	1072.978	214.3190 - 307.5173	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3P$	4 - 3		1092
	40	1073.232	217.9998 - 311.1770	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$x^3G^o - ^3F$	5 - 4		1092
	820	1073.625	227.9935 - 321.1351	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^3I$	6 - 7		1092
	80	1073.825						1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	280	1073.880	197.3253 - 290.4454	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^5H$	5 - 6		1092
	420	1074.179	199.2026 - 292.2967	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^5H$	4 - 4		1092
	50	1074.420						1092
	800	1074.550	228.4800 - 321.5421	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^\circ - ^3I$	5 - 6		1092
	330	1074.722	151.6244 - 244.6717	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^\circ$	6 - 5		921
	710	1074.816	218.1379 - 311.1770	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^3F$	3 - 4		1092
	720	1074.910	200.4829 - 293.5135	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	3 - 3		1092
	150	1075.264	218.7265 - 311.7267	$3d^7(a^2G)4p - 3d^7(a^2P)4d$	$y^3F^\circ - ^3P$	2 - 1		1092
	460	1075.481	194.3394 - 287.3195	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	5 - 5		1092
	850	1075.636	198.1795 - 291.1473	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3G$	4 - 5		1092
	100	1076.208	230.2362 - 323.1553	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^1G^\circ - ^1G$	4 - 4		1092
	170	1076.281	223.0003 - 315.9122	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$w^3D^\circ - ^3D$	3 - 3		1092
	240	1076.738	218.1379 - 311.0107	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^\circ - ^3F$	3 - 3		1092
	710	1077.105	199.5991 - 292.4400	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3G$	3 - 4		1092
	800	1077.307	230.3314 - 323.1553	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$y^1F^\circ - ^1G$	3 - 4		1092
	20	1077.533	195.0552 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	4 - 4		1092
	780	1077.661	200.7203 - 293.5135	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3G$	2 - 3		1092
	60	1077.801	244.9433 - 337.724 + M	$3d^7(a^2F)4p - 3d^6(a^3D)4s^2$	$v^3D^\circ - ^3D$	1 - 2		1092
	60	1078.036						1092
	270	1078.214	120.9204 - 213.6652	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^\circ$	4 - 3		921
	20	1078.354	227.1599 - 319.892 + M	$3d^7(a^2P)4p - 3d^7(a^2P)4d$	$z^1P^\circ - ^1D$	1 - 2	Q	1092
	60	1078.679	198.1795 - 290.8851	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3D$	4 - 3		1092
	740	1078.771	199.5991 - 292.2967	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3H$	3 - 4		1092
	430	1078.987	219.4030 - 312.0825	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$z^1F^\circ - ^1F$	3 - 3		1092
	320	1079.395	218.6283 - 311.2740	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$x^3G^\circ - ^3D$	3 - 2		1092
	750	1079.821	227.9935 - 320.6011	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^\circ - ^3H$	6 - 6		1092
	690	1080.092	228.4800 - 321.0640	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^\circ - ^3H$	5 - 5		1092
	190	1080.217	128.3450 - 220.9173	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$b^3F - y^3G^\circ$	4 - 5		1092
	20	1080.275	223.6233 - 316.1917	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$y^3G^\circ - ^3F$	3 - 2		1092
	50	1080.383						1092
	370	1080.525	218.7265 - 311.2740	$3d^7(a^2G)4p - 3d^7(a^2G)4d$	$y^3F^\circ - ^3D$	2 - 2		1092
	90	1080.832	152.2334 - 244.7534	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - w^3F^\circ$	3 - 4		1092
	20	1081.221						1092
	100	1081.667	152.3034 - 244.7534	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3F^\circ$	5 - 4		921
	20	1081.750	232.4421 - 324.884 + M	$3d^7(a^2D)4p - 3d^7(a^4P)5s$	$y^1P^\circ - ^3P$	1 - 1	Q	1092
	110	1081.862						921
	20	1081.933	223.7644 - 316.1917	$3d^7(a^2D)4p - 3d^7(a^2G)4d$	$w^3D^\circ - ^3F$	1 - 2		1092
	20	1082.098	152.4019 - 244.8131	$3d^7(a^2P)4s - 3d^7(a^2F)4p$	$a^1P - v^3D^\circ$	1 - 2		1092
	30	1082.453	218.6283 - 311.0107	$3d^7(a^2G)4p - 3d^7(a^4P)4d$	$x^3G^\circ - ^3F$	3 - 3		1092
	70	1082.562	198.1795 - 290.5528	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3G$	4 - 4		1092
	120	1082.608	152.3034 - 244.6717	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^\circ$	5 - 5		1092
	80	1082.979	130.0620 - 222.3980	$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$b^3F - y^3G^\circ$	3 - 4		1092
	20	1083.241	195.5444 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	3 - 4		1092
	20	1083.400	228.4800 - 320.7817	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^3H^\circ - ^3G$	5 - 5		1092
	470	1083.571	230.2362 - 322.5240	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1G^\circ - ^3I$	4 - 5		1092
	20	1083.841	195.0552 - 287.3195	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3F$	4 - 5		1092
	20	1084.061	197.3253 - 289.5729	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^\circ - ^3G$	5 - 5		1092
	110	1084.430	217.6499 - 309.8647	$3d^7(a^2P)4p - 3d^7(a^4P)4d$	$z^1D^\circ - ^3F$	2 - 2		1092
	180	1084.669	200.7203 - 292.9133	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^\circ - ^3H$	2 - 3		1092
	440	1084.759	149.6689 - 241.8552	$3d^7(a^4P)4s - 3d^7(a^2F)4p$	$c^3P - x^1D^\circ$	1 - 2		1092
	90	1084.898						1092
	20	1086.003	230.2362 - 322.3174	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1G^\circ - ^1H$	4 - 5		1092
	60	1086.555	227.9598 - 319.9927	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$y^1D^\circ - ^3F$	2 - 3		1092
	250	1089.196	201.2112 - 293.0217	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^\circ - ^3D$	3 - 2		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
80		1089.937	122.6655 - 214.4137	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - z^3S^o$	2 - 1		921
200		1090.102	121.9315 - 213.6652	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	3 - 3		921
220		1090.275	230.3314 - 322.0513	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$y^1F^o - ^1F$	3 - 3		1092
330		1090.475	201.2112 - 292.9133	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^5H$	3 - 3		1092
210		1091.053	202.3609 - 294.0153	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3D$	2 - 1		1092
60		1091.344	225.3872 - 317.0170	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$x^3F^o - ^1F$	4 - 3		1092
470		1091.649	121.9315 - 213.5348	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	3 - 2		921
320		1092.645						921
50		1092.926	220.9173 - 312.4155	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$y^3G^o - ^3I$	5 - 5		1092
100		1092.966	152.2334 - 243.7256	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - w^3F^o$	3 - 3		1092
40		1093.339	198.1795 - 289.6415	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5D$	4 - 4		1092
90		1093.650	153.3774 - 244.8131	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - v^3D^o$	2 - 2		1092
120		1093.705	233.2989 - 324.7314	$3d^7(a^2H)4p - 3d^6(a^3H)4s^2$	$y^1H^o - ^3H$	5 - 4		1092
220		1093.893	228.4800 - 319.8961	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^3G$	5 - 4		1092
430		1094.168	198.1795 - 289.5729	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5G$	4 - 5		1092
50		1095.174	227.9598 - 319.2684	$3d^7(a^2D)4p - 3d^7(a^2H)4d$	$y^1D^o - ^1F$	2 - 3		1092
150		1095.242						1092
20		1095.315						1092
30		1095.637	123.1415 - 214.4137	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - z^3S^o$	1 - 1		921
150		1095.655						1092
220		1096.695	213.9324 - 305.1160	$3d^7(a^4P)4p - 3d^7(a^4F)5s$	$y^3D^o - ^5F$	0 - 1		1092
350		1097.608	228.4800 - 319.5867	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^3H^o - ^3F$	5 - 4		1092
20		1098.129	213.5348 - 304.5997	$3d^7(a^4P)4p - 3d^7(a^4F)5s$	$y^3D^o - ^3F$	2 - 2		1092
20		1098.364	275.9706 - 367.014 + M	$3d^7(b^2D)4p - 3d^7(b^2D)4d$	$u^3D^o - ^3D$	2 - 2	Q	1092
40		1098.436	153.3774 - 244.4174	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - v^3D^o$	2 - 3		1092
20		1098.889	122.6655 - 213.6652	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	2 - 3		1092
120		1099.418	220.3159 - 311.2740	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$y^3P^o - ^3D$	2 - 2		1092
140		1099.454	199.5991 - 290.5528	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^5G$	3 - 4		1092
510		1100.404	203.1398 - 294.0153	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3D$	1 - 1		1092
260		1100.456	225.8592 - 316.7323	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$x^3F^o - ^3F$	3 - 4		921
240		1100.466	122.6655 - 213.5348	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	2 - 2		921
60		1100.978	230.2362 - 321.0640	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1G^o - ^3H$	4 - 5		1092
60		1101.143	216.7032 - 307.5173	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^o - ^3P$	2 - 3		1092
160		1101.350	152.2334 - 243.0292	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - w^3G^o$	3 - 4		1092
160		1101.421	123.1415 - 213.9324	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	1 - 0		921
600		1101.893	227.9935 - 318.7461	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^3G$	6 - 5		1092
800		1102.010	201.2112 - 291.9539	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3D$	3 - 3		1092
290		1102.206	152.3034 - 243.0292	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^o$	5 - 4		921
160		1102.588	122.6655 - 213.3607	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	2 - 1		921
690		1103.010	202.3609 - 293.0217	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3D$	2 - 2		1092
20		1103.351	139.6970 - 230.3314	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$a^5P - y^1F^o$	3 - 3		1092
270		1103.494	230.3314 - 320.9527	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$y^1F^o - ^3G$	3 - 4		1092
160		1104.322	202.3609 - 292.9133	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^5H$	2 - 3		1092
20		1104.554	197.3253 - 287.8593	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3G^o - ^5F$	5 - 4		1092
30		1104.771	227.9935 - 318.5100	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^3K$	6 - 7		1092
740		1105.503	233.2989 - 323.7548	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1H^o - ^1I$	5 - 6		1092
290		1106.283	123.1415 - 213.5348	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	1 - 2		1092
220		1106.811	153.3774 - 243.7256	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - w^3F^o$	2 - 3		1092
20		1106.883	221.7388 - 312.0825	$3d^7(a^4P)4p - 3d^7(a^2G)4d$	$y^3D^o - ^1F$	2 - 3		1092
20		1107.429	229.6945 - 319.9927	$3d^7(a^2D)4p - 3d^7(a^2D)4d$	$x^3P^o - ^3F$	2 - 3		1092
100		1107.867	213.5348 - 303.7984	$3d^7(a^4P)4p - 3d^7(a^4F)5s$	$y^3D^o - ^5F$	2 - 3		1092
180		1107.912	220.9173 - 311.1770	$3d^7(a^2H)4p - 3d^7(a^4P)4d$	$y^3G^o - ^3F$	5 - 4		1092
300		1108.415	123.1415 - 213.3607	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^5F - y^3D^o$	1 - 1		1092
110		1108.591	229.0643 - 319.2684	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^3H^o - ^1F$	4 - 3		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	120	1108.933						1092
	250	1109.376	221.6019 – 311.7429	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$z^3I^o - ^3I$	6 - 6		1092
	20	1109.478	213.6652 – 303.7984	$3d^7(a^4P)4p - 3d^7(a^4F)5s$	$y^3D^o - ^3F$	3 - 3		1092
	30	1110.121						921
	90	1111.414	243.0292 – 333.0057	$3d^7(a^2F)4p - 3d^7(a^2D)5s$	$w^3G^o - ^3D$	4 - 3		1092
	430	1112.397	217.6214 – 307.5173	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^o - ^3P$	3 - 3		1092
	70	1112.570	203.1398 – 293.0217	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3D$	1 - 2		1092
	170	1112.907	233.2989 – 323.1553	$3d^7(a^2H)4p - 3d^7(a^2D)4d$	$y^1H^o - ^1G$	5 - 4		1092
	90	1113.654	128.3450 – 218.1379	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - y^3D^o$	4 - 3		921
	20	1119.289	130.0620 – 219.4030	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^1F^o$	3 - 3		1092
	250	1119.426	153.1999 – 242.5301	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^3H - w^3G^o$	4 - 3		921
	160	1120.104	128.3450 – 217.6214	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - z^3P^o$	4 - 3		1092
	40	1120.316						1092
	550	1120.754	233.2989 – 322.5240	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1H^o - ^3I$	5 - 5		1092
	40	1121.833	198.1795 – 287.3195	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3F^o - ^3F$	4 - 5		1092
	40	1122.311	128.3450 – 217.4449	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^1G^o$	4 - 4		921
	550	1123.191	230.2362 – 319.2684	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1G^o - ^1F$	4 - 3		1092
	290	1123.226	218.1379 – 307.1670	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$y^3D^o - ^3P$	3 - 2		1092
	600	1123.357	233.2989 – 322.3174	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1H^o - ^1H$	5 - 5		1092
	140	1123.647	218.1710 – 307.1670	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^o - ^3P$	1 - 2		1092
	20	1125.981	218.1710 – 306.9825	$3d^7(a^4P)4p - 3d^7(a^4P)4d$	$z^3P^o - ^3P$	1 - 1		1092
	20	1126.501	203.8692 – 292.6391	$3d^7(a^4P)4p - 3d^7(a^4F)4d$	$z^3S^o - ^3P$	2 - 1		1092
	100	1126.830	156.4604 – 245.2046	$3d^7(a^2H)4s - 3d^7(a^2F)4p$	$a^1H - x^1G^o$	5 - 4		1092
	30	1127.845	130.0620 – 218.7265	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	3 - 2		1092
	180	1128.747	155.4784 – 244.0719	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$a^3D - w^3F^o$	1 - 2		1092
	170	1129.092	130.0620 – 218.6283	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - x^3G^o$	3 - 3		1092
		1133.6	61.4564 – 149.6689	$3d^8 - 3d^7(a^4P)4s$	$a^1S - c^3P$	0 - 1	F,P	375,921
	20	1134.089	223.0003 – 311.1770	$3d^7(a^2D)4p - 3d^7(a^4P)4d$	$w^3D^o - ^3F$	3 - 4		1092
	90	1136.799	130.0620 – 218.0278	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - z^3P^o$	3 - 2		1092
	20	1136.976	227.9598 – 315.9122	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$y^1D^o - ^3D$	2 - 3		1092
	40	1137.763	140.0674 – 227.9598	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$a^3P - y^1D^o$	2 - 2	Q	1092
	30	1139.306	227.1599 – 314.931 + M	$3d^7(a^2P)4p - 3d^7(a^4P)4d$	$z^1P^o - ^3D$	1 - 2	Q	1092
	180	1139.406	233.2989 – 321.0640	$3d^7(a^2H)4p - 3d^7(a^2H)4d$	$y^1H^o - ^3H$	5 - 5		1092
	30	1141.379	202.3609 – 289.9740	$3d^7(a^4F)4p - 3d^7(a^4F)4d$	$z^3D^o - ^3F$	2 - 1		1092
	90	1141.698	130.0620 – 217.6499	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - z^1D^o$	3 - 2		921
	180	1141.893	230.2362 – 317.8105	$3d^7(a^2H)4p - 3d^7(a^2P)4d$	$y^1G^o - ^3F$	4 - 3		1092
	100	1142.761	131.2203 – 218.7265	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	2 - 2		921
	20	1143.130	230.3314 – 317.8105	$3d^7(a^2D)4p - 3d^7(a^2P)4d$	$y^1F^o - ^3F$	3 - 3		1092
		1143.5	61.4564 – 148.9053	$3d^8 - 3d^7(a^4P)4s$	$a^1S - c^3P$	0 - 2	F,P	375,921
	110	1144.005	131.2203 – 218.6314	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - y^3D^o$	2 - 1		921
	140	1144.299	128.3450 – 215.7342	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^3H^o$	4 - 4		1092
	20	1144.378	130.0620 – 217.4449	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^1G^o$	3 - 4		1092
	100	1145.311	214.3190 – 301.6320	$3d^7(a^4P)4p - 3d^7(a^4F)5s$	$y^3D^o - ^3F$	4 - 5		1092
	20	1146.410	218.6283 – 305.8560	$3d^7(a^2G)4p - 3d^7(a^4F)5s$	$x^3G^o - ^3F$	3 - 3		1092
	130	1149.178	130.0620 – 217.0795	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	3 - 3		921
	30	1151.662	245.2046 – 332.0359	$3d^7(a^2F)4p - 3d^7(a^2H)4d$	$x^1G^o - ^1G$	4 - 4		1092
	20	1151.953	131.2203 – 218.0278	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - z^3P^o$	2 - 2		1092
	30	1154.176	130.0620 – 216.7032	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - z^3P^o$	3 - 2		921
		1156.4	61.4564 – 147.9315	$3d^8 - 3d^7(a^2P)4s$	$a^1S - b^3P$	0 - 1	F,P	375,921
		1159.0	61.4564 – 147.7383	$3d^8 - 3d^7(a^2P)4s$	$a^1S - b^3P$	0 - 2	F,P	375,921
	20	1160.247	157.5378 – 243.7256	$3d^7(a^2D)4s - 3d^7(a^2F)4p$	$b^1D - w^3F^o$	2 - 3		1092
	20	1163.141	128.3450 – 214.3190	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - y^3D^o$	4 - 4		1092
	20	1164.289	131.2203 – 217.1096	$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$b^3F - z^3P^o$	2 - 1		1092
	80	1164.688	131.2203 – 217.0795	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^o$	2 - 3		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
160	1168.479		144.7507 - 230.3314	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$a^3G - y^1F^\circ$	4 - 3		1092
30	1169.785		144.7507 - 230.2362	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$a^3G - y^1G^\circ$	4 - 4		1092
80	1172.048		128.3450 - 213.6652	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - y^3D^\circ$	4 - 3		1092
30	1175.473		130.0620 - 215.1331	$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^\circ$	3 - 4		1092
340	1183.558							1092
80	1184.318		148.8624 - 233.2989	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$b^1G - y^1H^\circ$	4 - 5		1092
50	1186.035		144.7507 - 229.0643	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$a^3G - y^3H^\circ$	4 - 4		1092
310	1190.111		230.2362 - 314.2622	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$y^1G^\circ - ^1H$	4 - 5		1092
60	1191.518		144.0676 - 227.9935	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$a^3G - y^3H^\circ$	5 - 6		921
50	1191.978		147.9315 - 231.8255	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$b^3P - x^3P^\circ$	1 - 0		1092
20	1197.697							1092
20	1200.237		223.6233 - 306.9418	$3d^7(a^2H)4p - 3d^7(a^4F)5s$	$y^3G^\circ - ^3F$	3 - 2		1092
20	1200.679		147.9315 - 231.2166	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$b^3P - x^3P^\circ$	1 - 1		1092
20	1202.008		131.2203 - 214.4137	$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - z^3S^\circ$	2 - 1		1092
40	1205.063							921
50	1205.787		140.0674 - 223.0003	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$a^5P - w^3D^\circ$	2 - 3		1092
20	1214.888		148.9053 - 231.2166	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$c^3P - x^3P^\circ$	2 - 1		921
40	1215.062		233.2989 - 315.5985	$3d^7(a^2H)4p - 3d^7(a^2G)4d$	$y^1H^\circ - ^1G$	5 - 4		1092
130	1220.141		147.7383 - 229.6945	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$b^3P - x^3P^\circ$	2 - 2		1092
40	1220.186		139.6970 - 221.6503	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$a^5P - x^3D^\circ$	3 - 3		921
40	1223.086							921
70	1224.378		151.6244 - 233.2989	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^1H^\circ$	6 - 5		1092
150	1225.731		140.0674 - 221.6503	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$a^5P - x^3D^\circ$	2 - 3		1092
20	1226.121							1092
570	1227.444		148.8624 - 230.3314	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$b^1G - y^1F^\circ$	4 - 3		921
70	1228.288		250.6231 - 332.0359	$3d^7(a^2F)4p - 3d^7(a^2H)4d$	$x^1F^\circ - ^1G$	3 - 4		1092
700	1228.872		148.8624 - 230.2362	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$b^1G - y^1G^\circ$	4 - 4		921
60	1230.885							1092
20	1232.899		144.7507 - 225.8592	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$a^3G - x^3F^\circ$	4 - 3		1092
120	1234.807							1092
840	1237.765		148.9053 - 229.6945	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$c^3P - x^3P^\circ$	2 - 2		1092
500	1238.315							1092
30	1239.323		145.5816 - 226.2716	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$a^3G - x^3F^\circ$	3 - 2		1092
280	1240.383		139.6970 - 220.3159	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^5P - y^3P^\circ$	3 - 2		921
90	1241.370		140.7167 - 221.2719	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^5P - y^3P^\circ$	1 - 1		1092
30	1242.534		213.5348 - 294.0153	$3d^7(a^4P)4p - 3d^7(a^4F)4d$	$y^5D^\circ - ^3D$	2 - 1		1092
90	1243.308		121.9315 - 202.3609	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^3D^\circ$	3 - 2		1092
750	1244.566		229.0643 - 309.4139	$3d^7(a^2H)4p - 3d^7(a^4P)4d$	$y^3H^\circ - ^3F$	4 - 5		1092
40	1245.470		120.9204 - 201.2112	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^3D^\circ$	4 - 3		921
130	1246.523							1092
460	1246.832		148.8624 - 229.0643	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$b^1G - y^3H^\circ$	4 - 4		921
50	1248.455		153.1999 - 233.2989	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^1H^\circ$	4 - 5		921
30	1249.368		152.4019 - 232.4421	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$a^1P - y^1P^\circ$	1 - 1		921
110	1249.543		147.9315 - 227.9598	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$b^3P - y^1D^\circ$	1 - 2		921
70	1250.021		123.1415 - 203.1398	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^3D^\circ$	1 - 1		1092
90	1250.490		197.1402 - 277.1090	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - u^3D^\circ$	2 - 3		921
130	1256.291		140.7167 - 220.3159	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^5P - y^3P^\circ$	1 - 2		921
700	1258.686		197.6612 - 277.1090	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - u^3D^\circ$	3 - 3		921
270	1259.075		152.4019 - 231.8255	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$a^1P - x^3P^\circ$	1 - 0		921
180	1259.351		197.1402 - 276.5462	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - w^1D^\circ$	2 - 2		921
170	1262.309		123.1415 - 202.3609	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^3D^\circ$	1 - 2		1092
100	1263.976		196.8552 - 275.9706	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - u^3D^\circ$	1 - 2		921
360	1264.940		148.9053 - 227.9598	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$c^3P - y^1D^\circ$	2 - 2		921
580	1266.908		139.6970 - 218.6283	$3d^7(a^4P)4s - 3d^7(a^2G)4p$	$a^5P - x^3G^\circ$	3 - 3		1092

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
440	1268.543		197.1402 - 275.9706	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - u^3D^o$	2 - 2		921
430	1268.743		196.8552 - 275.6732	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - u^3D^o$	1 - 1		921
560	1271.830		147.9315 - 226.5583	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - y^3S^o$	1 - 1		921
90	1272.841		140.0674 - 218.6314	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	2 - 1		1092
20	1272.864		214.8356 - 293.3992	$3d^7(a^2H)4p - 3d^7(a^2F)4d$	$z^3H^o - ^3H$	5 - 5		921
330	1273.077							921
440	1273.146		119.6341 - 198.1795	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^3F^o$	5 - 4		921
40	1273.353		197.1402 - 275.6732	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - u^3D^o$	2 - 1		921
70	1274.491		213.5348 - 291.9971	$3d^7(a^4P)4p - 3d^7(a^4F)4d$	$y^3D^o - ^3P$	2 - 2		1092
860	1274.843		139.6970 - 218.1379	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	3 - 3		921
770	1276.631		139.6970 - 218.0278	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	3 - 2		921
290	1276.766		148.2355 - 226.5583	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - y^3S^o$	0 - 1		921
70	1276.985		197.6612 - 275.9706	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - u^3D^o$	3 - 2		921
390	1277.427		120.9204 - 199.2026	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^o$	4 - 4		921
800	1280.346		140.0674 - 218.1710	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	2 - 1		921
610	1280.886		140.0674 - 218.1379	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	2 - 3		921
20	1282.704		140.0674 - 218.0278	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	2 - 2		921
400	1282.826		139.6970 - 217.6499	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3D^o$	3 - 2		921
150	1283.169		152.3034 - 230.2362	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^1G^o$	5 - 4		921
750	1283.294		139.6970 - 217.6214	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	3 - 3		921
280	1283.454		140.7167 - 218.6314	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - y^3D^o$	1 - 1		921
570	1284.695		153.3774 - 231.2166	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3P^o$	2 - 1		921
330	1285.060		122.6655 - 200.4829	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^o$	2 - 3		921
630	1287.153		119.6341 - 197.3253	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^o$	5 - 5		921
560	1287.781		148.9053 - 226.5583	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3S^o$	2 - 1		921
410	1287.849							921
520	1288.955		140.0674 - 217.6499	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3D^o$	2 - 2		921
420	1289.011		123.1415 - 200.7203	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3F^o$	1 - 2		921
870	1289.415		140.0674 - 217.6214	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	2 - 3		921
720	1290.969		152.2334 - 229.6945	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3P^o$	3 - 2		921
640	1291.081		140.7167 - 218.1710	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	1 - 1		921
860	1293.461		140.7167 - 218.0278	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	1 - 2		921
70	1293.778		152.4019 - 229.6945	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$a^1P - x^3P^o$	1 - 2		921
720	1294.139		121.9315 - 199.2026	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^o$	3 - 4		921
50	1296.486		153.1999 - 230.3314	$3d^7(a^2H)4s - 3d^7(a^2D)4p$	$a^3H - y^1F^o$	4 - 3		921
150	1297.992		140.0674 - 217.1096	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	2 - 1		921
250	1298.087		153.1999 - 230.2362	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^1G^o$	4 - 4		921
290	1298.603		139.6970 - 216.7032	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3P^o$	3 - 2		921
310	1298.752		148.8624 - 225.8592	$3d^7(a^2G)4s - 3d^7(a^2D)4p$	$b^1G - x^3F^o$	4 - 3		921
20	1299.471		148.9053 - 225.8592	$3d^7(a^4P)4s - 3d^7(a^2D)4p$	$c^3P - x^3F^o$	2 - 3		921
310	1299.824		122.6655 - 199.5991	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3F^o$	2 - 3		921
140	1300.571		149.6689 - 226.5583	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$c^3P - y^3S^o$	1 - 1		921
390	1301.243		144.0676 - 220.9173	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$a^3G - y^3G^o$	5 - 5		921
910	1301.430		156.4604 - 233.2989	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^1H - y^1H^o$	5 - 5		921
140	1302.744		152.3034 - 229.0643	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3H^o$	5 - 4		921
880	1308.811		120.9204 - 197.3253	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^o$	4 - 5		921
930	1309.414		151.6244 - 227.9935	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3H^o$	6 - 6		921
490	1309.836							921
70	1310.050		147.7383 - 224.0709	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$b^3P - w^3D^o$	2 - 2		921
310	1310.319		153.3774 - 229.6945	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3P^o$	2 - 2		921
140	1311.508		121.9315 - 198.1795	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3F^o$	3 - 4		921
930	1312.727		152.3034 - 228.4800	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3H^o$	5 - 5		921
700	1316.029		140.7167 - 216.7032	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$a^3P - z^3P^o$	1 - 2		921
50	1317.233		147.9315 - 223.8477	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3P^o$	1 - 0		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	920	1318.134	153.1999 - 229.0643	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3H^\circ$	4 - 4		921
	290	1318.666	147.9315 - 223.7644	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$b^3P - w^3D^\circ$	1 - 1		921
	40	1319.196	197.1402 - 272.9440	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - w^1F^\circ$	2 - 3		921
	770	1319.434	174.8330 - 250.6231	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$a^1F - x^1F^\circ$	3 - 3		921
	530	1320.346	155.4784 - 231.2166	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3P^\circ$	1 - 1		921
	600	1320.544	152.2334 - 227.9598	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - y^1D^\circ$	3 - 2		921
	700	1321.168	152.3034 - 227.9935	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3H^\circ$	5 - 6		921
	360	1323.493	152.4019 - 227.9598	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$a^1P - y^1D^\circ$	1 - 2		921
	60	1324.706						921
	420	1325.615	139.6970 - 215.1331	$3d^7(a^4P)4s - 3d^7(a^2G)4p$	$a^5P - y^3F^\circ$	3 - 4		921
	190	1325.898	119.6341 - 195.0552	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^5G^\circ$	5 - 4		921
	690	1328.369	153.1999 - 228.4800	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3H^\circ$	4 - 5		921
	750	1335.043	157.5378 - 232.4421	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$b^1D - y^1P^\circ$	2 - 1		921
	770	1335.557	170.0682 - 244.9433	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - v^3D^\circ$	2 - 1		921
	680	1337.371	201.7727 - 276.5462	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$c^1D - w^1D^\circ$	2 - 2		921
	470	1337.861	144.0676 - 218.8148	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - z^1H^\circ$	5 - 5		921
	550	1339.187	147.9315 - 222.6028	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - x^3D^\circ$	1 - 2		921
	950	1340.084	139.6970 - 214.3190	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$a^2P - y^2D^\circ$	3 - 4		921
	110	1340.513	147.7383 - 222.3362	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - x^3D^\circ$	2 - 1		921
	790	1340.769	170.6207 - 245.2046	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - x^1G^\circ$	4 - 4		921
	790	1341.679	170.2794 - 244.8131	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - v^3D^\circ$	3 - 2		921
	920	1342.749	170.2794 - 244.7534	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3F^\circ$	3 - 4		921
	650	1344.000	147.9315 - 222.3362	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - x^3D^\circ$	1 - 1		921
	620	1344.034	149.6689 - 224.0709	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$c^3P - w^3D^\circ$	1 - 2		921
	690	1345.005	170.0682 - 244.4174	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - v^3D^\circ$	2 - 3		921
	400	1345.370						921
	960	1345.641	119.6341 - 193.9481	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^5G^\circ$	5 - 6		921
	210	1346.209						921
	300	1347.427	155.4784 - 229.6945	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3P^\circ$	1 - 2		921
	950	1347.800	144.7507 - 218.9451	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - x^3G^\circ$	4 - 4		921
	910	1348.840	170.2794 - 244.4174	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - v^3D^\circ$	3 - 3		921
	900	1348.933	170.6207 - 244.7534	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3F^\circ$	4 - 4		921
	560	1349.606	148.9053 - 223.0003	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$c^3P - w^3D^\circ$	2 - 3		921
	930	1350.182	144.7507 - 218.8148	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - z^1H^\circ$	4 - 5		921
	980	1350.416	170.6207 - 244.6717	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3G^\circ$	4 - 5		921
	910	1351.269	170.0682 - 244.0719	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3F^\circ$	2 - 2		921
	960	1351.929	139.6970 - 213.6652	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$a^5P - y^5D^\circ$	3 - 3		921
	980	1352.584	144.0676 - 217.9998	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - x^3G^\circ$	5 - 5		921
	960	1352.956	147.7383 - 221.6503	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - x^3D^\circ$	2 - 3		921
	710	1353.253	121.9315 - 195.8273	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^5G^\circ$	3 - 2		921
	750	1353.589	144.7507 - 218.6283	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - x^3G^\circ$	4 - 3		921
	760	1353.728	152.4019 - 226.2716	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$a^1P - x^3F^\circ$	1 - 2		921
	770	1354.328	139.6970 - 213.5348	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^5P - y^5D^\circ$	3 - 2		921
	910	1354.610	145.5816 - 219.4030	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - z^1F^\circ$	3 - 3		921
	680	1355.071	170.6207 - 244.4174	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - v^3D^\circ$	4 - 3		921
	820	1355.343	153.3774 - 227.1599	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - z^1P^\circ$	2 - 1		921
	960	1355.461	156.4604 - 230.2362	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^1H - y^1G^\circ$	5 - 4		921
	880	1356.916	140.7167 - 214.4137	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$a^5P - z^5S^\circ$	1 - 1		921
	130	1357.499	148.8624 - 222.5277	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$b^1G - z^1I^\circ$	4 - 5		921
	630	1357.638	170.0682 - 243.7256	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3F^\circ$	2 - 3		921
	700	1359.912	147.7383 - 221.2719	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - y^3P^\circ$	2 - 1		921
	950	1361.155	140.0674 - 213.5348	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^5P - y^5D^\circ$	2 - 2		921
	460	1361.540	170.2794 - 243.7256	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3F^\circ$	3 - 3		921
	410	1361.830	148.9053 - 222.3362	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$c^3P - x^3D^\circ$	2 - 1		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
960	1362.047		120.9204 - 194.3394	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^5F - z^5G^\circ$	4 - 5		921
570	1362.640		144.7507 - 218.1379	$3d^7(a^2G)4s - 3d^7(a^4P)4p$	$a^3G - y^3D^\circ$	4 - 3		921
910	1362.823		144.0676 - 217.4449	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - z^3G^\circ$	5 - 4		921
940	1363.075		145.5816 - 218.9451	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - x^3G^\circ$	3 - 4		921
290	1363.510		147.9315 - 221.2719	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3P^\circ$	1 - 1		921
800	1364.378		140.0674 - 213.3607	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - y^3D^\circ$	2 - 1		921
890	1365.201		144.7507 - 217.9998	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - x^3G^\circ$	4 - 5		921
960	1365.885		120.9204 - 194.1327	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	4 - 3		921
400	1366.900							921
470	1366.971		121.9315 - 195.0862	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	3 - 2		921
470	1366.971		152.2334 - 225.3872	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3F^\circ$	3 - 4		921
950	1367.154		145.5816 - 218.7265	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - y^3F^\circ$	3 - 2		921
970	1367.559		121.9315 - 195.0552	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^\circ$	3 - 4		921
970	1367.634		119.6341 - 192.7531	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	5 - 4		921
900	1367.918		170.6207 - 243.7256	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3F^\circ$	4 - 3		921
940	1368.993		145.5816 - 218.6283	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - x^3G^\circ$	3 - 3		921
750	1369.180		148.2355 - 221.2719	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3P^\circ$	0 - 1		921
940	1369.506		122.6655 - 195.6846	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 1		921
150	1371.891							921
970	1372.136		122.6655 - 195.5444	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^\circ$	2 - 3		921
960	1372.380		128.3450 - 201.2112	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	4 - 3		921
890	1373.292		140.7167 - 213.5348	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - y^3D^\circ$	1 - 2		921
970	1373.753		157.5378 - 230.3314	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$b^3D - y^3F^\circ$	2 - 3		921
970	1373.803		123.1415 - 195.9323	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	1 - 0		921
940	1374.580		170.2794 - 243.0292	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3G^\circ$	3 - 4		921
940	1374.657		148.9053 - 221.6503	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$c^3P - x^3D^\circ$	2 - 3		921
990	1375.800		123.1415 - 195.8273	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3G^\circ$	1 - 2		921
500	1376.142		149.6689 - 222.3362	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$c^3P - x^3D^\circ$	1 - 1		921
950	1376.346		152.3034 - 224.9594	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - z^3I^\circ$	5 - 6		921
700	1376.576		140.7167 - 213.3607	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - y^3D^\circ$	1 - 1		921
690	1377.368		218.1710 - 290.7735	$3d^7(a^4P)4p - 3d^7(a^4F)4d$	$z^3P^\circ - ^5P$	1 - 2		921
970	1377.818		197.6612 - 270.2398	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - v^3F^\circ$	3 - 4		921
960	1378.502		123.1415 - 195.6846	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	1 - 1		921
960	1379.654		153.3774 - 225.8592	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3F^\circ$	2 - 3		921
920	1380.027		170.0682 - 242.5301	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3G^\circ$	2 - 3		921
970	1380.831		122.6655 - 195.0862	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 2		921
930	1381.054		170.6207 - 243.0292	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3G^\circ$	4 - 4		921
700	1381.502		147.9315 - 220.3159	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3P^\circ$	1 - 2		921
400	1381.852		148.9053 - 221.2719	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3P^\circ$	2 - 1		921
960	1382.558		144.7507 - 217.0795	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - y^3F^\circ$	4 - 3		921
940	1383.136		130.0620 - 202.3609	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	3 - 2		921
300	1383.359		223.6233 - 295.9104	$3d^7(a^2H)4p - 3d^7(a^4F)4d$	$y^3G^\circ - ^3F$	3 - 4		921
920	1384.077		170.2794 - 242.5301	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3G^\circ$	3 - 3		921
970	1385.012		121.9315 - 194.1327	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	3 - 3		921
90	1385.623							921
550	1386.253		128.3450 - 200.4829	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	4 - 3		921
920	1387.518		149.6689 - 221.7388	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3D^\circ$	1 - 2		921
960	1388.797		144.0676 - 216.0716	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - z^3H^\circ$	5 - 6		921
600	1390.120		147.9315 - 219.8677	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - z^3S^\circ$	1 - 0		921
940	1390.443		131.2203 - 203.1398	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	2 - 1		921
510	1390.638		170.6207 - 242.5301	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - w^3G^\circ$	4 - 3		921
960	1392.113		120.9204 - 192.7531	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3D^\circ$	4 - 4		921
880	1392.439		197.1402 - 268.9566	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - v^3F^\circ$	2 - 3		921
790	1393.019		170.0682 - 241.8552	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - x^3D^\circ$	2 - 2		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	710	1395.053	155.4784 - 227.1599	$3d^7(a^3D)4s - 3d^7(a^2P)4p$	$a^3D - z^1P^\circ$	1 - 1		921
	830	1395.350	144.0676 - 215.7342	$3d^7(a^3G)4s - 3d^7(a^2G)4p$	$a^3G - z^3H^\circ$	5 - 4		921
	190	1395.587						921
	800	1396.589	149.6689 - 221.2719	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3P^\circ$	1 - 1		921
	600	1397.124	170.2794 - 241.8552	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$c^3F - x^1D^\circ$	3 - 2		921
	100	1397.963	156.4604 - 227.9935	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^1H - y^3H^\circ$	5 - 6		921
	660	1398.632	145.5816 - 217.0795	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - y^3F^\circ$	3 - 3		921
	890	1399.652	152.4019 - 223.8477	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$a^1P - y^3P^\circ$	1 - 0		921
	860	1400.357	148.9053 - 220.3159	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3P^\circ$	2 - 2		921
	840	1401.290	152.4019 - 223.7644	$3d^7(a^2P)4s - 3d^7(a^2D)4p$	$a^1P - w^3D^\circ$	1 - 1		921
	550	1402.617	197.6612 - 268.9566	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - v^3F^\circ$	3 - 3		921
	930	1403.416	128.3450 - 199.5991	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^\circ$	4 - 3		921
	850	1405.069	201.7727 - 272.9440	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$c^1D - w^1F^\circ$	2 - 3		921
	910	1405.486	130.0620 - 201.2112	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	3 - 3		921
	860	1405.661	131.2203 - 202.3609	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	2 - 2		921
	130	1406.911						921
	940	1407.152	144.0676 - 215.1331	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - y^3F^\circ$	5 - 4		921
	950	1407.618	151.6244 - 222.6661	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - z^3I^\circ$	6 - 7		921
	880	1408.777	144.7507 - 215.7342	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - z^3H^\circ$	4 - 4		921
	970	1410.044	119.6341 - 190.5539	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3F^\circ$	5 - 4		921
	950	1410.543	119.6341 - 190.5280	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3F^\circ$	5 - 5		921
	640	1411.102	197.1402 - 268.0063	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - v^3F^\circ$	2 - 2		921
	520	1411.286	128.3450 - 199.2026	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	4 - 4		921
	970	1411.588	120.9204 - 191.7621	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3F^\circ$	4 - 3		921
	380	1412.016	121.9315 - 192.7531	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3D^\circ$	3 - 4		921
	970	1412.228	121.9315 - 192.7413	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3F^\circ$	3 - 2		921
	960	1412.572	155.4784 - 226.2716	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - x^3F^\circ$	1 - 2		921
	970	1413.043	122.6655 - 193.4347	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3F^\circ$	2 - 1		921
	920	1414.437	147.9315 - 218.6314	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3D^\circ$	1 - 1		921
	930	1414.561	153.3774 - 224.0709	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - w^3D^\circ$	2 - 2		921
	880	1415.269	130.0620 - 200.7203	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^\circ$	3 - 2		921
	550	1416.841	201.7727 - 272.3527	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$c^1D - x^1P^\circ$	2 - 1		921
	500	1417.050	220.3159 - 290.8851	$3d^7(a^4P)4p - 3d^7(a^4F)4d$	$y^3P^\circ - ^5D$	2 - 3		921
	900	1417.631	148.8624 - 219.4030	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$b^1G - z^1F^\circ$	4 - 3		921
	650	1419.807	147.7383 - 218.1710	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - z^3P^\circ$	2 - 1		921
	930	1420.005	157.5378 - 227.9598	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$b^1D - y^1D^\circ$	2 - 2		921
	930	1420.005	153.1999 - 223.6233	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3G^\circ$	4 - 3		921
	870	1420.481	147.7383 - 218.1379	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3D^\circ$	2 - 3		921
	860	1420.547	148.2355 - 218.6314	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3D^\circ$	0 - 1		921
	540	1420.724	153.3774 - 223.7644	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - w^3D^\circ$	2 - 1		921
	800	1420.809	144.7507 - 215.1331	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - y^3F^\circ$	4 - 4		921
	920	1421.023	174.8330 - 245.2046	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$a^4F - x^1G^\circ$	3 - 4		921
	920	1422.621	123.1415 - 193.4347	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3F^\circ$	1 - 1		921
	920	1422.686	147.7383 - 218.0278	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - z^3P^\circ$	2 - 2		921
	400	1423.700	147.9315 - 218.1710	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - z^3P^\circ$	1 - 1		921
	900	1424.486	152.4019 - 222.6028	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$a^1P - x^3D^\circ$	1 - 2		921
	930	1425.459	145.5816 - 215.7342	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - z^3H^\circ$	3 - 4		921
	930	1426.650	152.3034 - 222.3980	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3G^\circ$	5 - 4		921
	950	1426.847	144.7507 - 214.8356	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$a^3G - z^3H^\circ$	4 - 5		921
	940	1427.028	122.6655 - 192.7413	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^4F - z^3F^\circ$	2 - 2		921
	580	1428.762	131.2203 - 201.2112	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	2 - 3		921
	890	1429.045	151.6244 - 221.6019	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - z^3I^\circ$	6 - 6		921
	960	1429.533	148.8624 - 218.8148	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$b^1G - z^1H^\circ$	4 - 5		921
	800	1430.205	174.8330 - 244.7534	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$a^4F - w^3F^\circ$	3 - 4		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
900	1430.971		147.7383 - 217.6214	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - z^3P^\circ$	2 - 3		921
950	1431.950		128.3450 - 198.1795	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^\circ$	4 - 4		921
960	1432.031		121.9315 - 191.7621	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 3		921
810	1433.374		148.8624 - 218.6283	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$b^1G - x^3G^\circ$	4 - 3		921
350	1434.183		148.9053 - 218.6314	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3D^\circ$	2 - 1	P	921
380	1434.247		148.9053 - 218.6283	$3d^7(a^4P)4s - 3d^7(a^2G)4p$	$c^3P - x^3G^\circ$	2 - 3	P	921
890	1434.342		147.9315 - 217.6499	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - z^1D^\circ$	1 - 2		921
930	1436.090		120.9204 - 190.5539	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3F^\circ$	4 - 4		921
480	1436.670		196.8552 - 266.4612	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - w^3P^\circ$	1 - 1		921
670	1437.782		145.5816 - 215.1331	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$a^3G - y^3F^\circ$	3 - 4		921
930	1438.078		130.0620 - 199.5991	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^\circ$	3 - 3		921
920	1438.853		131.2203 - 200.7203	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^\circ$	2 - 2		921
250	1440.584		152.2334 - 221.6503	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - x^3D^\circ$	3 - 3		921
860	1442.241		152.4019 - 221.7388	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$a^1P - y^3D^\circ$	1 - 2		921
960	1442.429		153.1999 - 222.5277	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - z^1I^\circ$	4 - 5		921
890	1442.557		197.1402 - 266.4612	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - w^3P^\circ$	2 - 1		921
960	1443.023		152.3034 - 221.6019	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - z^1I^\circ$	5 - 6		921
970	1443.140		151.6244 - 220.9173	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - y^3G^\circ$	6 - 5		921
800	1443.524		148.8624 - 218.1379	$3d^7(a^2G)4s - 3d^7(a^4P)4p$	$b^1G - y^3D^\circ$	4 - 3		921
970	1443.774		131.2203 - 200.4829	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	2 - 3		921
880	1444.285		174.8330 - 244.0719	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$a^1F - w^3F^\circ$	3 - 2		921
940	1444.406		148.9053 - 218.1379	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3D^\circ$	2 - 3		921
850	1444.565		153.3774 - 222.6028	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - x^3D^\circ$	2 - 2		921
920	1446.332		130.0620 - 199.2026	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	3 - 4		921
450	1446.711		148.9053 - 218.0278	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - z^3P^\circ$	2 - 2		921
710	1447.249		122.6655 - 191.7621	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3F^\circ$	2 - 3		921
180	1448.092		197.1402 - 266.1968	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - w^3P^\circ$	2 - 2		921
910	1449.689		128.3450 - 197.3253	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	4 - 5		921
900	1450.032		147.7383 - 216.7032	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - z^3P^\circ$	2 - 2		921
430	1451.936		148.2355 - 217.1096	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - z^3P^\circ$	0 - 1		921
290	1452.006		152.4019 - 221.2719	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$a^1P - y^3P^\circ$	1 - 1		921
780	1454.091		147.9315 - 216.7032	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$b^3P - z^3P^\circ$	1 - 2		921
800	1454.661		148.9053 - 217.6499	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$c^3P - z^1D^\circ$	2 - 2		921
420	1454.896		157.5378 - 226.2716	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$b^1D - x^3F^\circ$	2 - 2		921
850	1455.236							921
440	1457.255		121.9315 - 190.5539	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 4		921
860	1458.094		148.8624 - 217.4449	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$b^1G - z^1G^\circ$	4 - 4		921
650	1459.091		197.6612 - 266.1968	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^3D - w^3P^\circ$	3 - 2		921
890	1459.874		156.4604 - 224.9594	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - z^1I^\circ$	5 - 6		921
120	1462.448		131.2203 - 199.5991	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^\circ$	2 - 3		921
390	1462.654		155.4784 - 223.8477	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$a^3D - y^3P^\circ$	1 - 0		921
50	1464.429		155.4784 - 223.7644	$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$a^3D - w^3D^\circ$	1 - 1		921
780	1464.711		153.3774 - 221.6503	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - x^3D^\circ$	2 - 3		921
330	1465.917		148.8624 - 217.0795	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$b^1G - y^3F^\circ$	4 - 3		921
780	1466.175		148.9053 - 217.1096	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$c^3P - z^3P^\circ$	2 - 1		921
690	1466.356		174.8330 - 243.0292	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$a^1F - w^3G^\circ$	3 - 4		921
400	1468.818		152.2334 - 220.3159	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$a^3D - y^3P^\circ$	3 - 2		921
360	1470.999		149.6689 - 217.6499	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$c^3P - z^1D^\circ$	1 - 2		921
710	1474.971		148.9053 - 216.7032	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$c^3P - z^3P^\circ$	2 - 2		921
30	1475.778							921
220	1476.214							921
450	1482.229		152.4019 - 219.8677	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$a^1P - z^1S^\circ$	1 - 0		921
710	1482.771		149.6689 - 217.1096	$3d^7(a^4P)4s - 3d^7(a^2P)4p$	$c^3P - z^3P^\circ$	1 - 1		921
90	1488.446		201.7727 - 268.9566	$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$c^1D - v^3F^\circ$	2 - 3		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
330	1489.770		155.4784 - 222.6028	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - x^3D^\circ$	1 - 2		921
790	1492.032		174.8330 - 241.8552	$3d^7(a^2F)4s - 3d^7(a^2F)4p$	$a^1F - x^1D^\circ$	3 - 2		921
150	1493.879		244.0719 - 311.0107	$3d^7(a^2F)4p - 3d^7(a^4P)4d$	$w^3F^\circ - ^3F$	2 - 3		921
760	1495.392		148.8624 - 215.7342	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$b^1G - z^3H^\circ$	4 - 4		921
80	1495.713		155.4784 - 222.3362	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - x^3D^\circ$	1 - 1		921
120	1499.013		128.3450 - 195.0552	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	4 - 4		921
780	1499.806		147.7383 - 214.4137	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - z^3S^\circ$	2 - 1		921
350	1500.567		152.3034 - 218.9451	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - x^3G^\circ$	5 - 4		921
620	1502.950							921
260	1504.158		147.9315 - 214.4137	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - z^3S^\circ$	1 - 1		921
200	1506.594		151.6244 - 217.9998	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - x^3G^\circ$	6 - 5		921
650	1508.946		148.8624 - 215.1331	$3d^7(a^2G)4s - 3d^7(a^2G)4p$	$b^1G - y^3F^\circ$	4 - 4		921
310	1510.118							921
60	1510.509		153.1999 - 219.4030	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - z^1F^\circ$	4 - 3		921
400	1511.075		148.2355 - 214.4137	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - z^3S^\circ$	0 - 1		921
110	1513.179		157.5378 - 223.6233	$3d^7(a^2D)4s - 3d^7(a^2H)4p$	$b^1D - y^3G^\circ$	2 - 3		921
280	1513.603		156.4604 - 222.5277	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^1H - z^1I^\circ$	5 - 5		921
880	1515.275		128.3450 - 194.3394	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	4 - 5		921
810	1515.749		148.8624 - 214.8356	$3d^7(a^2G)4s - 3d^7(a^2H)4p$	$b^1G - z^3H^\circ$	4 - 5		921
380	1516.584		156.4604 - 222.3980	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^1H - y^3G^\circ$	5 - 4		921
340	1516.823		147.7383 - 213.6652	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3D^\circ$	2 - 3		921
290	1517.338		152.2334 - 218.1379	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$a^3D - y^3D^\circ$	3 - 3		921
160	1519.882		152.2334 - 218.0278	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$a^3D - z^3P^\circ$	3 - 2		921
740	1523.877		147.7383 - 213.3607	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3D^\circ$	2 - 1		921
60	1524.047		153.1999 - 218.8148	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - z^1H^\circ$	4 - 5		921
320	1524.300		147.9315 - 213.5348	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3D^\circ$	1 - 2		921
300	1527.125		130.0620 - 195.5444	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	3 - 3		921
400	1528.373		153.1999 - 218.6283	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - x^3G^\circ$	4 - 3		921
300	1529.331		152.2334 - 217.6214	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$a^3D - z^3P^\circ$	3 - 3		921
490	1532.603		152.4019 - 217.6499	$3d^7(a^2P)4s - 3d^7(a^2P)4p$	$a^1P - z^1D^\circ$	1 - 2		921
870	1535.115		152.3034 - 217.4449	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - z^1G^\circ$	5 - 4		921
30	1535.519		148.2355 - 213.3607	$3d^7(a^2P)4s - 3d^7(a^4P)4p$	$b^3P - y^3D^\circ$	0 - 1		921
580	1536.916		157.5378 - 222.6028	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$b^1D - x^3D^\circ$	2 - 2		921
830	1538.614		130.0620 - 195.0552	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	3 - 4		921
60	1542.329		155.4784 - 220.3159	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$a^3D - y^3P^\circ$	1 - 2		921
340	1544.529		149.6689 - 214.4137	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - z^3S^\circ$	1 - 1		921
60	1546.778		153.3774 - 218.0278	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$a^3D - z^3P^\circ$	2 - 2		921
90	1547.276		148.9053 - 213.5348	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$c^3P - y^3D^\circ$	2 - 2		921
540	1547.803		131.2203 - 195.8273	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	2 - 2		921
170	1549.491							921
840	1551.116		152.2334 - 216.7032	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - z^3P^\circ$	3 - 2		921
320	1551.656		151.6244 - 216.0716	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - z^3H^\circ$	6 - 6		921
140	1553.055		155.4784 - 219.8677	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - z^1S^\circ$	1 - 0		921
80	1553.375							921
770	1554.623		131.2203 - 195.5444	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3G^\circ$	2 - 3		921
420	1555.874		153.3774 - 217.6499	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - z^1D^\circ$	2 - 2		921
40	1556.064							921
90	1556.545		153.1999 - 217.4449	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - z^1G^\circ$	4 - 4		921
420	1557.603		157.5378 - 221.7388	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$b^1D - y^3D^\circ$	2 - 2		921
920	1558.307		139.6970 - 203.8692	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^3P - z^3S^\circ$	3 - 2		921
460	1560.762		130.0620 - 194.1327	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	3 - 3		921
60	1565.457		153.1999 - 217.0795	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - y^3F^\circ$	4 - 3		921
250	1565.776		131.2203 - 195.0862	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^\circ$	2 - 2		921
190	1566.708							921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
910	1567.353		140.0674 - 203.8692	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^5P - z^5S^o$	2 - 2		921
270	1568.347							921
60	1571.767							921
70	1572.009		227.1599 - 290.7735	$3d^7(a^2P)4p - 3d^7(a^4F)4d$	$z^1P^o - ^5P$	1 - 2		921
40	1573.920							921
120	1574.236							921
190	1576.509		152.3034 - 215.7342	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - z^3H^o$	5 - 4		921
70	1578.371							921
190	1579.138		153.3774 - 216.7032	$3d^7(a^2D)4s - 3d^7(a^2P)4p$	$a^3D - z^3P^o$	2 - 2		921
120	1580.068							921
270	1582.002		151.6244 - 214.8356	$3d^7(a^2H)4s - 3d^7(a^2H)4p$	$a^3H - z^3H^o$	6 - 5		921
130	1582.094							921
850	1583.469		140.7167 - 203.8692	$3d^7(a^4P)4s - 3d^7(a^4P)4p$	$a^5P - z^5S^o$	1 - 2		921
260	1586.048							921
20	1588.070							921
90	1589.506		131.2203 - 194.1327	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^o$	2 - 3		921
20	1592.188							921
310	1592.524							921
290	1592.924		157.5378 - 220.3159	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$b^1D - y^3P^o$	2 - 2		921
380	1593.104							921
310	1594.194							921
680	1595.125		130.0620 - 192.7531	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3D^o$	3 - 4		921
280	1595.412		130.0620 - 192.7413	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^o$	3 - 2		921
470	1596.381							921
390	1597.264							921
100	1597.931		230.3314 - 292.9133	$3d^7(a^2D)4p - 3d^7(a^4F)4d$	$y^1F^o - ^5H$	3 - 3	Q	921
90	1598.107							921
220	1598.361							921
370	1599.086							921
400	1599.130		153.1999 - 215.7342	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^3H - z^3H^o$	4 - 4		921
340	1599.237		266.1968 - 328.727 + M	$3d^7(b^2D)4p - 3d^7(a^2D)4d$	$w^3P^o - ^3P$	2 - 1	Q	921
30	1599.651							921
780	1600.385		156.4604 - 218.9451	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^1H - x^3G^o$	5 - 4		921
320	1603.740		156.4604 - 218.8148	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^1H - z^1H^o$	5 - 5		921
700	1607.317							921
820	1608.143		128.3450 - 190.5280	$3d^7(a^4F)4s - 3d^7(a^4F)4p$	$b^3F - z^3F^o$	4 - 5		921
700	1616.414		157.5378 - 219.4030	$3d^7(a^2D)4s - 3d^7(a^2G)4p$	$b^1D - z^1F^o$	2 - 3		921
550	1636.913		157.5378 - 218.6283	$3d^7(a^2D)4s - 3d^7(a^2G)4p$	$b^1D - x^3G^o$	2 - 3		921
910	1639.754		156.4604 - 217.4449	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^1H - z^1G^o$	5 - 4		921
190	1650.156		157.5378 - 218.1379	$3d^7(a^2D)4s - 3d^7(a^4P)4p$	$b^1D - y^3D^o$	2 - 3		921
710	1704.368		156.4604 - 215.1331	$3d^7(a^2H)4s - 3d^7(a^2G)4p$	$a^1H - y^3F^o$	5 - 4		921
50	1774.845		233.2989 - 289.6415	$3d^7(a^2H)4p - 3d^7(a^4F)4d$	$y^1H^o - ^3D$	5 - 4	Q	921
60	1785.961		170.2794 - 226.2716	$3d^7(a^2F)4s - 3d^7(a^2D)4p$	$c^3F - x^3F^o$	3 - 2		921
300	1797.992		140.0674 - 195.6846	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^5P - z^5D^o$	2 - 1		921
40	1805.405		139.6970 - 195.0862	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^5P - z^5D^o$	3 - 2		921
70	1810.329		170.6207 - 225.8592	$3d^7(a^2F)4s - 3d^7(a^2D)4p$	$c^3F - x^3F^o$	4 - 3		921
400	1811.073		140.7167 - 195.9323	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^5P - z^5D^o$	1 - 0		921
320	1813.601		145.5816 - 200.7203	$3d^7(a^2G)4s - 3d^7(a^4F)4p$	$a^3G - z^3F^o$	3 - 2		921
690	1817.557		140.0674 - 195.0862	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^5P - z^5D^o$	2 - 2		921
670	1819.226		140.7167 - 195.6846	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^5P - z^5D^o$	1 - 1		921
80	1821.337		148.2355 - 203.1398	$3d^7(a^2P)4s - 3d^7(a^4F)4p$	$b^3P - z^3D^o$	0 - 1		921
350	1823.205		144.7507 - 199.5991	$3d^7(a^2G)4s - 3d^7(a^4F)4p$	$a^3G - z^3F^o$	4 - 3		921
90	1825.918		170.6207 - 225.3872	$3d^7(a^2F)4s - 3d^7(a^2D)4p$	$c^3F - x^3F^o$	4 - 4		921
560	1837.037		139.6970 - 194.1327	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^5P - z^5D^o$	3 - 3		921

CU IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
230		1837.210						921
490		1839.260	140.7167 - 195.0862	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	1 - 2		921
550		1848.028	144.0676 - 198.1795	$3d^7(a^2G)4s - 3d^7(a^2F)4p$	$a^3G - z^3F^o$	5 - 4		921
790		1849.616	140.0674 - 194.1327	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	2 - 3		921
60		1857.295						921
330		1867.239	170.0682 - 223.6233	$3d^7(a^2F)4s - 3d^7(a^2H)4p$	$c^3F - y^3G^o$	2 - 3		921
600		1884.805	139.6970 - 192.7531	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^3P - z^3D^o$	3 - 4		921
80		1909.164	170.6207 - 223.0003	$3d^7(a^2F)4s - 3d^7(a^2D)4p$	$c^3F - w^3D^o$	4 - 3		921
80		1911.208	170.2794 - 222.6028	$3d^7(a^2F)4s - 3d^7(a^2P)4p$	$c^3F - x^3D^o$	3 - 2		921
210		1911.829	148.9053 - 201.2112	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$c^3P - z^3D^o$	2 - 3		921
300		1918.708	170.2794 - 222.3980	$3d^7(a^2F)4s - 3d^7(a^2H)4p$	$c^3F - y^3G^o$	3 - 4		921
20		1934.434	140.0674 - 191.7621	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^3P - z^3F^o$	2 - 3		921
360		1966.306	139.6970 - 190.5539	$3d^7(a^4P)4s - 3d^7(a^4F)4p$	$a^3P - z^3F^o$	3 - 4		921
90		1988.211	170.6207 - 220.9173	$3d^7(a^2F)4s - 3d^7(a^2H)4p$	$c^3F - y^3G^o$	4 - 5		921

COPPER V (Cu⁴⁺), Z = 29
Ground State $1s^22s^22p^63s^23p^63d^7(^4F_{9/2})$ (25 electrons)
Ionization Potential [644 500] cm^{-1} ; [79.9] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
90		268.947	22.5753 - 394.3910	$3d^7 - 3d^6(b^1D)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		920
140		270.059	24.0998 - 394.3910	$3d^7 - 3d^6(b^1D)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
490		271.334	24.0998 - 392.6525	$3d^7 - 3d^6(b^1D)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		920
130		273.494	21.0659 - 386.7050	$3d^7 - 3d^6(b^1D)4p$	$a^4P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
20		275.158	30.9660 - 394.3910	$3d^7 - 3d^6(b^1D)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		920
190		275.272	30.9660 - 394.2485	$3d^7 - 3d^6(b^1D)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		920
20		276.533	33.2924 - 394.9124	$3d^7 - 3d^6(b^1D)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		920
140		278.020	27.0159 - 386.7050	$3d^7 - 3d^6(b^1D)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
100		278.275	33.2924 - 392.6525	$3d^7 - 3d^6(b^1D)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
190		280.606	0. - 356.3721	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		920
230		280.999	0. - 355.8750	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		920
120		281.543	2.7593 - 357.9483	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
310		281.765	0. - 354.9052	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		920
30		281.885	1.6159 - 356.3721	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
70		282.275	1.6159 - 355.8750	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		920
110		282.494	1.6159 - 355.6060	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		920
120		282.568	2.7593 - 356.6619	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
70		282.958	33.2924 - 386.7050	$3d^7 - 3d^6(b^1D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
180		283.055	1.6159 - 354.9052	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		920
270		283.179	3.5281 - 356.6619	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
40		283.341	1.6159 - 354.5480	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		920
90		283.410	2.7593 - 355.6060	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
80		283.519	33.2924 - 386.0042	$3d^7 - 3d^6(b^1D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
280		283.626	0. - 352.5823	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
490		283.966						920
130		284.028	3.5281 - 355.6060	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
70		284.062	2.7593 - 354.7967	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
390		284.067	1.6159 - 353.6459	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
20		284.197	1.6159 - 353.4857	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4P^o$	$\frac{7}{2} - \frac{3}{2}$		920
190		284.265	2.7593 - 354.5480	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	220	284.676	2.7593 - 354.0393	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		920
	20	284.888	3.5281 - 354.5480	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	40	285.125	2.7593 - 353.4857	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	80	285.299	3.5281 - 354.0393	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	250	285.666	3.5281 - 353.5900	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	120	285.751	3.5281 - 353.4857	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	130	285.993	2.7593 - 352.4192	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	110	286.395	0. - 349.1676	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	20	287.437	3.5281 - 351.4308	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	20	288.427	1.6159 - 348.3237	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	90	289.829	2.7593 - 347.7931	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	80	289.937	49.4900 - 394.3910	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
	80	290.430	50.0719 - 394.3910	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	40	290.488	20.8268 - 365.0711	$3d^7 - 3d^6(b^1G)4p$	$a^4P - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
	100	290.959	3.5281 - 347.2190	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	60	291.406	49.4900 - 392.6525	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	50	291.901	50.0719 - 392.6525	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	60	292.373	22.5753 - 364.6066	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	220	293.411	0. - 340.8195	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	90	294.490	22.5753 - 362.1428	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	90	294.490	22.5753 - 362.1447	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2H^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	60	294.732	24.0998 - 363.3968	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	90	294.808	1.6159 - 340.8195	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	160	294.892	1.6159 - 340.7228	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	70	295.583	20.8268 - 359.1412	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	60	295.822	24.0998 - 362.1428	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	300	295.890	2.7593 - 340.7228	$3d^7 - 3d^6(b^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	160	296.099	2.7593 - 340.4827	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	220	296.311	22.5753 - 360.0582	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	170	296.548	49.4900 - 386.7050	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	20	296.629	20.8268 - 357.9483	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$		920
	40	296.779	3.5281 - 340.4827	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	90	296.840	21.0659 - 357.9483	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	250	297.060	50.0719 - 386.7050	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	210	297.164	49.4900 - 386.0042	$3d^7 - 3d^6(b^1D)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	130	297.272				$\frac{3}{2} - \frac{3}{2}$		920
	50	297.336	3.5281 - 339.8455	$3d^7 - 3d^6(b^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	70	297.488	22.5753 - 358.7248	$3d^7 - 3d^6(b^3F)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	50	297.655	24.0998 - 360.0582	$3d^7 - 3d^6(b^1G)4p$	$a^2G - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	130	297.752	3.5281 - 339.3778	$3d^7 - 3d^6(a^1F)4p$	$ga^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	230	298.022	20.8268 - 356.3721	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	110	298.161	24.0998 - 359.4919	$3d^7 - 3d^6(b^3F)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	130	298.280	2.7593 - 338.0158	$3d^7 - 3d^6(a^1F)4p$	$ga^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	130	298.705	20.8268 - 355.6060	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	60	298.750	21.9351 - 356.6619	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
	230	298.917	21.0659 - 355.6060	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	560	299.222	30.4017 - 364.6066	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2G^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
	200	299.307	30.9660 - 365.0711	$3d^7 - 3d^6(b^1G)4p$	$a^2D - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	440	299.330	20.8268 - 354.9052	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
	70	299.582	22.5753 - 356.3721	$3d^7 - 3d^6(b^3P)4p$	$a^2G - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	530	299.639	21.0659 - 354.7967	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	490	299.650	20.8268 - 354.5480	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	300	299.863	21.0659 - 354.5480	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	230	300.078	31.8234 - 365.0711	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
150	300.109	300.109	20.8268 - 354.0393	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
110	300.324	300.324	21.0659 - 354.0393	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
120	300.425	300.425	21.9351 - 354.7967	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
20	300.607	300.607	20.8268 - 353.4857	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
160	300.824	300.824	21.0659 - 353.4857	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
80	301.109	301.109	21.9351 - 354.0393	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
230	301.438	301.438	30.4017 - 362.1447	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		920
130	301.516	301.516	21.9351 - 353.5900	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
70	301.954	301.954	30.9660 - 362.1428	$3d^7 - 3d^6(b^1G)4p$	$a^2D - ^2F^o$	$\frac{11}{2} - \frac{11}{2}$		920
50	302.050	302.050	22.5753 - 353.6459	$3d^7 - 3d^6(b^3F)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
20	302.171	302.171	21.0659 - 352.0045	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
40	302.237	302.237	27.0159 - 357.8810	$3d^7 - 3d^6(b^3P)4p$	$a^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		920
140	302.319	302.319	28.3666 - 359.1412	$3d^7 - 3d^6(b^3P)4p$	$a^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		920
120	302.474	302.474	21.0659 - 351.6719	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
90	302.695	302.695	21.0659 - 351.4308	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
410	302.737	302.737	31.8234 - 362.1447	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		920
240	302.934	302.934	33.2924 - 363.3968	$3d^7 - 3d^6(b^1G)4p$	$a^2D - ^2F^o$	$\frac{11}{2} - \frac{11}{2}$		920
360	302.967	302.967	21.9351 - 352.0045	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
20	303.022	303.022	22.5753 - 352.5823	$3d^7 - 3d^6(b^3F)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
20	303.273	303.273	21.9351 - 351.6719	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
220	303.347	303.347	30.4017 - 360.0582	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		920
120	304.330	304.330	27.0159 - 355.6060	$3d^7 - 3d^6(b^3P)4p$	$a^2P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
330	304.437	304.437	20.8268 - 349.3005	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$		920
380	304.659	304.659	21.0659 - 349.3005	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$		920
380	304.659	304.659	31.8234 - 360.0582	$3d^7 - 3d^6(b^1G)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		920
160	304.716	304.716	30.9660 - 359.1412	$3d^7 - 3d^6(b^3P)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		920
120	305.082	305.082	27.0159 - 354.7967	$3d^7 - 3d^6(b^3F)4p$	$a^2P - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
150	305.101	305.101	30.9660 - 358.7248	$3d^7 - 3d^6(b^3F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		920
310	305.470	305.470	21.9351 - 349.3005	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4S^o$	$\frac{1}{2} - \frac{1}{2}$		920
650	305.832	305.832	33.2924 - 357.9483	$3d^7 - 3d^6(b^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
40	306.306	306.306	27.0159 - 353.4857	$3d^7 - 3d^6(b^3P)4p$	$a^2P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
100	306.560	306.560	33.2924 - 359.4919	$3d^7 - 3d^6(b^3F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		920
250	307.243	307.243	30.4017 - 355.8750	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4F^o$	$\frac{11}{2} - \frac{11}{2}$		920
20	307.307	307.307	27.0159 - 352.4192	$3d^7 - 3d^6(b^3F)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
20	307.307	307.307	30.9660 - 356.3721	$3d^7 - 3d^6(b^3P)4p$	$a^2D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
100	308.020	308.020	33.2924 - 357.9483	$3d^7 - 3d^6(b^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
40	308.084	308.084	33.2924 - 357.8810	$3d^7 - 3d^6(b^3P)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		920
20	308.118	308.118	31.8234 - 356.3721	$3d^7 - 3d^6(b^3P)4p$	$a^2H - ^4D^o$	$\frac{9}{2} - \frac{9}{2}$		920
200	309.518	309.518	31.8234 - 354.9052	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		920
180	309.842	309.842	0. - 322.7444	$3d^7 - 3d^6(a^1G)4p$	$ga^4F - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		920
80	310.286	310.286	27.0159 - 349.3005	$3d^7 - 3d^6(b^3P)4p$	$a^2P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$		920
430	310.383	310.383	30.4017 - 352.5823	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^2G^o$	$\frac{11}{2} - \frac{11}{2}$		920
450	310.730	310.730	31.8234 - 353.6459	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		920
60	311.037	311.037	33.2924 - 354.7967	$3d^7 - 3d^6(b^3F)4p$	$a^2D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
220	311.107	311.107	0. - 321.4330	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{9}{2} - \frac{9}{2}$		920
210	311.763	311.763	1.6159 - 322.3759	$3d^7 - 3d^6(a^1G)4p$	$ga^4F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
210	311.763	311.763	31.8234 - 352.5823	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
220	311.937	311.937	1.6159 - 322.1921	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
20	312.324	312.324	1.6159 - 321.7958	$3d^7 - 3d^6(a^1G)4p$	$ga^4F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
510	312.506	312.506	20.8268 - 340.8195	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
180	312.602	312.602	20.8268 - 340.7228	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
90	312.744	312.744	1.6159 - 321.3649	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		920
80	312.782	312.782	2.7593 - 322.4700	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
350	312.835	312.835	21.0659 - 340.7228	$3d^7 - 3d^6(b^3F)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	170	313.057	2.7593 - 322.1921	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	180	313.071	21.0659 - 340.4827	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	20	313.439	3.5281 - 322.5690	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	70	313.699	21.0659 - 339.8455	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	60	313.790	2.7593 - 321.4431	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
	170	313.925	21.9351 - 340.4827	$3d^7 - 3d^6(b^3P)4p$	$a^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	220	314.157	2.7593 - 321.0740	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	210	314.394	1.6159 - 319.6890	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	380	314.545	30.4017 - 348.3237	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	100	315.018	21.9351 - 339.3778	$3d^7 - 3d^6(a^1F)4p$	$a^4P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	30	315.050	3.5281 - 320.9353	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
	70	315.268	20.8268 - 338.0158	$3d^7 - 3d^6(a^1F)4p$	$a^4P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	80	315.508	21.0659 - 338.0158	$3d^7 - 3d^6(a^1F)4p$	$a^4P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	20	315.767	3.5281 - 320.2164	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$		920
	220	315.875	77.6680 - 394.2485	$3d^7 - 3d^6(b^1D)4p$	$b^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
	50	316.302	0. - 316.1494	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2H^o$	$\frac{3}{2} - \frac{5}{2}$		920
	100	316.486	31.8234 - 347.7931	$3d^7 - 3d^6(b^3F)4p$	$a^2H - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	210	316.874	49.4900 - 365.0711	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	590	316.971	22.5753 - 338.0593	$3d^7 - 3d^6(a^1F)4p$	$a^2G - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	220	317.460	50.0719 - 365.0711	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	380	317.930	50.0719 - 364.6066	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	400	318.565	49.4900 - 363.3968	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	320	318.764	27.0159 - 340.7228	$3d^7 - 3d^6(b^3F)4p$	$a^2P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	70	319.013	27.0159 - 340.4827	$3d^7 - 3d^6(b^3P)4p$	$a^2P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	230	319.844	49.4900 - 362.1428	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	690	320.132	30.9660 - 343.3372	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	330	320.170	30.9660 - 343.3011	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	200	320.370	0. - 312.1380	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4H^o$	$\frac{3}{2} - \frac{5}{2}$		920
	230	320.392	20.8268 - 332.9463	$3d^7 - 3d^6(a^1S)4p$	$a^4P - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
	200	320.440	50.0719 - 362.1428	$3d^7 - 3d^6(b^1G)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	490	320.633	21.0659 - 332.9463	$3d^7 - 3d^6(a^1S)4p$	$a^4P - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
	660	321.048	2.7593 - 314.2379	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	590	321.067	3.5281 - 314.9880	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	240	321.303	0. - 311.2329	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	170	321.542	27.0159 - 338.0158	$3d^7 - 3d^6(a^1F)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	170	321.674	0. - 310.8749	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	140	322.105	1.6159 - 312.0731	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4H^o$	$\frac{3}{2} - \frac{5}{2}$		920
	100	322.350	1.6159 - 311.8378	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	580	322.576	33.2924 - 343.3011	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	680	322.615	1.6159 - 311.5824	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	50	322.719	76.8382 - 386.7050	$3d^7 - 3d^6(b^1D)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	310	322.788	0. - 309.8013	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	490	322.818	0. - 309.7720	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^2H^o$	$\frac{3}{2} - \frac{5}{2}$		920
	100	322.893	21.0659 - 330.7651	$3d^7 - 3d^6(a^1D)4p$	$a^4P - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	110	322.946	49.4900 - 359.1412	$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
	60	323.089	30.9660 - 340.4827	$3d^7 - 3d^6(b^3P)4p$	$a^2D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	50	323.184	50.0719 - 359.4919	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	250	323.302						920
	630	323.356	1.6159 - 310.8749	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	170	323.415						920
	370	323.449	76.8382 - 386.0042	$3d^7 - 3d^6(b^1D)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	410	323.479	1.6159 - 310.7538	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	700	323.542	2.7593 - 311.8378	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
	420	323.586	77.6680 - 386.7050	$3d^7 - 3d^6(b^1D)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
480	323.680		2.7593 - 311.7063	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
270	323.771		22.5753 - 331.4350	$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
310	323.814		0. - 308.8178	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
610	323.988		50.0719 - 358.7248	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
90	324.193		49.4900 - 357.9483	$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
30	324.240		30.9660 - 339.3778	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
420	324.294		2.7593 - 311.1213	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
260	324.350		3.5281 - 311.8378	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
130	324.385		21.0659 - 329.3396	$3d^7 - 3d^6(a^1D)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
840	324.481		1.6159 - 309.8013	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
480	324.509		1.6159 - 309.7720	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^2H^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
820	324.606		0. - 308.0649	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
700	324.681		2.7593 - 310.7538	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
460	324.805		50.0719 - 357.9483	$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
730	324.860		0. - 307.8245	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
510	325.018		1.6159 - 309.2941	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
730	325.037		30.4017 - 338.0593	$3d^7 - 3d^6(a^1F)4p$	$a^2H - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
60	325.269							920
70	325.377		24.0998 - 331.4350	$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
720	325.494		3.5281 - 310.7538	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
760	325.518		1.6159 - 308.8178	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
760	325.551		49.4900 - 356.6619	$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
760	325.685		2.7593 - 309.8013	$3d^7 - 3d^6(a^3G)4p$	$ga^4F - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
200	325.817		3.5281 - 310.4504	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
560	325.846		0. - 306.8922	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2I^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
580	325.934		2.7593 - 309.5699	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
60	326.086		24.0998 - 330.7651	$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
520	326.227		2.7593 - 309.2941	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
630	326.397		1.6159 - 307.9907	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
230	326.483		1.6159 - 307.9095	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
250	326.548		31.8234 - 338.0593	$3d^7 - 3d^6(a^1F)4p$	$a^2H - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
740	326.574		1.6159 - 307.8245	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
50	326.611		3.5281 - 309.7029	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
20	326.670		49.4900 - 355.6060	$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
470	326.707		33.2924 - 339.3778	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
390	326.753		3.5281 - 309.5699	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
420	326.871		27.0159 - 332.9463	$3d^7 - 3d^6(a^1S)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
60	327.177							920
110	327.317							920
650	327.382		0. - 305.4533	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
210	327.532							920
450	327.558		1.6159 - 306.9058	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
730	327.620		2.7593 - 307.9907	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
410	327.707		2.7593 - 307.9095	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
20	328.020		21.0659 - 325.9234	$3d^7 - 3d^6(a^1D)4p$	$a^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
100	328.168		33.2924 - 338.0158	$3d^7 - 3d^6(a^1F)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
140	328.205		20.8268 - 325.5185	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
580	328.240		0. - 304.6550	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
440	328.322		28.3666 - 332.9463	$3d^7 - 3d^6(a^1S)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
430	328.354		49.4900 - 354.0393	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
930	328.408		1.6159 - 306.1156	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
860	328.535		2.7593 - 307.1388	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
490	328.582		27.0159 - 331.3536	$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
470	328.788		2.7593 - 306.9058	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	810	328.828	31.8234 - 335.9352	$3d^7 - 3d^6(a^1F)4p$	$a^2H - ^2G^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	650	328.848	0. - 304.0922	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	890	329.039	2.7593 - 306.6781	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	840	329.052	22.5753 - 326.4771	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	20	329.118	21.0659 - 324.9088	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^2D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	340	329.221	27.0159 - 330.7651	$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	190	329.369	3.5281 - 307.1388	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^2D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	690	329.532	3.5281 - 306.9891	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	110	329.625	3.5281 - 306.9058	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	380	329.646	2.7593 - 306.1156	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	820	329.806	0. - 303.2093	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	840	329.851	24.0998 - 327.2680	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	630	329.869	3.5281 - 306.6781	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	530	329.940	2.7593 - 305.8444	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	490	330.047	28.3666 - 331.3536	$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2P^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	20	330.111	49.4900 - 352.4192	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	40	330.369	2.7593 - 305.4533	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	220	330.488	1.6159 - 304.1990	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	70	330.564	50.0719 - 352.5823	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2G^\circ$	$\frac{1}{2} - \frac{0}{2}$		920
	700	330.606	1.6159 - 304.0922	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	300	330.715	24.0998 - 326.4771	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	710	330.745	50.0719 - 352.4192	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	730	330.774	27.0159 - 329.3396	$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	110	330.955	21.0659 - 323.2224	$3d^7 - 3d^6(a^1G)4p$	$a^4P - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	80	331.026	22.5753 - 324.6683	$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2I^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	360	331.149	30.9660 - 332.9463	$3d^7 - 3d^6(a^1S)4p$	$a^2D - ^2P^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	600	331.191	49.4900 - 351.4308	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^2D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	570	331.217	20.8268 - 322.7444	$3d^7 - 3d^6(a^1G)4p$	$a^4P - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	530	331.241	2.7593 - 304.6550	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^2G^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	350	331.276	1.6159 - 303.4791	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	70	331.435						920
	300	331.538	1.6159 - 303.2417	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^2D^\circ$	$\frac{1}{2} - \frac{0}{2}$		920
	700	331.574	1.6159 - 303.2093	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	170	331.767	24.0998 - 325.5185	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^2D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	240	331.804	0. - 301.3856	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4H^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	510	331.824	1.6159 - 302.9804	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4I^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	270	331.911	0. - 301.2864	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4I^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	330	331.986						920
	310	332.088	21.0659 - 322.1921	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	520	332.254	2.7593 - 303.7341	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	300	332.300	22.5753 - 323.5063	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2H^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	390	332.313	2.7593 - 303.6795	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	70	332.359						920
	700	332.406	0. - 300.8371	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{0}{2} - \frac{0}{2}$		920
	480	332.535	2.7593 - 303.4791	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	600	332.659	20.8268 - 321.4330	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	400	332.739	21.9351 - 322.4700	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4D^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	640	332.814	30.9660 - 331.4350	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	430	332.835	2.7593 - 303.2093	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	880	332.889	0. - 300.4012	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	590	332.917	21.0659 - 321.4431	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^2P^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	420	333.002	21.0659 - 321.3649	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	290	333.057	27.0159 - 327.2680	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920
	460	333.105	3.5281 - 303.7341	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^\circ$	$\frac{0}{2} - \frac{1}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	720	333.146	22.5753 - 322.7444	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		920
	60	333.277				$\frac{3}{2} - \frac{1}{2}$		920
	210	333.326	21.0659 - 321.0740	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
	330	333.388	3.5281 - 303.4791	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
	370	333.460	22.5753 - 322.4641	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		920
	570	333.480	21.0659 - 320.9353	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		920
	820	333.558	22.5753 - 322.3759	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
	350	333.589	1.6159 - 301.3856	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4H^o$	$\frac{7}{2} - \frac{9}{2}$		920
	700	333.725				$\frac{7}{2} - \frac{9}{2}$		920
	690	333.734	1.6159 - 301.2554	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	590	333.872	24.0998 - 323.6168	$3d^7 - 3d^6(a^1D)4p$	$a^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		920
	660	333.929	1.6159 - 301.0805	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		920
	100	333.964	3.5281 - 302.9612	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		920
	800	334.200	1.6159 - 300.8371	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		920
	420	334.285				$\frac{7}{2} - \frac{9}{2}$		920
	720	334.312	24.0998 - 323.2224	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		920
	220	334.435	28.3666 - 327.3797	$3d^7 - 3d^6(a^1S)4p$	$a^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		920
	400	334.455	30.9660 - 329.9608	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		920
	410	334.552	27.0159 - 325.9234	$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		920
	460	334.608	22.5753 - 321.4330	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		920
	300	334.641	2.7593 - 301.5867	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4H^o$	$\frac{3}{2} - \frac{3}{2}$		920
	550	334.701	2.7593 - 301.5334	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		920
	570	334.926	20.8268 - 319.4041	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		920
	760	335.011	2.7593 - 301.2554	$3d^7 - 3d^6(a^3H)4p$	$ga^4F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$		920
	570	335.161	24.0998 - 322.4641	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	350	335.209	2.7593 - 301.0805	$3d^7 - 3d^6(a^3P)4p$	$ga^4F - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
	610	335.256	24.0998 - 322.3759	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		920
	880	335.463	20.8268 - 318.9231	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		920
	790	335.565	3.5281 - 301.5334	$3d^7 - 3d^6(a^3F)4p$	$ga^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$		920
	600	335.692	27.0159 - 324.9088	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		920
	670	335.732	21.0659 - 318.9231	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
	200	335.876	49.4900 - 347.2190	$3d^7 - 3d^6(b^3F)4p$	$a^2F - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		920
	840	335.914	24.0998 - 321.7958	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	640	336.071	28.3666 - 325.9234	$3d^7 - 3d^6(a^1D)4p$	$a^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		920
	770	336.171	21.9351 - 319.4041	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		920
	820	336.275	22.5753 - 319.9515	$3d^7 - 3d^6(a^1I)4p$	$a^2G - ^2H^o$	$\frac{9}{2} - \frac{11}{2}$		920
	410	336.323	24.0998 - 321.4330	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	300	336.400	24.0998 - 321.3649	$3d^7 - 3d^6(a^3D)4p$	$a^2G - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		920
	610	336.573	22.5753 - 319.6890	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
	390	337.009	22.5753 - 319.3042	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		920
	370	337.076	33.2924 - 329.9608	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		920
	130	337.183				$\frac{3}{2} - \frac{1}{2}$		920
	20	337.602	27.0159 - 323.2224	$3d^7 - 3d^6(a^1G)4p$	$a^2P - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		920
	350	337.783	33.2924 - 329.3396	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$		920
	20	337.945				$\frac{3}{2} - \frac{1}{2}$		920
	50	338.053	20.8268 - 316.6426	$3d^7 - 3d^6(a^3G)4p$	$a^4P - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		920
	750	338.307	24.0998 - 319.6890	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		920
	190	338.349	27.0159 - 322.5690	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$		920
	200	338.394	30.9660 - 326.4771	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		920
	300	338.463	27.0159 - 322.4700	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
	330	338.618	24.0998 - 319.4188	$3d^7 - 3d^6(a^1G)4p$	$a^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		920
	580	338.749	24.0998 - 319.3042	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	660	339.031	30.9660 - 325.9234	$3d^7 - 3d^6(a^1D)4p$	$a^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		920
	160	339.383	31.8234 - 326.4771	$3d^7 - 3d^6(a^3D)4p$	$a^2H - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	710	339.414	22.5753 - 317.2011	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
	640	339.497	30.9660 - 325.5185	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	160	339.643	27.0159 - 321.4431	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	660	339.828	30.4017 - 324.6683	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	810	339.880	30.4017 - 324.6235	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		920
	450	339.900	28.3666 - 322.5690	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$		920
	730	340.034	33.2924 - 327.3797	$3d^7 - 3d^6(a^1S)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	800	340.059	22.5753 - 316.6426	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	170	340.164	33.2924 - 327.2680	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	290	340.202	30.9660 - 324.9088	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	110	340.229	27.0159 - 320.9353	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	20	340.313	49.4900 - 343.3372	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	520	340.355	49.4900 - 343.3011	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	650	340.629	22.5753 - 316.1494	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		920
	560	340.988	50.0719 - 343.3372	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	110	341.030	50.0719 - 343.3011	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2F^\circ$	$\frac{7}{2} - \frac{3}{2}$		920
	260	341.063	27.0159 - 320.2164	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	210	341.098	21.0659 - 314.2379	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	720	341.176	24.0998 - 317.2011	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	710	341.476	31.8234 - 324.6683	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2I^\circ$	$\frac{9}{2} - \frac{11}{2}$		920
	60	341.727	33.2924 - 325.9234	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	260	341.799	28.3666 - 320.9353	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		920
	190	341.911	30.4017 - 322.8758	$3d^7 - 3d^6(a^3D)4p$	$a^2H - ^2F^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
	330	342.200	33.2924 - 325.5185	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	680	342.425	24.0998 - 316.1340	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$		920
	300	342.496	30.4017 - 322.3759	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
	140	342.573	27.0159 - 318.9231	$3d^7 - 3d^6(a^3D)4p$	$a^2P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	830	342.707	31.8234 - 323.6168	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
	570	342.837	31.8234 - 323.5063	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2H^\circ$	$\frac{9}{2} - \frac{11}{2}$		920
	320	342.914	33.2924 - 324.9088	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	530	343.051	30.9660 - 322.4641	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
	100	343.580	31.8234 - 322.8758	$3d^7 - 3d^6(a^3D)4p$	$a^2H - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
	20	343.651	49.4900 - 340.4827	$3d^7 - 3d^6(b^3P)4p$	$a^2F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	410	343.735	31.8234 - 322.7444	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	400	343.740	21.0659 - 311.9820	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^2S^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	90	343.842	30.9660 - 321.7958	$3d^7 - 3d^6(a^1G)4p$	$a^2D - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	80	344.066	31.8234 - 322.4641	$3d^7 - 3d^6(a^3D)4p$	$a^2H - ^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	650	344.172	31.8234 - 322.3759	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
	340	344.262	30.9660 - 321.4431	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	80	344.663	24.0998 - 314.2379	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		920
	610	344.859	31.8234 - 321.7958	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	420	344.909	33.2924 - 323.2224	$3d^7 - 3d^6(a^1G)4p$	$a^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	260	344.960	49.4900 - 339.3778	$3d^7 - 3d^6(a^1F)4p$	$a^2F - ^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$		920
	870	345.362	30.4017 - 319.9515	$3d^7 - 3d^6(a^1I)4p$	$a^2H - ^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	630	345.387	22.5753 - 312.1055	$3d^7 - 3d^6(a^3G)4p$	$a^2G - ^4H^\circ$	$\frac{9}{2} - \frac{11}{2}$		920
	170	345.561	21.0659 - 310.4504	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	460	345.676	30.4017 - 319.6890	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
	120	345.807	33.2924 - 322.4700	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	810	346.000	30.4017 - 319.4188	$3d^7 - 3d^6(a^1G)4p$	$a^2H - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
	40	346.456	21.0659 - 309.7029	$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	230	346.566	22.5753 - 311.1213	$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	200	346.661	20.8268 - 309.2941	$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	630	346.691	30.9660 - 319.4041	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	210	346.814	30.9660 - 319.3042	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
380	346.862	22.5753 - 310.8749	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ² G°	11 - 11		920	
70	347.067	31.8234 - 319.9515	3d ⁷ - 3d ⁶ (a ¹ I)4p	a ² H - ² H°	11 - 11		920	
60	347.131	33.2924 - 321.3649	3d ⁷ - 3d ⁶ (a ³ D)4p	a ² D - ⁴ F°	11 - 11		920	
290	347.177	24.0998 - 312.1380	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ⁴ H°	11 - 11		920	
370	347.240	50.0719 - 338.0593	3d ⁷ - 3d ⁶ (a ¹ F)4p	a ² F - ² G°	11 - 11		920	
530	347.256	27.0159 - 314.9880	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² P - ² D°	11 - 11		920	
320	347.289	50.0719 - 338.0158	3d ⁷ - 3d ⁶ (a ¹ F)4p	a ² F - ² D°	11 - 11		920	
520	347.333	22.5753 - 310.4831	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ⁴ G°	11 - 11		920	
100	347.484	33.2924 - 321.0740	3d ⁷ - 3d ⁶ (a ³ D)4p	a ² D - ⁴ F°	11 - 11		920	
70	347.503	21.9351 - 309.7029	3d ⁷ - 3d ⁶ (a ³ P)4p	a ⁴ P - ² P°	11 - 11		920	
150	347.539	24.0998 - 311.8378	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ⁴ G°	11 - 11		920	
500	347.710	31.8234 - 319.4188	3d ⁷ - 3d ⁶ (a ¹ G)4p	a ² H - ² H°	11 - 11		920	
770	347.848	31.8234 - 319.3042	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² H - ² G°	11 - 11		920	
520	347.944	77.6680 - 365.0711	3d ⁷ - 3d ⁶ (b ¹ G)4p	b ² D - ² G°	11 - 11		920	
720	348.162	27.0159 - 314.2379	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² P - ² D°	11 - 11		920	
780	348.193	22.5753 - 309.7720	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ² H°	11 - 11		920	
500	348.270	24.0998 - 311.2329	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ⁴ G°	11 - 11		920	
720	348.406	24.0998 - 311.1213	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ² G°	11 - 11		920	
260	348.628	30.4017 - 317.2404	3d ⁷ - 3d ⁶ (a ¹ I)4p	a ² H - ² K°	11 - 11		920	
80	348.677	30.4017 - 317.2011	3d ⁷ - 3d ⁶ (a ³ H)4p	a ² H - ² H°	11 - 11		920	
380	348.705	24.0998 - 310.8749	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ² G°	11 - 11		920	
520	348.773	22.5753 - 309.2941	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ² F°	11 - 11		920	
590	348.803	22.5753 - 309.2691	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ² H°	11 - 11		920	
270	348.852	24.0998 - 310.7538	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ⁴ F°	11 - 11		920	
520	348.893	28.3666 - 314.9880	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² P - ² D°	11 - 11		920	
520	348.970	76.8382 - 363.3968	3d ⁷ - 3d ⁶ (b ¹ G)4p	b ² D - ² F°	11 - 11		920	
270	349.106	49.4900 - 335.9352	3d ⁷ - 3d ⁶ (a ¹ F)4p	a ² F - ² G°	11 - 11		920	
90	349.217	349.217			11 - 11		920	
90	349.353	22.5753 - 308.8178	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - ⁴ F°	11 - 11		920	
30	349.556	20.8268 - 306.9058	3d ⁷ - 3d ⁶ (a ³ P)4p	a ⁴ P - ⁴ D°	11 - 11		920	
90	349.742	21.0659 - 306.9891	3d ⁷ - 3d ⁶ (a ³ F)4p	a ⁴ P - ⁴ D°	11 - 11		920	
870	349.957	30.4017 - 316.1494	3d ⁷ - 3d ⁶ (a ³ H)4p	a ² H - ² H°	11 - 11		920	
400	349.983	77.6680 - 363.3968	3d ⁷ - 3d ⁶ (b ¹ G)4p	b ² D - ² F°	11 - 11		920	
760	350.046	30.9660 - 316.6426	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² D - ² F°	11 - 11		920	
410	350.125	21.0659 - 306.6781	3d ⁷ - 3d ⁶ (a ³ F)4p	a ⁴ P - ⁴ D°	11 - 11		920	
70	350.276	22.5753 - 308.0649	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ⁴ G°	11 - 11		920	
240	350.298	24.0998 - 309.5699	3d ⁷ - 3d ⁶ (a ³ H)4p	a ² G - ⁴ G°	11 - 11		920	
450	350.367	22.5753 - 307.9907	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ⁴ G°	11 - 11		920	
700	350.411	31.8234 - 317.2011	3d ⁷ - 3d ⁶ (a ³ H)4p	a ² H - ² H°	11 - 11		920	
310	350.521	20.8268 - 306.1156	3d ⁷ - 3d ⁶ (a ³ F)4p	a ⁴ P - ⁴ D°	11 - 11		920	
560	350.570	22.5753 - 307.8245	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ⁴ G°	11 - 11		920	
630	350.813	21.0659 - 306.1156	3d ⁷ - 3d ⁶ (a ³ F)4p	a ⁴ P - ⁴ D°	11 - 11		920	
560	350.919	27.0159 - 311.9820	3d ⁷ - 3d ⁶ (a ³ P)4p	a ² P - ² S°	11 - 11		920	
330	351.194	21.9351 - 306.6781	3d ⁷ - 3d ⁶ (a ³ F)4p	a ⁴ P - ⁴ D°	11 - 11		920	
580	351.337	20.8268 - 305.4533	3d ⁷ - 3d ⁶ (a ³ F)4p	a ⁴ P - ⁴ D°	11 - 11		920	
530	351.525	77.6680 - 362.1428	3d ⁷ - 3d ⁶ (b ¹ G)4p	b ² D - ² F°	11 - 11		920	
20	351.570				11 - 11		920	
210	351.710	31.8234 - 316.1494	3d ⁷ - 3d ⁶ (a ³ H)4p	a ² H - ² H°	11 - 11		920	
150	352.086	30.9660 - 314.9880	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² D - ² D°	11 - 11		920	
370	352.247	24.0998 - 307.9907	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ⁴ G°	11 - 11		920	
150	352.327	20.8268 - 304.6550	3d ⁷ - 3d ⁶ (a ³ H)4p	a ⁴ P - ² G°	11 - 11		920	
350	352.348	24.0998 - 307.9095	3d ⁷ - 3d ⁶ (a ³ F)4p	a ² G - ² F°	11 - 11		920	
150	352.438	27.0159 - 310.7538	3d ⁷ - 3d ⁶ (a ³ G)4p	a ² P - ⁴ F°	11 - 11		920	
360	352.590	28.3666 - 311.9820	3d ⁷ - 3d ⁶ (a ³ P)4p	a ² P - ² S°	11 - 11		920	

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
530	352.814	27.0159 - 310.4504		$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2P^\circ$	2-1 2-2 2-3 2-4		920
690	353.018	30.9660 - 314.2379		$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2D^\circ$	2-1 2-2 2-3 2-4		920
60	353.474	1.6159 - 284.5209		$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4P^\circ$	2-1 2-2 2-3 2-4		920
80	353.507	22.5753 - 305.4533		$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4D^\circ$	2-1 2-2 2-3 2-4		920
650	353.555	33.2924 - 316.1340		$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^2F^\circ$	2-1 2-2 2-3 2-4		920
510	353.747	27.0159 - 309.7029		$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2P^\circ$	2-1 2-2 2-3 2-4		920
380	353.790	20.8268 - 303.4791		$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4F^\circ$	2-1 2-2 2-3 2-4		920
80	353.841	21.0659 - 303.6795		$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4D^\circ$	2-1 2-2 2-3 2-4		920
20	353.914	27.0159 - 309.5699		$3d^7 - 3d^6(a^3H)4p$	$a^2P - ^4G^\circ$	2-1 2-2 2-3 2-4		920
250	354.091	21.0659 - 303.4791		$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4F^\circ$	2-1 2-2 2-3 2-4		920
450	354.129	20.8268 - 303.2093		$3d^7 - 3d^6(a^3F)4p$	$a^4P - ^4F^\circ$	2-1 2-2 2-3 2-4		920
70	354.389	21.0659 - 303.2417		$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^2D^\circ$	2-1 2-2 2-3 2-4		920
100	354.679	49.4900 - 331.4350		$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	2-1 2-2 2-3 2-4		920
640	354.759	22.5753 - 304.4561		$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2G^\circ$	2-1 2-2 2-3 2-4		920
180	354.940	30.4017 - 312.1380		$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4H^\circ$	11-2 2-1 2-2 2-3 2-4		920
670	354.988							920
600	355.219	22.5753 - 304.0922		$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4F^\circ$	2-1 2-2 2-3 2-4		920
660	355.278	77.6680 - 359.1412		$3d^7 - 3d^6(b^3P)4p$	$b^2D - ^2P^\circ$	2-1 2-2 2-3 2-4		920
860	355.411	50.0719 - 331.4350		$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	2-1 2-2 2-3 2-4		920
190	355.423	22.5753 - 303.9317		$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4H^\circ$	2-1 2-2 2-3 2-4 11-2		920
680	355.523	49.4900 - 330.7651		$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	2-1 2-2 2-3 2-4		920
280	355.805							920
300	355.818	76.8382 - 357.8810		$3d^7 - 3d^6(b^3P)4p$	$b^2D - ^2P^\circ$	2-1 2-2 2-3 2-4		920
290	355.944	33.2924 - 314.2379		$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2D^\circ$	2-1 2-2 2-3 2-4		920
640	355.963	0. - 280.9287		$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	2-1 2-2 2-3 2-4		920
110	356.006	27.0159 - 307.9095		$3d^7 - 3d^6(a^3F)4p$	$a^2P - ^2F^\circ$	2-1 2-2 2-3 2-4		920
140	356.177	20.8268 - 301.5867		$3d^7 - 3d^6(a^3H)4p$	$a^4P - ^4H^\circ$	2-1 2-2 2-3 2-4		920
70	356.204	30.9660 - 311.7063		$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^4F^\circ$	2-1 2-2 2-3 2-4		920
250	356.260	50.0719 - 330.7651		$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2F^\circ$	2-1 2-2 2-3 2-4		920
70	356.359	30.9660 - 311.5824		$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^4G^\circ$	2-1 2-2 2-3 2-4		920
620	356.435	24.0998 - 304.6550		$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2G^\circ$	2-1 2-2 2-3 2-4		920
770	356.626	22.5753 - 302.9804		$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4I^\circ$	2-1 2-2 2-3 2-4		920
260	356.688	24.0998 - 304.4561		$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^2G^\circ$	2-1 2-2 2-3 2-4		920
810	356.727	1.6159 - 281.9421		$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	2-1 2-2 2-3 2-4		920
270	356.786	77.6680 - 357.9483		$3d^7 - 3d^6(b^3P)4p$	$b^2D - ^2D^\circ$	2-1 2-2 2-3 2-4		920
30	356.822	20.8268 - 301.0805		$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4P^\circ$	2-1 2-2 2-3 2-4		920
100	356.947	30.9660 - 311.1213		$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2G^\circ$	2-1 2-2 2-3 2-4		920
310	357.020	24.0998 - 304.1990		$3d^7 - 3d^6(a^3P)4p$	$a^2G - ^4D^\circ$	2-1 2-2 2-3 2-4		920
700	357.040	30.4017 - 310.4831		$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4G^\circ$	11-2 2-1 2-2 2-3 2-4		920
20	357.122	21.0659 - 301.0805		$3d^7 - 3d^6(a^3P)4p$	$a^4P - ^4P^\circ$	2-1 2-2 2-3 2-4		920
20	357.151	24.0998 - 304.0922		$3d^7 - 3d^6(a^3F)4p$	$a^2G - ^4F^\circ$	2-1 2-2 2-3 2-4		920
370	357.284	27.0159 - 306.9058		$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^4D^\circ$	2-1 2-2 2-3 2-4		920
630	357.320	2.7593 - 282.6215		$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	2-1 2-2 2-3 2-4		920
630	357.331	49.4900 - 329.3396		$3d^7 - 3d^6(a^1D)4p$	$a^2F - ^2D^\circ$	2-1 2-2 2-3 2-4		920
210	357.368	76.8382 - 356.6619		$3d^7 - 3d^6(b^3P)4p$	$b^2D - ^2D^\circ$	2-1 2-2 2-3 2-4		920
120	357.415	30.9660 - 310.7538		$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^4F^\circ$	2-1 2-2 2-3 2-4		920
20	357.450	31.8234 - 311.5824		$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4G^\circ$	2-1 2-2 2-3 2-4		920
740	357.802	30.9660 - 310.4504		$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2P^\circ$	2-1 2-2 2-3 2-4		920
890	357.882	0. - 279.4211		$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	2-1 2-2 2-3 2-4		920
830	357.898	31.8234 - 311.2329		$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4G^\circ$	2-1 2-2 2-3 2-4		920
390	357.949	30.4017 - 309.7720		$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2H^\circ$	11-2 2-1 2-2 2-3 2-4		920
850	358.022	1.6159 - 280.9287		$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	2-1 2-2 2-3 2-4		920
490	358.040	31.8234 - 311.1213		$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^2G^\circ$	2-1 2-2 2-3 2-4		920
780	358.188	2.7593 - 281.9421		$3d^7 - 3d^6(a^2D)4p$	$ga^4F - ^4F^\circ$	2-1 2-2 2-3 2-4		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
660	358.303	358.303	3.5281 - 282.6215	$3d^7 - 3d^6(a^5D)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
490	358.359	358.359	31.8234 - 310.8749	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
30	358.432	358.432	77.6680 - 356.6619	$3d^7 - 3d^6(b^3P)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
250	358.572	358.572	24.0998 - 302.9804	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4I^o$	$\frac{7}{2} - \frac{9}{2}$		920
690	358.595	358.595	30.4017 - 309.2691	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		920
210	358.644	358.644	27.0159 - 305.8444	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
320	358.666	358.666	22.5753 - 301.3856	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4H^o$	$\frac{9}{2} - \frac{9}{2}$		920
460	358.716	358.716	28.3666 - 307.1388	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
640	358.825	358.825	33.2924 - 311.9820	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2S^o$	$\frac{3}{2} - \frac{1}{2}$		920
940	358.856	358.856	0. - 278.6631	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		920
690	359.179	359.179	3.5281 - 281.9421	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
730	359.290	359.290	30.9660 - 309.2941	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		920
750	359.493	359.493	2.7593 - 280.9287	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{5}{2} - \frac{7}{2}$		920
590	359.780	359.780	31.8234 - 309.7720	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^2H^o$	$\frac{9}{2} - \frac{9}{2}$		920
910	359.867	359.867	1.6159 - 279.4968	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		920
500	359.963	359.963	1.6159 - 279.4211	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		920
20	360.150	360.150	30.4017 - 308.0649	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		920
590	360.377	360.377	24.0998 - 301.5867	$3d^7 - 3d^6(a^3H)4p$	$a^2G - ^4H^o$	$\frac{7}{2} - \frac{7}{2}$		920
90	360.411	360.411	33.2924 - 310.7538	$3d^7 - 3d^6(a^3G)4p$	$a^2D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		920
170	360.463	360.463	30.4017 - 307.8245	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4G^o$	$\frac{11}{2} - \frac{9}{2}$		920
850	360.612	360.612	2.7593 - 280.0657	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		920
260	360.753	360.753	50.0719 - 327.2680	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		920
140	360.806	360.806	33.2924 - 310.4504	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		920
750	360.949	360.949	1.6159 - 278.6631	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		920
500	360.980	360.980	30.9660 - 307.9907	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^4G^o$	$\frac{5}{2} - \frac{7}{2}$		920
80	361.021	361.021	31.8234 - 308.8178	$3d^7 - 3d^6(a^3G)4p$	$a^2H - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		920
110	361.085	361.085	30.9660 - 307.9095	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		920
280	361.167	361.167	77.6680 - 354.5480	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
860	361.213	361.213	3.5281 - 280.3733	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		920
800	361.227	361.227	3.5281 - 280.3733	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{5}{2} - \frac{3}{2}$		920
750	361.355	361.355	2.7593 - 279.4968	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		920
760	361.428	361.428	1.6159 - 278.2946	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{7}{2} - \frac{5}{2}$		920
660	361.614	361.614	3.5281 - 280.0657	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
280	361.752	361.752	49.4900 - 325.9234	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$		920
480	361.783	361.783	33.2924 - 309.7029	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		920
480	361.783	361.783	50.0719 - 326.4771	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
790	361.834	361.834	0. - 276.3680	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{9}{2} - \frac{7}{2}$		920
260	361.957	361.957	33.2924 - 309.5699	$3d^7 - 3d^6(a^3H)4p$	$a^2D - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$		920
350	362.004	362.004	31.8234 - 308.0649	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		920
530	362.024	362.024	27.0159 - 303.2417	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
300	362.094	362.094	30.9660 - 307.1388	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
270	362.101	362.101	31.8234 - 307.9907	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4G^o$	$\frac{9}{2} - \frac{7}{2}$		920
390	362.235	362.235	3.5281 - 279.5895	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{3}{2} - \frac{3}{2}$		920
240	362.361	362.361	3.5281 - 279.4968	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
180	362.444	362.444	2.7593 - 278.6631	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$		920
570	362.558	362.558	77.6680 - 353.4857	$3d^7 - 3d^6(b^3P)4p$	$b^2D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
80	362.867	362.867	76.8382 - 352.4192	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
370	362.929	362.929	2.7593 - 278.2946	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{5}{2} - \frac{5}{2}$		920
690	363.001	363.001	30.4017 - 305.8827	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2I^o$	$\frac{11}{2} - \frac{13}{2}$		920
430	363.047	363.047	50.0719 - 325.5185	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		920
270	363.084	363.084	49.4900 - 324.9088	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
70	363.225	363.225	28.3666 - 303.6795	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		920
40	363.309	363.309	28.3666 - 303.6795	$3d^7 - 3d^6(a^3P)4p$	$a^2P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		920
20	363.442	363.442	30.9660 - 306.1156	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	620	363.547	31.8234 - 306.8922	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2I^o$	$\frac{9}{2} - \frac{11}{2}$		920
	770	363.965	77.6680 - 352.4192	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
	770	363.965	1.6159 - 276.3680	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6P^o$	$\frac{7}{2} - \frac{7}{2}$		920
	360	364.146	33.2924 - 307.9095	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	600	364.175	76.8382 - 351.4308	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
	870	364.867	0. - 274.0732	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6F^o$	$\frac{9}{2} - \frac{7}{2}$		920
	90	365.281	77.6680 - 351.4308	$3d^7 - 3d^6(b^3F)4p$	$b^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
	390	365.322	49.4900 - 323.2224	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2F^o$	$\frac{4}{2} - \frac{4}{2}$		920
	130	365.380	30.9660 - 304.6550	$3d^7 - 3d^6(a^3H)4p$	$a^2D - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		920
	460	365.416	30.4017 - 304.0623	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		920
	20	365.458	31.8234 - 305.4533	$3d^7 - 3d^6(a^3F)4p$	$a^2H - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		920
	60	365.590	30.4017 - 303.9317	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		920
	140	366.528	31.8234 - 304.6550	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		920
	70	366.564	50.0719 - 322.8758	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		920
	90	366.683	30.9660 - 303.6795	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	260	366.740	50.0719 - 322.7444	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	180	366.796	31.8234 - 304.4561	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^2G^o$	$\frac{9}{2} - \frac{9}{2}$		920
	320	366.865	30.4017 - 302.9804	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4I^o$	$\frac{11}{2} - \frac{13}{2}$		920
	390	366.932	1.6159 - 274.1462	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6F^o$	$\frac{7}{2} - \frac{5}{2}$		920
	560	367.236	50.0719 - 322.3759	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		920
	50	367.396						920
	120	367.484	50.0719 - 322.1921	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		920
	140	367.501	31.8234 - 303.9317	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		920
	120	367.815	49.4900 - 321.3649	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^4F^o$	$\frac{5}{2} - \frac{5}{2}$		920
	140	368.022	50.0719 - 321.7958	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	300	368.420	2.7593 - 274.1885	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6F^o$	$\frac{5}{2} - \frac{3}{2}$		920
	320	368.512	50.0719 - 321.4330	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	180	369.025	30.4017 - 301.3856	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4H^o$	$\frac{11}{2} - \frac{9}{2}$		920
	260	369.093	30.4017 - 301.3361	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4I^o$	$\frac{11}{2} - \frac{13}{2}$		920
	290	369.160	30.4017 - 301.2864	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4I^o$	$\frac{11}{2} - \frac{11}{2}$		920
	190	369.438	3.5281 - 274.2097	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6F^o$	$\frac{3}{2} - \frac{1}{2}$		920
	20	369.522	3.5281 - 274.1462	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6F^o$	$\frac{3}{2} - \frac{5}{2}$		920
	30	369.765	33.2924 - 303.7341	$3d^7 - 3d^6(a^3F)4p$	$a^2D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
	20	370.370	30.4017 - 300.4012	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4G^o$	$\frac{11}{2} - \frac{11}{2}$		920
	250	370.437	33.2924 - 303.2417	$3d^7 - 3d^6(a^3P)4p$	$a^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		920
	70	370.576						920
	650	370.626	49.4900 - 319.3042	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2G^o$	$\frac{5}{2} - \frac{7}{2}$		920
	170	370.694	31.8234 - 301.5867	$3d^7 - 3d^6(a^3H)4p$	$a^2H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		920
	360	370.896	50.0719 - 319.6890	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		920
	730	371.269	50.0719 - 319.4188	$3d^7 - 3d^6(a^1G)4p$	$a^2F - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		920
	140	371.427	50.0719 - 319.3042	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	20	371.957	50.0719 - 318.9231	$3d^7 - 3d^6(a^3D)4p$	$a^2F - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		920
	380	375.032	49.4900 - 316.1340	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		920
	570	375.135	50.0719 - 316.6426	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	90	375.624	0. - 266.2267	$3d^7 - 3d^6(a^3D)4p$	$ga^4F - ^6D^o$	$\frac{9}{2} - \frac{9}{2}$		920
	40	375.852	50.0719 - 316.1340	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2F^o$	$\frac{5}{2} - \frac{5}{2}$		920
	270	376.651	49.4900 - 314.9880	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		920
	690	377.356	21.0659 - 286.0687	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$		920
	30	377.431						920
	240	377.718	49.4900 - 314.2379	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2D^o$	$\frac{5}{2} - \frac{3}{2}$		920
	740	377.758	20.8268 - 285.5464	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
	520	378.100	21.0659 - 285.5464	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
	350	378.549	50.0719 - 314.2379	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2D^o$	$\frac{7}{2} - \frac{5}{2}$		920
	410	378.597	21.9351 - 286.0687	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	840	379.226	20.8268 - 284.5209	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	710	379.346	21.9351 - 285.5464	$3d^7 - 3d^6(a^3D)4p$	$a^4P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
	200	380.832	49.4900 - 312.0731	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4H^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	70	380.895	76.8382 - 339.3778	$3d^7 - 3d^6(a^1F)4p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	30	381.545	49.4900 - 311.5824	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4G^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	30	381.584	50.0719 - 312.1380	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4H^\circ$	$\frac{2}{2} - \frac{6}{2}$		920
	250	382.220	49.4900 - 311.1213	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2G^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
	280	382.906	50.0719 - 311.2329	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^4G^\circ$	$\frac{2}{2} - \frac{6}{2}$		920
	120	383.072	50.0719 - 311.1213	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2G^\circ$	$\frac{2}{2} - \frac{7}{2}$		920
	370	383.427	50.0719 - 310.8749	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2G^\circ$	$\frac{2}{2} - \frac{6}{2}$		920
	520	384.464	20.8268 - 280.9287	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^4F^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	130	384.904	49.4900 - 309.2941	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	40	385.059	50.0719 - 309.7720	$3d^7 - 3d^6(a^3G)4p$	$a^2F - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	320	386.019	27.0159 - 286.0687	$3d^7 - 3d^6(a^5D)4p$	$a^2P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	410	386.102	21.0659 - 280.0657	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	150	386.453	20.8268 - 279.5895	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	290	386.594	20.8268 - 279.4968	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	230	386.812	21.0659 - 279.5895	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6P^\circ$	$\frac{2}{2} - \frac{3}{2}$		920
	280	386.930						920
	600	386.952	21.0659 - 279.4968	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	700	387.400	21.9351 - 280.0657	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
	660	387.845	20.8268 - 278.6631	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^4D^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	100	388.117	21.9351 - 279.5895	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6P^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
	240	388.343	27.0159 - 284.5209	$3d^7 - 3d^6(a^5D)4p$	$a^2P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	250	388.399	20.8268 - 278.2946	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6P^\circ$	$\frac{5}{2} - \frac{5}{2}$		920
	200	388.759	21.0659 - 278.2946	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	80	388.833	28.3666 - 285.5464	$3d^7 - 3d^6(a^5D)4p$	$a^2P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
	200	390.689						920
	240	391.329	20.8268 - 276.3680	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6P^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	70	391.542						920
	240	391.665	24.0998 - 279.4211	$3d^7 - 3d^6(a^5D)4p$	$a^2G - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	710	391.725	77.6680 - 332.9463	$3d^7 - 3d^6(a^1S)4p$	$b^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	310	391.901	49.4900 - 304.6550	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^2G^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	20	392.904	76.8382 - 331.3536	$3d^7 - 3d^6(a^1D)4p$	$b^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
	190	393.105	50.0719 - 304.4561	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^2G^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	150	393.392						920
	150	393.504	50.0719 - 304.1990	$3d^7 - 3d^6(a^3P)4p$	$a^2F - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	170	393.667	50.0719 - 304.0922	$3d^7 - 3d^6(a^3F)4p$	$a^2F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	190	394.871	20.8268 - 274.0732	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6F^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	90	395.059						920
	140	395.124						920
	130	395.183	27.0159 - 280.0657	$3d^7 - 3d^6(a^5D)4p$	$a^2P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	190	395.401	50.0719 - 302.9804	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^4I^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	510	396.065	27.0159 - 279.4968	$3d^7 - 3d^6(a^5D)4p$	$a^2P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	100	396.675	49.4900 - 301.5867	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^4H^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	120	397.733						920
	190	397.910	50.0719 - 301.3856	$3d^7 - 3d^6(a^3H)4p$	$a^2F - ^4H^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	120	403.468	77.6680 - 325.5185	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	100	404.321	30.9660 - 278.2946	$3d^7 - 3d^6(a^5D)4p$	$a^2D - ^6P^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
	270	405.226	33.2924 - 280.0657	$3d^7 - 3d^6(a^5D)4p$	$a^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	180	405.874	76.8382 - 323.2224	$3d^7 - 3d^6(a^1G)4p$	$b^2D - ^2F^\circ$	$\frac{2}{2} - \frac{7}{2}$		920
	360	406.018	33.2924 - 279.5895	$3d^7 - 3d^6(a^5D)4p$	$a^2D - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	250	406.943	20.8268 - 266.5600	$3d^7 - 3d^6(a^5D)4p$	$a^4P - ^6D^\circ$	$\frac{3}{2} - \frac{7}{2}$		920
	600	407.579	76.8382 - 322.1921	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^4D^\circ$	$\frac{2}{2} - \frac{7}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	270	408.035	77.6680 - 322.7444	$3d^7 - 3d^6(a^1G)4p$	$b^2D - ^2F^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	270	408.160	33.2924 - 278.2946	$3d^7 - 3d^6(a^3D)4p$	$a^2D - ^6P^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	120	408.957	76.8382 - 321.3649	$3d^7 - 3d^6(a^3D)4p$	$b^2D - ^4F^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	320	409.620	77.6680 - 321.7958	$3d^7 - 3d^6(a^1G)4p$	$b^2D - ^2G^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	240	410.207				2-1 3-1 4-1 5-1 6-1 7-1		920
	130	413.003	24.0998 - 266.2267	$3d^7 - 3d^6(a^5D)4p$	$a^2G - ^6D^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	20	413.073				2-1 3-1 4-1 5-1 6-1 7-1		920
		498.385	0. - 200.6482	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		500.508	1.6159 - 201.4128	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		501.401	0. - 199.4413	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		502.284	2.7593 - 201.8497	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		502.431	1.6159 - 200.6482	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		503.389	2.7593 - 201.4128	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		504.232	3.5281 - 201.8497	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		505.334	2.7593 - 200.6482	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		505.345	3.5281 - 201.4128	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		505.496	1.6159 - 199.4413	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		527.463	0. - 189.5869	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		529.569	0. - 188.8327	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		530.548	1.6159 - 190.1003	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		531.997	1.6159 - 189.5869	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		532.540	0. - 187.7794	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		532.933	2.7593 - 190.4003	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		533.786	2.7593 - 190.1003	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		534.140	1.6159 - 188.8327	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		535.125	3.5281 - 190.4003	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		535.253	2.7593 - 189.5869	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		535.986	3.5281 - 190.1003	$3d^7 - 3d^6(a^5D)4s$	$ga^4F - ^6D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		554.487	21.0659 - 201.4128	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		555.819	21.9351 - 201.8497	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		556.107	20.8268 - 200.6482	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		556.848	21.0659 - 200.6482	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		557.172	21.9351 - 201.4128	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		559.556	21.9351 - 200.6482	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		559.865	20.8268 - 199.4413	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
		560.615	21.0659 - 199.4413	$3d^7 - 3d^6(a^5D)4s$	$a^4P - ^4D$	2-1 3-1 4-1 5-1 6-1 7-1	F,P	375,920
	130	1097.104				2-1 3-1 4-1 5-1 6-1 7-1		920
	220	1105.138	265.8860 - 356.3721	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^4F - ^4D^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	120	1105.235	189.5869 - 280.0657	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	420	1106.235	265.9750 - 356.3721	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^4F - ^4D^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	190	1107.302	221.2719 - 311.5824	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4G^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	480	1107.726	220.2078 - 310.4831	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4G^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	250	1108.874				2-1 3-1 4-1 5-1 6-1 7-1		920
	520	1109.584				2-1 3-1 4-1 5-1 6-1 7-1		920
	420	1111.056				2-1 3-1 4-1 5-1 6-1 7-1		920
	350	1111.542	190.1003 - 280.0657	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	200	1111.896	220.9381 - 310.8749	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^2G^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	280	1112.170	265.6915 - 355.6060	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^4F - ^4D^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	360	1112.233	189.5869 - 279.4968	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^4D^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	310	1112.348	265.9750 - 355.8750	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	130	1112.552	236.0398 - 325.9234	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^2P^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	210	1112.852	220.6228 - 310.4831	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4G^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	450	1113.102	226.3108 - 316.1494	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2H^o$	2-1 3-1 4-1 5-1 6-1 7-1		920
	770	1113.225				2-1 3-1 4-1 5-1 6-1 7-1		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	140	1113.529						920
	330	1114.518	239.6145 - 329.3396	$3d^6(a^1G)4s - 3d^6(a^1D)4p$	$^2G - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	460	1114.560						920
	160	1115.184	222.4013 - 312.0731	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4H^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	270	1115.337	227.5426 - 317.2011	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
	120	1116.034	221.2719 - 310.8749	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
	150	1116.758	220.9381 - 310.4831	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
	580	1117.431						920
	100	1117.578	236.0398 - 325.5185	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
	220	1117.693	234.0364 - 323.5063	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
	660	1117.801	188.8327 - 278.2946	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	200	1118.554	227.8005 - 317.2011	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
	250	1118.730	272.7551 - 362.1428	$3d^6(b^3F)4s - 3d^6(b^3G)4p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
	670	1121.202	190.4003 - 279.5895	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	640	1121.245	222.8857 - 312.0731	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
	560	1121.651	228.0475 - 317.2011	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
	330	1121.719	220.6228 - 309.7720	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
	530	1123.333						920
	240	1124.461						920
	120	1125.329	220.9381 - 309.8013	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	120	1125.402	265.6915 - 354.5480	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	20	1125.732	222.4013 - 311.2329	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
	20	1126.111						920
	20	1126.296	221.6641 - 310.4504	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	610	1127.295	189.5869 - 278.2946	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		920
	240	1127.452	222.8857 - 311.5824	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
	180	1127.879	265.8860 - 354.5480	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		920
	570	1128.077	220.6228 - 309.2691	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		920
	850	1128.346						920
	230	1128.573	223.3755 - 311.9820	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^2S^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		920
	230	1128.573	227.5426 - 316.1494	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
	760	1128.804	187.7794 - 276.3680	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	370	1129.017	265.9750 - 354.5480	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	410	1129.117	235.0525 - 323.6168	$3d^6(a^3G)4s - 3d^6(a^3I)4p$	$^2G - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
	50	1129.475	228.1053 - 316.6426	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		920
	40	1129.582	221.2719 - 309.8013	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
	250	1129.938	221.2719 - 309.7720	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
	280	1130.293	222.4013 - 310.8749	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
	320	1131.799	220.9381 - 309.2941	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	610	1131.877	227.8005 - 316.1494	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		920
	290	1132.094	220.9381 - 309.2691	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
	450	1132.537	221.2719 - 309.5699	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	400	1133.386						920
	590	1133.855	190.1003 - 278.2946	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
	590	1133.855	220.6228 - 308.8178	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
	180	1134.169	235.0525 - 323.2224	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	390	1134.387	265.8860 - 354.0393	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	210	1135.307	222.4013 - 310.4831	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
	100	1135.998	228.1053 - 316.1340	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^2F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		920
	130	1136.085	221.2719 - 309.2941	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
	220	1136.516	222.8857 - 310.8749	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
	220	1137.180						920
	310	1137.593	221.6641 - 309.5699	$3d^6(a^3P)4s - 3d^6(a^3H)4p$	$^4P - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
	400	1137.681	265.6915 - 353.5900	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	400	1137.725						920
	250	1137.910	220.9381 - 308.8178	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^4H - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
	370	1138.207	220.2078 - 308.0649	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	220	1138.636	235.0525 - 322.8758	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^2G - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	150	1139.479	234.0364 - 321.7958	$3d^6(a^3G)4s - 3d^6(a^1G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	150	1140.224	219.2034 - 306.9058	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4D^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	100	1140.337						920
	80	1140.638	265.9750 - 353.6459	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	40	1140.848	239.6145 - 327.2680	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^2G - ^2F^\circ$	$\frac{7}{2} - \frac{3}{2}$		920
	160	1141.576						920
	630	1142.383	188.8327 - 276.3680	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	230	1143.620	220.6228 - 308.0649	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	100	1144.207	234.0364 - 321.4330	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^2G - ^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	220	1144.842	226.8888 - 314.2379	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	150	1145.668	236.3312 - 323.6168	$3d^6(a^3D)4s - 3d^6(a^1D)4p$	$^4D - ^2H^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	200	1145.760	223.4765 - 310.7538	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	250	1146.300	223.2142 - 310.4504	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	330	1146.775	220.6228 - 307.8245	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
	280	1147.268	236.0589 - 323.2224	$3d^6(a^3D)4s - 3d^6(a^1G)4p$	$^4D - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		920
	50	1147.593	235.0525 - 322.1921	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^2G - ^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$		920
	120	1147.751	220.9381 - 308.0649	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		920
	540	1148.582	256.2725 - 343.3372	$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		920
	370	1148.687	229.5875 - 316.6426	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	400	1148.736	220.9381 - 307.9907	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	540	1149.059	256.2729 - 343.3011	$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2F^\circ$	$\frac{5}{2} - \frac{5}{2}$		920
	160	1150.246						920
	170	1150.547	222.8857 - 309.8013	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	350	1150.851	222.4013 - 309.2941	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	440	1150.929	220.9381 - 307.8245	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
	150	1151.653						920
	480	1152.201	278.2818 - 365.0711	$3d^6(b^1G)4s - 3d^6(b^1G)4p$	$^2G - ^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
	580	1152.322	189.5869 - 276.3680	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6P^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	160	1152.828	235.0525 - 321.7958	$3d^6(a^3G)4s - 3d^6(a^1G)4p$	$^2G - ^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	70	1152.940						920
	170	1153.159	221.2719 - 307.9907	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4G^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	490	1153.492						920
	410	1153.595	236.0589 - 322.7444	$3d^6(a^3D)4s - 3d^6(a^1G)4p$	$^4D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
	220	1154.620						920
	380	1154.894	223.2142 - 309.8013	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
	400	1155.349						920
	650	1155.472	236.3312 - 322.8758	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{7}{2} - \frac{9}{2}$		920
	160	1155.679	236.0398 - 322.5690	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	80	1156.488	246.4765 - 332.9463	$3d^6(a^1D)4s - 3d^6(a^1S)4p$	$^2D - ^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$		920
	190	1156.596	236.1088 - 322.5690	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	250	1156.928	238.2336 - 324.6683	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	270	1157.019						920
	540	1157.200	222.4013 - 308.8178	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^4F - ^4F^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
	600	1157.340	236.0589 - 322.4641	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^\circ$	$\frac{11}{2} - \frac{7}{2}$		920
	720	1157.544	238.2336 - 324.6235	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	550	1157.662	235.0525 - 321.4330	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^2G - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	680	1157.894	238.3052 - 324.6683	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
	90	1158.218	272.8008 - 359.1412	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^2F - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	590	1158.453	246.6243 - 332.9463	$3d^6(a^1D)4s - 3d^6(a^1S)4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
	260	1158.561	265.6915 - 352.0045	$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^4F - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
120	1158.830	187.7794 - 274.0732		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{7}{2}$		920
570	1158.957	187.7794 - 274.0645		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{7}{2}$		920
170	1159.166	220.6228 - 306.8922		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^o$	$\frac{11}{2} - \frac{11}{2}$		920
250	1159.420	219.2034 - 305.4533		$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{7}{2}$		920
800	1159.770	187.7794 - 274.0039		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{3}{2} - \frac{7}{2}$		920
80	1160.110	243.1404 - 329.3396		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
540	1160.724	236.0398 - 322.1921		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
450	1160.995	236.0589 - 322.1921		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
50	1161.208							920
480	1161.539	223.4765 - 309.5699		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
360	1161.718	223.2142 - 309.2941		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		920
160	1162.193	236.3312 - 322.3759		$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$^4D - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
400	1163.219							920
460	1163.406	220.9381 - 306.8922		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2I^o$	$\frac{3}{2} - \frac{11}{2}$		920
360	1163.826	272.8008 - 358.7248		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
340	1163.930	234.0364 - 319.9515		$3d^6(a^3G)4s - 3d^6(a^3I)4p$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{11}{2}$		920
20	1164.666	236.3312 - 322.1921		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
110	1165.132	226.3108 - 312.1380		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		920
210	1165.581	226.3108 - 312.1055		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		920
310	1166.360	236.0589 - 321.7958		$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$^4D - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
130	1167.207	220.2078 - 305.8827		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2I^o$	$\frac{11}{2} - \frac{11}{2}$		920
640	1167.349	222.4013 - 308.0649		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{5}{2}$		920
450	1167.501	234.0364 - 319.6890		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
680	1168.525	226.3108 - 311.8888		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		920
190	1168.967	265.8860 - 351.4308		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
550	1170.075	236.3312 - 321.7958		$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$^4D - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
170	1170.245	219.2034 - 304.6550		$3d^6(a^3P)4s - 3d^6(a^3H)4p$	$^4P - ^2G^o$	$\frac{3}{2} - \frac{5}{2}$		920
250	1170.918	236.0398 - 321.4431		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
580	1171.202	234.0364 - 319.4188		$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{11}{2}$		920
400	1171.855	236.1088 - 321.4431		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
430	1171.981	236.0398 - 321.3649		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		920
640	1172.164	238.3052 - 323.6168		$3d^6(a^3I)4s - 3d^6(a^3I)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		920
620	1172.239	236.0589 - 321.3649		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{5}{2}$		920
450	1172.704	238.2336 - 323.5063		$3d^6(a^3I)4s - 3d^6(a^3G)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		920
620	1172.869							920
730	1173.154	188.8327 - 274.0732		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{7}{2} - \frac{7}{2}$		920
750	1173.271	188.8327 - 274.0645		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^6D - ^6F^o$	$\frac{7}{2} - \frac{7}{2}$		920
440	1173.690	238.3052 - 323.5063		$3d^6(a^3I)4s - 3d^6(a^3G)4p$	$^2I - ^2H^o$	$\frac{11}{2} - \frac{11}{2}$		920
20	1173.803	272.7551 - 357.9483		$3d^6(b^3F)4s - 3d^6(b^3P)4p$	$^2F - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$		920
300	1174.696	239.5409 - 324.6683		$3d^6(a^3G)4s - 3d^6(a^3I)4p$	$^2G - ^2I^o$	$\frac{3}{2} - \frac{11}{2}$		920
600	1175.045							920
550	1175.378	199.4413 - 284.5209		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		920
540	1176.140	222.8857 - 307.9095		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^o$	$\frac{7}{2} - \frac{5}{2}$		920
630	1176.228	278.3800 - 363.3968		$3d^6(b^3G)4s - 3d^6(b^3G)4p$	$^2G - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
770	1176.533	219.2034 - 304.1990		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
650	1176.968							920
390	1177.052	246.4765 - 331.4350		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		920
740	1177.328	222.8857 - 307.8245		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{5}{2}$		920
700	1177.890	200.6482 - 285.5464		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		920
620	1178.874	236.1088 - 320.9353		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$		920
710	1179.596							920
590	1180.200							920
290	1180.707	223.2142 - 307.9095		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		920
650	1181.267	201.4128 - 286.0687		$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$^4D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	680	1181.327	229.5875 - 314.2379	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	340	1181.526	235.0525 - 319.6890	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
	650	1182.011	189.5869 - 274.1885	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	770	1182.601	189.5869 - 274.1462	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	200	1182.746						920
	340	1183.022						920
	130	1183.236						920
	840	1183.628	189.5869 - 274.0732	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		920
	430	1184.385	223.4765 - 307.9095	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
	160	1185.312	235.0525 - 319.4188	$3d^6(a^3G)4s - 3d^6(a^1G)4p$	$^2G - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
	30	1186.404	246.4765 - 330.7651	$3d^6(a^1D)4s - 3d^6(a^1D)4p$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	460	1186.590	219.2034 - 303.4791	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		920
	610	1186.935						920
	540	1187.379	201.8497 - 286.0687	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		920
	360	1187.517	256.2729 - 340.4827	$3d^6(a^1F)4s - 3d^6(b^3P)4p$	$^2F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	440	1187.912	221.6641 - 305.8444	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	810	1188.056						920
	540	1188.509						920
	600	1188.586	201.4128 - 285.5464	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	790	1188.839						920
	590	1188.925	190.1003 - 274.2097	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		920
	850	1189.242	190.1003 - 274.1885	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	770	1189.672						920
	830	1189.837	190.1003 - 274.1462	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
	700	1189.939	219.2034 - 303.2417	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
	340	1190.113	228.0475 - 312.0731	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4H^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	470	1190.198	222.8857 - 306.9058	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	720	1190.422						920
	810	1190.974	239.5409 - 323.5063	$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
	420	1191.536	223.2142 - 307.1388	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
	550	1192.280	200.6482 - 284.5209	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		920
	760	1192.410	278.2818 - 362.1447	$3d^6(b^1G)4s - 3d^6(b^1G)4p$	$^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
	760	1192.535	220.2078 - 304.0623	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{13}{2} - \frac{13}{2}$		920
	300	1192.843	220.6228 - 304.4561	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
	520	1193.077	228.0203 - 311.8378	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	740	1193.185	190.4003 - 274.2097	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		920
	690	1193.500	190.4003 - 274.1885	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		920
	220	1193.870						920
	570	1194.308						920
	710	1194.506	220.9381 - 304.6550	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	20	1194.648	230.5317 - 314.2379	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
	230	1194.792	201.8497 - 285.5464	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		920
	700	1194.909						920
	20	1195.274	223.4765 - 307.1388	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	300	1195.983	223.3755 - 306.9891	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		920
	530	1196.066	239.6145 - 323.2224	$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
	520	1196.178						920
	90	1196.487	227.5426 - 311.1213	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	650	1196.731	226.8888 - 310.4504	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
	450	1197.100	228.0475 - 311.5824	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
	670	1197.351	220.9381 - 304.4561	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
	680	1197.421	223.4765 - 306.9891	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		920
	330	1197.814						920
	620	1198.038	220.6228 - 304.0922	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	700	1198.146						920
	790	1198.473	220.6228 - 304.0623	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{13}{2}$		920
	750	1198.802						920
	210	1199.561	236.0398 - 319.4041	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
	670	1199.832	236.0589 - 319.4041	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$		920
	690	1199.953	243.1404 - 326.4771	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		920
	660	1200.343	220.6228 - 303.9317	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^o$	$\frac{11}{2} - \frac{11}{2}$		920
	370	1201.024	239.6145 - 322.8758	$3d^6(a^3G)4s - 3d^6(a^3D)4p$	$^2G - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		920
	830	1201.217	220.2078 - 303.4564	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^o$	$\frac{13}{2} - \frac{13}{2}$		920
	560	1201.477	222.8857 - 306.1156	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{5}{2}$		920
	640	1201.852						920
	690	1201.912	223.4765 - 306.6781	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
	530	1202.154	221.2719 - 304.4561	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^2G^o$	$\frac{7}{2} - \frac{9}{2}$		920
	80	1202.591	220.9381 - 304.0922	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4F^o$	$\frac{9}{2} - \frac{9}{2}$		920
	450	1203.078	272.7551 - 355.8750	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^4F^o$	$\frac{7}{2} - \frac{9}{2}$		920
	490	1203.242	201.4128 - 284.5209	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$		920
	550	1203.317						920
	180	1203.550	236.3312 - 319.4188	$3d^6(a^3D)4s - 3d^6(a^1G)4p$	$^4D - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		920
	310	1203.761	228.0475 - 311.1213	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^2G^o$	$\frac{9}{2} - \frac{7}{2}$		920
	580	1204.061	222.4013 - 305.4533	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^o$	$\frac{9}{2} - \frac{7}{2}$		920
	560	1204.612						920
	770	1204.896						920
	440	1205.445						920
	370	1205.694	227.5426 - 310.4831	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4G^o$	$\frac{9}{2} - \frac{11}{2}$		920
	530	1205.926	239.5409 - 322.4641	$3d^6(a^1G)4s - 3d^6(a^3D)4p$	$^2G - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		920
	630	1206.245	223.2142 - 306.1156	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		920
	470	1206.785	236.0589 - 318.9231	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$		920
	600	1206.992	239.6145 - 322.4641	$3d^6(a^1G)4s - 3d^6(a^3D)4p$	$^2G - ^4F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	680	1207.247						920
	640	1207.345						920
	640	1207.525	226.8888 - 309.7029	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		920
	460	1208.313						920
	560	1208.702	228.0203 - 310.7538	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		920
	220	1209.945	228.1053 - 310.7538	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$		920
	450	1210.082	223.4765 - 306.1156	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$		920
	30	1210.188						920
	610	1210.575	234.0364 - 316.6426	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2F^o$	$\frac{9}{2} - \frac{7}{2}$		920
	670	1210.759	236.3312 - 318.9231	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4P^o$	$\frac{7}{2} - \frac{5}{2}$		920
	660	1211.076	265.7524 - 348.3237	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4G^o$	$\frac{9}{2} - \frac{9}{2}$		920
	680	1211.121	222.8857 - 305.4533	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	670	1211.399						920
	640	1212.023	226.3108 - 308.8178	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^o$	$\frac{11}{2} - \frac{9}{2}$		920
	390	1212.098	199.4413 - 281.9421	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		920
	500	1212.590	223.3755 - 305.8444	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		920
	580	1213.930						920
	330	1214.214	220.6228 - 302.9804	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^o$	$\frac{11}{2} - \frac{9}{2}$		920
	710	1214.362	265.9750 - 348.3237	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4G^o$	$\frac{7}{2} - \frac{9}{2}$		920
	170	1214.615	219.2034 - 301.5334	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4G^o$	$\frac{5}{2} - \frac{5}{2}$		920
	400	1215.495	220.9381 - 303.2093	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4F^o$	$\frac{9}{2} - \frac{7}{2}$		920
	750	1215.943						920
	520	1216.433	229.7736 - 311.9820	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^2S^o$	$\frac{1}{2} - \frac{1}{2}$		920
	520	1216.433	221.2719 - 303.4791	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4F^o$	$\frac{7}{2} - \frac{5}{2}$		920
	720	1216.826	239.6145 - 321.7958	$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	690	1217.317	235.0525 - 317.2011	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^2G - ^2H^o$	$\frac{7}{2} - \frac{9}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
640	1217.832		234.0364 - 316.1494	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^2G - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
70	1217.950		272.8008 - 354.9052	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		920
690	1218.463		221.6641 - 303.7341	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^4P - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
580	1218.702		222.4013 - 304.4561	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
180	1218.876		220.9381 - 302.9804	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
720	1219.615					$\frac{9}{2} - \frac{9}{2}$		920
310	1219.921		200.6482 - 282.6215	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
530	1220.438		221.2719 - 303.2093	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^4H - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
330	1221.100					$\frac{7}{2} - \frac{7}{2}$		920
700	1221.344		219.2034 - 301.0805	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		920
430	1222.209		265.9750 - 347.7931	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
540	1222.288					$\frac{7}{2} - \frac{7}{2}$		920
390	1222.528		222.4013 - 304.1990	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
720	1222.711					$\frac{9}{2} - \frac{7}{2}$		920
510	1222.944		222.8857 - 304.6550	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
660	1223.197		228.0475 - 309.8013	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
670	1223.622		228.0475 - 309.7720	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
690	1223.719		238.2336 - 319.9515	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2H^{\circ}$	$\frac{13}{2} - \frac{11}{2}$		920
760	1223.866		221.2719 - 302.9804	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
750	1224.140		222.4013 - 304.0922	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
740	1224.243					$\frac{9}{2} - \frac{9}{2}$		920
430	1224.806		238.3052 - 319.9515	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		920
710	1225.822		221.6641 - 303.2417	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
570	1225.920		222.8857 - 304.4561	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
230	1226.245		228.0203 - 309.5699	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
730	1226.521					$\frac{7}{2} - \frac{5}{2}$		920
730	1226.560					$\frac{7}{2} - \frac{5}{2}$		920
720	1227.182		199.4413 - 280.9287	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
770	1227.476		227.8005 - 309.2691	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2H^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		920
310	1227.880		223.2142 - 304.6550	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		920
470	1229.509		265.8860 - 347.2190	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^4F - ^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$		920
380	1229.831					$\frac{5}{2} - \frac{5}{2}$		920
420	1229.944					$\frac{5}{2} - \frac{5}{2}$		920
340	1230.053		221.6641 - 302.9612	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		920
760	1230.106		200.6482 - 281.9421	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
720	1230.204		229.5875 - 310.8749	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
560	1230.400		227.5426 - 308.8178	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^4G - ^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
540	1230.827		228.0475 - 309.2941	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
190	1230.930		272.8008 - 354.0393	$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
100	1231.197		228.0475 - 309.2691	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
700	1231.409		201.4128 - 282.6215	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
260	1231.697		228.1053 - 309.2941	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		920
830	1231.922		238.2336 - 319.4076	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2K^{\circ}$	$\frac{13}{2} - \frac{13}{2}$		920
780	1232.622		220.2078 - 301.3361	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{13}{2} - \frac{13}{2}$		920
470	1232.843		238.3052 - 319.4188	$3d^6(a^1I)4s - 3d^6(a^1G)4p$	$^2I - ^2H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
560	1233.347					$\frac{11}{2} - \frac{9}{2}$		920
150	1233.799		230.5317 - 311.5824	$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		920
640	1234.315		227.8005 - 308.8178	$3d^6(a^3H)4s - 3d^6(a^3G)4p$	$^2H - ^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
240	1234.797		223.2142 - 304.1990	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		920
220	1236.213					$\frac{5}{2} - \frac{7}{2}$		920
360	1236.540		236.3312 - 317.2011	$3d^6(a^3D)4s - 3d^6(a^3H)4p$	$^4D - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
410	1236.950					$\frac{7}{2} - \frac{9}{2}$		920
740	1237.517					$\frac{7}{2} - \frac{9}{2}$		920
730	1238.064		201.8497 - 282.6215	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
710	1238.183	220.6228 - 301.3856		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
340	1238.685	272.7551 - 353.4857		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
770	1238.955	220.6228 - 301.3361		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{11}{2} - \frac{13}{2}$		920
800	1239.727	220.6228 - 301.2864		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		920
710	1239.941	220.9381 - 301.5867		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
660	1240.026	246.6243 - 327.2680		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
660	1240.784	222.8857 - 303.4791		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
460	1240.860	230.5317 - 311.1213		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2G^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		920
560	1241.003	222.4013 - 302.9804		$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
790	1241.781	201.4128 - 281.9421		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
620	1241.906	227.5426 - 308.0649		$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4G^{\circ}$	$\frac{5}{2} - \frac{11}{2}$		920
670	1242.790							920
780	1243.041	220.9381 - 301.3856		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
550	1243.147							920
550	1243.620	239.5409 - 319.9515		$3d^6(a^1G)4s - 3d^6(a^1I)4p$	$^2G - ^2H^{\circ}$	$\frac{3}{2} - \frac{11}{2}$		920
750	1244.586	220.9381 - 301.2864		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
550	1244.955	222.8857 - 303.2093		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
760	1245.080							920
790	1245.653							920
710	1245.875	223.2142 - 303.4791		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
730	1245.971							920
610	1246.092	226.8888 - 307.1388		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
340	1246.533	230.5317 - 310.7538		$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
730	1246.656	220.6228 - 300.8371		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$		920
790	1246.990	220.2078 - 300.4012		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		920
690	1247.125	229.5875 - 309.7720		$3d^6(a^3F)4s - 3d^6(a^3G)4p$	$^2F - ^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
580	1247.696	239.5409 - 319.6890		$3d^6(a^1G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
730	1248.217	221.2719 - 301.3856		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
540	1248.500							920
670	1248.845	239.6145 - 319.6890		$3d^6(a^1G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
670	1249.143	199.4413 - 279.4968		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
750	1249.742	226.8888 - 306.9058		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		920
650	1249.953	223.4765 - 303.4791		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
640	1250.080	223.2142 - 303.2093		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
850	1250.308	199.4413 - 279.4211		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
420	1250.893	228.0475 - 307.9907		$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$^2H - ^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$		920
340	1251.110	229.7736 - 309.7029		$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		920
600	1251.572	220.9381 - 300.8371		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$		920
270	1251.928							920
680	1252.704	272.7551 - 352.5823		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
650	1253.068	239.6145 - 319.4188		$3d^6(a^1G)4s - 3d^6(a^1G)4p$	$^2G - ^2H^{\circ}$	$\frac{3}{2} - \frac{9}{2}$		920
650	1253.070	228.0203 - 307.8245		$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4G^{\circ}$	$\frac{5}{2} - \frac{11}{2}$		920
200	1253.302	226.8888 - 306.6781		$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$^2P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		920
20	1253.471	220.6228 - 300.4012		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{11}{2} - \frac{11}{2}$		920
610	1253.703	239.5409 - 319.3042		$3d^6(a^1G)4s - 3d^6(a^3G)4p$	$^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		920
650	1254.597	229.5875 - 309.2941		$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$		920
290	1254.839							920
690	1255.261	272.7551 - 352.4192		$3d^6(b^3F)4s - 3d^6(b^3F)4p$	$^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$		920
370	1255.299	256.2729 - 335.9352		$3d^6(a^1F)4s - 3d^6(a^1F)4p$	$^2F - ^2G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		920
720	1256.709							920
450	1256.817	221.2719 - 300.8371		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		920
20	1258.431	220.9381 - 300.4012		$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^4H - ^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920
590	1259.167	200.6482 - 280.0657		$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		920
700	1260.244	227.5426 - 306.8922		$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
450	1260.529							920
690	1262.272		199.4413 - 278.6631	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
510	1262.856		235.0525 - 314.2379	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$		920
390	1264.347		227.8005 - 306.8922	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{11}{2}$		920
360	1265.281		228.1053 - 307.1388	$3d^6(a^3G)4s - 3d^6(a^3P)4p$	$^4G - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
600	1265.727		238.2336 - 317.2404	$3d^6(a^1I)4s - 3d^6(a^1I)4p$	$^2I - ^2K^\circ$	$\frac{13}{2} - \frac{13}{2}$		920
590	1266.076		222.4013 - 301.3856	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4H^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
570	1266.432							920
400	1266.519							920
490	1266.758		200.6482 - 279.5895	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
790	1266.886							920
440	1267.480		238.3052 - 317.2011	$3d^6(a^1I)4s - 3d^6(a^3H)4p$	$^2I - ^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
150	1267.660		222.4013 - 301.2864	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4I^\circ$	$\frac{9}{2} - \frac{11}{2}$		920
90	1267.758		236.1088 - 314.9880	$3d^6(a^3D)4s - 3d^6(a^3F)4p$	$^4D - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
600	1268.147							920
760	1268.295							920
770	1269.351		187.7794 - 266.5600	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{9}{2} - \frac{7}{2}$		920
170	1269.675							920
200	1270.653							920
630	1271.399		201.4128 - 280.0657	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
600	1271.475							920
240	1272.699		228.1053 - 306.6781	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$		920
550	1273.485							920
800	1274.733		187.7794 - 266.2267	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{9}{2} - \frac{9}{2}$		920
690	1274.907							920
320	1275.442							920
620	1275.982							920
660	1276.844							920
390	1277.074							920
220	1277.257		243.1404 - 321.4330	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
780	1278.195		188.8327 - 267.0688	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{5}{2}$		920
530	1278.504		201.8497 - 280.0657	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
250	1278.857		222.8857 - 301.0805	$3d^6(a^3F)4s - 3d^6(a^3P)4p$	$^4F - ^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$		920
570	1279.155		201.4128 - 279.5895	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
670	1279.661		226.3108 - 304.4561	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
530	1280.464							920
740	1280.687		227.8005 - 305.8827	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$^2H - ^2I^\circ$	$\frac{11}{2} - \frac{13}{2}$		920
630	1281.123		223.4765 - 301.5334	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$^4F - ^4G^\circ$	$\frac{3}{2} - \frac{5}{2}$		920
630	1281.365		223.2142 - 301.2554	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{5}{2} - \frac{7}{2}$		920
460	1281.787							920
290	1281.859							920
620	1282.043		222.4013 - 300.4012	$3d^6(a^3F)4s - 3d^6(a^3H)4p$	$^4F - ^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$		920
	1282.5		187.7794 - 265.7524	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^6D - ^4F$	$\frac{9}{2} - \frac{9}{2}$	F,P	375,920
380	1283.139		243.1404 - 321.0740	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^2D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		920
580	1283.440		238.2336 - 316.1494	$3d^6(a^1I)4s - 3d^6(a^3H)4p$	$^2I - ^2H^\circ$	$\frac{13}{2} - \frac{11}{2}$		920
610	1283.504							920
760	1283.671		189.5869 - 267.4887	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{5}{2} - \frac{3}{2}$		920
370	1285.663		226.3108 - 304.0922	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^4G - ^4F^\circ$	$\frac{11}{2} - \frac{9}{2}$		920
680	1286.134		226.3108 - 304.0623	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$^4G - ^4H^\circ$	$\frac{11}{2} - \frac{13}{2}$		920
500	1286.339		201.8497 - 279.5895	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^4D - ^6P^\circ$	$\frac{1}{2} - \frac{3}{2}$		920
770	1286.551		188.8327 - 266.5600	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{7}{2} - \frac{7}{2}$		920
	1287.5		0. - 77.6680	$3d^7 - 3d^7$	$ga^4F - b^2D$	$\frac{9}{2} - \frac{5}{2}$	F,P	375,920
720	1287.691		190.1003 - 267.7590	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$^6D - ^6D^\circ$	$\frac{3}{2} - \frac{1}{2}$		920
160	1288.515		265.6915 - 343.3011	$3d^6(b^3F)4s - 3d^6(a^3F)4p$	$^4F - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	420	1288.876	239.6145 - 317.2011	$3d^6(a^1G)4s - 3d^6(a^3H)4p$	$2G - 2H^o$	$\frac{7}{2} - \frac{7}{2}$		920
	310	1289.557	234.0364 - 311.5824	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$2G - 4G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	680	1290.617	189.5869 - 267.0688	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$6D - 6D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	240	1291.419						920
	420	1291.874						920
	670	1292.075	188.8327 - 266.2267	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$6D - 6D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	510	1292.170	190.1003 - 267.4887	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$6D - 6D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	20	1292.375	230.5317 - 307.9095	$3d^6(a^3F)4s - 3d^6(a^3F)4p$	$2F - 2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	590	1292.676	190.4003 - 267.7590	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$6D - 6D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	280	1292.842						920
	280	1293.223	265.9750 - 343.3011	$3d^6(b^3F)4s - 3d^6(a^1F)4p$	$4F - 2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	130	1295.389	234.0364 - 311.2329	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$2G - 4G^o$	$\frac{7}{2} - \frac{7}{2}$		920
		1296.3	188.8327 - 265.9750	$3d^6(a^5D)4s - 3d^6(b^3F)4s$	$6D - 4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	330	1296.997	239.5409 - 316.6426	$3d^6(a^1G)4s - 3d^6(a^3G)4p$	$2G - 2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	680	1297.214	190.4003 - 267.4887	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$6D - 6D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	720	1299.138						920
	730	1299.221	190.1003 - 267.0688	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$6D - 6D^o$	$\frac{7}{2} - \frac{7}{2}$		920
		1300.1	188.8327 - 265.7524	$3d^6(a^5D)4s - 3d^6(b^3F)4s$	$6D - 4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	330	1300.147	227.5426 - 304.4561	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$4G - 2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	140	1300.329	229.7736 - 306.6781	$3d^6(a^3P)4s - 3d^6(a^3F)4p$	$2P - 4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	610	1300.696	201.4128 - 278.2946	$3d^6(a^5D)4s - 3d^6(a^5D)4p$	$4D - 6P^o$	$\frac{7}{2} - \frac{7}{2}$		920
	220	1302.350						920
	620	1304.284	226.3108 - 302.9804	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$4G - 4I^o$	$\frac{7}{2} - \frac{7}{2}$		920
	610	1304.540	227.8005 - 304.4561	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$2H - 2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	560	1305.342	228.0475 - 304.6550	$3d^6(a^3H)4s - 3d^6(a^3H)4p$	$2H - 2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	620	1306.308						920
	160	1306.672	235.0525 - 311.5824	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$2G - 4G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	210	1306.863	239.6145 - 316.1340	$3d^6(a^1G)4s - 3d^6(a^3G)4p$	$2G - 2F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	520	1308.108	234.0364 - 310.4831	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$2G - 4G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	550	1308.284	228.0203 - 304.4561	$3d^6(a^3G)4s - 3d^6(a^3H)4p$	$4G - 2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	610	1309.056						920
		1309.1	189.5869 - 265.9750	$3d^6(a^5D)4s - 3d^6(b^3F)4s$	$6D - 4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	650	1309.715	226.8888 - 303.2417	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$2P - 2D^o$	$\frac{7}{2} - \frac{7}{2}$		920
		1310.6	189.5869 - 265.8860	$3d^6(a^5D)4s - 3d^6(b^3F)4s$	$6D - 4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	520	1310.774						920
	340	1311.242	243.1404 - 319.4041	$3d^6(a^3D)4s - 3d^6(a^3D)4p$	$2D - 4P^o$	$\frac{7}{2} - \frac{7}{2}$		920
		1312.9	189.5869 - 265.7524	$3d^6(a^5D)4s - 3d^6(b^3F)4s$	$6D - 4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	220	1312.946	243.1404 - 319.3042	$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$2D - 2G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	220	1313.180	228.0475 - 304.1990	$3d^6(a^3H)4s - 3d^6(a^3P)4p$	$2H - 4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
	340	1313.491						920
	260	1314.188						920
	530	1314.535	226.8888 - 302.9612	$3d^6(a^3P)4s - 3d^6(a^3P)4p$	$2P - 4P^o$	$\frac{7}{2} - \frac{7}{2}$		920
		1314.9	1.6159 - 77.6680	$3d^7 - 3d^7$	$ga^4F - b^2D$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	370	1315.021	228.0475 - 304.0922	$3d^6(a^3H)4s - 3d^6(a^3F)4p$	$2H - 4F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	150	1316.735	246.6243 - 322.5690	$3d^6(a^1D)4s - 3d^6(a^3D)4p$	$2D - 4D^o$	$\frac{7}{2} - \frac{7}{2}$		920
		1318.0	190.1003 - 265.9750	$3d^6(a^5D)4s - 3d^6(b^3F)4s$	$6D - 4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	550	1318.892						920
	500	1319.293	236.0398 - 311.8378	$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$4D - 4G^o$	$\frac{7}{2} - \frac{7}{2}$		920
		1319.5	190.1003 - 265.8860	$3d^6(a^5D)4s - 3d^6(b^3F)4s$	$6D - 4F$	$\frac{7}{2} - \frac{7}{2}$	F,P	375,920
	360	1319.629	236.0589 - 311.8378	$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$4D - 4G^o$	$\frac{7}{2} - \frac{7}{2}$		920
	290	1320.987	235.0525 - 310.7538	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$2G - 4F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	140	1321.596	227.5426 - 303.2093	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$4G - 4F^o$	$\frac{7}{2} - \frac{7}{2}$		920
	270	1321.947						920
	110	1322.223						920

CU V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
360	1322.816							920
	1322.9		190.1003 - 265.6915	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^6D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
650	1323.278							920
420	1324.098		236.0589 - 311.5824	$3d^6(a^3D)4s - 3d^6(a^3G)4p$	$^4D - ^4G^o$	$\frac{3}{2} - \frac{7}{2}$		920
220	1324.410							920
	1324.7		190.4003 - 265.8860	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^6D - ^4F$	$\frac{1}{2} - \frac{5}{2}$	F,P	375,920
	1328.2		190.4003 - 265.6915	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^6D - ^4F$	$\frac{1}{2} - \frac{3}{2}$	F,P	375,920
90	1328.646							920
530	1328.777		234.0364 - 309.2941	$3d^6(a^3G)4s - 3d^6(a^3F)4p$	$^2G - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		920
640	1329.215		234.0364 - 309.2691	$3d^6(a^3G)4s - 3d^6(a^3G)4p$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{11}{2}$		920
	1329.4		1.6159 - 76.8382	$3d^7 - 3d^7$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1335.0		2.7593 - 77.6680	$3d^7 - 3d^7$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1349.9		2.7593 - 76.8382	$3d^7 - 3d^7$	$ga^4F - b^2D$	$\frac{5}{2} - \frac{3}{2}$	F,P	375,920
	1364.1		3.5281 - 76.8382	$3d^7 - 3d^7$	$ga^4F - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1503.0		199.4413 - 265.9750	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1508.0		199.4413 - 265.7524	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1530.8		200.6482 - 265.9750	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1532.8		200.6482 - 265.8860	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1536.0		200.6482 - 265.7524	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1548.9		201.4128 - 265.9750	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1551.0		201.4128 - 265.8860	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1555.7		201.4128 - 265.6915	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1561.6		201.8497 - 265.8860	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1566.4		201.8497 - 265.6915	$3d^6(a^3D)4s - 3d^6(b^3F)4s$	$^4D - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1974.2		27.0159 - 77.6680	$3d^7 - 3d^7$	$a^2P - b^2D$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920
	1997.1		0. - 50.0719	$3d^7 - 3d^7$	$ga^4F - a^2F$	$\frac{3}{2} - \frac{3}{2}$	F,P	375,920

COPPER VI (Cu⁵⁺), Z = 29
Ground State $1s^22s^22p^63s^23p^63d^6(^5D_4)$ (24 electrons)
Ionization Potential [831 000] cm^{-1} ; [103] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
57	281.489		0.0 - 355.25	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	4 - 3		1088
44	281.740		1.194 - 356.14	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	3 - 2		1088
16	281.942		1.985 - 356.67	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	2 - 1		1088
23	282.342		2.488 - 356.67	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	1 - 1		1088
30	282.355		1.985 - 356.14	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	2 - 2		1088
28	282.439		1.194 - 355.25	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	3 - 3		1088
8	282.537		2.732 - 356.67	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	0 - 1		1088
6	282.770		2.488 - 356.14	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	1 - 2		1088
5	283.068		1.985 - 355.25	$3d^6 - 3d^5(a^6S)4p$	$ga^3D - ^3P^o$	2 - 3		1088

COPPER VII (Cu⁶⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁶3d⁵(⁶S_{5/2}) (23 electrons)
Ionization Potential [1 121 000] cm⁻¹; [139] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	200	200.665	0.0 - 498.343	3d ⁵ - 3d ⁴ 4p	g ⁶ S - ⁶ P°	$\frac{5}{2} - \frac{7}{2}$		357
	150	200.851	0.0 - 497.881	3d ⁵ - 3d ⁴ 4p	g ⁶ S - ⁶ P°	$\frac{5}{2} - \frac{5}{2}$		357
	100	200.948	0.0 - 497.64	3d ⁵ - 3d ⁴ 4p	g ⁶ S - ⁶ P°	$\frac{5}{2} - \frac{3}{2}$		357

COPPER X (Cu⁹⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁶3d²(³F₂) (20 electrons)
Ionization Potential [1 871 000] cm⁻¹; [232] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	100	86.160	0.0 - 1160.63	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ G°	2 - 3		207
	100	86.204	2.49 - 1162.55	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ G°	3 - 4		207
	140	86.336	5.49 - 1163.76	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ G°	4 - 5		207
	10	86.422	5.49 - 1162.55	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ G°	4 - 4		207
	10	86.720	0.0 - 1153.14	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ F°	2 - 3		207
	90	86.776	0.0 - 1152.39	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ F°	2 - 2		207
	10	86.792	2.49 - 1154.67	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ F°	3 - 4		207
	90	86.907	2.49 - 1153.14	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ F°	3 - 3		207
	0	86.964	2.49 - 1152.39	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ F°	3 - 2		207
	90	87.018	5.49 - 1154.67	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ F°	4 - 4		207
	0	87.135	5.49 - 1153.14	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ F°	4 - 3		207
	50	87.516	24.14 + X - 1166.79 + X	3p ⁶ 3d ² - 3p ⁶ 3d4f	¹ D - ³ D°	2 - 2		207
	100	87.703	24.14 + X - 1164.35 + X	3p ⁶ 3d ² - 3p ⁶ 3d4f	¹ D - ¹ F°	2 - 3		207
	100	87.932	24.14 + X - 1161.38 + X	3p ⁶ 3d ² - 3p ⁶ 3d4f	¹ D - ¹ D°	2 - 2		207
	40	87.983	30.21 + X - 1166.79 + X	3p ⁶ 3d ² - 3p ⁶ 3d4f	³ P - ³ D°	0 - 1		207
	60	88.020	30.69 + X - 1166.79 + X	3p ⁶ 3d ² - 3p ⁶ 3d4f	³ P - ³ D°	1 - 2		207
	120	88.032	30.84 + X - 1166.79 + X	3p ⁶ 3d ² - 3p ⁶ 3d4f	³ P - ³ D°	2 - 3		207
	50	132.240	0.0 - 756.20	3p ⁶ 3d ² - 3p ² (3d ³ (⁴ F))	g ³ F - ³ D°	2 - 1		1056
	120	132.478	2.49 - 757.33	3p ⁶ 3d ² - 3p ² (3d ³ (⁴ F))	g ³ F - ³ D°	3 - 2		1056
	200	133.034	5.49 - 757.18	3p ⁶ 3d ² - 3p ² (3d ³ (⁴ F))	g ³ F - ³ D°	4 - 3		1056
	150	137.036	20.00 + K - 749.74 + K	3p ⁶ 3d ² - 3p ² (3d ³ (² H))	¹ G - ¹ G°	4 - 4		1056
	200	139.771	5.49 - 720.95	3p ⁶ 3d ² - 3p ² (3d ³ (⁴ F))	g ³ F - ³ F°	4 - 4		1056
	150	139.868	2.49 - 717.45	3p ⁶ 3d ² - 3p ² (3d ³ (⁴ F))	g ³ F - ³ F°	3 - 3		1056
	200	140.071	0.0 - 713.92	3p ⁶ 3d ² - 3p ² (3d ³ (⁴ F))	g ³ F - ³ F°	2 - 2		1056
	85	153.711	20.00 + K - 670.57 + K	3p ⁶ 3d ² - 3p ² (3d ³ (² H))	¹ G - ¹ H°	4 - 5		1056
	150	153.767	5.49 - 655.82	3p ⁶ 3d ² - 3p ² (3d ³ (² H))	g ³ F - ³ G°	4 - 5		1056
	50	154.363	2.49 - 650.31	3p ⁶ 3d ² - 3p ² (3d ³ (² H))	g ³ F - ³ G°	3 - 4		1056
	85	154.591	0.0 - 646.87	3p ⁶ 3d ² - 3p ² (3d ³ (² H))	g ³ F - ³ G°	2 - 3		1056

COPPER XI (Cu¹⁰⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁶3d^(²D_{3/2}) (19 electrons)
Ionization Potential [2 146 000] cm⁻¹; [266.1] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	1	56.915	0.0 - 1757.01	3p ⁶ 3d - 3p ⁶ 6f	g ² D - ² F°	2 - 2		207
	1	57.047	4.065 - 1756.96	3p ⁶ 3d - 3p ⁶ 6f	g ² D - ² F°	2 - 2		207
	40	63.038	0.0 - 1586.34	3p ⁶ 3d - 3p ⁶ 5f	g ² D - ² F°	2 - 2		207
	40	63.192	4.065 - 1586.54	3p ⁶ 3d - 3p ⁶ 5f	g ² D - ² F°	2 - 2		207
	1	70.895						207
	10	71.823						207
	10	71.847						207
	30	72.098						207
	2	72.369	0.0 - 1381.81	3p ⁶ 3d - 3p ² 3d(³ D°)4s	g ² D - ² D°	2 - 2		315
	15	72.580	4.065 - 1381.81	3p ⁶ 3d - 3p ² 3d(³ D°)4s	g ² D - ² D°	2 - 2		315
	5	72.792	4.065 - 1377.79	3p ⁶ 3d - 3p ² 3d(³ D°)4s	g ² D - ² D°	2 - 2		315
	5	72.956	4.065 - 1374.71	3p ⁶ 3d - 3p ² 3d(¹ F°)4s	g ² D - ² F°	2 - 2		315
	1	73.516	0.0 - 1360.25	3p ⁶ 3d - 3p ² 3d(³ D°)4s	g ² D - ⁴ D°	2 - 2		315
	5	73.735	4.065 - 1360.25	3p ⁶ 3d - 3p ² 3d(³ D°)4s	g ² D - ⁴ D°	2 - 2		315
	2	73.982	4.065 - 1355.70	3p ⁶ 3d - 3p ² 3d(³ D°)4s	g ² D - ⁴ D°	2 - 2		315
	15	74.633	0.0 - 1339.89	3p ⁶ 3d - 3p ² 3d(³ F°)4s	g ² D - ² F°	2 - 2		315
	1	74.856	4.065 - 1339.89	3p ⁶ 3d - 3p ² 3d(³ F°)4s	g ² D - ² F°	2 - 2		315
	25	75.325	4.065 - 1331.60	3p ⁶ 3d - 3p ² 3d(³ F°)4s	g ² D - ² F°	2 - 2		315
	2	75.472	0.0 - 1325.00	3p ⁶ 3d - 3p ² 3d(³ F°)4s	g ² D - ⁴ F°	2 - 2		315
	2	75.866	4.065 - 1322.13	3p ⁶ 3d - 3p ² 3d(³ F°)4s	g ² D - ⁴ F°	2 - 2		315
	1	76.022	0.0 - 1315.41	3p ⁶ 3d - 3p ² 3d(³ P°)4s	g ² D - ² P°	2 - 2		315
	5	76.256	4.065 - 1315.41	3p ⁶ 3d - 3p ² 3d(³ P°)4s	g ² D - ² P°	2 - 2		315
	10	76.406						207
	120	78.542	0.0 - 1273.21	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	2 - 2		207
	130	78.786	4.065 - 1273.32	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	2 - 2		207
	5	108.002	0.0 - 925.90	3p ⁶ 3d - 3p ⁶ 4p	g ² D - ² P°	2 - 2		1085
	100	108.479	4.065 - 925.90	3p ⁶ 3d - 3p ⁶ 4p	g ² D - ² P°	2 - 2		1085
	70	108.878	0.0 - 918.46	3p ⁶ 3d - 3p ⁶ 4p	g ² D - ² P°	2 - 2		1085
	400	134.914	0.0 - 741.22	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	2 - 2		1085
	120	134.989	0.0 - 740.80	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	2 - 2		1085
	100	135.286	0.0 - 739.18	3p ⁶ 3d - 3p ⁵ (3d ² (³ P))	g ² D - ² P°	2 - 2		1085
	90	135.655	4.065 - 741.22	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	2 - 2		1085
	500	135.734	4.065 - 740.80	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² D°	2 - 2		1085
	350	136.034	4.065 - 739.18	3p ⁶ 3d - 3p ⁵ (3d ² (³ P))	g ² D - ² P°	2 - 2		1085
	250	136.386	0.0 - 733.21	3p ⁶ 3d - 3p ⁵ (3d ² (³ P))	g ² D - ² P°	2 - 2		1085
	350	147.742	4.065 - 680.92	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² F°	2 - 2		1085
	320	149.455	0.0 - 669.10	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² F°	2 - 2		1085
	30	150.369	4.065 - 669.10	3p ⁶ 3d - 3p ⁵ (3d ² (³ F))	g ² D - ² F°	2 - 2		1085
	50	171.875	0.0 - 581.82	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² F°	2 - 2		1085
	100	180.001	4.065 - 559.62	3p ⁶ 3d - 3p ⁵ (3d ² (¹ D))	g ² D - ² F°	2 - 2		1085
	40	184.320	4.065 - 546.60	3p ⁶ 3d - 3p ⁵ (3d ² (¹ G))	g ² D - ² F°	2 - 2		1085

COPPER XII (Cu¹¹⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁶(¹S₀) (18 electrons)
Ionization Potential [2 975 000] cm⁻¹; [368.8] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
1	55.466		0.0 - 1802.91	3p ⁶ - 3p ⁵ 4d	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$) ^o	0 - 1		207
1	56.333		0.0 - 1775.16	3p ⁶ - 3p ⁵ 4d	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$) ^o	0 - 1		207
30	67.882		0.0 - 1473.14	3p ⁶ - 3p ⁵ 4s	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$) ^o	0 - 1		207
30	69.128		0.0 - 1446.59	3p ⁶ - 3p ⁵ 4s	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$) ^o	0 - 1		207
60	70.551		484.91 + W - 1902.33 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ P ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	1 - 2		729
50	70.656		484.91 + W - 1900.22 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ P ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	1 - 1		729
40	70.804		494.53 + W - 1906.88 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ P ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	2 - 3		729
40	71.033		494.53 + W - 1902.33 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ P ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	2 - 2		729
80	71.530		506.87 + W - 1904.88 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ F ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	4 - 5		729
70	71.609		511.62 + W - 1908.09 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ F ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	3 - 4		729
40	71.700		519.36 + W - 1914.06 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ F ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	2 - 3		729
60	71.948		552.60 + W - 1942.49 + W	3p ⁵ 3d - 3p ⁵ (² P _{1/2})4f	¹ D ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	2 - 2		729
60	72.373		560.58 + W - 1942.32 + W	3p ⁵ 3d - 3p ⁵ (² P _{1/2})4f	³ D ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	2 - 3		729
100	72.572		564.37 + W - 1942.32 + W	3p ⁵ 3d - 3p ⁵ (² P _{1/2})4f	¹ F ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	3 - 3		729
70	72.821		547.37 + W - 1920.60 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	³ D ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	3 - 4		729
30	73.734		564.37 + W - 1920.60 + W	3p ⁵ 3d - 3p ⁵ (² P _{3/2})4f	¹ F ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	3 - 4		729
20	80.666		718.34 - 1958.02	3p ⁵ 3d - 3p ⁵ (² P _{1/2})4f	¹ P ^o - ($\frac{3}{2}, \frac{3}{2}$) ^o	1 - 1		729
100	139.210		0.0 - 718.34	3p ⁶ - 3p ⁵ 3d	g ¹ S - ¹ P ^o	0 - 1		207

COPPER XIII (Cu¹²⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential [3 234 000] cm⁻¹; [401] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10	65.24		300.00 + D - 1832.80 + D	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ D ^o - ⁴ F ^o	$\frac{7}{2} - \frac{9}{2}$		878
10	66.18		320.00 + S - 1831.03 + S	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ F ^o - ⁴ G ^o	$\frac{9}{2} - \frac{11}{2}$		878
0	138.481		0.0 - 722.11	3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		302
5	142.930		0.0 - 699.64	3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		302
2	143.334		28.56 - 726.23	3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		302
2	144.186		28.56 - 722.11	3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		302

COPPER XIV (Cu¹³⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [3 509 000] cm⁻¹; [435] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10	61.08		2150.00 + D - 3787.20 + D	3s ² 3p ³ (⁴ S)3d - 3s ² 3p ³ (⁴ S ^o)4f	⁵ D ^o - ⁵ F	4 - 5		878
	61.70		2550.00 + L - 4170.74 + L	3s ² 3p ³ (² D)3d - 3s ² 3p ³ (² D ^o)4f	³ G ^o - ³ H	5 - 6		878
20	148.30		0.0 - 674.31	3s ² 3p ⁴ - 3s ² 3p ³ 3d	g ³ P - ³ D ^o	2 - 3		878
10	148.32		52.466 + N - 726.68 + N	3s ² 3p ⁴ - 3s ² 3p ³ 3d	¹ D - ¹ F ^o	2 - 3	P	878
	1190.		23.838 + N - 107.872 + N	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ S	1 - 0	F,P	1145
	1906.		0.0 - 52.466 + N	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ D	2 - 2	F,P	1145

COPPER XV (Cu¹⁴⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [3 904 000] cm⁻¹; [484] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	57.44	700.00 + D - 2440.95 + D	3s ² 3p ² (³ P)3d - 3s ² 3p ² (³ P)4f	⁴ F - ⁴ G°	$\frac{3}{2} - \frac{1}{2}$		878
	10	57.52	1050.00 + S - 2788.52 + S	3s ² 3p ² (¹ D)3d - 3s ² 3p ² (¹ D)4f	² G - ² H°	$\frac{3}{2} - \frac{1}{2}$		878
	30	154.67	57.783 + C - 704.32 + C	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	² D° - ² F	$\frac{3}{2} - \frac{1}{2}$		878
	20	161.34	0.0 - 619.82	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{1}{2}$		878
		944.2	0.0 - 105.910	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² P°	$\frac{3}{2} - \frac{1}{2}$	F, Q	1145
		1099.	0.0 - 90.983 + C	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² P°	$\frac{3}{2} - \frac{1}{2}$	F, P	1139
		1726.	47.939 - 105.910	3s ² 3p ³ - 3s ² 3p ³	² D° - ² P°	$\frac{3}{2} - \frac{1}{2}$	F, P	1139
		1731.	0.0 - 57.783 + C	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² D°	$\frac{3}{2} - \frac{1}{2}$	F, P	1139

COPPER XVI (Cu¹⁵⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [4 194 000] cm⁻¹; [520] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		44.47	18.597 - 2267.3	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ P°	1 - 0		970
		44.63	0.0 - 2240.6	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	0 - 1		970
		44.67	32.668 - 2271.3	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ F°	2 - 3		970
		44.98	18.597 - 2241.8	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	1 - 2		970
		45.21	32.668 - 2244.6	3s ² 3p ² - 3s ² 3p4d	g ³ P - ³ D°	2 - 3		970
		45.24	72.031 - 2282.5	3s ² 3p ² - 3s ² 3p4d	¹ D - ¹ F°	2 - 3		970
		45.90	123.551 - 2302.2	3s ² 3p ² - 3s ² 3p4d	¹ S - ¹ P°	0 - 1		970
		52.08	429.9 + U - 2350.0 + U	3s3p ³ - 3s ² 3p4f	¹ D° - ¹ F	2 - 3		970
		52.41	429.9 + U - 2337.9 + U	3s3p ³ - 3s ² 3p4f	¹ D° - ³ G	2 - 3		970
		54.24	600.0 + M - 2443.7 + M	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	4 - 5		970
		54.48	601.0 + N - 2436.5 + N	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	3 - 4		970
		55.46	650.0 + P - 2453.1 + P	3s ² 3p3d - 3s ² 3p4f	³ P° - ³ D	0 - 1		970
		56.06	625.09 - 2408.9	3s ² 3p3d - 3s ² 3p4f	³ D° - ³ F	3 - 4		970
		57.29	630.0 + S - 2375.5 + S	3s ² 3p3d - 3s ² 3p4f	¹ F° - ¹ G	3 - 4		970
		57.95	670.0 + T - 2395.6 + T	3s ² 3p3d - 3s ² 3p4f	¹ P° - ¹ D	1 - 2		970
	30	168.80	32.668 - 625.09	3s ² 3p ² - 3s ² 3p3d	g ³ P - ³ D°	2 - 3		878
		952.8	18.597 - 123.551	3s ² 3p ² - 3s ² 3p ²	g ³ P - ¹ S	1 - 0	F	1145
		1871.	18.597 - 72.031	3s ² 3p ² - 3s ² 3p ²	g ³ P - ¹ D	1 - 2	F, P	1145

COPPER XVII (Cu¹⁶⁺), Z = 29
Ground State 1s²2s²2p⁶3s²3p²(²P_{1/2}) (13 electrons)
Ionization Potential [4 493 000] cm⁻¹; [557] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	50	174.12	0.0 - 574.32	3s ² 3p - 3s ² 3d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		878
	50	183.47	33.239 - 578.29	3s ² 3p - 3s ² 3d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		878
	20	218.76	33.239 - 490.36	3s ² 3p - 3s3p ²	g ² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		878

COPPER XVIII (Cu¹⁷⁺), Z = 29
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential [5 106 000] cm⁻¹; [633] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	20	11.774	0.0 - 8493.3	3s ² - 2p ⁵ 3s ² 3d	g ¹ S - ¹ P°	0 - 1		716
	10	30.019	279.21 - 3610.43	3s3p - 3s5d	³ P° - ³ D	0 - 1		237
	20	30.104	289.35 - 3611.17	3s3p - 3s5d	³ P° - ³ D	1 - 2		237
	35	30.325	314.71 - 3612.41	3s3p - 3s5d	³ P° - ³ D	2 - 3		237
	6	35.238	818.06 - 3655.91	3s3d - 3s5f	³ D - ³ F°	1 - 2		237
	6	35.256	820.70 - 3657.10	3s3d - 3s5f	³ D - ³ F°	2 - 3		237
	10	35.294	823.88 - 3657.22	3s3d - 3s5f	³ D - ³ F°	3 - 4		237
	35	38.876	0.0 - 2572.28	3s ² - 3s4p	g ¹ S - ¹ P°	0 - 1		237
	6	40.613	279.21 - 2741.83	3s3p - 3s4d	³ P° - ³ D	0 - 1		237
	35	40.749	289.35 - 2743.44	3s3p - 3s4d	³ P° - ³ D	1 - 2		237
	10	40.769	289.35 - 2741.83	3s3p - 3s4d	³ P° - ³ D	1 - 1		237
	60	41.134	314.71 - 2745.79	3s3p - 3s4d	³ P° - ³ D	2 - 3		237
	10	41.173	314.71 - 2743.44	3s3p - 3s4d	³ P° - ³ D	2 - 2		237
	3	46.781	279.21 - 2416.50	3s3p - 3s4s	³ P° - ³ S	0 - 1		237
	6	47.012	289.35 - 2416.50	3s3p - 3s4s	³ P° - ³ S	1 - 1		237
	10	47.585	314.71 - 2416.50	3s3p - 3s4s	³ P° - ³ S	2 - 1		237
		48.783	1047.4 + N - 3097.3 + N	3p3d - 3p4f	³ F° - ³ F	3 - 4		970
		48.885	1000.0 + K - 3045.6 + K	3p3d - 3p4f	³ F° - ³ G	4 - 5		970
		49.010	1047.4 + N - 3087.8 + N	3p3d - 3p4f	³ F° - ³ G	3 - 4		970
		49.395	1163.3 + R - 3187.8 + R	3p3d - 3p4f	¹ D° - ¹ F	2 - 3		970
	10	49.452	818.06 - 2840.12	3s3d - 3s4f	³ D - ³ F°	1 - 2		237
	20	49.490	820.70 - 2841.31	3s3d - 3s4f	³ D - ³ F°	2 - 3		237
	20	49.558	823.88 - 2841.72	3s3d - 3s4f	³ D - ³ F°	3 - 4		237
		49.639	1220.0 + T - 3234.5 + T	3p3d - 3p4f	³ P° - ³ D	0 - 1		970
		49.769	1210.0 + S - 3219.3 + S	3p3d - 3p4f	³ P° - ³ D	1 - 2		970
		49.862	1110.0 + P - 3115.5 + P	3p3d - 3p4f	³ D° - ³ D	2 - 3		970
		50.067	1100.0 + N - 3097.3 + N	3p3d - 3p4f	³ D° - ³ F	3 - 4		970
		50.118	1120.0 + Q - 3115.3 + Q	3p3d - 3p4f	³ D° - ³ F	1 - 2		970
		50.306	1100.0 + N - 3087.8 + N	3p3d - 3p4f	³ D° - ³ G	3 - 4		970
		51.287	1100.0 + U - 3049.8 + U	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		970
		51.496	1300.0 + W - 3241.9 + W	3p3d - 3p4f	¹ P° - ¹ D	1 - 2		970
	10	185.58	279.21 - 818.06	3s3p - 3s3d	³ P° - ³ D	0 - 1		878
	30	188.20	289.35 - 820.70	3s3p - 3s3d	³ P° - ³ D	1 - 2		878
	50	196.40	314.71 - 823.88	3s3p - 3s3d	³ P° - ³ D	2 - 3		878
	50	204.06	426.91 - 916.96	3s3p - 3s3d	¹ P° - ¹ D	1 - 2		878
	50	234.24	0.0 - 426.91	3s ² - 3s3p	g ¹ S - ¹ P°	0 - 1		878
	10	345.6	0.0 - 289.35	3s ² - 3s3p	g ¹ S - ³ P°	0 - 1		1131

COPPER XIX (Cu¹⁸⁺), Z = 29
Ground State 1s²2s²2p⁶3s(²S_{1/2}) (11 electrons)
Ionization Potential 5 408 700 cm⁻¹; 670.60 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		13.11	0.0 - 7628.	2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		265
	1	22.475	329.410 - 4778.87	2p ⁶ 3p - 2p ⁶ 8d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		237
	1	22.661	365.817 - 4778.72	2p ⁶ 3p - 2p ⁶ 8d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		237
	10	23.503	329.410 - 4584.26	2p ⁶ 3p - 2p ⁶ 7d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		237
	10	23.599	0.0 - 4237.47	2p ⁶ 3s - 2p ⁶ 6p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		237
	1	23.621	0.0 - 4233.52	2p ⁶ 3s - 2p ⁶ 6p	g ² S - ² P°	$\frac{3}{2} - \frac{5}{2}$		237

CU XIX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	23.704	365.817 - 4584.55	$2p^63p - 2p^67d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		237
		25.142	811.767 - 4789.18	$2p^63d - 2p^68f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		237
	1	25.175	817.537 - 4789.81	$2p^63d - 2p^68f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		237
	100	25.297	329.410 - 4282.45	$2p^63p - 2p^66d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	150	25.526	365.817 - 4283.40	$2p^63p - 2p^66d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	20	26.416	811.767 - 4597.30	$2p^63d - 2p^67f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		237
	20	26.452	817.537 - 4597.90	$2p^63d - 2p^67f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		237
	150	27.032	0.0 - 3699.28	$2p^63s - 2p^65p$	$g^2S - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	100	27.075	0.0 - 3693.38	$2p^63s - 2p^65p$	$g^2S - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	100	28.631	811.767 - 4304.40	$2p^63d - 2p^66f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	150	28.674	817.537 - 4305.00	$2p^63d - 2p^66f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	180	28.987	329.410 - 3779.18	$2p^63p - 2p^65d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	200	29.284	365.817 - 3780.61	$2p^63p - 2p^65d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	300	33.266	811.767 - 3818.17	$2p^63d - 2p^65f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	350	33.320	817.537 - 3818.68	$2p^63d - 2p^65f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	450	37.293	0.0 - 2681.60	$2p^63s - 2p^64p$	$g^2S - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	350	37.488	0.0 - 2667.43	$2p^63s - 2p^64p$	$g^2S - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	550	39.725	329.410 - 2846.82	$2p^63p - 2p^64d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	650	40.263	365.817 - 2849.49	$2p^63p - 2p^64d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	200	40.298	365.817 - 2846.82	$2p^63p - 2p^64d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	200	45.332	329.410 - 2535.43	$2p^63p - 2p^64s$	$2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$		630
	300	46.090	365.817 - 2535.43	$2p^63p - 2p^64s$	$2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$		630
	850	47.340	811.767 - 2924.22	$2p^63d - 2p^64f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	1000	47.445	817.537 - 2925.24	$2p^63d - 2p^64f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	200	53.643	817.537 - 2681.60	$2p^63d - 2p^64p$	$2D - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	100	53.889	811.767 - 2667.43	$2p^63d - 2p^64p$	$2D - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	20	85.92	2535.43 - 3699.28	$2p^64s - 2p^65p$	$2S - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	630
	50	90.990	2681.60 - 3780.61	$2p^64p - 2p^65d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	100	102.960	2846.82 - 3818.17	$2p^64d - 2p^65f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	150	103.179	2849.49 - 3818.68	$2p^64d - 2p^65f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
	250	111.274	2924.22 - 3822.97	$2p^64f - 2p^65g$	$2F^\circ - 2G$	$\frac{3}{2} - \frac{1}{2}$		630
	350	111.353	2925.24 - 3823.28	$2p^64f - 2p^65g$	$2F^\circ - 2G$	$\frac{3}{2} - \frac{1}{2}$		630
	350	207.315	329.410 - 811.767	$2p^63p - 2p^63d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	450	221.376	365.817 - 817.537	$2p^63p - 2p^63d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	100	224.240	365.817 - 811.767	$2p^63p - 2p^63d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{1}{2}$		630
	150	273.361	0.0 - 365.817	$2p^63s - 2p^63p$	$g^2S - 2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		630
		303.57	0.0 - 329.410	$2p^63s - 2p^63p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		630

COPPER XX (Cu¹⁹⁺), Z = 29
Ground State $1s^22s^22p^6(^1S_0)$ (10 electrons)
Ionization Potential [13 630 000] cm⁻¹; [1690] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.955	0.0 - 12571.	$2s^22p^6 - 2s^22p^56d$	$g^1S - 3P^\circ$	0 - 1		643
	10	8.070	0.0 - 12392.	$2s^22p^6 - 2s^22p^56d$	$g^1S - 3D^\circ$	0 - 1		643,716
	10	8.330	0.0 - 12005.	$2s^22p^6 - 2s^22p^55d$	$g^1S - 1P^\circ$	0 - 1		643,716
	10	8.383	0.0 - 11929.	$2s^22p^6 - 2s2p^64p$	$g^1S - 1P^\circ$	0 - 1		1061,716
		8.395	0.0 - 11912.	$2s^22p^6 - 2s2p^64p$	$g^1S - 3P^\circ$	0 - 1		1061
	10	8.444	0.0 - 11843.	$2s^22p^6 - 2s^22p^55d$	$g^1S - 3D^\circ$	0 - 1		643,716

CU XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	9.102	0.0 - 10987.	$2s^2 2p^6 - 2s^2 2p^5 4d$	$g^1 S - ^1 P^o$	0 - 1		643,716
	20	9.233	0.0 - 10831.	$2s^2 2p^6 - 2s^2 2p^5 4d$	$g^1 S - ^3 D^o$	0 - 1		643,716
	10	9.371	0.0 - 10671.	$2s^2 2p^6 - 2s^2 2p^5 4s$	$g^1 S - ^1 P^o$	0 - 1		1061,716
	10	9.423	0.0 - 10606.	$2s^2 2p^6 - 2s^2 2p^5 4s$	$g^1 S - ^1 P^o$	0 - 1		643,716
	10	9.522	0.0 - 10502.	$2s^2 2p^6 - 2s^2 2p^5 4s$	$g^1 S - ^3 P^o$	0 - 1		1061,716
	100	10.599	0.0 - 9434.8	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^1 P^o$	0 - 1		643
	80	10.653	0.0 - 9387.0	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^3 P^o$	0 - 1		643
	150	11.386	0.0 - 8782.7	$2s^2 2p^6 - 2s^2 2p^5 3d$	$g^1 S - ^1 P^o$	0 - 1		643
	120	11.597	0.0 - 8622.9	$2s^2 2p^6 - 2s^2 2p^5 3d$	$g^1 S - ^3 D^o$	0 - 1		643
	50	11.737	0.0 - 8520.1	$2s^2 2p^6 - 2s^2 2p^5 3d$	$g^1 S - ^3 P^o$	0 - 1		643
	80	12.573	0.0 - 7953.6	$2s^2 2p^6 - 2s^2 2p^5 3s$	$g^1 S - ^1 P^o$	0 - 1		643
	100	12.830	0.0 - 7794.2	$2s^2 2p^6 - 2s^2 2p^5 3s$	$g^1 S - ^3 P^o$	0 - 1		643

COPPER XXI (Cu²⁰⁺), Z = 29
Ground State $1s^2 2s^2 2p^5 (^2P_{3/2}^o)$ (9 electrons)
Ionization Potential [14 460 000] cm^{-1} ; [1793] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		8.437	0.0 - 11853. +H	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 4d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$	P	1060
		8.554	168.91 - 11859.	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 4d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
	10	8.574	0.0 - 11654.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1060,716
		8.591	0.0 - 11640.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
	10	8.652	0.0 - 11558.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4d$	$g^2 P^o - ^4 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	10	8.691	0.0 - 11506.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4d$	$g^2 P^o - ^4 F$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	10	8.707	168.91 - 11654.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	10	8.754	0.0 - 11423.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	0	8.777	168.91 - 11562.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4d$	$g^2 P^o - ^2 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	10	8.808	0.0 - 11349.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4s$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1060,716
		8.870	0.0 - 11274.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4s$	$g^2 P^o - ^4 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
		8.911	0.0 - 11222.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4s$	$g^2 P^o - ^4 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1060
	0	8.936	168.91 - 11360.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4s$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
		8.984	0.0 - 11131.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4s$	$g^2 P^o - ^2 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
		9.10	0.0 - 10985. +C	$2s^2 2p^5 - 2p^6 3d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$	P	139
		9.26	168.91 - 10975. +C	$2s^2 2p^5 - 2p^6 3d$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$	P	139
	0	9.892	0.0 - 10112.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$	Q	716
	0	9.912	0.0 - 10089.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	10	9.961	0.0 - 10049.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$	Q	716
	10	10.057	168.91 - 10112.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
		10.074	168.91 - 10095.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
	10	10.121	168.91 - 10049.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
		10.203	0.0 - 9801.0	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^4 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
	0	10.234	0.0 - 9771.4	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	10	10.260	0.0 - 9746.6	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 P$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
		10.282	168.91 - 9894.6	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 S$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
		10.291	0.0 - 9717.2	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
		10.306	168.91 - 9872.0	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094
	10	10.316	0.0 - 9693.7	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^4 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716
	10	10.354	0.0 - 9658.1	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^4 D$	$\begin{smallmatrix} 1 & 2 \\ 2 & 1 \end{smallmatrix}$		1094,716

CU XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	10.392	168.91 - 9791.7	$2s^2 2p^5 - 2s^2 2p^4(^3P^o)3p$	$g^2 P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		1094,716
		10.625	0.0 - 9411.8 + H	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	1061
	15	10.800	168.91 - 9428.2	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,964
		10.813	0.0 - 9248.2	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
	40	10.858	0.0 - 9209.8	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094,716
	3	10.863	0.0 - 9205.8	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	14	10.893	0.0 - 9180.3	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2S$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	14	10.971	0.0 - 9114.9	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	12	11.002	168.91 - 9258.2	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	14	11.014	168.91 - 9248.2	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	14	11.026	0.0 - 9069.5	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		964
	12	11.065	168.91 - 9205.8	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	5	11.097	168.91 - 9180.3	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2S$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	19	11.114	0.0 - 8997.7	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	10	11.136	0.0 - 8979.9	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	7	11.162	0.0 - 8959.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	6	11.185	168.91 - 9109.4	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	10	11.229	168.91 - 9069.5	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	Q	716
	10	11.280	168.91 - 9035.8 + H	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	P	1061,716
		11.352	168.91 - 8979.9	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		1061
		11.736	168.91 - 8689.7	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2 P^o - ^2S$	$\frac{1}{2} - \frac{3}{2}$		1094
	8	11.830	0.0 - 8453.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	4	11.920	0.0 - 8389.2	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	6	11.956	0.0 - 8364.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094,964
		12.029	0.0 - 8313.2	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1061
	7	12.061	168.91 - 8460.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	7	12.140	0.0 - 8237.2	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	4	12.165	168.91 - 8389.2	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094,964
		12.186	0.0 - 8206.1	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
	10	12.203	168.91 - 8364.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		1061,716
		78.395	0.0 - 1275.59	$2s^2 2p^5 - 2s^2 p^6$	$g^2 P^o - ^2S$	$\frac{3}{2} - \frac{5}{2}$	P	1104
		90.360	168.91 - 1275.59	$2s^2 2p^5 - 2s^2 p^6$	$g^2 P^o - ^2S$	$\frac{1}{2} - \frac{3}{2}$	P	1104
		592.3	0.0 - 168.91	$2s^2 2p^5 - 2s^2 p^5$	$g^2 P^o - g^2 P^o$	$\frac{3}{2} - \frac{5}{2}$	F	1120

COPPER XXII (Cu²⁺), Z = 29
Ground State $1s^2 2s^2 2p^4(^3P_2)$ (8 electrons)
Ionization Potential [15 365 000] cm⁻¹; [1905] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		8.086	151.965 - 12519.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$g^3 P - ^3D^o$	1 - 2		1094
		8.125	0.0 - 12307.7	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)4d$	$g^3 P - ^3D^o$	2 - 3		1094
	10	8.158	151.965 - 12409.2	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$g^3 P - ^3D^o$	1 - 1		716
		8.171	0.0 - 12238.4	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)4d$	$g^3 P - ^3F^o$	2 - 3		1094
		8.222	238.21 - 12400.7 + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$^1D - ^3F^o$	2 - 3		1094
	10	8.275	456.50 - 12541.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)4d$	$^1S - ^1P^o$	0 - 1		1094,716
	10	8.275	0.0 - 12084.6	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)4d$	$g^3 P - ^3D^o$	2 - 3		1094,716
		8.281	238.21 - 12314.0	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)4d$	$^1D - ^1F^o$	2 - 3		1094
		8.333	101.516 - 12102.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)4d$	$g^3 P - ^3D^o$	0 - 1		1094
		8.385	151.965 - 12078.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)4d$	$g^3 P - ^3D^o$	1 - 2		1094
		10.277	151.965 - 9882.4	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3 P - ^1D^o$	1 - 2		634
	10	10.316	151.965 - 9845.6	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3 P - ^3D^o$	1 - 2		1094,716

CU XXII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	10.328	151.965 - 9834.4	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3d$	$g^3P - ^3D^{\circ}$	1 - 1		634
		10.342	0.0 - 9669.3	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3d$	$g^3P - ^3F^{\circ}$	2 - 3	Q	1094
		10.356	151.965 - 9808.2	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3d$	$g^3P - ^3P^{\circ}$	1 - 0		634,716
		10.371	0.0 - 9642.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^3S^{\circ}$	2 - 1		634
		10.392	0.0 - 9622.8	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 2		1094
		10.406	0.0 - 9609.8	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 3		634
	10	10.422	238.21 - 9834.4	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3d$	$^1D - ^3D^{\circ}$	2 - 1	Q	634
		10.438	0.0 - 9580.4	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^1P^{\circ}$	2 - 1		634,716
		10.501	0.0 - 9522.9	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^3G^{\circ}$	2 - 3		634
	10	10.507	0.0 - 9517.5	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^3F^{\circ}$	2 - 3		634,716
		10.523	0.0 - 9503.0	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^1D^{\circ}$	2 - 2		634
		10.547	238.21 - 9719.6	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3d$	$^1D - ^3F^{\circ}$	2 - 2		634
	10	10.551	151.965 - 9629.7	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	1 - 1		634,716
		10.562	151.965 - 9619.9	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	1 - 0		634
		10.597	238.21 - 9674.8	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$^1D - ^1F^{\circ}$	2 - 3		1094
		10.611	456.50 - 9880.7	$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3d$	$^1S - ^1P^{\circ}$	0 - 1		1094
		10.611	0.0 - 9424.2	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 3		1094
		10.653	0.0 - 9387.0	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 2		634
			10	10.728	0.0 - 9321.4	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 1
10.799	238.21 - 9503.0			$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3d$	$^1D - ^1D^{\circ}$	2 - 2	Q	716
11.097	151.965 - 9163.4			$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3s$	$g^3P - ^3P^{\circ}$	1 - 2		1094
11.185	238.21 - 9178.8			$2s^2 2p^4 - 2s^2 2p^3(^2P^{\circ})3s$	$^1D - ^1P^{\circ}$	2 - 1		1094
11.198	0.0 - 8930.2			$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3s$	$g^3P - ^3D^{\circ}$	2 - 3		1094
11.266	0.0 - 8873.4			$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3s$	$g^3P - ^3D^{\circ}$	2 - 2		1094
	40	11.416	0.0 - 8758.4	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ})3s$	$g^3P - ^3S^{\circ}$	2 - 1		1094,716
		11.440	151.965 - 8893.2	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3s$	$g^3P - ^3D^{\circ}$	1 - 1		1094
		11.466	151.965 - 8873.4	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3s$	$g^3P - ^3D^{\circ}$	1 - 2		1094
		11.468	238.21 - 8958.1	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3s$	$^1D - ^1D^{\circ}$	2 - 2		1094
		11.573	238.21 - 8873.4	$2s^2 2p^4 - 2s^2 2p^3(^2D^{\circ})3s$	$^1D - ^3D^{\circ}$	2 - 2	Q	1094,716
		11.621	151.965 - 8758.4	$2s^2 2p^4 - 2s^2 2p^3(^4S^{\circ})3s$	$g^3P - ^3S^{\circ}$	1 - 1		1094
		65.428	0.0 - 1528.39	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^1P^{\circ}$	2 - 1	P	1104
		77.509	238.21 - 1528.39	$2s^2 2p^4 - 2s2p^5$	$^1D - ^1P^{\circ}$	2 - 1	P	1104
		83.176	0.0 - 1202.27	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^{\circ}$	2 - 1	P	1104
		88.389	151.965 - 1283.33	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^{\circ}$	1 - 0	P	1104
		90.264	0.0 - 1107.86	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^{\circ}$	2 - 2	P	1104
		90.847	101.516 - 1202.27	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^{\circ}$	0 - 1	P	1104
		93.293	456.50 - 1528.39	$2s^2 2p^4 - 2s2p^5$	$^1S - ^1P^{\circ}$	0 - 1	P	1104
		95.210	151.965 - 1202.27	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^{\circ}$	1 - 1	P	1104
		98.029	1528.39 - 2548.50	$2s2p^3 - 2p^6$	$^1P^{\circ} - ^1S$	1 - 0	P	1104
		104.614	151.965 - 1107.86	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^{\circ}$	1 - 2	P	1104
		219.1	0.0 - 456.50	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1104
		328.4	151.965 - 456.50	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1104
		420.0	0.0 - 238.21	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F	1120
		458.1	238.21 - 456.50	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1104
		657.7	0.0 - 151.965	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F	1120
		731.6	101.516 - 238.21	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1104
		985.07	0.0 - 101.516	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1104
		1159.	151.965 - 238.21	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 2	F,P	375,1104
		1982.	101.516 - 151.965	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	0 - 1	F,P	375,1104

COPPER XXIII (Cu²²⁺), Z = 29
Ground State 1s²2s²2p³(⁴S_{3/2}) (7 electrons)
Ionization Potential [16 490 000] cm⁻¹; [2045] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	0	9.772	300.0+R - 10533.+R	2s ² 2p ³ - 2s ² 2p ² 3d	² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		716
		79.65	229.98 - 1485.5	2s ² 2p ³ - 2s2p ⁴	² D° - ² P	$\frac{3}{2} - \frac{3}{2}$		396
		83.35	300.0+R - 1499.8+R	2s ² 2p ³ - 2s2p ⁴	² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		396
		92.72	170.95 - 1249.5	2s ² 2p ³ - 2s2p ⁴	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		396
		94.83	229.98 - 1284.5	2s ² 2p ³ - 2s2p ⁴	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		396
		434.8	0.0 - 229.98	2s ² 2p ³ - 2s ² 2p ³	g ⁴ S° - ² D°	$\frac{3}{2} - \frac{3}{2}$	F	1120
		585.0	0.0 - 170.95	2s ² 2p ³ - 2s ² 2p ³	g ⁴ S° - ² D°	$\frac{3}{2} - \frac{3}{2}$	F	1120

COPPER XXIV (Cu²³⁺), Z = 29
Ground State 1s²2s²2p²(³P₀) (6 electrons)
Ionization Potential [17 530 000] cm⁻¹; [2173] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	0	9.802	0.0 - 10206.	2s ² 2p ² - 2s ² 2p3s	g ³ P - ³ P°	0 - 1	Q	716
	10	9.982	188.42 - 10206.	2s ² 2p ² - 2s ² 2p3s	g ³ P - ³ P°	2 - 2	Q	716
	10	10.103	132.12 - 10030.	2s ² 2p ² - 2s ² 2p3s	g ³ P - ¹ P°	1 - 1		716
	0	10.170	373.61 - 10206.	2s ² 2p ² - 2s ² 2p3s	¹ D - ³ P°	2 - 2		716
	10	10.400	414.6 - 10030.	2s ² 2p ² - 2s ² 2p3s	¹ S - ¹ P°	0 - 1		716
		414.1	132.12 - 373.61	2s ² 2p ² - 2s ² 2p ²	g ³ P - ¹ D	1 - 2	F	1120
		540.0	188.42 - 373.61	2s ² 2p ² - 2s ² 2p ²	g ³ P - ¹ D	2 - 2	F	1120
		756.9	0.0 - 132.12	2s ² 2p ² - 2s ² 2p ²	g ³ P - g ³ P	0 - 1	F	1120
		1776.0	132.12 - 188.42	2s ² 2p ² - 2s ² 2p ²	g ³ P - g ³ P	1 - 2	F	1120

COPPER XXV (Cu²⁴⁺), Z = 29
Ground State 1s²2s²2p(²P_{1/2}) (5 electrons)
Ionization Potential [18 530 000] cm⁻¹; [2298] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		522.8	0.0 - 191.28	2s ² 2p - 2s ² 2p	g ² P° - g ² P°	$\frac{1}{2} - \frac{3}{2}$	F	1120

COPPER XXVI (Cu²⁵⁺), Z = 29
Ground State 1s²2s²(¹S₀) (4 electrons)
Ionization Potential [19 830 000] cm⁻¹; [2459] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	8.551	593.30 - 12293.5	1s ² 2s2p - 1s ² 2p3p	³ P° - ¹ D	2 - 2		643
	30	8.653	593.30 - 12150.0	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	2 - 2		643
		8.663	0.0 - 11543.5+C	1s ² 2s ² - 1s ² 2s3p	g ¹ S - ¹ P°	0 - 1	P	619
		8.705	0.0 - 11487.4+C	1s ² 2s ² - 1s ² 2s3p	g ¹ S - ³ P°	0 - 1	P	619
	0	8.772	899.28 - 12293.5	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ D	1 - 2		643
	0	8.933	438.98 - 11633.4	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	1 - 1		643
	0	8.981	899.28 - 12033.9	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ P	1 - 1		643
	50	9.233	1475.5+B - 12306.2+B	1s ² 2p ² - 1s ² 2p3d	¹ D - ¹ D°	2 - 2		643
	0	9.331	1709.0+B - 12426.0+B	1s ² 2p ² - 1s ² 2p3d	¹ S - ¹ P°	0 - 1		643
	0	9.355	593.30 - 11282.8	1s ² 2s2p - 1s ² 2s3s	³ P° - ³ S	2 - 1		643
	0	9.373	1475.5+B - 12144.4+B	1s ² 2p ² - 1s ² 2p3d	¹ D - ³ P°	2 - 2		643
	0	9.520	1475.5+B - 11979.7+B	1s ² 2p ² - 1s ² 2p3s	¹ D - ¹ P°	2 - 1		643
	0	9.737	1709.0+B - 11979.7+B	1s ² 2p ² - 1s ² 2p3s	¹ S - ¹ P°	0 - 1		643
		111.2	0.0 - 899.28	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ¹ P°	0 - 1		1120
		227.8	0.0 - 438.98	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ³ P°	0 - 1		1120
		648.0	438.98 - 593.30	1s ² 2s2p - 1s ² 2s2p	³ P° - ³ P°	1 - 2	F	1120

COPPER XXVII (Cu²⁶⁺), Z = 29
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential [20 850 000] cm⁻¹; [2585] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.482	0.0 - 67466.+N	1s ² 2s - 1s(2s2p(¹ P°))	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	631
		1.492	0.0 - 67217.+N	1s ² 2s - 1s(2s2p(³ P°))	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		429
		8.41	0.0 - 11897.+V	1s ² 2s - 1s ² 3p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	631
		8.45	0.0 - 11837.+V	1s ² 2s - 1s ² 3p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	631
		153.6	0.0 - 651.04	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		1120
		224.8	0.0 - 444.84	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		1120

COPPER XXVIII (Cu²⁷⁺), Z = 29
Ground State 1s²(¹S₀) (2 electrons)
Ionization Potential 89 229 000 cm⁻¹; 11063.1 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.166	0.0 - 85756.70	1s ² - 1s5p	g ¹ S - ³ P°	0 - 1	P	728
		1.193	0.0 - 83793.45	1s ² - 1s4p	g ¹ S - ³ P°	0 - 1	P	728
		1.257	0.0 - 79539.02	1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	P	728
		1.478	0.0 - 67683.28	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	P	728
		1.485	0.0 - 67333.78	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	P	728
		1.492	0.0 - 67044.42	1s ² - 1s2s	g ¹ S - ³ S	0 - 1	F,P	1105

COPPER XXIX (Cu²⁸⁺), Z = 29
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 93 297 700 cm⁻¹; 11567.5 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.116	0.0 - 89594.5570	1s - 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.143	0.0 - 87509.4320	1s - 4p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.205	0.0 - 83005.0590	1s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.425	0.0 - 70161.0400	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.431	0.0 - 69894.7500	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	375,1042
		5.078	69901.6800 - 89594.5570	2s - 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		5.144	70161.0400 - 89600.0976	2p - 5d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	375,1042
		5.679	69901.6800 - 87509.4320	2s - 4p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		5.761	70161.0400 - 87520.2527	2p - 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	375,1042
		7.632	69901.6800 - 83005.0590	2s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		7.770	70161.0400 - 83030.6870	2p - 3d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	P	375,1042
		385.564	69901.6800 - 70161.0400	2s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042

ZINC, Z = 30
 Unclassified Lines

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	512.656						152
	15	512.812						152
	20	518.550						152
	15	524.323						152
	12	532.310						152
	10	542.762						152
	15	544.195						152
	10	564.305						152
	20	574.967						152
	20	582.852						152
	15	903.194						152
	10	926.083						152
	10	926.892						152
	12	949.063						152
	10	975.438						152
	12	977.536						152
	10	980.623						152
	10	982.253						152
	10	987.445						152
	15	990.443						152
	10	998.496						152
	10	999.413						152
	12	1000.885						152
	20	1001.932						152
	12	1003.523						152
	12	1004.598						152
	10	1006.347						152
	12	1009.049						152
	10	1009.648						152
	10	1016.017						152
	12	1017.431						152
	10	1018.107						152
	10	1018.456						152
	10	1023.423						152
	10	1042.980						152
	10	1046.867						152
	10	1079.655						152
	10	1088.711						152
	10	1117.393						152
	10	1138.175						152
	10	1142.865						152
	15	1146.465						152
	10	1147.006						152
	12	1148.062						152
	10	1152.957						152
	15	1163.315						152
	50	1173.854						152
	10	1176.846						152
	60	1178.929						152
	20	1181.539						152
	12	1183.824						152
	50	1187.404						152
	12	1195.019						152
	35	1196.009						152

ZINC I (Zn⁰⁺), Z = 30
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²(¹S₀) (30 electrons)
Ionization Potential 75 769.33 cm⁻¹; 9.3943 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		715.071	0.0 - 139.846	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})9f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		716.878	0.0 - 139.494	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})8f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		719.676	0.0 - 138.951	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})7f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		720.619	0.0 - 138.770	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})9p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		723.95	0.0 - 138.132	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})6f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	P	1115
		725.39	0.0 - 137.856	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})8p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		727.850	0.0 - 137.391	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})10f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		729.252	0.0 - 137.127	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})9f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		731.158	0.0 - 136.769	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})8f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		731.724	0.0 - 136.663	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})10p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		733.478	0.0 - 136.337	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})7p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		733.81	0.0 - 136.274	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})7p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		733.84	0.0 - 136.270	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})7f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	P	1115
		734.907	0.0 - 136.072	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})9p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		738.497	0.0 - 135.411	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})6f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		739.840	0.0 - 135.164	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})8p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		744.80	0.0 - 134.265	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})4f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	P	1115
		745.970	0.0 - 134.054	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})5f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		748.37	0.0 - 133.625	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})7p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		749.962	0.0 - 133.340	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})6p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		750.73	0.0 - 133.204	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})6p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		760.20	0.0 - 131.545	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})4f	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		765.51	0.0 - 130.632	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})6p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		792.00	0.0 - 126.263	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})5p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		794.07	0.0 - 125.934	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{3/2})5p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		809.91	0.0 - 123.470	3d ¹⁰ 4s ² - 3d ⁹ 4s ² (² D _{5/2})5p	g ¹ S - $\frac{3}{2}^{\circ}$	0 - 1	A	1115
		1331.375	0.0 - 75.11031	3d ¹⁰ 4s ² - 3d ¹⁰ 4s15p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1331.610	0.0 - 75.09709	3d ¹⁰ 4s ² - 3d ¹⁰ 4s14d	g ¹ S - ¹ D	0 - 2	F,A	112
		1333.422	0.0 - 74.99499	3d ¹⁰ 4s ² - 3d ¹⁰ 4s14p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1333.721	0.0 - 74.97820	3d ¹⁰ 4s ² - 3d ¹⁰ 4s13d	g ¹ S - ¹ D	0 - 2	F,A	112
		1336.067	0.0 - 74.84654	3d ¹⁰ 4s ² - 3d ¹⁰ 4s13p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1336.451	0.0 - 74.82505	3d ¹⁰ 4s ² - 3d ¹⁰ 4s12d	g ¹ S - ¹ D	0 - 2	F,A	112
		1339.569	0.0 - 74.65087	3d ¹⁰ 4s ² - 3d ¹⁰ 4s12p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1340.001	0.0 - 74.62680	3d ¹⁰ 4s ² - 3d ¹⁰ 4s12p	g ¹ S - ³ P ^o	0 - 1	A	112
		1340.074	0.0 - 74.62277	3d ¹⁰ 4s ² - 3d ¹⁰ 4s11d	g ¹ S - ¹ D	0 - 2	F,A	112
		1344.343	0.0 - 74.38580	3d ¹⁰ 4s ² - 3d ¹⁰ 4s11p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1344.956	0.0 - 74.35185	3d ¹⁰ 4s ² - 3d ¹⁰ 4s11p	g ¹ S - ³ P ^o	0 - 1	A	112
		1345.023	0.0 - 74.34818	3d ¹⁰ 4s ² - 3d ¹⁰ 4s10d	g ¹ S - ¹ D	0 - 2	F,A	112
		1351.098	0.0 - 74.01387	3d ¹⁰ 4s ² - 3d ¹⁰ 4s10p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1352.003	0.0 - 73.96433	3d ¹⁰ 4s ² - 3d ¹⁰ 4s10p	g ¹ S - ³ P ^o	0 - 1	A	112
		1352.048	0.0 - 73.96189	3d ¹⁰ 4s ² - 3d ¹⁰ 4s9d	g ¹ S - ¹ D	0 - 2	F,A	112
		1361.111	0.0 - 73.46937	3d ¹⁰ 4s ² - 3d ¹⁰ 4s9p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1362.483	0.0 - 73.39542	3d ¹⁰ 4s ² - 3d ¹⁰ 4s8d	g ¹ S - ¹ D	0 - 2	F,A	112
	60	1362.526	0.0 - 73.39307	3d ¹⁰ 4s ² - 3d ¹⁰ 4s9p	g ¹ S - ³ P ^o	0 - 1		112,152
		1376.911	0.0 - 72.62632	3d ¹⁰ 4s ² - 3d ¹⁰ 4s8p	g ¹ S - ¹ P ^o	0 - 1	A	112
		1378.987	0.0 - 72.51698	3d ¹⁰ 4s ² - 3d ¹⁰ 4s7d	g ¹ S - ¹ D	0 - 2	F,A	112
		1379.329	0.0 - 72.49900	3d ¹⁰ 4s ² - 3d ¹⁰ 4s8p	g ¹ S - ³ P ^o	0 - 1	A	112
	20	1404.119	0.0 - 71.21905	3d ¹⁰ 4s ² - 3d ¹⁰ 4s7p	g ¹ S - ¹ P ^o	0 - 1		112,152
		1407.438	0.0 - 71.05111	3d ¹⁰ 4s ² - 3d ¹⁰ 4s6d	g ¹ S - ¹ D	0 - 2	F,A	112
		1408.803	0.0 - 70.98223	3d ¹⁰ 4s ² - 3d ¹⁰ 4s7p	g ¹ S - ³ P ^o	0 - 1	A	112
4	20	1457.570	0.0 - 68.60727	3d ¹⁰ 4s ² - 3d ¹⁰ 4s6p	g ¹ S - ¹ P ^o	0 - 1		112,152
		1463.304	0.0 - 68.33849	3d ¹⁰ 4s ² - 3d ¹⁰ 4s5d	g ¹ S - ¹ D	0 - 2	F,A	112
	3	1468.846	0.0 - 68.08067	3d ¹⁰ 4s ² - 3d ¹⁰ 4s6p	g ¹ S - ³ P ^o	0 - 1		112,152
3	30	1589.567	0.0 - 62.91043	3d ¹⁰ 4s ² - 3d ¹⁰ 4s5p	g ¹ S - ¹ P ^o	0 - 1		112,152

ZN I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
2	10	1601.063	0.0 - 62.45852	$3d^{10}4s^2 - 3d^{10}4s4d$	$g^1S - ^1D$	0 - 2	F,A	112
		1632.002	0.0 - 61.27442	$3d^{10}4s^2 - 3d^{10}4s5p$	$g^1S - ^3P^o$	0 - 1		112,152

ZINC II (Zn¹⁺), Z = 30
Ground State $1s^22s^22p^63s^23p^63d^{10}4s(^2S_{1/2})$ (29 electrons)
Ionization Potential 144 892.6 cm^{-1} ; 17.9645 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	732.605	0.0 - 136.5053	$3d^{10}4s - 3d^{10}9p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		457
	3	742.720	0.0 - 134.6438	$3d^{10}4s - 3d^9(^2D)4s4p(^1P^o)$	$g^2S - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		154
	5	747.358	0.0 - 133.8063	$3d^{10}4s - 3d^9(^2D)4s4p(^1P^o)$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		154
	5	767.050	0.0 - 130.37157	$3d^{10}4s - 3d^9(^2D)4s4p(^1P^o)$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		154
	5	778.112	0.0 - 128.5185	$3d^{10}4s - 3d^{10}7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		154
	10	779.163	0.0 - 128.34344	$3d^{10}4s - 3d^{10}7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		154
	1	801.075	49.35504 - 174.1897	$3d^{10}4p - 3d^94s(^3D)4d$	$^2P^o - 16$	$\frac{3}{2} - \frac{3}{2}$	Q	162
	0	806.561	49.35504 - 173.3398	$3d^{10}4p - 3d^94s(^3D)4d$	$^2P^o - 14$	$\frac{3}{2} - \frac{5}{2}$	Q	162
	1	833.600	0.0 - 119.95934	$3d^{10}4s - 3d^{10}6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		154
	6	834.11	0.0 - 119.88851	$3d^{10}4s - 3d^{10}6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		682
4	876.84	0.0 - 114.04503	$3d^{10}4s - 3d^9(^2D)4s4p(^3P^o)$	$g^2S - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		682	
15	881.060	0.0 - 113.4992	$3d^{10}4s - 3d^9(^2D)4s4p(^3P^o)$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		154	
6	888.620	0.0 - 112.5349	$3d^{10}4s - 3d^9(^2D)4s4p(^3P^o)$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$		154	
10	892.914	0.0 - 111.9943	$3d^{10}4s - 3d^9(^2D)4s4p(^3P^o)$	$g^2S - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$		154	
0	923.969	0.0 - 108.2279	$3d^{10}4s - 3d^9(^2D)4s4p(^3P^o)$	$g^2S - ^4F^o$	$\frac{1}{2} - \frac{3}{2}$		154	
1	938.719	0.0 - 106.5288	$3d^{10}4s - 3d^9(^2D)4s4p(^3P^o)$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		154	
10	949.455	0.0 - 105.3227	$3d^{10}4s - 3d^9(^2D)4s4p(^3P^o)$	$g^2S - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$		154	
2	971.699						457	
10	984.139	0.0 - 101.6114	$3d^{10}4s - 3d^{10}5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		154	
8	986.516	0.0 - 101.3659	$3d^{10}4s - 3d^{10}5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		154	
8	1115.657	48.48100 - 138.1140	$3d^{10}4p - 3d^{10}9d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154	
2	1126.611	49.35504 - 138.1175	$3d^{10}4p - 3d^{10}9d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		154	
2	1128.300	105.3227 - 193.952	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		154	
8	1138.524						457	
2	1142.904	103.7016 - 191.1980	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4P^o - ^4D$	$\frac{5}{2} - \frac{7}{2}$		154	
0	1150.223	48.48100 - 135.4233	$3d^{10}4p - 3d^{10}9s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	Q	162	
1	1150.758	105.3227 - 192.225	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	Q	162	
4	1152.139						457	
5	1153.398	49.35504 - 136.0568	$3d^{10}4p - 3d^{10}8d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		154	
1	1161.813	106.5288 - 192.5995	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	Q	162	
0	1171.343	106.8524 - 192.225	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4F^o - ^4D$	$\frac{7}{2} - \frac{5}{2}$	Q	162	
5	1171.943	107.2686 - 192.598	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4F^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		154	
8	1177.052	107.2686 - 192.225	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4F^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	Q	162	
2	1183.488						457	
8	1184.528	106.7799 - 191.1980	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4F^o - ^4D$	$\frac{9}{2} - \frac{7}{2}$		457	
40	1184.858	48.48100 - 132.8806	$3d^{10}4p - 3d^{10}7d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		154	
1	1185.610	106.8524 - 191.1980	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4F^o - ^4D$	$\frac{7}{2} - \frac{7}{2}$		154	
	1192.961						457	
60	1193.231						154	
40	1197.149	49.35504 - 132.8884	$3d^{10}4p - 3d^{10}7d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		154	
30	1206.525						457	
25	1211.841	49.35504 - 131.8769	$3d^{10}4p - 3d^{10}8s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		154	

ZN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1228.261	112.5349 - 193.952	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4D^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		154
	1	1236.768	111.7430 - 192.598	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4D^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	Q	154
	3	1240.625	111.9943 - 192.598	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4D^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154
	0	1241.874	110.6723 - 191.1980	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^2F^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		154
	2	1244.848	110.8672 - 191.1980	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4D^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		154
	0	1258.581	111.7430 - 191.1980	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^4D^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		154
	40	1263.412	48.48100 - 127.6306	$3d^{10}4p - 3d^{10}6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154
		1265.065				$\frac{1}{2} - \frac{3}{2}$		457
	60	1277.306	49.35504 - 127.6437	$3d^{10}4p - 3d^{10}6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154
	40	1277.523	49.35504 - 127.6306	$3d^{10}4p - 3d^{10}6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154
	3	1292.00	48.48100 - 125.8800	$3d^{10}4p - 3d^{10}7s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		682
	5	1306.741	49.35504 - 125.8800	$3d^{10}4p - 3d^{10}7s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		154
	1	1309.521	114.83395 - 191.1980	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)6s$	$^2D^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		154
	1	1334.029	117.2640 - 192.225	$3d^{10}4f - 3d^94s(^3D)6s$	$^2F^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	Q	162
	1	1351.030	65.44164 - 139.457	$3d^94s^2 - 3d^{10}9f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	Q	162
	25	1355.332	62.72245 - 136.5053	$3d^94s^2 - 3d^{10}9p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	60	1366.682	62.72245 - 135.8899	$3d^94s^2 - 3d^{10}7f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		154
	1	1376.633	119.95934 - 192.598	$3d^{10}6p - 3d^94s(^3D)6s$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$	Q	162
	40	1390.372	62.72245 - 134.6438	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		154
	2	1407.189	65.44164 - 136.5053	$3d^94s^2 - 3d^{10}9p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	3	1407.215	65.44164 - 136.5053	$3d^94s^2 - 3d^{10}9p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	7	1407.259				$\frac{1}{2} - \frac{1}{2}$		457
	100	1410.443	62.72245 - 133.6221	$3d^94s^2 - 3d^{10}8p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	3	1419.416	65.44164 - 135.8926	$3d^94s^2 - 3d^{10}7f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		154
	200	1419.982	62.72245 - 133.14576	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		457
	15	1430.285	62.72245 - 132.6394	$3d^94s^2 - 3d^{10}6f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		457
	150	1430.992	62.72245 - 132.60409	$3d^94s^2 - 3d^{10}6f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		457
	500	1439.091	48.48100 - 117.96932	$3d^{10}4p - 3d^{10}5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		457
	5	1442.962	103.7016 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 12$	$\frac{1}{2} - \frac{1}{2}$		154
	700	1445.042	65.44164 - 134.6438	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		457
	5	1450.234	105.3227 - 174.2778	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 17$	$\frac{1}{2} - \frac{1}{2}$		154
	700	1450.778	62.72245 - 131.65093	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		457
	500	1456.907	49.35504 - 117.99361	$3d^{10}4p - 3d^{10}5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		457
	100	1457.422	49.35504 - 117.96932	$3d^{10}4p - 3d^{10}5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		457
	20	1458.455	103.7016 - 172.2688	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 10$	$\frac{1}{2} - \frac{1}{2}$		154
	12	1460.616	103.7016 - 172.1657	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 9$	$\frac{1}{2} - \frac{1}{2}$		154
	150	1462.743	65.44164 - 133.8063	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	15	1466.697	65.44164 - 133.6221	$3d^94s^2 - 3d^{10}8p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	4	1467.867	103.7016 - 171.8276	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 8$	$\frac{1}{2} - \frac{1}{2}$		457
	2	1470.222	105.3227 - 173.3398	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 14$	$\frac{1}{2} - \frac{1}{2}$		154
	50	1471.862	103.7016 - 171.6430	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 7$	$\frac{1}{2} - \frac{1}{2}$		457
	400	1477.016	65.44164 - 133.14576	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		457
	5	1477.938	106.5288 - 174.1897	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 16$	$\frac{1}{2} - \frac{1}{2}$		154
	300	1478.216	62.72245 - 130.37157	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	80	1482.139	103.7016 - 171.1716	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 6$	$\frac{1}{2} - \frac{1}{2}$		457
	700	1486.065	62.72245 - 130.01426	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		457
	120	1488.926	65.44164 - 132.60409	$3d^94s^2 - 3d^{10}6f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$		457
	30	1492.121	105.3227 - 172.3415	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 11$	$\frac{1}{2} - \frac{1}{2}$		457
	2	1492.369	107.2686 - 174.2778	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 17$	$\frac{1}{2} - \frac{1}{2}$		154
	300	1493.133	65.44164 - 132.4149	$3d^94s^2 - 3d^{10}8p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		457
	5	1496.001	105.3227 - 172.1657	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 9$	$\frac{1}{2} - \frac{1}{2}$		457
	80	1497.410	106.7799 - 173.5619	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 21$	$\frac{1}{2} - \frac{1}{2}$		457
	20	1499.052	106.8524 - 173.5619	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 21$	$\frac{1}{2} - \frac{1}{2}$		457
	20	1499.077	106.8524 - 173.5607	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 20$	$\frac{1}{2} - \frac{1}{2}$		457

ZN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1503.109						457
	25	1503.653	105.3227 - 171.8276	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 8$	$\frac{3}{2} - \frac{3}{2}$		457
	5	1504.034	106.8524 - 173.3398	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 14$	$\frac{3}{2} - \frac{3}{2}$		457
	0	1508.453	107.2686 - 173.5607	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 20$	$\frac{3}{2} - \frac{3}{2}$	Q	162
	70	1508.645	103.7016 - 169.9863	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 4$	$\frac{3}{2} - \frac{3}{2}$		457
	5	1510.045	106.7799 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 12$	$\frac{3}{2} - \frac{3}{2}$		457
	150	1510.363	65.44164 - 131.65093	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		457
	12	1511.694	106.8524 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 12$	$\frac{3}{2} - \frac{3}{2}$		457
	15	1511.718	106.8524 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 12$	$\frac{3}{2} - \frac{3}{2}$		457
	20	1513.522	107.2686 - 173.3398	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 14$	$\frac{3}{2} - \frac{3}{2}$		457
	2	1513.982	108.2279 - 174.2778	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 17$	$\frac{3}{2} - \frac{3}{2}$	Q	162
	25	1514.479						457
	120	1514.763	48.48100 - 114.49802	$3d^{10}4p - 3d^{10}6s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		457
	35	1516.045	108.2279 - 174.1897	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 16$	$\frac{3}{2} - \frac{3}{2}$		154
	3	1518.631	105.3227 - 171.1716	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 6$	$\frac{3}{2} - \frac{3}{2}$		457
	2	1520.022	105.3227 - 171.1105	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 5$	$\frac{3}{2} - \frac{3}{2}$		457
	50	1520.527	107.2686 - 173.0353	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 13$	$\frac{3}{2} - \frac{3}{2}$		457
	15	1520.998	103.7016 - 169.4477	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 3$	$\frac{3}{2} - \frac{3}{2}$		457
	40	1521.276	107.2686 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 12$	$\frac{3}{2} - \frac{3}{2}$		457
	150	1523.903	62.72245 - 128.34344	$3d^94s^2 - 3d^{10}7p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		457
	15	1526.969	106.8524 - 172.3415	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 11$	$\frac{3}{2} - \frac{3}{2}$		457
	20	1527.002	106.7799 - 172.2688	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 10$	$\frac{3}{2} - \frac{3}{2}$		154
	25	1527.125						457
	20	1527.236						457
	100	1527.915	103.7016 - 169.1505	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 1$	$\frac{3}{2} - \frac{3}{2}$		457
	40	1528.550						457
	9	1528.759						457
	3	1529.355	127.2094 - 192.598	$3d^{10}5f - 3d^94s(^3D)6s$	$^2F^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	Q	162
	25	1530.620	108.2279 - 173.5607	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 20$	$\frac{3}{2} - \frac{3}{2}$		457
	30	1531.088	106.8524 - 172.1657	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 9$	$\frac{3}{2} - \frac{3}{2}$		457
	3	1531.394	106.5288 - 171.8276	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 8$	$\frac{1}{2} - \frac{3}{2}$		457
	200	1535.081	49.35504 - 114.49802	$3d^{10}4p - 3d^{10}6s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		457
	30	1535.823	108.2279 - 173.3398	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 14$	$\frac{3}{2} - \frac{3}{2}$		457
	20	1536.726	107.2686 - 172.3415	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 11$	$\frac{3}{2} - \frac{3}{2}$		457
	2	1538.464	107.2686 - 172.2688	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 10$	$\frac{3}{2} - \frac{3}{2}$		154
	50	1540.120	65.44164 - 130.37157	$3d^94s^2 - 3d^9(^2D)4s4p(^1P^o)$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		457
	80	1540.895	107.2686 - 172.1657	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 9$	$\frac{3}{2} - \frac{3}{2}$		457
	40	1541.707	106.7799 - 171.6430	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 7$	$\frac{3}{2} - \frac{3}{2}$		457
	20	1542.517						152
	50	1543.037	108.2279 - 173.0353	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 13$	$\frac{3}{2} - \frac{3}{2}$		457
	40	1543.428	106.8524 - 171.6430	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 7$	$\frac{3}{2} - \frac{3}{2}$		457
	50	1544.922						457
	10	1546.460	105.3227 - 169.9863	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 4$	$\frac{3}{2} - \frac{3}{2}$		457
	100	1546.650						457
	25	1546.991						154
	20	1547.800						457
	20	1548.434	106.5288 - 171.1105	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 5$	$\frac{1}{2} - \frac{1}{2}$		457
	3	1548.957	107.2686 - 171.8276	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 8$	$\frac{3}{2} - \frac{3}{2}$		457
	80	1550.936	62.72245 - 127.1996	$3d^94s^2 - 3d^{10}5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		457
	75	1551.031						154
	6	1554.225						457
	6	1554.740	106.8524 - 171.1716	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 6$	$\frac{7}{2} - \frac{5}{2}$		457
	100	1555.764						457
	10	1559.466	105.3227 - 169.4477	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 3$	$\frac{3}{2} - \frac{3}{2}$		457

ZN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	1559.709	108.2279 - 172.3415	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 11$	$\frac{3}{2} - \frac{5}{2}$		154
	5	1561.778	105.3227 - 169.3528	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 2$	$\frac{3}{2} - \frac{5}{2}$		154
	6	1564.369	103.7016 - 167.6244	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		457
	20	1564.885	107.2686 - 171.1716	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 6$	$\frac{3}{2} - \frac{5}{2}$	Q	162
	10	1566.736						154
	15	1572.198	110.6723 - 174.2778	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 17$	$\frac{5}{2} - \frac{5}{2}$		154
	40	1572.991						457
	6	1574.381	110.6723 - 174.1897	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 16$	$\frac{5}{2} - \frac{3}{2}$		154
	10	1575.810						152
	15	1576.905						154
	10	1580.443						154
	15	1583.933	106.8524 - 169.9863	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 4$	$\frac{7}{2} - \frac{5}{2}$		457
	100	1585.368	65.44164 - 128.5185	$3d^94s^2 - 3d^{10}7p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		457
	3	1588.754	108.2279 - 171.1716	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 6$	$\frac{3}{2} - \frac{5}{2}$		457
	50	1589.777	65.44164 - 128.34344	$3d^94s^2 - 3d^{10}7p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		457
	25	1590.133	110.6723 - 173.5607	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 20$	$\frac{3}{2} - \frac{5}{2}$		457
	2	1591.724	106.5288 - 169.3528	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4P^o - 2$	$\frac{3}{2} - \frac{5}{2}$		154
		1594.448	107.2686 - 169.9863	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 4$	$\frac{3}{2} - \frac{5}{2}$		457
	100	1595.027	110.8672 - 173.5619	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 21$	$\frac{7}{2} - \frac{9}{2}$		457
	20	1595.732	110.6723 - 173.3398	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 14$	$\frac{3}{2} - \frac{5}{2}$		457
	10	1596.076						152
	15	1597.556	106.8524 - 169.4477	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 3$	$\frac{7}{2} - \frac{5}{2}$		457
	5	1597.801						457
	100	1603.315	106.7799 - 169.1505	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 1$	$\frac{9}{2} - \frac{7}{2}$		457
	3	1603.508	110.6723 - 173.0353	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 13$	$\frac{3}{2} - \frac{5}{2}$		457
	20	1604.347	110.6723 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 12$	$\frac{3}{2} - \frac{5}{2}$		457
	10	1605.196	106.8524 - 169.1505	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 1$	$\frac{7}{2} - \frac{5}{2}$		457
	60	1606.082						457
	10	1608.555	110.8672 - 173.0353	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 13$	$\frac{7}{2} - \frac{5}{2}$		457
	70	1608.819						457
	10	1609.390	110.8672 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 12$	$\frac{7}{2} - \frac{7}{2}$		457
	30	1610.743	107.2686 - 169.3528	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 2$	$\frac{3}{2} - \frac{5}{2}$		154
	5	1611.501						154
	25	1611.866						457
	25	1613.938						154
	10	1614.364	111.7430 - 173.6880	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 15$	$\frac{3}{2} - \frac{5}{2}$		457
	8	1614.432						154
	1	1615.949	107.2686 - 169.1505	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4F^o - 1$	$\frac{3}{2} - \frac{7}{2}$		457
	30	1616.364	112.4097 - 174.2778	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 17$	$\frac{3}{2} - \frac{5}{2}$		154
	5	1616.729	130.37157 - 192.225	$3d^9(^2D)4s4p(^1P^o) - 3d^94s(^3D)6s$	$^2P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	Q	162
	40	1617.675	111.7430 - 173.5607	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 20$	$\frac{3}{2} - \frac{5}{2}$		457
	40	1618.968	65.44164 - 127.2094	$3d^94s^2 - 3d^{10}5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		457
	80	1619.269						154
	40	1621.552	110.6723 - 172.3415	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 11$	$\frac{5}{2} - \frac{5}{2}$		154
	15	1621.951	112.5349 - 174.1897	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 16$	$\frac{1}{2} - \frac{3}{2}$		154
	40	1623.479	111.7430 - 173.3398	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 14$	$\frac{3}{2} - \frac{5}{2}$		154
	30	1624.020	103.7016 - 165.2771	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		154
	2	1624.262	111.9943 - 173.5607	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 20$	$\frac{3}{2} - \frac{5}{2}$	Q	162
	3	1626.200	110.6723 - 172.1657	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 9$	$\frac{5}{2} - \frac{5}{2}$		154
	25	1630.119	111.9943 - 173.3398	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 14$	$\frac{3}{2} - \frac{5}{2}$		154
	20	1631.364	103.7016 - 164.9989	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		154
	12	1631.539	111.7430 - 173.0353	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 13$	$\frac{3}{2} - \frac{5}{2}$		154
	15	1632.390	111.7430 - 173.0031	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 12$	$\frac{3}{2} - \frac{7}{2}$		154
	3	1634.404	130.01426 - 191.1980	$3d^9(^2D)4s4p(^1P^o) - 3d^94s(^3D)6s$	$^2F^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	Q	162

ZN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1635.180	110.6723 - 171.8276	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 8$	110.6723 171.8276		154
	20	1635.277	112.4097 - 173.5607	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 20$	112.4097 173.5607		154
	2	1635.974	108.2279 - 169.3528	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4F^o - 2$	108.2279 169.3528	Q	162
	20	1638.239	111.9943 - 173.0353	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 13$	111.9943 173.0353		154
	50	1645.389	110.8672 - 171.6430	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 7$	110.8672 171.6430		154
	8	1647.571	113.4929 - 174.1897	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2P^o - 16$	113.4929 174.1897		154
	5	1647.754	113.4992 - 174.1897	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2P^o - 16$	113.4992 174.1897		154
	20	1650.211	111.7430 - 172.3415	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 11$	111.7430 172.3415		154
	10	1652.241	111.7430 - 172.2688	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 10$	111.7430 172.2688		154
	5	1652.931	110.6723 - 171.1716	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 6$	110.6723 171.1716		154
	30	1655.020	111.7430 - 172.1657	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 9$	111.7430 172.1657		154
	60	1658.245	110.8672 - 171.1716	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 6$	110.8672 171.1716		154
	4	1660.247	114.04503 - 174.2778	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 17$	114.04503 174.2778		154
	2	1661.306	113.4929 - 173.6880	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2P^o - 15$	113.4929 173.6880		154
	4	1661.495						154
	15	1662.695	114.04503 - 174.1897	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 16$	114.04503 174.1897		154
	0	1664.326	111.7430 - 171.8276	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 8$	111.7430 171.8276		154
	5	1667.911	105.3227 - 165.2771	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)5s$	$^4P^o - ^2D$	105.3227 165.2771		154
	1	1668.585	112.4097 - 172.3415	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 11$	112.4097 172.3415		154
	2	1669.453	111.7430 - 171.6430	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 7$	111.7430 171.6430		154
	4	1670.563	112.4097 - 172.2688	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 10$	112.4097 172.2688	Q	162
	2	1670.617	112.4097 - 172.2688	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 10$	112.4097 172.2688		154
	20	1671.313	111.9943 - 171.8276	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 8$	111.9943 171.8276		154
	5	1679.667	113.4992 - 173.0353	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2P^o - 13$	113.4992 173.0353		154
	0	1682.251	114.83395 - 174.2778	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 17$	114.83395 174.2778	Q	162
	5	1682.698	111.7430 - 171.1716	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 6$	111.7430 171.1716		154
	3	1684.802	114.83395 - 174.1897	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 16$	114.83395 174.1897		154
	5	1685.942	110.6723 - 169.9863	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 4$	110.6723 169.9863		154
	1	1686.133	134.6438 - 193.952	$3d^2(^2D)4s4p(^1P^o) - 3d^24s(^2D)6s$	$^2D^o - ^4D$	134.6438 193.952	Q	162
	25	1686.502	114.04503 - 173.3398	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 14$	114.04503 173.3398		154
	15	1688.240	112.4097 - 171.6430	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 7$	112.4097 171.6430		154
	25	1689.818	111.9943 - 171.1716	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 6$	111.9943 171.1716		154
	1	1691.470	110.8672 - 169.9863	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 4$	110.8672 169.9863		154
	1	1691.592	111.9943 - 171.1105	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 5$	111.9943 171.1105		154
	3	1699.471	113.4992 - 172.3415	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2P^o - 11$	113.4992 172.3415		154
	4	1701.398	110.6723 - 169.4477	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 3$	110.6723 169.4477		154
	12	1701.766	112.4097 - 171.1716	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 6$	112.4097 171.1716		154
	2	1702.836	114.83395 - 173.5607	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 20$	114.83395 173.5607		457
	0	1704.577	113.4992 - 172.1657	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2P^o - 9$	113.4992 172.1657		154
	20	1707.191	112.5349 - 171.1105	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 5$	112.5349 171.1105		154
	0	1709.243	114.83395 - 173.3398	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 14$	114.83395 173.3398		154
	10	1710.052	110.6723 - 169.1505	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2F^o - 1$	110.6723 169.1505		154
	50	1713.251	103.7016 - 162.0703	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)5s$	$^4P^o - ^4D$	103.7016 162.0703		154
	0	1714.270	113.4929 - 171.8276	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2P^o - 8$	113.4929 171.8276		154
	1	1715.388	114.04503 - 172.3415	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 11$	114.04503 172.3415		154
	60	1715.763	110.8672 - 169.1505	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 1$	110.8672 169.1505		154
	1	1716.935	111.7430 - 169.9863	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 4$	111.7430 169.9863		154
	1	1718.182	114.83395 - 173.0353	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 13$	114.83395 173.0353		457
	2	1719.136	114.83395 - 173.0031	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 12$	114.83395 173.0031		154
	2	1723.901	107.2686 - 165.2771	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)5s$	$^4F^o - ^2D$	107.2686 165.2771		154
	2	1724.364	111.9943 - 169.9863	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^4D^o - 4$	111.9943 169.9863		154
	0	1725.477	134.6438 - 192.598	$3d^2(^2D)4s4p(^1P^o) - 3d^24s(^2D)6s$	$^2D^o - ^2D$	134.6438 192.598	Q	162
	2	1730.619	114.04503 - 171.8276	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)4d$	$^2D^o - 8$	114.04503 171.8276		154
	0	1732.160	107.2686 - 164.9989	$3d^2(^2D)4s4p(^3P^o) - 3d^24s(^2D)5s$	$^4F^o - ^2D$	107.2686 164.9989	Q	162

ZN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	25	1732.953	111.7430 - 169.4477	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 3$	$\frac{1}{2} - \frac{3}{2}$		154
	80	1735.607	103.7016 - 161.3184	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	15	1735.847	111.7430 - 169.3528	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 2$	$\frac{1}{2} - \frac{3}{2}$		154
	0	1736.825	112.4097 - 169.9863	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 4$	$\frac{1}{2} - \frac{3}{2}$		154
	60	1736.889	105.3227 - 162.8970	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		154
	50	1737.895	106.5288 - 164.0701	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	1	1738.915	114.83395 - 172.3415	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2D^o - 11$	$\frac{1}{2} - \frac{3}{2}$		154
	1	1740.536	111.9943 - 169.4477	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 3$	$\frac{1}{2} - \frac{3}{2}$		154
	0	1741.090	114.83395 - 172.2688	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2D^o - 10$	$\frac{1}{2} - \frac{3}{2}$	Q	162
	18	1741.930	111.7430 - 169.1505	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^4D^o - 1$	$\frac{1}{2} - \frac{3}{2}$		154
	20	1742.285				$\frac{1}{2} - \frac{3}{2}$		154
	75	1747.118	62.72245 - 119.95934	$3d^94s^2 - 3d^{10}6p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		154
	5	1751.806						457
	3	1752.358	114.04503 - 171.1105	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2D^o - 5$	$\frac{1}{2} - \frac{3}{2}$		154
	10	1755.847	110.6723 - 167.6244	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2F^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		457
	2	1756.665	117.2640 - 174.1897	$3d^{10}4f - 3d^94s(^3D)4d$	$^2F^o - 16$	$\frac{1}{2} - \frac{3}{2}$		154
	20	1762.151				$\frac{1}{2} - \frac{3}{2}$		457
	10	1762.191	105.3227 - 162.0703	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	10	1762.223						457
	10	1762.243						457
	25	1762.395	112.4097 - 169.1505	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2F^o - 1$	$\frac{1}{2} - \frac{3}{2}$		154
	75	1774.040	106.5288 - 162.8970	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		154
	3	1775.024	114.83395 - 171.1716	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2D^o - 6$	$\frac{1}{2} - \frac{3}{2}$		154
	0	1787.384	113.4992 - 169.4477	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2P^o - 3$	$\frac{1}{2} - \frac{3}{2}$		154
	8	1789.509	111.7430 - 167.6244	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		457
	80	1790.759	108.2279 - 164.0701	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	5	1795.160						154
	15	1796.701						154
	100	1797.643	107.2686 - 162.8970	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	2	1804.978	114.04503 - 169.4477	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2D^o - 3$	$\frac{1}{2} - \frac{3}{2}$	Q	162
	10	1808.915						154
	80	1811.008	106.8524 - 162.0703	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	15	1811.105	112.4097 - 167.6244	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2F^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		457
	1	1813.170	114.83395 - 169.9863	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)4d$	$^2D^o - 4$	$\frac{1}{2} - \frac{3}{2}$		154
	80	1816.480						154
	80	1831.376	110.6723 - 165.2771	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2F^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154
	40	1833.481	62.72245 - 117.2634	$3d^94s^2 - 3d^{10}4f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$		457
	50	1833.573	106.7799 - 161.3184	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	40	1834.268	65.44164 - 119.95934	$3d^94s^2 - 3d^{10}6p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		457
	70	1836.007	106.8524 - 161.3184	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		457
	75	1836.654	65.44164 - 119.88851	$3d^94s^2 - 3d^{10}6p$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		457
	75	1847.562	113.4992 - 167.6244	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		457
	10	1850.140	107.2686 - 161.3184	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		154
	5	1857.274	108.2279 - 162.0703	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		154
	100	1864.117						457
	100	1866.077						457
	10	1866.366	114.04503 - 167.6244	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2D^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		457
	40	1867.994	111.7430 - 165.2771	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154
	100	1872.125						154
	75	1894.259	114.83395 - 167.6244	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2D^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		457
	2	1896.056	112.5349 - 165.2771	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		154
	60	1901.523	112.4097 - 164.9989	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2F^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		457
	60	1914.806	110.6723 - 162.8970	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2F^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		154
	50	1918.962	62.72245 - 114.83395	$3d^94s^2 - 3d^9(^2D)4s4p(^3P^o)$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$		457

ZN II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
70	1920.271	111.9943 - 164.0701	111.9943 - 164.0701	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		457
3	1929.670	65.44164 - 117.2640	65.44164 - 117.2640	$3d^94s^2 - 3d^{10}4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		457
40	1931.073	113.4929 - 165.2771	113.4929 - 165.2771	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		154
40	1940.413	112.5349 - 164.0701	112.5349 - 164.0701	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		154
60	1945.583	110.6723 - 162.0703	110.6723 - 162.0703	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2F^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		154
30	1948.458	62.72245 - 114.04503	62.72245 - 114.04503	$3d^94s^2 - 3d^9(^2D)4s4p(^3P^o)$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$		154
60	1951.911	114.04503 - 165.2771	114.04503 - 165.2771	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		154
80	1952.999	110.8672 - 162.0703	110.8672 - 162.0703	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		457
75	1954.872	111.7430 - 162.8970	111.7430 - 162.8970	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		154
80	1964.538	111.9943 - 162.8970	111.9943 - 162.8970	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		457
100	1969.404	62.72245 - 113.4992	62.72245 - 113.4992	$3d^94s^2 - 3d^9(^2D)4s4p(^3P^o)$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$		457
12	1974.467	110.6723 - 161.3184	110.6723 - 161.3184	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2F^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		154
25	1977.159	113.4929 - 164.0701	113.4929 - 164.0701	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$		154
5	1977.494							154
100	1982.111	110.8672 - 161.3184	110.8672 - 161.3184	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		457
10	1982.429	114.83395 - 165.2771	114.83395 - 165.2771	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		154
70	1985.608	112.5349 - 162.8970	112.5349 - 162.8970	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		154
100	1986.988	111.7430 - 162.0703	111.7430 - 162.0703	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		457
50	1993.367							457
50	1996.922	111.9943 - 162.0703	111.9943 - 162.0703	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$		154
20	1998.238							154
25	1998.977	114.04503 - 164.0701	114.04503 - 164.0701	$3d^9(^2D)4s4p(^3P^o) - 3d^94s(^3D)5s$	$^2D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		154

ZINC III (Zn^{2+}), $Z = 30$
 Ground State $1s^22s^22p^63s^23p^63d^{10}(^1S_0)$ (28 electrons)
 Ionization Potential 320 390 cm^{-1} ; 39.722 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	383.759	0.0 - 260.5841	0.0 - 260.5841	$3d^{10} - 3d^9(^2D_{3/2})4f$	$g^1S - ^3D^o$	0 - 1		162
1	387.740	0.0 - 257.9082	0.0 - 257.9082	$3d^{10} - 3d^9(^2D_{3/2})4f$	$g^1S - ^1P^o$	0 - 1		162
0	388.224	0.0 - 257.5661	0.0 - 257.5661	$3d^{10} - 3d^9(^2D_{3/2})4f$	$g^1S - ^3P^o$	0 - 1		162
1	419.807	0.0 - 238.2055	0.0 - 238.2055	$3d^{10} - 3d^9(^2D_{3/2})5p$	$g^1S - ^3D^o$	0 - 1		162
3	421.035	0.0 - 237.5068	0.0 - 237.5068	$3d^{10} - 3d^9(^2D_{3/2})5p$	$g^1S - ^1P^o$	0 - 1		162
15	425.799	0.0 - 234.8669	0.0 - 234.8669	$3d^{10} - 3d^9(^2D_{3/2})5p$	$g^1S - ^3P^o$	0 - 1		162
0	467.630	78.0963 - 291.9438	78.0963 - 291.9438	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^1F^o$	3 - 3		162
1	470.211	79.2736 - 291.9438	79.2736 - 291.9438	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^1F^o$	2 - 3		162
1	479.743	83.5003 - 291.9438	83.5003 - 291.9438	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^1D - ^1F^o$	2 - 3		162
1	496.423	79.2736 - 280.7126	79.2736 - 280.7126	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	2 - 2		162
2	497.003	78.0963 - 279.3072	78.0963 - 279.3072	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	3 - 3	Q	162
2	499.678	78.0963 - 278.2236	78.0963 - 278.2236	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^o$	3 - 2		162
2	499.915	79.2736 - 279.3072	79.2736 - 279.3072	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	2 - 3		162
2	500.342	80.8502 - 280.7126	80.8502 - 280.7126	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	1 - 2		162
5	501.264	78.0963 - 277.5934	78.0963 - 277.5934	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^o$	3 - 3		162
5	502.632	79.2736 - 278.2236	79.2736 - 278.2236	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^o$	2 - 2		162
1	504.227	79.2736 - 277.5934	79.2736 - 277.5934	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^o$	2 - 3		162
3	506.646	80.8502 - 278.2236	80.8502 - 278.2236	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^o$	1 - 2		162
5	507.202	78.0963 - 275.2544	78.0963 - 275.2544	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	3 - 4		162
1	510.668	83.5003 - 279.3072	83.5003 - 279.3072	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^1D - ^3F^o$	2 - 3	Q	162
4	513.522	83.5003 - 278.2236	83.5003 - 278.2236	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^1D - ^3D^o$	2 - 2	Q	162
8	515.254	83.5003 - 277.5934	83.5003 - 277.5934	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^1D - ^3D^o$	2 - 3	Q	162
8	516.837	78.0963 - 271.5792	78.0963 - 271.5792	$3d^9(^2D_{3/2})4s - 3d^84s(^2P)4p$	$^3D - ^3D^o$	3 - 3		162
8	519.998	79.2736 - 271.5792	79.2736 - 271.5792	$3d^9(^2D_{3/2})4s - 3d^84s(^2P)4p$	$^3D - ^3D^o$	2 - 3		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	4	521.872	78.0963 - 269.7117	$3d^9(^2D_{3/2})4s - 3d^84s(^2D)4p$	$^3D - ^1F^\circ$	3 - 3		162
	5	525.109	79.2736 - 269.7117	$3d^9(^2D_{3/2})4s - 3d^84s(^2D)4p$	$^3D - ^1F^\circ$	2 - 3		162
	10	533.517	78.0963 - 265.5322	$3d^9(^2D_{3/2})4s - 3d^84s(^2D)4p$	$^3D - ^3F^\circ$	3 - 4		162
	4	533.646	78.0963 - 265.4851	$3d^9(^2D_{3/2})4s - 3d^84s(^2D)4p$	$^3D - ^3F^\circ$	3 - 3		162
	8	537.019	79.2736 - 265.4851	$3d^9(^2D_{3/2})4s - 3d^84s(^2D)4p$	$^3D - ^3F^\circ$	2 - 3		162
	2	539.072	80.8502 - 266.3537	$3d^9(^2D_{3/2})4s - 3d^84s(^2D)4p$	$^3D - ^3F^\circ$	1 - 2		162
	0	546.802	78.0963 - 260.9819	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3G^\circ$	3 - 3		162
	0	547.083	78.0963 - 260.8788	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^1F^\circ$	3 - 3	Q	162
	4	549.491	83.5003 - 265.4851	$3d^9(^2D_{3/2})4s - 3d^84s(^2D)4p$	$^1D - ^3F^\circ$	2 - 3		162
	0	550.662	79.2736 - 260.8788	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^1F^\circ$	2 - 3	Q	162
	0	555.350	78.0963 - 258.1783	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3F^\circ$	3 - 4	Q	162
	0	555.627	78.0963 - 258.0757	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3D^\circ$	3 - 3		162
	0	555.979	78.0963 - 257.9625	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3D^\circ$	3 - 2		162
	6	556.763	78.0963 - 257.7051	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^1F^\circ$	3 - 3		162
	0	558.641	79.2736 - 258.2777	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3F^\circ$	2 - 3		162
	6	559.239	79.2736 - 258.0757	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3D^\circ$	2 - 3		162
	2	559.628	79.2736 - 257.9625	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3D^\circ$	2 - 2		162
	8	560.513	79.2736 - 257.6787	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^3D - ^3P^\circ$	2 - 2		162
	1	563.759	83.5003 - 260.8788	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^1D - ^1F^\circ$	2 - 3		162
	25	568.099	78.0963 - 254.1205	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3G^\circ$	3 - 3		162
	25	569.987	80.8502 - 256.2919	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3D^\circ$	1 - 1		162
	15	571.927	79.2736 - 254.1205	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3G^\circ$	2 - 3		162
	10	572.151	78.0963 - 252.8746	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3D^\circ$	3 - 3		162
	20	572.788	83.5003 - 258.0870	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^1D - ^1D^\circ$	2 - 2		162
	12	573.187	83.5003 - 257.9625	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4f$	$^1D - ^3D^\circ$	2 - 2		162
	8	573.338	79.2736 - 253.6927	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3D^\circ$	2 - 2		162
	8	573.695	78.0963 - 252.4044	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3F^\circ$	3 - 3		162
	12	574.037	83.5003 - 257.7051	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^1D - ^1F^\circ$	2 - 3		162
	8	574.161	78.0963 - 252.2648	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3F^\circ$	3 - 4		162
	25	577.031	80.8502 - 254.1516	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3F^\circ$	1 - 2		162
	15	577.590	79.2736 - 252.4044	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3F^\circ$	2 - 3		162
	12	578.559	80.8502 - 253.6927	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3D^\circ$	1 - 2		162
	10	582.123	78.0963 - 249.8814	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^3D - ^3G^\circ$	3 - 4		162
	2	585.100	78.0963 - 249.0103	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^\circ$	3 - 3		162
	8	586.087	83.5003 - 254.1205	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^1D - ^3G^\circ$	2 - 3		162
	4	587.194	79.2736 - 249.5752	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^\circ$	2 - 2		162
	3	587.589	83.5003 - 253.6927	$3d^9(^2D_{3/2})4s - 3d^84s(^2F)4p$	$^1D - ^3D^\circ$	2 - 2	Q	162
	10	588.048	78.0963 - 248.1472	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^\circ$	3 - 4		162
	6	589.146	79.2736 - 249.0103	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^\circ$	2 - 3		162
	2	591.710	80.8502 - 249.8540	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^\circ$	1 - 1		162
	0	592.677	80.8502 - 249.5752	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3F^\circ$	1 - 2		162
	2	596.407	78.0963 - 245.7746	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3G^\circ$	3 - 3	Q	162
	0	597.413	137.8664 - 305.2506	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})10s$	$^3P^\circ - ^3D$	2 - 3	Q	162
	2	598.665	78.0963 - 245.1354	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3G^\circ$	3 - 4		162
	2	600.599	79.2736 - 245.7746	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3G^\circ$	2 - 3		162
	1	604.082	142.4833 - 308.0210	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})10s$	$^3F^\circ - ^1D$	2 - 2		162
	8	606.164	79.2736 - 244.2462	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^\circ$	2 - 2		162
	10	607.364	78.0963 - 242.7396	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^\circ$	3 - 3		162
	1	612.033	80.8502 - 244.2462	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^\circ$	1 - 2	Q	162
	0	612.787	78.0963 - 241.2848	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^\circ$	3 - 4		162
	8	616.310	80.8502 - 243.1062	$3d^9(^2D_{3/2})4s - 3d^84s(^4F)4p$	$^3D - ^3D^\circ$	1 - 1		162
	3	617.042	145.9666 - 308.0210	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})10s$	$^1F^\circ - ^1D$	3 - 2	Q	162
	4	628.682	79.2736 - 238.3362	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^3D - ^1D^\circ$	2 - 2		162
	2	628.955	144.5012 - 303.5013	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})9s$	$^3D^\circ - ^1D$	3 - 2	Q	162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
4		629.792	141.3925 - 300.1734	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})7g$	$^3P^o - ^3D$	0 - 1	Q	162
5		631.444	79.2736 - 237.6427	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{3/2})5p$	$^3D - ^1F^o$	2 - 3		162
10		634.807	78.0963 - 235.6239	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3D^o$	3 - 3		162
1		634.979	80.8502 - 238.3362	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^3D - ^1D^o$	1 - 2		162
6		635.498	78.0963 - 235.4525	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3D^o$	3 - 2		162
2		638.357	80.8502 - 237.5068	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^3D - ^1P^o$	1 - 1	Q	162
20		639.060	78.0963 - 234.5760	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3F^o$	3 - 4		162
2		639.597	79.2736 - 235.6239	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3D^o$	2 - 3		162
4		639.850	78.0963 - 234.3840	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3F^o$	3 - 3		162
20		640.263	80.8502 - 237.0478	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^3D - ^3F^o$	1 - 2		162
0		641.597	137.8664 - 293.7243	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})8s$	$^3P^o - ^3D$	2 - 2	Q	162
1		641.821	140.6548 - 296.4643	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})8s$	$^3F^o - ^1D$	3 - 2		162
6		642.216	144.5012 - 300.2123	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7g$	$^3D^o - ^3F$	3 - 4		162
8		642.702	79.2736 - 234.8669	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3P^o$	2 - 1		162
12		643.026	78.0963 - 233.6104	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3P^o$	3 - 2		162
0		643.259	141.3925 - 296.8527	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7d$	$^3P^o - ^3D$	0 - 1		162
30		644.700	79.2736 - 234.3840	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3F^o$	2 - 3		162
15		645.836	83.5003 - 238.3362	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^1D - ^1D^o$	2 - 2		162
4		646.377	83.5003 - 238.2055	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^1D - ^3D^o$	2 - 1		162
2		646.802	80.8502 - 235.4525	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3D^o$	1 - 2		162
1		647.415	142.4833 - 296.9530	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7d$	$^3F^o - ^3F$	2 - 2	Q	162
1		647.927	79.2736 - 233.6104	$3d^9(^2D_{5/2})4s - 3d^9(^2D_{5/2})5p$	$^3D - ^3P^o$	2 - 2		162
12		648.755	83.5003 - 237.6427	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^1D - ^1F^o$	2 - 3		162
6		649.318	83.5003 - 237.5068	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^1D - ^1P^o$	2 - 1		162
10		651.261	83.5003 - 237.0478	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})5p$	$^1D - ^3F^o$	2 - 2		162
0		651.975	140.6548 - 294.0343	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7d$	$^3F^o - ^3G$	3 - 4		162
1		653.321	140.6548 - 293.7243	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})8s$	$^3F^o - ^3D$	3 - 2		162
0		653.575	140.6548 - 293.6584	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})8s$	$^3F^o - ^3D$	3 - 3		162
0		654.977	141.3270 - 294.0058	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7d$	$^3F^o - ^3G$	4 - 5		162
2		656.486	141.3270 - 293.6584	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})8s$	$^3F^o - ^3D$	4 - 3		162
6		657.372	83.5003 - 235.6239	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{5/2})5p$	$^1D - ^3D^o$	2 - 3		162
6		658.115	83.5003 - 235.4525	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{5/2})5p$	$^1D - ^3D^o$	2 - 2		162
1		661.475	145.2439 - 296.4179	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})8s$	$^3D^o - ^3D$	2 - 1	Q	162
0		662.309	145.9666 - 296.9530	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7d$	$^1F^o - ^3F$	3 - 2		162
20		662.776	83.5003 - 234.3840	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{5/2})5p$	$^1D - ^3F^o$	2 - 3		162
5		669.064	147.4986 - 296.9530	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7d$	$^3D^o - ^3F$	1 - 2	Q	162
1		671.804	147.5712 - 296.4179	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})8s$	$^1P^o - ^3D$	1 - 1	Q	162
0		672.017	145.2439 - 294.0445	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7d$	$^3D^o - ^3P$	2 - 1	Q	162
2		673.278	145.2439 - 293.7686	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7d$	$^3D^o - ^3S$	2 - 1	Q	162
2		673.499	145.2439 - 293.7243	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})8s$	$^3D^o - ^3D$	2 - 2		162
60		677.642	0.0 - 147.5712	$3d^{10} - 3d^9(^2D_{3/2})4p$	$g^1S - ^1P^o$	0 - 1		162
60		677.971	0.0 - 147.4986	$3d^{10} - 3d^9(^2D_{3/2})4p$	$g^1S - ^3D^o$	0 - 1		162
0		680.364	145.9666 - 292.9426	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6g$	$^1F^o - ^3G$	3 - 4	Q	162
1		680.468	145.9666 - 292.9234	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6g$	$^1F^o - ^3F$	3 - 4	Q	162
10		683.268	147.9215 - 294.2750	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})7d$	$^1D^o - ^3F$	2 - 3		162
0		683.906	147.4986 - 293.7243	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})8s$	$^3D^o - ^3D$	1 - 2	Q	162
0		684.331	147.9215 - 294.0445	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})7d$	$^1D^o - ^3P$	2 - 1	Q	162
0		687.929	147.4986 - 292.8617	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6g$	$^3D^o - ^3D$	1 - 2	Q	162
1		689.790	137.8664 - 282.8395	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3P^o - ^3D$	2 - 3		162
0		690.770	137.8664 - 282.6286	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3P^o - ^3P$	2 - 2	Q	162
0		692.619	137.8664 - 282.2459	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3P^o - ^3S$	2 - 1		162
0		692.983	137.8664 - 282.1690	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7s$	$^3P^o - ^3D$	2 - 2		162
1		693.571	137.8664 - 282.0576	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7s$	$^3P^o - ^3D$	2 - 3		162
0		694.970	140.0710 - 283.9688	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3P^o - ^3P$	1 - 0		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	698.157	142.4833 - 285.7235	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^3F^o - ^1F$	2 - 3		162
	1	699.680	137.8664 - 280.7828	$3d^9(^2D_{5/2})4p - 3d^9(^2G_{5/2})5g$	$^3P^o - ^3D$	2 - 3		162
	0	699.904	140.0710 - 282.9507	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3P^o - ^3D$	1 - 2		162
	0	701.437	140.0710 - 282.6286	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^3P^o - ^3P$	1 - 2	Q	162
	0	702.594	140.6548 - 282.9776	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3F^o - ^3F$	3 - 4		162
	1	704.108	140.6548 - 282.6804	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3F^o - ^3G$	3 - 4		162
	1	705.979	141.3270 - 282.9776	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3F^o - ^3F$	4 - 4		162
	1	706.667	141.3270 - 282.8395	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3F^o - ^3D$	4 - 3		162
	1	707.671	141.3270 - 282.6402	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3F^o - ^3G$	4 - 5		162
	2	710.603	141.3270 - 282.0576	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7s$	$^3F^o - ^3D$	4 - 3		162
	0	710.977	140.0710 - 280.7269	$3d^9(^2D_{5/2})4p - 3d^9(^2G_{5/2})5g$	$^3P^o - ^3D$	1 - 2	Q	162
	0	711.768	142.4833 - 282.9706	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^3F^o - ^3F$	2 - 3	Q	162
	0	711.924	142.4833 - 282.9507	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^3F^o - ^3D$	2 - 2		162
	10	713.904	0.0 - 140.0710	$3d^{10} - 3d^9(^2D_{5/2})4p$	$g^1S - ^3P^o$	0 - 1		162
	0	715.337	145.9666 - 285.7535	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^1F^o - ^3F$	3 - 2	Q	162
	0	716.052	145.2439 - 284.9015	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})7s$	$^3D^o - ^1D$	2 - 2		162
	1	716.758	141.3270 - 280.8372	$3d^9(^2D_{5/2})4p - 3d^9(^2G_{5/2})5g$	$^3F^o - ^3F$	4 - 4		162
	0	717.143	145.9666 - 285.4117	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^1F^o - ^3G$	3 - 3		162
	1	719.765	145.9666 - 284.9015	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7s$	$^1F^o - ^1D$	3 - 2		162
	0	722.182	144.5012 - 282.9706	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3D^o - ^3F$	3 - 3		162
	1	723.354	142.4833 - 280.7269	$3d^9(^2D_{3/2})4p - 3d^9(^2G_{5/2})5g$	$^3F^o - ^3D$	2 - 1	Q	162
	0	725.533	147.9215 - 285.7535	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^1D^o - ^3F$	2 - 2		162
	0	725.694	147.9215 - 285.7235	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^1D^o - ^1F$	2 - 3		162
	0	726.184	145.2439 - 282.9507	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6d$	$^3D^o - ^3D$	2 - 2	Q	162
	0	726.394	144.5012 - 282.1690	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7s$	$^3D^o - ^3D$	3 - 2		162
	0	727.002	144.5012 - 282.0576	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7s$	$^3D^o - ^3D$	3 - 3		162
	0	727.332	147.9215 - 285.4117	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^1D^o - ^3G$	2 - 3		162
	0	728.252	147.4986 - 284.8168	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7s$	$^3D^o - ^3D$	1 - 1		162
	0	728.646	147.5712 - 284.8168	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7s$	$^1P^o - ^3D$	1 - 1		162
	1	728.921	147.4986 - 284.6890	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^3D^o - ^1P$	1 - 1		162
	1	729.959	145.9666 - 282.9507	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^1F^o - ^3D$	3 - 2	Q	162
	1	730.064	147.9215 - 284.9015	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})7s$	$^1D^o - ^1D$	2 - 2		162
	1	730.310	145.2439 - 282.1690	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7s$	$^3D^o - ^3D$	2 - 2		162
	0	730.946	145.2439 - 282.0576	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})7s$	$^3D^o - ^3D$	2 - 3		162
	0	731.197	147.9215 - 284.6890	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6d$	$^1D^o - ^1P$	2 - 1		162
	0	733.281	144.5012 - 280.8705	$3d^9(^2D_{5/2})4p - 3d^9(^2G_{5/2})5g$	$^3D^o - ^3G$	3 - 4	Q	162
	0	734.185	145.9666 - 282.1690	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})7s$	$^1F^o - ^3D$	3 - 2		162
	1	734.828	145.9666 - 282.0576	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})7s$	$^1F^o - ^3D$	3 - 3		162
	0	738.261	147.4986 - 282.9507	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^3D^o - ^3D$	1 - 2	Q	162
	0	738.623	147.5712 - 282.9507	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^1P^o - ^3D$	1 - 2	Q	162
	0	740.279	147.5712 - 282.6518	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^1P^o - ^3P$	1 - 1	Q	162
	0	742.215	147.9215 - 282.6518	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6d$	$^1D^o - ^3P$	2 - 1	Q	162
	1	742.964	147.5712 - 282.1690	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})7s$	$^1P^o - ^3D$	1 - 2		162
	0	752.956	147.9215 - 280.7269	$3d^9(^2D_{3/2})4p - 3d^9(^2G_{5/2})5g$	$^1D^o - ^3D$	2 - 2	Q	162
	0	794.474	137.8664 - 263.7421	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})6s$	$^3P^o - ^1D$	2 - 2		162
	3	800.422	140.0710 - 265.0053	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5d$	$^3P^o - ^1D$	1 - 2		162
	0	802.152	140.6548 - 265.3134	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5d$	$^3F^o - ^3F$	3 - 2	Q	162
	5	804.077	137.8664 - 262.2358	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3P^o - ^3D$	2 - 3		162
	0	805.351	140.0710 - 264.2374	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5d$	$^3P^o - ^1P$	1 - 1		162
	5	806.108	137.8664 - 261.9216	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3P^o - ^3P$	2 - 2		162
	3	808.606	140.0710 - 263.7421	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})6s$	$^3P^o - ^1D$	1 - 2		162
	3	813.485	137.8664 - 260.7966	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6s$	$^3P^o - ^3D$	2 - 3		162
	1	814.120	142.4833 - 265.3134	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5d$	$^3F^o - ^3F$	2 - 2		162
	1	816.670	140.0710 - 262.5202	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3P^o - ^3D$	1 - 2		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	818.682	142.4833 - 264.6324	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5d$	$^3F^\circ - ^3G$	2 - 3		162
	0	820.661	140.0710 - 261.9216	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3P^\circ - ^3P$	1 - 2		162
	0	820.735	140.6548 - 262.4959	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3F^\circ - ^3F$	3 - 4		162
	2	821.070	140.6548 - 262.4461	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3F^\circ - ^3F$	3 - 3		162
	0	822.498	140.6548 - 262.2358	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3F^\circ - ^3D$	3 - 3		162
	0	824.711	140.6548 - 261.9097	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3F^\circ - ^3G$	3 - 4		162
	10	825.330	141.3270 - 262.4959	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3F^\circ - ^3F$	4 - 4	Q	162
	2	825.955	142.4833 - 263.5595	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6s$	$^3F^\circ - ^3D$	2 - 1		162
	0	826.909	140.0710 - 261.0073	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6s$	$^3P^\circ - ^3D$	1 - 2		162
	0	829.866	141.3270 - 261.8298	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3F^\circ - ^3G$	4 - 5		162
	0	830.901	140.6548 - 261.0073	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6s$	$^3F^\circ - ^3D$	3 - 2		162
	0	831.380	144.5012 - 264.7839	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5d$	$^3D^\circ - ^1G$	3 - 4		162
	0	832.426	144.5012 - 264.6324	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5d$	$^3D^\circ - ^3G$	3 - 3		162
	0	832.868	145.2439 - 265.3134	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5d$	$^3D^\circ - ^3F$	2 - 2		162
	0	837.054	141.3270 - 260.7966	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6s$	$^3F^\circ - ^3D$	4 - 3		162
	0	837.225	142.4833 - 261.9216	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})5d$	$^3F^\circ - ^3P$	2 - 2	Q	162
	0	837.613	145.2439 - 264.6324	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5d$	$^3D^\circ - ^3G$	2 - 3		162
	0	838.313	145.9666 - 265.2561	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5d$	$^1F^\circ - ^1F$	3 - 3		162
	0	838.658	144.5012 - 263.7421	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})6s$	$^3D^\circ - ^1D$	3 - 2		162
	0	841.664	145.9666 - 264.7839	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5d$	$^1F^\circ - ^1G$	3 - 4		162
	0	845.238	142.4833 - 260.7966	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6s$	$^3F^\circ - ^3D$	2 - 3		162
	0	847.525	144.5012 - 262.4959	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3D^\circ - ^3F$	3 - 4		162
	0	847.879	144.5012 - 262.4461	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3D^\circ - ^3F$	3 - 3		162
	0	849.117	145.9666 - 263.7421	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6s$	$^1F^\circ - ^1D$	3 - 2		162
	0	849.386	144.5012 - 262.2358	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3D^\circ - ^3D$	3 - 3		162
	0	851.539	147.5712 - 265.0053	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5d$	$^1P^\circ - ^1D$	1 - 2		162
	0	852.306	147.9215 - 265.2561	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5d$	$^1D^\circ - ^1F$	2 - 3		162
	0	852.707	145.2439 - 262.5202	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3D^\circ - ^3D$	2 - 2		162
	0	853.220	145.2439 - 262.4461	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5d$	$^3D^\circ - ^3F$	2 - 3		162
	0	858.152	145.9666 - 262.4959	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})5d$	$^1F^\circ - ^3F$	3 - 4		162
	0	859.760	147.9215 - 264.2374	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5d$	$^1D^\circ - ^1P$	2 - 1		162
	0	859.895	144.5012 - 260.7966	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6s$	$^3D^\circ - ^3D$	3 - 3		162
	0	860.062	145.9666 - 262.2358	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})5d$	$^1F^\circ - ^3D$	3 - 3		162
	0	860.286	147.4986 - 263.7421	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6s$	$^3D^\circ - ^1D$	1 - 2		162
	0	860.808	147.5712 - 263.7421	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6s$	$^1P^\circ - ^1D$	1 - 2		162
	0	861.667	147.4986 - 263.5595	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})6s$	$^3D^\circ - ^3D$	1 - 1		162
	1	863.850	145.2439 - 261.0073	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})6s$	$^3D^\circ - ^3D$	2 - 2		162
	3	870.890	145.9666 - 260.7966	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6s$	$^1F^\circ - ^3D$	3 - 3		162
	0	872.633	147.9215 - 262.5202	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})5d$	$^1D^\circ - ^3D$	2 - 2		162
	0	873.207	147.9215 - 262.4461	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})5d$	$^1D^\circ - ^3F$	2 - 3		162
	0	874.542	147.5712 - 261.9216	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})5d$	$^1P^\circ - ^3P$	1 - 2		162
	0	879.380	147.5712 - 261.2868	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})5d$	$^1P^\circ - ^3S$	1 - 1		162
	0	881.565	147.5712 - 261.0073	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{5/2})6s$	$^1P^\circ - ^3D$	1 - 2		162
	2	911.148	190.3413 - 300.0981	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^3F - ^3F^\circ$	4 - 4	Q	162
	0	921.434	194.3033 - 302.8270	$3d^8 4s^2 - 3d^9(^2D_{3/2})7f$	$^3F - ^3F^\circ$	2 - 2	Q	162
	0	931.564	192.7637 - 300.1081	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^3F - ^3F^\circ$	3 - 3	Q	162
	0	931.766	192.7637 - 300.0830	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^3F - ^3D^\circ$	3 - 3	Q	162
	0	931.860	192.7637 - 300.0761	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^3F - ^3D^\circ$	3 - 2	Q	162
	0	1086.437	208.0413 - 300.0830	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^1D - ^3D^\circ$	2 - 3	Q	162
	0	1104.584	140.0710 - 230.6060	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^1S$	1 - 0	Q	162
	2	1124.021	190.3413 - 279.3072	$3d^8 4s^2 - 3d^8 4s^2 (^4F)4p$	$^3F - ^3F^\circ$	4 - 3		162
	1	1131.434	211.7255 - 300.1081	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^3P - ^3F^\circ$	2 - 3	Q	162
	2	1131.728	211.7255 - 300.0830	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^3P - ^3D^\circ$	2 - 3	Q	162
	5	1132.700	211.7255 - 300.0087	$3d^8 4s^2 - 3d^9(^2D_{5/2})7f$	$^3P - ^3P^\circ$	2 - 1	Q	162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
5		1136.594	214.8780 - 302.8569	$3d^9(^2D_{3/2})5s - 3d^9(^2D_{3/2})7f$	$^3D - ^1F^o$	3 - 3	Q	162
3		1137.030	192.7637 - 280.7126	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3F^o$	3 - 2		162
1		1142.477	215.3405 - 302.8698	$3d^9(^2D_{3/2})5s - 3d^9(^2D_{3/2})7f$	$^3D - ^3G^o$	2 - 3	Q	162
50		1146.105	190.3413 - 277.5934	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3D^o$	4 - 3		162
60		1155.497	192.7637 - 279.3072	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3F^o$	3 - 3		162
1		1156.853	216.4645 - 302.9085	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^1G^o$	4 - 4	Q	162
40		1157.289	194.3033 - 280.7126	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3F^o$	2 - 2		162
0		1158.251	216.4645 - 302.8043	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^1H^o$	4 - 5	Q	162
10		1158.737	216.6074 - 302.9085	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^1G^o$	5 - 4	Q	162
1		1160.079	216.6074 - 302.8084	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^3H^o$	5 - 4	Q	162
1		1160.118	216.6074 - 302.8043	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^1H^o$	5 - 5	Q	162
1		1163.705	216.8953 - 302.8270	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3P - ^3F^o$	1 - 2	Q	162
10		1165.559	217.0738 - 302.8698	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3P - ^3G^o$	2 - 3	Q	162
25		1166.790	147.4986 - 233.2044	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3D^o - ^1S$	1 - 0		162
30		1167.764	147.5712 - 233.2044	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^1P^o - ^1S$	1 - 0		162
50		1170.149	192.7637 - 278.2236	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3D^o$	3 - 2		162
50		1177.651	190.3413 - 275.2544	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3F^o$	4 - 4		162
25		1178.835	192.7637 - 277.5934	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3D^o$	3 - 3		162
1		1180.000	215.3405 - 300.0830	$3d^9(^2D_{3/2})5s - 3d^9(^2D_{3/2})7f$	$^3D - ^3D^o$	2 - 3	Q	162
2		1180.443	215.3405 - 300.0532	$3d^9(^2D_{3/2})5s - 3d^9(^2D_{3/2})7f$	$^3D - ^3P^o$	2 - 2	Q	162
3		1185.840	218.5403 - 302.8698	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3D - ^3G^o$	2 - 3	Q	162
3		1185.980	218.5403 - 302.8569	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3D - ^1F^o$	2 - 3	Q	162
5		1186.442	218.5403 - 302.8270	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3D - ^3F^o$	2 - 2	Q	162
10		1191.597	194.3033 - 278.2236	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3D^o$	2 - 2		162
40		1191.864	208.0413 - 291.9438	$3d^84s^2 - 3d^84s(^4F)4p$	$^1D - ^1F^o$	2 - 3		162
25		1195.366	216.4645 - 300.1234	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^3G^o$	4 - 5	Q	162
3		1195.729	216.4645 - 300.0981	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^3F^o$	4 - 4	Q	162
0		1197.646	219.3600 - 302.8569	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^1G - ^1F^o$	4 - 3	Q	162
1		1197.745	216.6074 - 300.0981	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^3F^o$	5 - 4	Q	162
20		1197.973	137.8664 - 221.3436	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^3F$	2 - 2		162
6		1198.322	219.3600 - 302.8084	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^1G - ^3H^o$	4 - 4	Q	162
60		1200.635	194.3033 - 277.5934	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3D^o$	2 - 3		162
50		1200.854	137.8664 - 221.1437	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^1F$	2 - 3		162
30		1202.152	219.6849 - 302.8698	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3G - ^3G^o$	3 - 3	Q	152
8		1203.200	216.8953 - 300.0087	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3P - ^3P^o$	1 - 1	Q	162
50		1203.270	147.4986 - 230.6060	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^1S$	1 - 0		162
60		1204.310	147.5712 - 230.6060	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1P^o - ^1S$	1 - 0		162
10		1207.737	137.8664 - 220.6683	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^1D$	2 - 2		162
40		1212.255	192.7637 - 275.2544	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^3F^o$	3 - 4		162
0		1212.930	217.6558 - 300.0981	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3D - ^3F^o$	3 - 4	Q	162
1		1213.199	217.6558 - 300.0830	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3D - ^3D^o$	3 - 3	Q	162
1		1214.436	217.6637 - 300.0087	$3d^9(^2D_{3/2})5s - 3d^9(^2D_{3/2})7f$	$^3D - ^3P^o$	1 - 1	Q	162
3		1217.494						162
2		1218.459	218.0405 - 300.1081	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3F - ^3F^o$	3 - 3	Q	162
1		1218.953	218.0405 - 300.0761	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3F - ^3D^o$	3 - 2	Q	162
8		1222.266	221.0522 - 302.8698	$3d^84s^2 - 3d^84s(^2D_{3/2})7f$	$^1G - ^3G^o$	4 - 3		162
0		1222.427	221.0522 - 302.8569	$3d^84s^2 - 3d^84s(^2D_{3/2})7f$	$^1G - ^1F^o$	4 - 3	Q	162
1		1226.805	218.5403 - 300.0532	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3D - ^3P^o$	2 - 2	Q	162
1		1227.263	221.3436 - 302.8270	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^3F - ^3F^o$	2 - 2	Q	162
25		1230.451	140.0710 - 221.3436	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^3F$	1 - 2		162
1		1230.949	190.3413 - 271.5792	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - ^3D^o$	4 - 3		162
2		1232.425	218.9094 - 300.0532	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^1P - ^3P^o$	1 - 2	Q	162
50		1233.948	137.8664 - 218.9094	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^1P$	2 - 1		162
2		1238.156	219.3600 - 300.1234	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^1G - ^3G^o$	4 - 5	Q	162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
3	1238.379		219.3600 – 300.1081	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{5/2})7f$	$^1G - ^3F^\circ$	4 - 3	Q	162
3	1239.355		140.6548 – 221.3436	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^3F$	3 - 2		162
50	1240.750		140.0710 – 220.6683	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^1D$	1 - 2		162
50	1242.411		140.6548 – 221.1437	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^1F$	3 - 3		162
20	1243.833		140.6548 – 221.0522	$3d^9(^2D_{5/2})4p - 3d^84s^2$	$^3F^\circ - ^1G$	3 - 4		162
5	1247.355							162
30	1250.336		137.8664 – 217.8468	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5s$	$^3P^\circ - ^1D$	2 - 2		162
40	1251.021		140.0710 – 220.0066	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^3D$	1 - 1		162
3	1252.873		141.3270 – 221.1437	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^1F$	4 - 3		162
10	1253.201		137.8664 – 217.6637	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5s$	$^3P^\circ - ^3D$	2 - 1		162
60	1253.345		137.8664 – 217.6558	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^3D$	2 - 3		162
25	1254.316		141.3270 – 221.0522	$3d^9(^2D_{5/2})4p - 3d^84s^2$	$^3F^\circ - ^1G$	4 - 4		162
0	1259.302		220.6683 – 300.0761	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{5/2})7f$	$^1D - ^3D^\circ$	2 - 2	Q	162
20	1259.912		190.3413 – 269.7117	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - ^1F^\circ$	4 - 3		162
10	1260.411		220.6683 – 300.0087	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{5/2})7f$	$^1D - ^3P^\circ$	2 - 1	Q	162
50	1262.541		137.8664 – 217.0738	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^3P$	2 - 2		162
2	1264.627		221.0522 – 300.1260	$3d^84s^2 - 3d^9(^2D_{5/2})7f$	$^1G - ^3G^\circ$	4 - 4	Q	162
10	1264.732		221.0522 – 300.1234	$3d^84s^2 - 3d^9(^2D_{5/2})7f$	$^1G - ^3G^\circ$	4 - 5	Q	162
2	1265.065		221.0522 – 300.0981	$3d^84s^2 - 3d^9(^2D_{5/2})7f$	$^1G - ^3F^\circ$	4 - 4	Q	162
60	1265.370		137.8664 – 216.8953	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^3P$	2 - 1		162
50	1268.077		142.4833 – 221.3436	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^3F$	2 - 2		162
50	1268.423		140.0710 – 218.9094	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^1P$	1 - 1		162
10	1268.792		192.7637 – 271.5792	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - ^3D^\circ$	3 - 3		162
50	1270.573		140.6548 – 219.3600	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^1G$	3 - 4		162
8	1271.291		142.4833 – 221.1437	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^1F$	2 - 3		162
50	1272.037		141.3925 – 220.0066	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^3D$	0 - 1		162
60	1274.383		140.0710 – 218.5403	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3P^\circ - ^3D$	1 - 2		162
60	1276.219		140.0710 – 218.4280	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3P^\circ - ^3P$	1 - 0		162
50	1279.021		142.4833 – 220.6683	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^1D$	2 - 2		162
40	1281.508		141.3270 – 219.3600	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^1G$	4 - 4		162
50	1283.941		140.6548 – 218.5403	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3F^\circ - ^3D$	3 - 2		162
40	1285.752		140.0710 – 217.8468	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5s$	$^3P^\circ - ^1D$	1 - 2		162
40	1288.767		140.0710 – 217.6637	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5s$	$^3P^\circ - ^3D$	1 - 1		162
50	1289.935		142.4833 – 220.0066	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^3D$	2 - 1		162
50	1290.051		141.3925 – 218.9094	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^\circ - ^1P$	0 - 1		162
5	1290.789		137.8664 – 215.3405	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5s$	$^3P^\circ - ^3D$	2 - 2		162
50	1292.231		140.6548 – 218.0405	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3F^\circ - ^3F$	3 - 3		162
1	1294.095		194.3033 – 271.5792	$3d^84s^2 - 3d^84s(^2P)4p$	$^3F - ^3D^\circ$	2 - 3	Q	162
50	1295.318		142.4833 – 219.6849	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^3G$	2 - 3		162
10	1295.465		140.6548 – 217.8468	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})5s$	$^3F^\circ - ^1D$	3 - 2		162
50	1298.539		137.8664 – 214.8780	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})5s$	$^3P^\circ - ^3D$	2 - 3		162
50	1298.689		140.6548 – 217.6558	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3F^\circ - ^3D$	3 - 3		162
1	1299.612		192.7637 – 269.7117	$3d^84s^2 - 3d^84s(^2D)4p$	$^3F - ^1F^\circ$	3 - 3	Q	162
40	1301.371		144.5012 – 221.3436	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^\circ - ^3F$	3 - 2		162
50	1301.687		140.0710 – 216.8953	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3P^\circ - ^3P$	1 - 1		162
50	1303.551		141.3270 – 218.0415	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3F^\circ - ^3F$	4 - 4		162
50	1304.769		144.5012 – 221.1437	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^\circ - ^1F$	3 - 3		162
50	1306.322		144.5012 – 221.0522	$3d^9(^2D_{5/2})4p - 3d^84s^2$	$^3D^\circ - ^1G$	3 - 4		162
60	1307.384		137.8664 – 214.3570	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3P^\circ - ^3S$	2 - 1		162
5	1308.450		142.4833 – 218.9094	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^\circ - ^1P$	2 - 1		162
60	1308.569		140.6548 – 217.0738	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3F^\circ - ^3P$	3 - 2		162
60	1310.117		141.3270 – 217.6558	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{5/2})4d$	$^3F^\circ - ^3D$	4 - 3		162
50	1311.104		141.3925 – 217.6637	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3P^\circ - ^3D$	0 - 1		162
35	1312.904		144.5012 – 220.6683	$3d^9(^2D_{5/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^\circ - ^1D$	3 - 2		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
60	1314.067	1314.796	145.2439 - 221.3436	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3F$	2 - 2		162
60	1314.796	1317.509	142.4833 - 218.5403	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^o - ^3D$	2 - 2		162
0	1317.509	1319.096	145.2439 - 221.1437	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^1F$	2 - 3		162
60	1319.096	1323.512	140.6548 - 216.4645	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^o - ^3G$	3 - 4		162
50	1323.512	1323.909	142.4833 - 218.0405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^o - ^3F$	2 - 3		162
12	1323.909	1324.455	235.6239 - 311.1595	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3D^o - ^1D$	3 - 2	Q	162
20	1324.455	1324.826	141.3925 - 216.8953	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^3P$	0 - 1		162
2	1324.826	1325.831	216.4645 - 291.9438	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3G - ^1F^o$	4 - 3	Q	162
30	1325.831	1326.899	145.2439 - 220.6683	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^1D$	2 - 2		162
50	1326.899	1328.372	142.4833 - 217.8468	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3F^o - ^1D$	2 - 2		162
50	1328.372	1328.561	141.3270 - 216.6074	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^o - ^3G$	4 - 5		162
40	1328.561	1330.087	140.0710 - 215.3405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3P^o - ^3D$	1 - 2		162
40	1330.087	1330.178	142.4833 - 217.6637	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3F^o - ^3D$	2 - 1		162
40	1330.178	1330.897	145.9666 - 221.1437	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1F^o - ^1F$	3 - 3		162
40	1330.897	1331.823	141.3270 - 216.4645	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^o - ^3G$	4 - 4		162
50	1331.823	1335.846	145.9666 - 221.0522	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1F^o - ^1G$	3 - 4		162
50	1335.846	1336.996	144.5012 - 219.3600	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^1G$	3 - 4		162
2	1336.996	1337.571	233.6104 - 308.4048	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3P^o - ^3D$	2 - 2		162
20	1337.571	1338.659	145.2439 - 220.0066	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3D$	2 - 1		162
20	1338.659	1338.939	145.9666 - 220.6683	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1F^o - ^1D$	3 - 2		162
50	1338.939	1340.656	140.6548 - 215.3405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3F^o - ^3D$	3 - 2		162
3	1340.656	1343.355	142.4833 - 217.0738	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3F^o - ^3P$	2 - 2		162
60	1343.355	1346.146	145.2439 - 219.6849	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3G$	2 - 3		162
50	1346.146	1347.286	140.0710 - 214.3570	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^3S$	1 - 1		162
50	1347.286	1349.270	140.6548 - 214.8780	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3F^o - ^3D$	3 - 3		162
2	1349.270	1350.377	237.0478 - 311.1595	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3F^o - ^1D$	2 - 2	Q	162
50	1350.377	1350.638	137.8664 - 211.9207	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^3P$	2 - 1		162
50	1350.638	1350.968	144.5012 - 218.5403	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3D$	3 - 2		162
10	1350.968	1353.953	234.3840 - 308.4048	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3F^o - ^3D$	3 - 2		162
50	1353.953	1354.189	137.8664 - 211.7255	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^3P$	2 - 2		162
50	1354.189	1354.650	147.4986 - 221.3436	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3F$	1 - 2		162
1	1354.650	1355.518	234.5760 - 308.3965	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3F^o - ^3D$	4 - 3		162
30	1355.518	1356.519	147.5712 - 221.3436	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1P^o - ^3F$	1 - 2		162
50	1356.519	1357.496	145.9666 - 219.6849	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1F^o - ^3G$	3 - 3		162
15	1357.496	1359.604	145.2439 - 218.9094	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^1P$	2 - 1		162
50	1359.604	1359.804	141.3270 - 214.8780	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3F^o - ^3D$	4 - 3		162
50	1359.804	1360.220	144.5012 - 218.0415	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3F$	3 - 4		162
0	1360.220	1361.979	237.6427 - 311.1595	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^1F^o - ^1D$	3 - 2		162
60	1361.979	1362.335	147.9215 - 221.3436	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1D^o - ^3F$	2 - 2		162
5	1362.335	1362.523	218.5403 - 291.9438	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})4p$	$^3D - ^1F^o$	2 - 3		162
60	1362.523	1364.323	145.9666 - 219.3600	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1F^o - ^1G$	3 - 4		162
60	1364.323	1365.702	145.2439 - 218.5403	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3D$	2 - 2		162
60	1365.702	1366.978	147.9215 - 221.1437	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1D^o - ^1F$	2 - 3		162
60	1366.978	1368.027	144.5012 - 217.6558	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3D$	3 - 3		162
60	1368.027	1370.532	147.5712 - 220.6683	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1P^o - ^1D$	1 - 2		162
60	1370.532	1372.541	141.3925 - 214.3570	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3P^o - ^3S$	0 - 1		162
50	1372.541	1373.200	142.4833 - 215.3405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^3F^o - ^3D$	2 - 2		162
1	1373.200	1373.381	238.3362 - 311.1595	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^1D^o - ^1D$	2 - 2		162
1	1373.381	1373.687	238.3362 - 311.1498	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^1D^o - ^3D$	2 - 1		162
60	1373.687	1374.005	145.2439 - 218.0405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3F$	2 - 3		162
3	1374.005	1374.130	235.6239 - 308.4048	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3D^o - ^3D$	3 - 2		162
1	1374.130	1374.269	235.6239 - 308.3965	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3D^o - ^3D$	3 - 3		162
3	1374.269	1374.638	192.7637 - 265.5322	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})11s$	$^3F - ^3F^o$	3 - 4	Q	162
60	1374.638		147.9215 - 220.6683	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1D^o - ^1D$	2 - 2		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1375.105	192.7637 - 265.4851	$3d^4 4s^2 - 3d^4 4s(2D)4p$	$^3F - ^3F^\circ$	3 - 3		162
	40	1377.346	145.2439 - 217.8468	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})5s$	$^3D^\circ - ^1D$	2 - 2		162
	50	1377.915	144.5012 - 217.0738	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})4d$	$^3D^\circ - ^3P$	3 - 2		162
	60	1379.161	147.4986 - 220.0066	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})4d$	$^3D^\circ - ^3D$	1 - 1		162
	12	1380.554	147.5712 - 220.0066	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})4d$	$^1P^\circ - ^3D$	1 - 1		162
	50	1380.828	145.2439 - 217.6637	$3d^3(2D_{5/2})4p - 3d^3(2D_{3/2})5s$	$^3D^\circ - ^3D$	2 - 1		162
	60	1380.986	145.2439 - 217.6558	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})4d$	$^3D^\circ - ^3D$	2 - 3		162
	40	1381.314	142.4833 - 214.8780	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})5s$	$^3F^\circ - ^3D$	2 - 3		162
	60	1383.700	140.0710 - 212.3403	$3d^3(2D_{5/2})4p - 3d^4 4s^2$	$^3P^\circ - ^3P$	1 - 0		162
	1	1383.920	219.6849 - 291.9438	$3d^3(2D_{3/2})4d - 3d^4 4s(4F)4p$	$^3G - ^1F^\circ$	3 - 3		162
	50	1387.440	145.9666 - 218.0415	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})4d$	$^1F^\circ - ^3F$	3 - 4		162
	3	1387.925	194.3033 - 266.3537	$3d^4 4s^2 - 3d^4 4s(2D)4p$	$^3F - ^3F^\circ$	2 - 2		162
	60	1389.604	144.5012 - 216.4645	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})4d$	$^3D^\circ - ^3G$	3 - 4		162
	60	1391.216	145.9666 - 217.8468	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})5s$	$^1F^\circ - ^1D$	3 - 2		162
	40	1391.790	140.0710 - 211.9207	$3d^3(2D_{5/2})4p - 3d^4 4s^2$	$^3P^\circ - ^3P$	1 - 1		162
	30	1392.170	145.2439 - 217.0738	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})4d$	$^3D^\circ - ^3P$	2 - 2		162
	50	1393.460	147.9215 - 219.6849	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})4d$	$^1D^\circ - ^3G$	2 - 3		162
	60	1394.911	145.9666 - 217.6558	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1F^\circ - ^3D$	3 - 3		162
	60	1395.652	145.2439 - 216.8953	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})4d$	$^3D^\circ - ^3P$	2 - 1		162
	2	1399.599	236.5600 - 308.009	$3d^3(2D_{3/2})5p - 3d^3(2D_{3/2})10s$	$^3P^\circ - ^3D$	0 - 1		162
	8	1400.344	147.4986 - 218.9094	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})4d$	$^3D^\circ - ^1P$	1 - 1		162
	60	1401.762	147.5712 - 218.9094	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})4d$	$^1P^\circ - ^1P$	1 - 1		162
	3	1404.853	194.3033 - 265.4851	$3d^4 4s^2 - 3d^4 4s(2D)4p$	$^3F - ^3F^\circ$	2 - 3		162
	60	1406.326	145.9666 - 217.0738	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1F^\circ - ^3P$	3 - 2		162
	40	1407.039	140.6548 - 211.7255	$3d^3(2D_{5/2})4p - 3d^4 4s^2$	$^3F^\circ - ^3P$	3 - 2		162
	40	1407.619	147.4986 - 218.5403	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^3D^\circ - ^3D$	1 - 2		162
	70	1408.687	147.9215 - 218.9094	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})4d$	$^1D^\circ - ^1P$	2 - 1		162
	30	1409.050	147.5712 - 218.5403	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1P^\circ - ^3D$	1 - 2		162
	50	1409.855	147.4986 - 218.4280	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^3D^\circ - ^3P$	1 - 0		162
	40	1411.287	147.5712 - 218.4280	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1P^\circ - ^3P$	1 - 0		162
	60	1411.647	144.5012 - 215.3405	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})5s$	$^3D^\circ - ^3D$	3 - 2		162
	2	1413.168	237.6427 - 308.4048	$3d^3(2D_{3/2})5p - 3d^3(2D_{5/2})11s$	$^1F^\circ - ^3D$	3 - 2		162
	40	1416.048	147.9215 - 218.5403	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1D^\circ - ^3D$	2 - 2		162
	5	1417.252	234.3840 - 304.9427	$3d^3(2D_{5/2})5p - 3d^3(2D_{5/2})8g$	$^3F^\circ - ^3F$	3 - 4	Q	162
	5	1417.682	190.3413 - 260.8788	$3d^4 4s^2 - 3d^4(2D_{3/2})4f$	$^3F - ^1F^\circ$	4 - 3		162
	40	1417.868	141.3925 - 211.9207	$3d^3(2D_{3/2})4p - 3d^4 4s^2$	$^3P^\circ - ^3P$	0 - 1		162
	0	1418.152	237.5068 - 308.0210	$3d^3(2D_{3/2})5p - 3d^3(2D_{3/2})10s$	$^1P^\circ - ^1D$	1 - 2		162
	1	1418.482	145.9666 - 216.4645	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1F^\circ - ^3G$	3 - 4		162
	10	1420.509	234.8669 - 305.2635	$3d^3(2D_{5/2})5p - 3d^3(2D_{5/2})10s$	$^3P^\circ - ^3D$	1 - 2		162
	60	1420.920	144.5012 - 214.8780	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})5s$	$^3D^\circ - ^3D$	3 - 3		162
	1	1421.361	234.5760 - 304.9307	$3d^3(2D_{5/2})5p - 3d^3(2D_{5/2})8g$	$^3F^\circ - ^3D$	4 - 3	Q	162
	50	1421.494	147.4986 - 217.8468	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})5s$	$^3D^\circ - ^1D$	1 - 2		162
	50	1422.976	147.5712 - 217.8468	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})5s$	$^1P^\circ - ^1D$	1 - 2		162
	5	1424.890	208.0413 - 278.2236	$3d^4 4s^2 - 3d^4 4s(4F)4p$	$^1D - ^3D^\circ$	2 - 2	Q	162
	25	1426.150	147.9215 - 218.0405	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1D^\circ - ^3F$	2 - 3		162
	60	1426.611	145.2439 - 215.3405	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})5s$	$^3D^\circ - ^3D$	2 - 2		162
	50	1430.107	147.9215 - 217.8468	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})5s$	$^1D^\circ - ^1D$	2 - 2		162
	60	1432.143	78.0963 - 147.9215	$3d^3(2D_{5/2})4s - 3d^3(2D_{3/2})4p$	$^3D - ^1D^\circ$	3 - 2		162
	2	1432.716	235.4525 - 305.2506	$3d^3(2D_{5/2})5p - 3d^3(2D_{5/2})10s$	$^3D^\circ - ^3D$	2 - 3		162
	50	1433.853	147.9215 - 217.6637	$3d^3(2D_{3/2})4p - 3d^3(2D_{3/2})5s$	$^1D^\circ - ^3D$	2 - 1		162
	25	1434.027	147.9215 - 217.6558	$3d^3(2D_{3/2})4p - 3d^3(2D_{5/2})4d$	$^1D^\circ - ^3D$	2 - 3		162
	2	1435.037	238.3362 - 308.0210	$3d^3(2D_{3/2})5p - 3d^3(2D_{3/2})10s$	$^1D^\circ - ^1D$	2 - 2		162
	40	1436.075	145.2439 - 214.8780	$3d^3(2D_{5/2})4p - 3d^3(2D_{5/2})5s$	$^3D^\circ - ^3D$	2 - 3		162
	15	1436.219	235.6239 - 305.2506	$3d^3(2D_{5/2})5p - 3d^3(2D_{5/2})10s$	$^3D^\circ - ^3D$	3 - 3		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
12	1437.296		147.4986 - 217.0738	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3P$	1 - 2		162
1	1437.767		208.0413 - 277.5934	$3d^84s^2 - 3d^84s(^4F)4p$	$^1D - ^3D^o$	2 - 3		162
10	1438.808		147.5712 - 217.0738	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1P^o - ^3P$	1 - 2		162
12	1440.159		142.4833 - 211.9207	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3F^o - ^3P$	2 - 1		162
1	1440.876		230.6060 - 300.0087	$3d^9(^2D_{3/2})4d - 3d^9(^2D_{3/2})7f$	$^1S - ^3P^o$	0 - 1	Q	162
15	1441.017		147.4986 - 216.8953	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3P$	1 - 1		162
50	1441.474		145.9666 - 215.3405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^1F^o - ^3D$	3 - 2		162
60	1442.512		147.5712 - 216.8953	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1P^o - ^3P$	1 - 1		162
10	1444.216		142.4833 - 211.7255	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3F^o - ^3P$	2 - 2		162
50	1446.086		147.9215 - 217.0738	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1D^o - ^3P$	2 - 2		162
40	1446.915		145.2439 - 214.3570	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3S$	2 - 1		162
50	1451.147		145.9666 - 214.8780	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^1F^o - ^3D$	3 - 3		162
1	1453.644		211.9207 - 280.7126	$3d^84s^2 - 3d^84s(^4F)4p$	$^3P - ^3F^o$	1 - 2	Q	162
60	1456.707		79.2736 - 147.9215	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^1D^o$	2 - 2		162
10	1457.922		234.3840 - 302.9727	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3G$	3 - 4	Q	162
2	1458.622		234.3840 - 302.9419	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3F$	3 - 4	Q	162
5	1462.485		234.5760 - 302.9528	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3I$	4 - 5	Q	162
75	1464.198		79.2736 - 147.5712	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^1P^o$	2 - 1		162
60	1465.744		79.2736 - 147.4986	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3D^o$	2 - 1		162
15	1465.952		237.0478 - 305.2635	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})10s$	$^3F^o - ^3D$	2 - 2		162
4	1468.113		192.7637 - 260.8788	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^1F^o$	3 - 3		162
3	1468.978		234.8669 - 302.9419	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})7g$	$^3P^o - ^3F$	1 - 2	Q	162
30	1471.224		140.0710 - 208.0413	$3d^9(^2D_{5/2})4p - 3d^84s^2$	$^3P^o - ^1D$	1 - 2		162
2	1472.769		190.3413 - 258.2396	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^3G^o$	4 - 4		162
3	1472.838		190.3413 - 258.2396	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^3G^o$	4 - 4	Q	162
75	1473.394		78.0963 - 145.9666	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^1F^o$	3 - 3		162
15	1474.132		190.3413 - 258.1783	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^3F^o$	4 - 4		162
20	1474.270		190.3413 - 258.1712	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^3G^o$	4 - 5		162
50	1475.591		147.5712 - 215.3405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^1P^o - ^3D$	1 - 2		162
30	1483.266		147.9215 - 215.3405	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^1D^o - ^3D$	2 - 2		162
8	1483.979		140.6548 - 208.0413	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3F^o - ^1D$	3 - 2		162
5	1484.484		190.3413 - 257.7051	$3d^84s^2 - 3d^84s(^2F)4p$	$^3F - ^1F^o$	4 - 3		162
5	1484.833		235.6239 - 302.9727	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})7g$	$^3D^o - ^3G$	3 - 4	Q	162
25	1487.566		144.5012 - 211.7255	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3D^o - ^3P$	3 - 2		162
40	1489.245		78.0963 - 145.2439	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3D^o$	3 - 2		162
3	1489.708		233.6104 - 300.7378	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})8s$	$^3P^o - ^3S$	2 - 1		162
50	1490.943		80.8502 - 147.9215	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^1D^o$	1 - 2		162
30	1493.506		147.9215 - 214.8780	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})5s$	$^1D^o - ^3D$	2 - 3		162
15	1495.715		147.4986 - 214.3570	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^3D^o - ^3S$	1 - 1		162
10	1497.327		147.5712 - 214.3570	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1P^o - ^3S$	1 - 1		162
60	1498.778		80.8502 - 147.5712	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^1P^o$	1 - 1		162
70	1499.400		79.2736 - 145.9666	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^1F^o$	2 - 3		162
5	1499.780		145.2439 - 211.9207	$3d^9(^2D_{5/2})4p - 3d^84s^2$	$^3D^o - ^3P$	2 - 1		162
60	1500.398		80.8502 - 147.4986	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3D^o$	1 - 1		162
8	1501.655		238.3362 - 304.9307	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8g$	$^1D^o - ^1D$	2 - 2	Q	162
5	1502.077		194.3033 - 260.8788	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^1F^o$	2 - 3		162
0	1503.803		211.7255 - 278.2236	$3d^84s^2 - 3d^84s(^4F)4p$	$^3P - ^3D^o$	2 - 2		162
15	1504.188		145.2439 - 211.7255	$3d^9(^2D_{5/2})4p - 3d^84s^2$	$^3D^o - ^3P$	2 - 2		162
20	1505.234		147.9215 - 214.3570	$3d^9(^2D_{3/2})4p - 3d^9(^2D_{3/2})4d$	$^1D^o - ^3S$	2 - 1		162
75	1505.903		78.0963 - 144.5012	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3D^o$	3 - 3		162
15	1507.862		234.3840 - 300.7014	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})9s$	$^3F^o - ^3D$	3 - 2		162
10	1508.220		211.9207 - 278.2236	$3d^84s^2 - 3d^84s(^4F)4p$	$^3P - ^3D^o$	1 - 2		162
2	1512.611		234.5760 - 300.6861	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})9s$	$^3F^o - ^3D$	4 - 3		162
10	1515.289		237.5068 - 303.5013	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^1P^o - ^1D$	1 - 2		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
80	1515.833		79.2736 - 145.2439	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3D^o$	2 - 2		162
20	1517.611		237.0478 - 302.9419	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3F$	2 - 3	Q	152
3	1518.150		211.7255 - 277.5934	$3d^84s^2 - 3d^84s(^4F)4p$	$^3P - ^3D^o$	2 - 3		162
6	1518.396		237.6427 - 303.5013	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^1F^o - ^1D$	3 - 2		162
3	1518.829		234.3840 - 300.2242	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3G$	3 - 4	Q	162
2	1518.979		234.8669 - 300.7014	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^3P^o - ^3D$	1 - 2		162
60	1520.713		145.9666 - 211.7255	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^1F^o - ^3P$	3 - 2		162
2	1523.241		234.5760 - 300.2242	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3G$	4 - 5	Q	154
8	1525.371		142.4833 - 208.0413	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3F^o - ^1D$	2 - 2		162
2	1526.417		192.7637 - 258.2777	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^3F^o$	3 - 3		162
20	1527.236		192.7637 - 258.2396	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^3G^o$	3 - 4	Q	162
1	1531.725		235.4525 - 300.7378	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3D^o - ^3S$	2 - 1		162
6	1532.588		235.4525 - 300.7014	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^3D^o - ^3D$	2 - 2		162
30	1533.087		79.2736 - 144.5012	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3D^o$	2 - 3		162
2	1534.563		238.3362 - 303.5013	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^1D^o - ^1D$	2 - 2		162
3	1536.999		235.6239 - 300.6861	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^3D^o - ^3D$	3 - 3		162
20	1539.845		192.7637 - 257.7051	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^1F^o$	3 - 3		162
5	1540.781		243.1062 - 308.009	$3d^84s(^4F)4p - 3d^9(^2D_{3/2})10s$	$^5D^o - ^3D$	1 - 1	Q	162
25	1542.223		147.4986 - 212.3403	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3D^o - ^3P$	1 - 0		162
10	1543.954		147.5712 - 212.3403	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^1P^o - ^3P$	1 - 0		162
20	1545.086		235.4525 - 300.1734	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7g$	$^3D^o - ^3D$	2 - 2	Q	162
10	1549.173		235.6239 - 300.1734	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7g$	$^3D^o - ^3D$	3 - 2	Q	162
5	1552.090		214.8780 - 279.3072	$3d^9(^2D_{3/2})5s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	3 - 3		162
50	1552.288		83.5003 - 147.9215	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^1D^o$	2 - 2		162
30	1552.937		80.8502 - 145.2439	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3D^o$	1 - 2		162
25	1553.106		78.0963 - 142.4833	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3F^o$	3 - 2		162
20	1554.030		147.5712 - 211.9207	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^1P^o - ^3P$	1 - 1		162
15	1556.993		147.4986 - 211.7255	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3D^o - ^3P$	1 - 2		162
25	1558.738		147.5712 - 211.7255	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^1P^o - ^3P$	1 - 2		162
70	1560.780		83.5003 - 147.5712	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^1P^o$	2 - 1		162
75	1562.538		83.5003 - 147.4986	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^3D^o$	2 - 1		162
10	1563.163		194.3033 - 258.2777	$3d^84s^2 - 3d^9(^2D_{3/2})4f$	$^3F - ^3F^o$	2 - 3		162
1	1563.280		215.3405 - 279.3072	$3d^9(^2D_{3/2})5s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	2 - 3	Q	162
12	1566.955		216.8953 - 280.7126	$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^3P - ^3F^o$	1 - 2		162
25	1567.310		147.9215 - 211.7255	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^1D^o - ^3P$	2 - 2		162
25	1567.840		194.3033 - 258.0870	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^1D^o$	2 - 2	Q	152
8	1568.345		244.2462 - 308.009	$3d^84s(^4F)4p - 3d^9(^2D_{3/2})10s$	$^5D^o - ^3D$	2 - 1	Q	162
3	1570.900		241.2848 - 304.9427	$3d^84s(^4F)4p - 3d^9(^2D_{3/2})8g$	$^5D^o - ^3F$	4 - 4		162
3	1571.008		237.0478 - 300.7014	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^3F^o - ^3D$	2 - 2		162
12	1571.377		237.0478 - 300.6861	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})9s$	$^3F^o - ^3D$	2 - 3		162
25	1573.809		144.5012 - 208.0413	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3D^o - ^1D$	3 - 2		162
0	1577.275		194.3033 - 257.7051	$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^1F^o$	2 - 3		162
15	1578.642		214.8780 - 278.2236	$3d^9(^2D_{3/2})5s - 3d^84s(^4F)4p$	$^3D - ^3D^o$	3 - 2		162
15	1579.729		233.6104 - 296.9123	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3P^o - ^1F$	2 - 3		162
100	1581.505		78.0963 - 141.3270	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3F^o$	3 - 4		162
100	1582.034		79.2736 - 142.4833	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3F^o$	2 - 2		162
0	1583.136		237.0478 - 300.2123	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3F$	2 - 3	Q	162
2	1583.620		237.0478 - 300.1931	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^1D$	2 - 2	Q	162
5	1585.876		217.6558 - 280.7126	$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^3D - ^3F^o$	3 - 2		162
6	1586.076		217.6637 - 280.7126	$3d^9(^2D_{3/2})5s - 3d^84s(^4F)4p$	$^3D - ^3F^o$	1 - 2		162
2	1590.678		217.8468 - 280.7126	$3d^9(^2D_{3/2})5s - 3d^84s(^4F)4p$	$^1D - ^3F^o$	2 - 2		162
3	1592.128		233.6104 - 296.4179	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3P^o - ^3D$	2 - 1		162
50	1592.431		145.2439 - 208.0413	$3d^9(^2D_{3/2})4p - 3d^84s^2$	$^3D^o - ^1D$	2 - 2		162
80	1598.517		78.0963 - 140.6548	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3F^o$	3 - 3		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	1599.146	190.3413 - 252.8746	$3d^8 4s^2 - 3d^8 4s(^2F)4p$	$^3F - ^3D$	4 - 3		162
	2	1599.233	237.6427 - 300.1734	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})7g$	$^1F - ^1D$	3 - 2	Q	162
	2	1600.074	238.2055 - 300.7014	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})9s$	$^3D - ^3D$	1 - 2		162
	1	1600.206	234.3840 - 296.8756	$3d^9(^2D_{5/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^1D$	3 - 2		162
	80	1600.858	83.5003 - 145.9666	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^1F$	2 - 3		162
	1	1602.511	238.3362 - 300.7378	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})8s$	$^1D - ^3S$	2 - 1		162
	0	1603.470	238.3362 - 300.7014	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})9s$	$^1D - ^3D$	2 - 2		162
	5	1603.873	238.3362 - 300.6861	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})9s$	$^1D - ^3D$	2 - 3		162
	10	1607.950	242.7396 - 304.9307	$3d^8 4s(^4F)4p - 3d^9(^2D_{5/2})8g$	$^5D - ^3D$	3 - 3	Q	162
	20	1608.424	218.5403 - 280.7126	$3d^9(^2D_{3/2})4d - 3d^9 4s(^4F)4p$	$^3D - ^3F$	2 - 2		162
	40	1608.829	243.1062 - 305.2635	$3d^8 4s(^4F)4p - 3d^9(^2D_{5/2})10s$	$^5D - ^3D$	1 - 2	Q	162
	30	1610.832	234.3840 - 296.4643	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3F - ^1D$	3 - 2		162
	40	1610.968	145.9666 - 208.0413	$3d^9(^2D_{3/2})4p - 3d^8 4s^2$	$^1F - ^1D$	3 - 2		162
	10	1612.688	234.8669 - 296.8756	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3P - ^1D$	1 - 2		162
	15	1613.201	194.3033 - 256.2919	$3d^8 4s^2 - 3d^8 4s(^2F)4p$	$^3F - ^3D$	2 - 1		162
	20	1613.728	238.2055 - 300.1734	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})7g$	$^3D - ^3D$	1 - 1	Q	162
	8	1614.895	190.3413 - 252.2648	$3d^8 4s^2 - 3d^8 4s(^2F)4p$	$^3F - ^3F$	4 - 4		162
	80	1619.616	83.5003 - 145.2439	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^3D$	2 - 2		162
	40	1621.552	208.0413 - 269.7117	$3d^8 4s^2 - 3d^8 4s(^2D)4p$	$^1D - ^1F$	2 - 3		162
	100	1622.509	80.8502 - 142.4833	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3F$	1 - 2		162
	1	1626.009	235.4525 - 296.9530	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D - ^3F$	2 - 2		162
	100	1629.157	79.2736 - 140.6548	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3F$	2 - 3		162
	5	1630.546	218.8953 - 278.2236	$3d^9(^2D_{3/2})4d - 3d^8 4s(^4F)4p$	$^3P - ^3D$	1 - 2		162
	8	1631.653	235.6239 - 296.9123	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D - ^1F$	3 - 3		162
	2	1632.171	218.0405 - 279.3072	$3d^9(^2D_{3/2})4d - 3d^8 4s(^4F)4p$	$^3F - ^3F$	3 - 3		162
	10	1632.626	235.6239 - 296.8756	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D - ^1D$	3 - 2		162
	100	1639.318	83.5003 - 144.5012	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^3D$	2 - 3		162
	2	1641.257	192.7637 - 253.6927	$3d^8 4s^2 - 3d^8 4s(^2F)4p$	$^3F - ^3D$	3 - 2		162
	100	1644.820	79.2736 - 140.0710	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3P$	2 - 1		162
	2	1648.406	233.6104 - 294.2750	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3P - ^3F$	2 - 3		162
	100	1651.739	80.8502 - 141.3925	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3P$	1 - 0		162
	3	1652.541	233.6104 - 294.1237	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3P - ^3D$	2 - 3		162
	60	1653.697	147.5712 - 208.0413	$3d^9(^2D_{3/2})4p - 3d^8 4s^2$	$^1P - ^1D$	1 - 2		162
	5	1654.950	233.6104 - 294.0351	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3P - ^3P$	2 - 2		162
	2	1662.279	233.6104 - 293.7686	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3P - ^3S$	2 - 1		162
	40	1663.344	147.9215 - 208.0413	$3d^9(^2D_{3/2})4p - 3d^8 4s^2$	$^1D - ^1D$	2 - 2		162
	6	1665.352	233.6104 - 293.6584	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3P - ^3D$	2 - 3		162
	5	1666.342	235.6239 - 295.6358	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6g$	$^3D - ^1F$	3 - 3	Q	162
	2	1669.297	237.0478 - 296.9530	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3F$	2 - 2		162
	2	1669.699	234.3840 - 294.2750	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3F$	3 - 3		162
	20	1670.456	237.0478 - 296.9123	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^1F$	2 - 3		162
	3	1671.779	194.3033 - 254.1205	$3d^8 4s^2 - 3d^8 4s(^2F)4p$	$^3F - ^3G$	2 - 3		162
	5	1672.120	234.3840 - 294.1883	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3D$	3 - 2		162
	100	1673.049	78.0963 - 137.8664	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3P$	3 - 2		162
	12	1674.291	234.5760 - 294.3028	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3F$	4 - 4		162
	3	1675.059	234.5760 - 294.2750	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3F$	4 - 3		162
	3	1675.788	237.0478 - 296.7209	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3G$	2 - 3		162
	20	1676.443	234.3840 - 294.0343	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3G$	3 - 4		162
	2	1676.692	192.7637 - 252.4044	$3d^8 4s^2 - 3d^8 4s(^2F)4p$	$^3F - ^3F$	3 - 3		162
	5	1677.216	219.6849 - 279.3072	$3d^9(^2D_{3/2})4d - 3d^8 4s(^4F)4p$	$^3G - ^3F$	3 - 3		162
	2	1678.728	221.1437 - 280.7126	$3d^9(^2D_{3/2})4d - 3d^8 4s(^4F)4p$	$^1F - ^3F$	3 - 2		162
	0	1679.180	218.0415 - 277.5934	$3d^9(^2D_{3/2})4d - 3d^8 4s(^4F)4p$	$^3F - ^3D$	4 - 3		162
	2	1679.321	234.5760 - 294.1237	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3D$	4 - 3		162
	1	1681.858	234.5760 - 294.0343	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F - ^3G$	4 - 4		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1	1682.656	234.5760 - 294.0058		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F^o - ^3G$	4 - 5		162
2	1683.419	241.2848 - 300.6861		$3d^84s(^4F)4p - 3d^9(^2D_{3/2})9s$	$^5D^o - ^3D$	4 - 3	Q	162
6	1684.381	237.5068 - 296.8756		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^1P^o - ^1D$	1 - 2		162
4	1685.196	234.3840 - 293.7243		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3F^o - ^3D$	3 - 2		162
6	1686.039	237.6427 - 296.9530		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^1F^o - ^3F$	3 - 2		162
1	1686.804	233.6104 - 292.8925		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6g$	$^3P^o - ^3D$	2 - 3	Q	162
15	1688.240	237.6427 - 296.8756		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^1F^o - ^1D$	3 - 2		162
100	1688.589	80.8502 - 140.0710		$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3P^o$	1 - 1		162
3	1690.111	245.7746 - 304.9427		$3d^84s(^4F)4p - 3d^9(^2D_{3/2})8g$	$^5G^o - ^3F$	3 - 3		162
8	1692.554	234.5760 - 293.6584		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3F^o - ^3D$	4 - 3		162
100	1695.407	83.5003 - 142.4833		$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^3F^o$	2 - 2		162
1	1697.433	237.5068 - 296.4179		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^1P^o - ^3D$	1 - 1		162
2	1699.036	234.8669 - 293.7243		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3P^o - ^3D$	1 - 2		162
1	1699.828	249.5752 - 308.4048		$3d^84s(^4F)4p - 3d^9(^2D_{3/2})11s$	$^5F^o - ^3D$	2 - 2	Q	162
5	1700.053	237.6427 - 296.4643		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^1F^o - ^1D$	3 - 2		162
1	1700.976	216.4645 - 275.2544		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^3G - ^3F^o$	4 - 4		162
10	1702.210	238.2055 - 296.9530		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D^o - ^3F$	1 - 2		162
7	1702.540	235.4525 - 294.1883		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D^o - ^3D$	2 - 2		162
0	1703.726	244.2462 - 302.9419		$3d^84s(^4F)4p - 3d^9(^2D_{3/2})7g$	$^5D^o - ^3F$	2 - 3	Q	162
2	1704.178	235.6239 - 294.3028		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D^o - ^3F$	3 - 4		162
0	1704.475	190.3413 - 249.0103		$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^5F^o$	4 - 3		162
2	1705.115	216.6074 - 275.2544		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^3G - ^3F^o$	5 - 4		162
15	1705.997	238.3362 - 296.9530		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^1D^o - ^3F$	2 - 2		162
100	1706.659	79.2736 - 137.8664		$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^3D - ^3P^o$	2 - 2		162
20	1707.191	238.3362 - 296.9123		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^1D^o - ^1F$	2 - 3		162
3	1707.732	234.3840 - 292.9426		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6g$	$^3F^o - ^3G$	3 - 4	Q	162
2	1707.865	246.3904 - 304.9427		$3d^84s(^4F)4p - 3d^9(^2D_{3/2})8g$	$^5G^o - ^3F$	2 - 3	Q	162
3	1708.259	238.3362 - 296.8756		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^1D^o - ^1D$	2 - 2		162
0	1708.896	238.3362 - 296.8527		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^1D^o - ^3D$	2 - 1		162
0	1709.143	234.3840 - 292.8925		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6g$	$^3F^o - ^3D$	3 - 3	Q	162
4	1709.401	235.6239 - 294.1237		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D^o - ^3D$	3 - 3		162
1	1711.982	235.6239 - 294.0351		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3D^o - ^3P$	3 - 2		162
0	1713.455	234.5760 - 292.9374		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6g$	$^3F^o - ^3H$	4 - 5	Q	162
0	1714.800	234.5760 - 292.8925		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6g$	$^3F^o - ^3D$	4 - 3		162
4	1716.090	235.4525 - 293.7243		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3D^o - ^3D$	2 - 2		162
1	1716.467	238.2055 - 296.4643		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3D^o - ^1D$	1 - 2		162
2	1716.589	221.0522 - 279.3072		$3d^84s^2 - 3d^84s(^4F)4p$	$^1G - ^3F^o$	4 - 3		162
1	1717.212	219.3600 - 277.5934		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^1G - ^3D^o$	4 - 3		162
1	1717.880	238.2055 - 296.4179		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3D^o - ^3D$	1 - 1		162
2	1720.339	238.3362 - 296.4643		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^1D^o - ^1D$	2 - 2		162
2	1721.151	235.6239 - 293.7243		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3D^o - ^3D$	3 - 2		162
6	1723.111	235.6239 - 293.6584		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})8s$	$^3D^o - ^3D$	3 - 3		162
2	1724.558	211.7255 - 269.7117		$3d^84s^2 - 3d^84s(^2D)4p$	$^3P - ^1F^o$	2 - 3		162
0	1725.230	221.3436 - 279.3072		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^3F - ^3F^o$	2 - 3		162
3	1729.918	190.3413 - 248.1472		$3d^84s^2 - 3d^84s(^4F)4p$	$^3F - ^5F^o$	4 - 4		162
0	1736.138	217.6558 - 275.2544		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^3D - ^3F^o$	3 - 4		162
10	1737.473	220.6683 - 278.2236		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^1D - ^3D^o$	2 - 2		162
0	1739.954	242.7396 - 300.2123		$3d^84s(^4F)4p - 3d^9(^2D_{3/2})7g$	$^5D^o - ^3F$	3 - 4	Q	162
0	1747.872	218.0415 - 275.2544		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^3F - ^3F^o$	4 - 4		162
200	1749.629	83.5003 - 140.6548		$3d^9(^2D_{3/2})4s - 3d^9(^2D_{3/2})4p$	$^1D - ^3F^o$	2 - 3		162
10	1750.770	192.7637 - 249.8814		$3d^84s^2 - 3d^84s(^2F)4p$	$^3F - ^3G^o$	3 - 4		162
1	1751.945	221.1437 - 278.2236		$3d^9(^2D_{3/2})4d - 3d^84s(^4F)4p$	$^1F - ^3D^o$	3 - 2	Q	162
100	1753.824							162
0	1754.498	237.0478 - 294.0445		$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})7d$	$^3F^o - ^3P$	2 - 1		162

ZN III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1754.777	237.0478 - 294.0351	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})7d$	$^3F^o - ^3P$	2 - 2		162
	2	1760.192	192.7637 - 249.5752	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5F^o$	3 - 2		162
	6	1763.032	237.0478 - 293.7686	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})7d$	$^3F^o - ^3S$	2 - 1		162
	90	1767.684	83.5003 - 140.0710	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{5/2})4p$	$^1D - ^3P^o$	2 - 1		162
	3	1777.911	192.7637 - 249.0103	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5F^o$	3 - 3		162
	5	1789.691	237.0478 - 292.9222	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})6g$	$^3F^o - ^3F$	2 - 3	Q	162
	1	1791.180	238.2055 - 294.0351	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})7d$	$^3D^o - ^3P$	1 - 2		162
	1	1792.523	238.3362 - 294.1237	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})7d$	$^1D^o - ^3D$	2 - 3		162
	3	1805.599	192.7637 - 248.1472	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5F^o$	3 - 4		162
	1	1807.566	238.3362 - 293.6584	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})8s$	$^1D^o - ^3D$	2 - 3		162
	3	1808.300	237.6427 - 292.9426	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})6g$	$^1F^o - ^3G$	3 - 4	Q	162
	6	1808.915	237.6427 - 292.9234	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})6g$	$^1F^o - ^3F$	3 - 4	Q	162
	1	1809.253	194.3033 - 249.5752	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5F^o$	2 - 2		162
	35	1821.676						162
	20	1822.914	256.2919 - 311.1498	$3d^94s(^4F)4p - 3d^9(^2D_{3/2})11s$	$^3D^o - ^3D$	1 - 1	Q	162
	1	1825.020	190.3413 - 245.1354	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5G^o$	4 - 4		162
	1	1832.940	238.3362 - 292.8925	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{5/2})6g$	$^1D^o - ^1D$	2 - 2	Q	162
	150	1839.334	83.5003 - 137.8664	$3d^9(^2D_{3/2})4s - 3d^9(^2D_{5/2})4p$	$^1D - ^3P^o$	2 - 2		162
	25	1843.953	140.0710 - 194.3033	$3d^9(^2D_{3/2})4p - 3d^94s^2$	$^3P^o - ^3F$	1 - 2		162
	1	1852.500	242.7396 - 296.7209	$3d^94s(^4F)4p - 3d^9(^2D_{3/2})7d$	$^3D^o - ^3G$	3 - 3	Q	162
	50	1864.006	140.6548 - 194.3033	$3d^9(^2D_{3/2})4p - 3d^94s^2$	$^3F^o - ^3F$	3 - 2		162
	1	1866.200	257.5661 - 311.1498	$3d^9(^2D_{3/2})4f - 3d^9(^2D_{3/2})11s$	$^3P^o - ^3D$	1 - 1	Q	162
	1	1886.405	192.7637 - 245.7746	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5G^o$	3 - 3		162
	3	1888.968						162
	3	1896.775	241.2848 - 294.0058	$3d^94s(^4F)4p - 3d^9(^2D_{5/2})7d$	$^5D^o - ^3G$	4 - 5	Q	162
	12	1899.793	217.0738 - 269.7117	$3d^9(^2D_{3/2})4d - 3d^94s(^2D)4p$	$^3P - ^1F^o$	2 - 3		162
	1	1908.436	190.3413 - 242.7396	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5D^o$	4 - 3		162
	6	1909.424	192.7637 - 245.1354	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5G^o$	3 - 4		162
	20	1919.068	140.6548 - 192.7637	$3d^9(^2D_{3/2})4p - 3d^94s^2$	$^3F^o - ^3F$	3 - 3		457
	20	1921.012	217.6558 - 269.7117	$3d^9(^2D_{3/2})4d - 3d^94s(^2D)4p$	$^3D - ^1F^o$	3 - 3		162
	2	1927.005	233.6104 - 285.5037	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6d$	$^3P^o - ^3D$	2 - 1		162
	0	1928.098	217.8468 - 269.7117	$3d^9(^2D_{3/2})5s - 3d^94s(^2D)4p$	$^1D - ^1F^o$	2 - 3		162
	80	1929.774	142.4833 - 194.3033	$3d^9(^2D_{3/2})4p - 3d^94s^2$	$^3F^o - ^3F$	2 - 2		457
	15	1930.525						162
	5	1935.354	218.0415 - 269.7117	$3d^9(^2D_{3/2})4d - 3d^94s(^2D)4p$	$^3F - ^1F^o$	4 - 3		162
	1	1942.392	192.7637 - 244.2462	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5D^o$	3 - 2		162
	60	1944.160	141.3270 - 192.7637	$3d^9(^2D_{3/2})4p - 3d^94s^2$	$^3F^o - ^3F$	4 - 3		162
	0	1946.637	234.3840 - 285.7535	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6d$	$^3F^o - ^3F$	3 - 2		162
	1	1954.183	218.5403 - 269.7117	$3d^9(^2D_{3/2})4d - 3d^94s(^2D)4p$	$^3D - ^1F^o$	2 - 3		162
	8	1955.955	249.5752 - 300.7014	$3d^94s(^4F)4p - 3d^9(^2D_{3/2})9s$	$^5F^o - ^3D$	2 - 2	Q	162
	1	1962.974	190.3413 - 241.2848	$3d^94s^2 - 3d^94s(^4F)4p$	$^3F - ^5D^o$	4 - 4		162
	2	1971.416	234.8669 - 285.5921	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6d$	$^3P^o - ^1D$	1 - 2		162
	1	1973.305	252.2648 - 302.9419	$3d^94s(^4F)4p - 3d^9(^2D_{3/2})7g$	$^3F^o - ^3F$	4 - 4	Q	162
	0	1974.863	234.8669 - 285.5037	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6d$	$^3P^o - ^3D$	1 - 1		162
	1	1977.250	260.5841 - 311.1595	$3d^9(^2D_{3/2})4f - 3d^9(^2D_{3/2})11s$	$^3D^o - ^1D$	1 - 2	Q	162
	4	1986.020	219.3600 - 269.7117	$3d^9(^2D_{3/2})4d - 3d^94s(^2D)4p$	$^1G - ^1F^o$	4 - 3		162
	1	1986.365	249.8814 - 300.2242	$3d^94s(^4F)4p - 3d^9(^2D_{3/2})7g$	$^3G^o - ^3G$	4 - 5	Q	162
	25	1990.637	221.3436 - 271.5792	$3d^9(^2D_{3/2})4d - 3d^94s(^2P)4p$	$^3F - ^3D^o$	2 - 3		162
	1	1992.936	260.9819 - 311.1595	$3d^9(^2D_{3/2})4f - 3d^9(^2D_{3/2})11s$	$^3G^o - ^1D$	3 - 2	Q	162
	1	1994.454	235.4525 - 285.5921	$3d^9(^2D_{3/2})5p - 3d^9(^2D_{3/2})6d$	$^3D^o - ^1D$	2 - 2		162
	1	1995.539	257.9082 - 308.0210	$3d^9(^2D_{3/2})4f - 3d^9(^2D_{3/2})10s$	$^1P^o - ^1D$	1 - 2	Q	162
	10	1998.150	208.0413 - 258.0870	$3d^94s^2 - 3d^94s(^4F)4p$	$^1D - ^1D^o$	2 - 2		162
	10	1998.653	208.0413 - 258.0757	$3d^94s^2 - 3d^9(^2D_{3/2})4f$	$^1D - ^3D^o$	2 - 3		162

ZINC IV (Zn³⁺), Z = 30
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁰(²D_{5/2}) (27 electrons)
 Ionization Potential [479 100] cm⁻¹; [59.4] eV

Multiplet	Rel. Int.	λ _{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
3	412.671		0.0 - 242.3204	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - y ² G°	2-2		154
0	423.424		0.0 - 236.1758	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ S°	2-2		154
5	423.533		0.0 - 236.1112	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F°	2-2		154
40	425.891		0.0 - 234.8038	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F°	2-2		154
30	428.541		2.7588 - 236.1112	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F°	2-2		154
10	428.788		2.7588 - 235.9754	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² S°	2-2		154
25	429.299		0.0 - 232.9380	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P°	2-2		154
15	430.586		0.0 - 232.2446	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D°	2-2		154
15	431.535		2.7588 - 234.4929	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P°	2-2		154
25	431.613		0.0 - 231.6902	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D°	2-2		154
0	434.407		2.7588 - 232.9380	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P°	2-2		154
5	435.023		0.0 - 229.8758	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D°	2-2		154
20	435.762		2.7588 - 232.2446	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D°	2-2		154
15	436.248		0.0 - 229.2304	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D°	2-2		154
8	436.381		0.0 - 229.1610	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D°	2-2		154
10	436.812		2.7588 - 231.6902	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D°	2-2		154
15	441.146		0.0 - 226.6834	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P°	2-2		154
8	441.543		2.7588 - 229.2304	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D°	2-2		154
20	441.693		2.7588 - 229.1610	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D°	2-2		154
40	442.381		0.0 - 226.0486	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D°	2-2		154
60	444.383		0.0 - 225.0312	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F°	2-2		154
30	444.455		0.0 - 224.9970	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D°	2-2		154
40	446.582		2.7588 - 226.6834	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P°	2-2		154
8	447.850		2.7588 - 226.0486	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D°	2-2		154
1	449.131		2.7588 - 225.4134	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P°	2-2		154
40	449.970		2.7588 - 224.9970	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D°	2-2		154
50	450.985		0.0 - 221.7377	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P°	2-2		154
10	451.624		0.0 - 221.4263	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P°	2-2		154
50	452.803		2.7588 - 223.6060	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F°	2-2		154
35	456.671		2.7588 - 221.7377	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P°	2-2		154
50	457.315		2.7588 - 221.4263	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P°	2-2		154
60	466.924		0.0 - 214.1682	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F°	2-2		154
40	468.426		0.0 - 213.4809	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D°	2-2		154
75	472.086		0.0 - 211.8251	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F°	2-2		154
70	472.655		0.0 - 211.5708	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D°	2-2		154
60	473.014		2.7588 - 214.1682	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F°	2-2		154
75	473.501		0.0 - 211.1907	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² G°	2-2		154
60	474.558		2.7588 - 213.4809	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D°	2-2		154
8	475.768		0.0 - 210.1888	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F°	2-2		154
75	478.646		0.0 - 208.9227	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F°	2-2		154
60	478.898		2.7588 - 211.5708	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D°	2-2		154
50	482.089		2.7588 - 210.1888	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F°	2-2		154
2	482.668		0.0 - 207.1785	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ G°	2-2		154
	485.476		0.0 - 205.9909	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ G°	2-2		154
1	489.183		2.7588 - 207.1785	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ G°	2-2		154
3	490.956		0.0 - 203.6837	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D°	2-2		154
2	493.365		2.7588 - 205.4531	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D°	2-2		154
1	496.719		0.0 - 201.3189	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D°	2-2		154
3	497.701		2.7588 - 203.6837	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D°	2-2		154
2	986.960		130.3661 - 231.6902	3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - x ² D°	2-2		154
5	988.667		128.7298 - 229.8758	3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D°	2-2		154
5	995.584		131.8045 - 232.2446	3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - x ² D°	2-2	Q	162
8	998.357		135.9512 - 236.1112	3d ⁸ (³ F)4s - 3d ⁸ (¹ G)4p	a ² F - x ² F°	2-2	Q	162
2	1001.156		131.8045 - 231.6902	3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - x ² D°	2-2		154

ZN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
2	1004.931		130.3661 - 229.8758	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	2-1		154
0	1005.400		132.7773 - 232.2446	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - x^2D^o$	2-1	Q	162
0	1011.003		132.7773 - 231.6902	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - x^2D^o$	2-1		154
7	1011.605		135.9512 - 234.8038	$3d^8(^3F)4s - 3d^8(^1G)4p$	$a^2F - x^2F^o$	2-1		154
5	1012.192		130.3661 - 229.1610	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	2-1		154
2	1024.255		138.4794 - 236.1112	$3d^8(^3F)4s - 3d^8(^1G)4p$	$a^2F - x^2F^o$	2-1		154
4	1026.414		131.8045 - 229.2304	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	2-1		154
6	1027.118		131.8045 - 229.1610	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	2-1		154
3	1036.551		132.7773 - 229.2506	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	2-1		154
2	1036.773		132.7773 - 229.2304	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - y^4D^o$	2-1		154
1	1044.502		135.9512 - 231.6902	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^2F - x^2D^o$	2-1		154
1	1062.240		148.1797 - 242.3204	$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - y^2G^o$	2-1		154
1	1066.520		138.4794 - 232.2446	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^2F - x^2D^o$	2-1		154
1	1072.496		130.3661 - 223.6060	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^4F - y^2F^o$	2-1		154
	1073.027		131.8045 - 224.9970	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^4F - y^2D^o$	2-1		154
0	1089.334		131.8045 - 223.6060	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^4F - y^2F^o$	2-1		154
	1094.128		138.4794 - 229.8758	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^2F - y^4D^o$	2-1		154
8	1094.429		130.3661 - 221.7377	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - z^4P^o$	2-1		154
2	1101.896		138.4794 - 229.2304	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^2F - y^4D^o$	2-1		154
0	1102.805		138.4794 - 229.1610	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^2F - y^4D^o$	2-1	Q	162
35	1109.919		135.9512 - 226.0486	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2D^o$	2-1		154
2	1111.935		131.8045 - 221.7377	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - z^4P^o$	2-1		154
3	1115.801		131.8045 - 221.4263	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4F - z^4P^o$	2-1		154
3	1122.587		135.9512 - 225.0312	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2F^o$	2-1		154
15	1133.744		138.4794 - 226.6834	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - z^2P^o$	2-1		154
40	1136.406		148.1797 - 236.1758	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4S^o$	2-1		154
3	1137.243		148.1797 - 236.1112	$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - x^2F^o$	2-1		154
8	1140.849		135.9512 - 223.6060	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2F^o$	2-1		154
20	1141.955		138.4794 - 226.0486	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2D^o$	2-1		154
25	1149.610		149.1908 - 236.1758	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4S^o$	2-1		154
30	1150.481		149.1908 - 236.1112	$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - x^2F^o$	2-1		154
20	1152.278		149.1908 - 235.9754	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^2S^o$	2-1		154
25	1154.402		148.1797 - 234.8038	$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - x^2F^o$	2-1		154
5	1155.384		138.4794 - 225.0312	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2F^o$	2-1		154
40	1155.850		138.4794 - 224.9970	$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2D^o$	2-1		154
30	1172.304		149.1908 - 234.4929	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^o$	2-1		154
60	1177.484		151.2495 - 236.1758	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	2-1		154
15	1178.391		151.2495 - 236.1112	$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^4P - x^2F^o$	2-1		154
50	1179.478		151.3924 - 236.1758	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	2-1		154
25	1179.814		148.1797 - 232.9380	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^o$	2-1		154
4	1180.274		151.2495 - 235.9754	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^2S^o$	2-1		154
50	1182.016		151.5743 - 236.1758	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	2-1		154
35	1189.565		148.1797 - 232.2446	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^o$	2-1		154
30	1194.068		149.1908 - 232.9380	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^o$	2-1		154
30	1197.440		148.1797 - 231.6902	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^o$	2-1		154
25	1201.292		151.2495 - 234.4929	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^o$	2-1		154
50	1201.489		151.5743 - 234.8038	$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^4P - x^2F^o$	2-1		154
40	1203.430		128.7298 - 211.8251	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	2-1		154
30	1204.038		149.1908 - 232.2446	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^o$	2-1		154
25	1205.594		138.4794 - 221.4263	$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^2F - z^4P^o$	2-1		154
12	1212.110		149.1908 - 231.6902	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^2D^o$	2-1		154
25	1212.693		128.7298 - 211.1907	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	2-1		154
15	1214.121		131.8045 - 214.1682	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	2-1		154
60	1223.181		160.8860 - 242.6400	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^o$	2-1		154

ZN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
30	1223.680	160.9192 - 242.6400		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^\circ$	2-1		154
50	1224.052	148.1797 - 229.8758		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	2-1		154
20	1224.179	151.2495 - 232.9380		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^\circ$	2-1		154
20	1224.348	131.8045 - 213.4809		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	2-1		154
8	1226.325	151.3924 - 232.9380		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^\circ$	2-1		154
15	1227.615	130.3661 - 211.8251		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	2-1		154
1	1228.003	160.8860 - 242.3204		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^\circ$	2-1		154
60	1228.482	160.9192 - 242.3204		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^\circ$	2-1		154
50	1228.646	132.7773 - 214.1682		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	2-1		154
15	1229.062	151.5743 - 232.9380		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^2P^\circ$	2-1		154
25	1231.458	130.3661 - 211.5708		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	2-1		154
10	1233.806	148.1797 - 229.2304		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	2-1		154
20	1234.857	148.1797 - 229.1610		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	2-1		154
25	1237.250	130.3661 - 211.1907		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	2-1		154
40	1239.102	132.7773 - 213.4809		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	2-1		154
40	1239.602	151.5743 - 232.2446		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^2D^\circ$	2-1		154
40	1243.157	151.2495 - 231.6902		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^2D^\circ$	2-1		154
3	1246.260	128.7298 - 208.9703		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	2-1		154
10	1247.000	128.7298 - 208.9227		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
15	1248.184	151.5743 - 231.6902		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^2D^\circ$	2-1		154
3	1249.083	149.1908 - 229.2506		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	2-1		154
5	1249.402	149.1908 - 229.2304		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	2-1		154
40	1249.676	131.8045 - 211.8251		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^\circ$	2-1		154
30	1250.466	149.1908 - 229.1610		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^\circ$	2-1		154
40	1253.664	131.8045 - 211.5708		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	2-1		154
30	1257.291	130.3661 - 209.9020		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
5	1259.673	131.8045 - 211.1907		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	2-1		154
0	1264.205	157.0748 - 236.1758		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4S^\circ$	2-1		154
3	1265.223	157.0748 - 236.1112		$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^2P - x^2F^\circ$	2-1		154
60	1265.716	128.7298 - 207.7368		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
40	1267.397	157.0748 - 235.9754		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^2S^\circ$	2-1		154
4	1269.144	132.7773 - 211.5708		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^\circ$	2-1		154
50	1272.192	130.3661 - 208.9703		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^\circ$	2-1		154
60	1272.963	130.3661 - 208.9227		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
30	1273.818	148.1797 - 226.6834		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^\circ$	2-1		154
40	1275.756	131.8045 - 210.1888		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
60	1277.110	151.5743 - 229.8758		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^\circ$	2-1		154
20	1278.491	135.9512 - 214.1682		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2F^\circ$	2-1		154
60	1280.443	131.8045 - 209.9020		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
15	1281.292	157.9295 - 235.9754		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^2S^\circ$	2-1		154
20	1282.027	151.2495 - 229.2506		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^\circ$	2-1		154
50	1282.363	151.2495 - 229.2304		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^\circ$	2-1		154
50	1283.497	151.2495 - 229.1610		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^\circ$	2-1		154
40	1284.185	148.1797 - 226.0486		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^\circ$	2-1		154
50	1284.382	151.3924 - 229.2506		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^\circ$	2-1		154
50	1284.715	151.3924 - 229.2304		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^\circ$	2-1		154
40	1288.875	151.5743 - 229.1610		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^\circ$	2-1		154
40	1290.440	149.1908 - 226.6834		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^\circ$	2-1		154
50	1291.795	132.7773 - 210.1888		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
60	1292.484	130.3661 - 207.7368		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
10	1294.306	128.7298 - 205.9909		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^\circ$	2-1		154
50	1296.589	132.7773 - 209.9020		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
50	1296.730	131.8045 - 208.9227		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^\circ$	2-1		154
30	1301.082	149.1908 - 226.0486		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^\circ$	2-1	Q	152

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	1301.204	148.1797 - 225.0312	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^o$	2 - 2		154
	40	1301.865	130.3661 - 207.1785	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	40	1306.097	157.9295 - 234.4929	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^2P^o$	1 - 1		154
	60	1306.641	128.7298 - 205.2611	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	50	1311.939	149.1908 - 225.4134	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^o$	2 - 1		154
	50	1317.975	135.9512 - 211.8251	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	2 - 2		154
	5	1319.200	149.1908 - 224.9970	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^o$	2 - 2		154
	50	1320.699	128.7298 - 204.4466	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	50	1321.188	138.4794 - 214.1682	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	2 - 2		154
	50	1322.308	130.3661 - 205.9909	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	50	1322.414	135.9512 - 211.5708	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	2 - 2		154
	5	1325.659	151.2495 - 226.6834	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	2 - 2		154
	50	1326.708	131.8045 - 207.1785	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	5	1329.061	135.9512 - 211.1907	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	2 - 2		154
	40	1329.923	160.9192 - 236.1112	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^o$	2 - 1		154
	40	1330.297	157.0748 - 232.2446	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	2 - 2		154
	40	1331.390	151.5743 - 226.6834	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	2 - 1		154
	40	1333.168	157.9295 - 232.9380	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^2P^o$	2 - 2		154
	50	1333.296	138.4794 - 213.4809	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	2 - 2		154
	40	1336.889	151.2495 - 226.0486	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	2 - 2		154
	50	1340.162	157.0748 - 231.6902	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	2 - 2		154
	50	1342.720	151.5743 - 226.0486	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	2 - 2		154
	50	1343.794	149.1908 - 223.6060	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^o$	2 - 2		154
	50	1344.063	132.7773 - 207.1785	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	10	1345.622	157.9295 - 232.2446	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	1 - 2		154
	50	1347.949	131.8045 - 205.9909	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	40	1348.354	151.2495 - 225.4134	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	2 - 1		154
	50	1349.872	130.3661 - 204.4466	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^o$	2 - 2		154
	40	1352.247	135.9512 - 209.9020	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	2 - 2		154
	60	1352.876	160.8860 - 234.8038	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^o$	2 - 2		154
	3	1353.476	160.9192 - 234.8038	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^o$	2 - 2		154
	40	1355.967	151.2495 - 224.9970	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	2 - 2		154
	50	1356.178	160.8860 - 234.6226	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	2 - 1		154
	50	1357.787	131.8045 - 205.4531	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	2 - 2		154
	30	1358.608	151.3924 - 224.9970	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	1 - 2		154
	50	1359.460	148.1797 - 221.7377	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	2 - 2		154
	50	1361.321	151.5743 - 225.0312	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	2 - 2		154
	60	1363.413	138.4794 - 211.8251	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	2 - 2		154
	60	1363.913	130.3661 - 203.6837	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	2 - 2		154
	60	1365.233	148.1797 - 221.4263	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	2 - 2		154
	8	1368.135	138.4794 - 211.5708	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	2 - 2		154
	60	1369.497	135.9512 - 208.9703	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	2 - 2		154
	60	1370.385	135.9512 - 208.9227	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	2 - 2		154
	50	1371.176	149.1908 - 222.1201	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	2 - 1		154
	60	1375.304	138.4794 - 211.1907	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	2 - 2		154
	40	1375.954	132.7773 - 205.4531	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	2 - 2		154
	60	1377.621	128.7298 - 201.3189	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	2 - 2		154
	15	1382.035	151.2495 - 223.6060	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	2 - 2		154
	40	1384.341	149.1908 - 221.4263	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	2 - 2		154
	4	1385.473	157.0748 - 229.2506	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	2 - 1		154
	6	1385.908	157.0748 - 229.2304	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	2 - 2		154
	50	1387.046	160.8860 - 232.9814	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	2 - 2		154
	50	1387.215	157.0748 - 229.1610	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	2 - 2		154
	50	1387.695	160.9192 - 232.9814	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	2 - 2		154

ZN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
50		1388.258	151.5743 - 223.6060	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	3-3		154
50		1393.019	135.9512 - 207.7368	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	3-3		154
50		1394.509	138.4794 - 210.1888	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	3-3		154
50		1400.111	138.4794 - 209.9020	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	3-3		154
20		1402.097	157.9295 - 229.2506	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	3-3		154
35		1402.500	157.9295 - 229.2304	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	3-3		154
40		1403.954	135.9512 - 207.1785	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	3-3		154
60		1409.370	130.3661 - 201.3189	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	3-3		154
25		1410.310	132.7773 - 203.6837	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	3-3		154
60		1411.015	151.2495 - 222.1201	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	3-3		154
10		1412.996	160.9192 - 231.6902	$3d^8(^1G)4s - 3d^8(^3P)4p$	$a^2G - x^2D^o$	3-3		154
50		1413.867	151.3924 - 222.1201	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	3-3		154
40		1418.667	151.2495 - 221.7377	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	3-3		154
40		1419.572	138.4794 - 208.9227	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	3-3		154
25		1425.002	151.2495 - 221.4263	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	3-3		154
50		1425.210	151.5743 - 221.7377	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	3-3		154
10		1427.759	135.9512 - 205.9909	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	3-3		154
40		1427.879	151.3924 - 221.4263	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	3-3		154
8		1431.592	151.5743 - 221.4263	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	3-3		154
40		1436.577	157.0748 - 226.6834	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^o$	3-3		154
15		1438.558	131.8045 - 201.3189	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	3-3		154
40		1449.496	160.8860 - 229.8758	$3d^8(^1G)4s - 3d^8(^3P)4p$	$a^2G - y^4D^o$	3-3		154
40		1449.832	157.0748 - 226.0486	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - y^2D^o$	3-3		154
25		1454.465	157.9295 - 226.6834	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^o$	3-3		154
30		1455.630	138.4794 - 207.1785	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	3-3		154
40		1459.964	135.9512 - 204.4466	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	3-3		154
30		1463.283	157.0748 - 225.4134	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^o$	3-3		154
20		1465.386	160.9192 - 229.1610	$3d^8(^1G)4s - 3d^8(^3P)4p$	$a^2G - y^4D^o$	3-3		154
20		1472.256	157.0748 - 224.9970	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - y^2D^o$	3-3		154
40		1476.410	135.9512 - 203.6837	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4D^o$	3-3		154
30		1481.232	138.4794 - 205.9909	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	3-3		154
25		1481.837	157.9295 - 225.4134	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^o$	3-3		154
30		1503.079	157.0748 - 223.6060	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - y^2F^o$	3-3		154
15		1515.425	148.1797 - 214.1682	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2F^o$	3-3		154
25		1529.833	135.9512 - 201.3189	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4D^o$	3-3		154
25		1531.372	148.1797 - 213.4809	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2D^o$	3-3		154
20		1533.667	138.4794 - 203.6837	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4D^o$	3-3		154
25		1535.415	160.9192 - 226.0486	$3d^8(^1G)4s - 3d^8(^1D)4p$	$a^2G - y^2D^o$	3-3		154
6		1539.068				3-3		154
20		1553.941	157.0748 - 221.4263	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4P^o$	3-3		154
20		1555.431	149.1908 - 213.4809	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2D^o$	3-3		154
20		1557.881	157.9295 - 222.1201	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4P^o$	3-3		154
25		1558.971	160.8860 - 225.0312	$3d^8(^1G)4s - 3d^8(^1D)4p$	$a^2G - y^2F^o$	3-3		154
5		1571.207	148.1797 - 211.8251	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2F^o$	3-3		154
20		1574.833	157.9295 - 221.4263	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^4P^o$	3-3		154
20		1577.504	148.1797 - 211.5708	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2D^o$	3-3		154
5		1587.036	148.1797 - 211.1907	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2G^o$	3-3		154
30		1595.258	160.9192 - 223.6060	$3d^8(^1G)4s - 3d^8(^1D)4p$	$a^2G - y^2F^o$	3-3		154
6		1603.088	149.1908 - 211.5708	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2D^o$	3-3		154
12		1606.907	151.2495 - 213.4809	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^2D^o$	3-3		154
3		1610.574	151.3924 - 213.4809	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^2D^o$	3-3		154
8		1615.345	151.5743 - 213.4809	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^2D^o$	3-3		154
40		1620.165	148.1797 - 209.9020	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4F^o$	3-3		154
8		1646.290	148.1797 - 208.9227	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4F^o$	3-3		154

ZN IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1647.161	149.1908 - 209.9020	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4F^o$	2-3		154
	5	1657.790	151.2495 - 211.5708	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^2D^o$	2-3		154
60	1666.760	151.5743 - 211.5708	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^2D^o$	2-3		154	
	2	1677.399	151.5743 - 211.1907	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^2G^o$	2-3		154
	2	1700.788	151.3924 - 210.1888	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^o$	2-3		154
	10	1704.971	151.2495 - 209.9020	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^o$	2-3		154
	15	1714.457	151.5743 - 209.9020	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^o$	2-3		154
	10	1729.760	148.1797 - 205.9909	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4G^o$	2-3		154
	15	1743.734	151.5743 - 208.9227	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^o$	2-3		154
	12	1744.502	149.1908 - 206.5130	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4D^o$	2-3		154
	25	1745.998	148.1797 - 205.4531	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4D^o$	2-3		154
	8	1751.463	157.0748 - 214.1682	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^2P - z^2F^o$	2-3		154
	1	1772.843	157.0748 - 213.4809	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^2P - z^2D^o$	2-3		154
40	1777.404	149.1908 - 205.4531	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4D^o$	2-3		154	
0	1788.015	151.2495 - 207.1785	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4G^o$	2-3		154	
15	1800.147	157.9295 - 213.4809	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^2P - z^2D^o$	2-3		154	
80	1801.704	148.1797 - 203.6837	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4D^o$	2-3		154	
20	1809.521	151.2495 - 206.5130	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^o$	2-3		154	
	75	1814.222	151.3924 - 206.5130	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^o$	2-3		154
30	1834.966	157.0748 - 211.5708	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^2P - z^2D^o$	2-3		154	
50	1835.124	149.1908 - 203.6837	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4D^o$	2-3		154	
1	1837.680	151.5743 - 205.9909	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4G^o$	2-3		154	
75	1844.909	151.2495 - 205.4531	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^o$	2-3		154	
75	1849.791	151.3924 - 205.4531	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^o$	2-3		154	
	5	1856.025	151.5743 - 205.4531	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^o$	2-3		154
50	1877.976	160.9192 - 214.1682	$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^2G - z^2F^o$	2-3		154	
90	1881.861	148.1797 - 201.3189	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^4D^o$	2-3		154	
90	1907.168	151.2495 - 203.6837	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^o$	2-3		154	
1	1913.521	157.9295 - 210.1888	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^2P - z^4F^o$	2-3		154	
100	1919.019	151.5743 - 203.6837	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^o$	2-3		154	
	60	1963.112	160.8860 - 211.8251	$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^2G - z^2F^o$	2-3		154
15	1974.254	160.9192 - 211.5708	$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^2G - z^2D^o$	2-3		154	
35	1987.874	160.8860 - 211.1907	$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^2G - z^2G^o$	2-3		154	
10	1989.190	160.9192 - 211.1907	$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^2G - z^2G^o$	2-3		154	

ZINC XI (Zn^{10+}), Z = 30
Ground State $1s^22s^22p^63s^23p^63d^2(^3F_2)$ (20 electrons)
Ionization Potential [2 210 000] cm^{-1} ; [274] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	60	74.173	0.0 - 1348.2	$3d^2 - 3d4f$	$g^3F - ^3G^o$	2-3		207
	80	74.213	3.08 - 1350.55	$3d^2 - 3d4f$	$g^3F - ^3G^o$	3-4		207
	160	74.337	6.89 - 1352.12	$3d^2 - 3d4f$	$g^3F - ^3G^o$	4-5		207
	10	74.412	6.89 - 1350.55	$3d^2 - 3d4f$	$g^3F - ^3G^o$	4-4		207
	10	74.669	0.0 - 1339.24	$3d^2 - 3d4f$	$g^3F - ^3F^o$	2-3		207
	20	74.724	3.08 - 1341.29	$3d^2 - 3d4f$	$g^3F - ^3F^o$	3-4		207
	20	74.836	3.08 - 1339.24	$3d^2 - 3d4f$	$g^3F - ^3F^o$	3-3		207
	10	74.896	3.08 - 1338.26	$3d^2 - 3d4f$	$g^3F - ^3F^o$	3-2		207
	20	74.940	6.89 - 1341.29	$3d^2 - 3d4f$	$g^3F - ^3F^o$	4-4		207
	10	75.050	6.89 - 1339.24	$3d^2 - 3d4f$	$g^3F - ^3F^o$	4-3		207
	20	75.406	26.4+X - 1352.55+X	$3d^2 - 3d4f$	$^1D - ^1F^o$	2-3		207
	120	75.590	26.4+X - 1349.33+X	$3d^2 - 3d4f$	$^1D - ^1D^o$	2-2		207

ZN XI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	75.635	33.74 + Y - 1355.88 + Y	$3d^2 - 3d4f$	$^3P - ^3D^\circ$	0 - 1		207
	20	75.668	34.32 + Y - 1355.88 + Y	$3d^2 - 3d4f$	$^3P - ^3D^\circ$	1 - 2		207

ZINC XII (Zn^{11+}), Z = 30
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 (D_{3/2})$ (19 electrons)
Ionization Potential [2 507 000] cm^{-1} ; [310.8] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	54.409	0.0 - 1837.93	$3p^6 3d - 3p^6 5f$	$g^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$		207
	10	54.544	4.55 + X - 1837.93 + X	$3p^6 3d - 3p^6 5f$	$g^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{7}{2}$		207
	40	68.271	0.0 - 1464.65	$3p^6 3d - 3p^6 4f$	$g^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$		207
	120	68.495	4.55 + X - 1464.65 + X	$3p^6 3d - 3p^6 4f$	$g^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{7}{2}$		207
	40	126.786	0.0 - 788.73	$3p^6 3d - 3p^3 3d^2$	$g^2 D - ^2 D^\circ$	$\frac{3}{2} - \frac{3}{2}$		302
	40	127.346	4.55 + X - 789.81 + X	$3p^6 3d - 3p^3 3d^2$	$g^2 D - ^2 P^\circ$	$\frac{5}{2} - \frac{3}{2}$		302
	40	127.631	4.55 + X - 788.06 + X	$3p^6 3d - 3p^3 3d^2$	$g^2 D - ^2 D^\circ$	$\frac{5}{2} - \frac{5}{2}$		302
	20	128.518	0.0 - 778.1	$3p^6 3d - 3p^3 3d^2$	$g^2 D - ^2 P^\circ$	$\frac{3}{2} - \frac{1}{2}$		302
	40	138.448	4.55 + X - 726.84 + X	$3p^6 3d - 3p^3 3d^2$	$g^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{7}{2}$		302
	40	140.283	0.0 - 712.84	$3p^6 3d - 3p^3 3d^2$	$g^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$		302

ZINC XIII (Zn^{12+}), Z = 30
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 (S_0)$ (18 electrons)
Ionization Potential [3 385 000] cm^{-1} ; [419.7] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	60.248	0.0 - 1659.81	$3p^6 - 3p^5 (2P_{1/2}) 4s$	$g^1 S - \frac{1}{2} [1]^\circ$	0 - 1		207
	10	61.356	0.0 - 1629.83	$3p^6 - 3p^5 (2P_{3/2}) 4s$	$g^1 S - \frac{3}{2} [1]^\circ$	0 - 1		207
	10	62.87	490.0 + D - 2080.6 + D	$3p^5 3d - 3p^5 4f$	$^3 F^\circ - ^3 G$	4 - 5		878
	40	131.082	0.0 - 762.88	$3p^6 - 3p^5 3d$	$g^1 S - ^1 P^\circ$	0 - 1		302

ZINC XIV (Zn^{13+}), Z = 30
Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 (2P_{3/2})$ (17 electrons)
Ionization Potential [3 662 000] cm^{-1} ; [454] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	57.74	330.0 + D - 2061.9 + D	$3p^4 (3P) 3d - 3p^4 (3P) 4f$	$^4 D - ^4 F^\circ$	$\frac{7}{2} - \frac{9}{2}$		878
	10	58.60	360.0 + S - 2066.5 + S	$3p^4 (3P) 3d - 3p^4 (3P) 4f$	$^4 F - ^4 G^\circ$	$\frac{9}{2} - \frac{11}{2}$		878
	30	134.80	0.0 - 741.8	$3p^5 - 3p^5 3d$	$g^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		878
	20	135.64	34.19 + H - 771.4 + H	$3p^5 - 3p^4 3d$	$g^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		878

ZINC XV (Zn¹⁴⁺), Z = 30
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [3 952 000] cm⁻¹; [490] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	54.40	1500.0+D - 3338.4+D	3p ³ (⁴ S°)3d - 3p ² (⁴ S°)4f	³ D° - ⁵ F	4 - 5		878
		54.91	2000.0+L - 3821.2+L	3p ³ (² D°)3d - 3p ³ (² D°)4f	³ G° - ³ H	5 - 6		878
	20	139.87	0.0 - 714.95	3p ⁴ - 3p ³ 3d	^g 3P - ³ D°	2 - 3		878
	10	140.13	63.00+R - 776.62+R	3p ⁴ - 3p ³ 3d	¹ D - ¹ F°	2 - 3		878

ZINC XVI (Zn¹⁵⁺), Z = 30
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [4 372 000] cm⁻¹; [542] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	51.3	1500.0+D - 3449.3+D	3s ² 3p ² 3d - 3s ² 3p ² 4f	⁴ F - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		878
	10	51.8	1900.0+S - 3830.5+S	3s ² 3p ² (¹ D)3d - 3s ² 3p ² 4f	² G - ² H°	$\frac{9}{2} - \frac{11}{2}$		878
	30	146.24	916.2+L - 1600.0+L	3s ² 3p ³ - 3s ² 3p ² 3d	² D° - ² F	$\frac{3}{2} - \frac{5}{2}$		878
	20	152.42	0.0 - 656.08	3s ² 3p ³ - 3s ² 3p ² 3d	^g 4S° - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		878

ZINC XVII (Zn¹⁶⁺), Z = 30
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [4 670 000] cm⁻¹; [579] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		40.27	22.4+K - 2505.6+K	3s ² 3p ² - 3s ² 3p4d	^g 3P - ³ P°	1 - 0		970
		40.38	0.0 - 2476.5	3s ² 3p ² - 3s ² 3p4d	^g 3P - ³ D°	0 - 1		970
		40.49	44.7+S - 2514.4+S	3s ² 3p ² - 3s ² 3p4d	^g 3P - ³ F°	2 - 3		970
		40.74	22.4+K - 2477.0+K	3s ² 3p ² - 3s ² 3p4d	^g 3P - ³ D°	1 - 2		970
		40.96	152.0+L - 2593.4+L	3s ² 3p ² - 3s ² 3p4d	¹ D - ¹ F°	2 - 3		970
		41.09	44.7+S - 2478.4+S	3s ² 3p ² - 3s ² 3p4d	^g 3P - ³ D°	2 - 3		970
		41.58	167.0+R - 2572.0+R	3s ² 3p ² - 3s ² 3p4d	¹ S - ¹ P°	0 - 1		970
		46.13	523.5+F - 2691.3+F	3s3p ³ - 3s ² 3p4f	¹ D° - ¹ F	2 - 3		970
		46.44	523.5+F - 2676.8+F	3s3p ³ - 3s ² 3p4f	¹ D° - ³ G	2 - 3		970
		47.92	620.0+C - 2706.8+C	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	4 - 5		970
		48.13	600.0+A - 2677.7+A	3s ² 3p3d - 3s ² 3p4f	³ F° - ³ G	3 - 4		970
		48.92	700.0+B - 2744.2+B	3s ² 3p3d - 3s ² 3p4f	³ P° - ³ D	0 - 1		970
		50.41	750.0+D - 2733.7+D	3s ² 3p3d - 3s ² 3p4f	¹ F° - ¹ G	3 - 4		970
		50.95	800.0+E - 2762.7+E	3s ² 3p3d - 3s ² 3p4f	¹ P° - ¹ D	1 - 2		970
	30	159.48	44.7+S - 671.7+S	3s ² 3p ² - 3s ² 3p3d	^g 3P - ³ D°	2 - 3		878

ZINC XVIII (Zn¹⁷⁺), Z = 30
Ground State 1s²2s²2p⁶3s²3p²(³P_{1/2}) (13 electrons)
Ionization Potential [4 993 000] cm⁻¹; [619] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	20	164.06	0.0 - 609.53	3s ² 3p - 3s ² 3d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		878
	50	174.01	39.483 + D - 614.16 + D	3s ² 3p - 3s ² 3d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		878
	20	206.29	39.483 + D - 524.24 + D	3s ² 3p - 3s3p ²	g ² P° - ² P	$\frac{3}{2} - \frac{5}{2}$		878

ZINC XIX (Zn¹⁸⁺), Z = 30
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential [5 630 000] cm⁻¹; [698] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	80	27.02	294.92 + C - 3995.9 + C	3s3p - 3s5d	³ P° - ³ D	0 - 1	Q	1125
	180	27.28	306.13 + C - 3971.8 + C	3s3p - 3s5d	³ P° - ³ D	1 - 2		1125
	400	27.510	336.53 + C - 3971.6 + C	3s3p - 3s5d	³ P° - ³ D	2 - 3		878,1125
	500	31.80	873.1 + C - 4017.8 + C	3s3d - 3s5f	³ D - ³ F°	3 - 4		878,1125
	200	34.831	336.53 + C - 3207.5 + C	3s3p - 3p4p	³ P° - ³ D	2 - 3		878
	650	35.423	0.0 - 2823.0	3s ² - 3s4p	g ¹ S - ¹ P°	0 - 1		878,1125
	500	37.085	294.92 + C - 2991.4 + C	3s3p - 3s4d	³ P° - ³ D	0 - 1		878,1125
	200	37.22	306.13 + C - 2993. + C	3s3p - 3s4d	³ P° - ³ D	1 - 2	Q	1125
	700	37.448	336.53 + C - 3006.9 + C	3s3p - 3s4d	³ P° - ³ D	2 - 3		878,1125
	200	39.135	453.31 - 3008.6	3s3p - 3s4d	¹ P° - ¹ D	1 - 2		878
	100	41.581	721.34 - 3126.28	3p ² - 3s4f	¹ D - ¹ F°	2 - 3		878
	100	42.32	294.92 + C - 2658. + C	3s3p - 3s4s	³ P° - ³ S	0 - 1	P	1125
	70	42.52	306.13 + C - 2658. + C	3s3p - 3s4s	³ P° - ³ S	1 - 1		1125
	160	43.08	336.53 + C - 2658. + C	3s3p - 3s4s	³ P° - ³ S	2 - 1	P	1125
		44.07	2208.8 + D - 4478.0 + D	3p3d - 3p4f	³ F° - ³ F	3 - 4		970
	700	44.166	2210.0 + S - 4474.2 + S	3p3d - 3p4f	³ F° - ³ G	4 - 5		878,1125
		44.20	2198.5 + H - 4460.9 + H	3p3d - 3p4f	³ F° - ³ G	2 - 3		970
	400	44.341	2208.8 + D - 4464.1 + D	3p3d - 3p4f	³ F° - ³ G	3 - 4		878,1125
	300	44.67	866.3 + C - 3104.9 + C	3s3d - 3s4f	³ D - ³ F°	1 - 2		970,1125
	700	44.71	869.0 + C - 3105.6 + C	3s3d - 3s4f	³ D - ³ F°	2 - 3		970,1125
	950	44.77	873.1 + C - 3106.7 + C	3s3d - 3s4f	³ D - ³ F°	3 - 4		970,1125
		44.84	2255.2 + C - 4485.4 + C	3p3d - 3p4f	³ P° - ³ D	0 - 1		970
		44.95	2260.9 + B - 4485.6 + B	3p3d - 3p4f	³ P° - ³ D	1 - 2		970
		45.04	2265.5 + A - 4485.7 + A	3p3d - 3p4f	³ D° - ³ D	2 - 3		970
		45.20	2265.6 + D - 4478.0 + D	3p3d - 3p4f	³ D° - ³ F	3 - 4		970
		45.26	2265.5 + A - 4475.0 + A	3p3d - 3p4f	³ D° - ³ F	2 - 3		970
		45.41	2265.0 + E - 4467.2 + E	3p3d - 3p4f	³ P° - ¹ F	2 - 3		970
	200	46.24	2339.6 + R - 4502.2 + R	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		970,878
	200	46.383	970.32 - 3126.28	3s3d - 3s4f	¹ D - ¹ F°	2 - 3		878
		46.44	2290.0 + G - 4443.3 + G	3p3d - 3p4f	¹ P° - ¹ D	1 - 2		970
	100	175.02	294.92 + C - 866.3 + C	3s3p - 3s3d	³ P° - ³ D	0 - 1		878
	300	177.67	306.13 + C - 869.0 + C	3s3p - 3s3d	³ P° - ³ D	1 - 2		878
	500	186.38	336.53 + C - 873.1 + C	3s3p - 3s3d	³ P° - ³ D	2 - 3		878
	500	193.42	453.31 - 970.32	3s3p - 3s3d	¹ P° - ¹ D	1 - 2		878
	500	220.60	0.0 - 453.31	3s ² - 3s3p	g ¹ S - ¹ P°	0 - 1		878
		326.7	0.0 - 306.13 + C	3s ² - 3s3p	g ¹ S - ³ P°	0 - 1	P	1135

ZINC XX (Zn¹⁰⁺), Z = 30
Ground State 1s²2s²2p⁶3s(²S_{1/2}) (11 electrons)
Ionization Potential 5 947 300 cm⁻¹; 737.38 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	100	21.3	346.956 - 5035.0 + S	2p ⁶ 3p - 2p ⁶ 7d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	Q	1125
	270	21.5	0.0 - 4651.0 + R	2p ⁶ 3s - 2p ⁶ 6p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	Q	1125
	200	22.956	346.956 - 4703.12	2p ⁶ 3p - 2p ⁶ 6d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	200	23.180	390.000 - 4704.00	2p ⁶ 3p - 2p ⁶ 6d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	50	23.87	858.792 - 5046.90	2p ⁶ 3d - 2p ⁶ 7f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$	P	630
	100	23.92	865.828 - 5047.13	2p ⁶ 3d - 2p ⁶ 7f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$	P	630
	250	24.624	0.0 - 4061.10	2p ⁶ 3s - 2p ⁶ 5p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
	200	24.674	0.0 - 4052.80	2p ⁶ 3s - 2p ⁶ 5p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
	200	25.869	858.792 - 4724.40	2p ⁶ 3d - 2p ⁶ 6f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	300	25.914	865.828 - 4724.70	2p ⁶ 3d - 2p ⁶ 6f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	280	26.340	346.956 - 4143.42	2p ⁶ 3p - 2p ⁶ 5d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	450	26.632	390.000 - 4144.94	2p ⁶ 3p - 2p ⁶ 5d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	450	30.066	858.792 - 4184.76	2p ⁶ 3d - 2p ⁶ 5f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	500	30.125	865.828 - 4185.39	2p ⁶ 3d - 2p ⁶ 5f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	650	34.044	0.0 - 2937.38	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
	550	34.245	0.0 - 2920.28	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
	650	36.180	346.956 - 3110.92	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	950	36.709	390.000 - 3114.15	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	300	36.748	390.000 - 3110.92	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	300	41.084	346.956 - 2780.99	2p ⁶ 3p - 2p ⁶ 4s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		630
	450	41.824	390.000 - 2780.99	2p ⁶ 3p - 2p ⁶ 4s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		630
	800	42.815	858.792 - 3194.41	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	1000	42.924	865.828 - 3195.56	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	300	48.273	865.828 - 2937.38	2p ⁶ 3d - 2p ⁶ 4p	² D - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
	200	48.505	858.792 - 2920.28	2p ⁶ 3d - 2p ⁶ 4p	² D - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
		78.12	2780.99 - 4061.10	2p ⁶ 4s - 2p ⁶ 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	630
		78.63	2780.99 - 4052.80	2p ⁶ 4s - 2p ⁶ 5p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	630
	70	81.758	2920.28 - 4143.42	2p ⁶ 4p - 2p ⁶ 5d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	70	82.812	2937.38 - 4144.94	2p ⁶ 4p - 2p ⁶ 5d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	250	93.122	3110.92 - 4184.76	2p ⁶ 4d - 2p ⁶ 5f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	400	93.351	3114.15 - 4185.39	2p ⁶ 4d - 2p ⁶ 5f	² D - ² F°	$\frac{1}{2} - \frac{5}{2}$		630
	550	100.410	3194.41 - 4190.35	2p ⁶ 4f - 2p ⁶ 5g	² F° - ² G	$\frac{1}{2} - \frac{3}{2}$		630
	650	100.487	3195.56 - 4190.72	2p ⁶ 4f - 2p ⁶ 5g	² F° - ² G	$\frac{1}{2} - \frac{3}{2}$		630
	600	195.375	346.956 - 858.792	2p ⁶ 3p - 2p ⁶ 3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	700	210.160	390.000 - 865.828	2p ⁶ 3p - 2p ⁶ 3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	180	213.314	390.000 - 858.792	2p ⁶ 3p - 2p ⁶ 3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
	250	256.41	0.0 - 390.000	2p ⁶ 3s - 2p ⁶ 3p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
		288.22	0.0 - 346.956	2p ⁶ 3s - 2p ⁶ 3p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		630

ZINC XXI (Zn²⁰⁺), Z = 30
Ground State 1s²2s²2p⁶(¹S₀) (10 electrons)
Ionization Potential [14 890 000] cm⁻¹; [1846] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		6.898	0.0 - 14497.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})9d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1		643
		6.983	0.0 - 14320.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})8d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1		643
		7.001	0.0 - 14285.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})9d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1		643
		7.073	0.0 - 14138.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})8d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1		643
		7.102	0.0 - 14080.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})7d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1		643
		7.198	0.0 - 13893.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})7d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1		643

ZN XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.287	0.0 - 13723.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})6d$	$g^1 S - (\frac{1}{2}, \frac{3}{2})^o$	0 - 1		643
		7.390	0.0 - 13532.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})6d$	$g^1 S - (\frac{3}{2}, \frac{5}{2})^o$	0 - 1		643
		7.625	0.0 - 13115.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})5d$	$g^1 S - (\frac{1}{2}, \frac{3}{2})^o$	0 - 1		643
		7.710	0.0 - 12970.	$2s^2 2p^6 - 2s^2 p^6 4p$	$g^1 S - ^1P^o$	0 - 1		1061
		7.738	0.0 - 12923.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})5d$	$g^1 S - (\frac{3}{2}, \frac{5}{2})^o$	0 - 1		643
		8.340	0.0 - 11990.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})4d$	$g^1 S - (\frac{1}{2}, \frac{3}{2})^o$	0 - 1		643
		8.467	0.0 - 11811.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})4d$	$g^1 S - (\frac{3}{2}, \frac{5}{2})^o$	0 - 1		643
		8.658	0.0 - 11550.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})4s$	$g^1 S - \frac{1}{2} \frac{1}{2} \frac{1}{2}^o$	0 - 1		643
		8.722	0.0 - 11465.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})4s$	$g^1 S - \frac{3}{2} \frac{3}{2} \frac{1}{2}^o$	0 - 1		643
	100	9.762	0.0 - 10244.	$2s^2 2p^6 - 2s^2 p^6 3p$	$g^1 S - ^1P^o$	0 - 1		643
	80	9.815	0.0 - 10188.	$2s^2 2p^6 - 2s^2 p^6 3p$	$g^1 S - ^3P^o$	0 - 1		643
	150	10.462	0.0 - 9558.4	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})3d$	$g^1 S - (\frac{1}{2}, \frac{3}{2})^o$	0 - 1		643
	120	10.663	0.0 - 9378.2	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})3d$	$g^1 S - (\frac{3}{2}, \frac{5}{2})^o$	0 - 1		643
	50	10.796	0.0 - 9262.7	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})3d$	$g^1 S - (\frac{3}{2}, \frac{5}{2})^o$	0 - 1		643
	80	11.516	0.0 - 8683.6	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})3s$	$g^1 S - \frac{1}{2} \frac{1}{2} \frac{1}{2}^o$	0 - 1		643
	100	11.769	0.0 - 8496.9	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})3s$	$g^1 S - \frac{3}{2} \frac{3}{2} \frac{1}{2}^o$	0 - 1		643

ZINC XXII (Zn^{21+}), Z = 30
 Ground State $1s^2 2s^2 2p^5(^2P_{3/2})$ (9 electrons)
 Ionization Potential [15 750 000] cm^{-1} ; [1953] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.747	0. - 12908.	$2s^2 2p^5 - 2s^2 2p^4(^1S)4d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	1060
		7.847	196.955 - 12941.	$2s^2 2p^5 - 2s^2 2p^4(^1S)4d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.879	0. - 12689.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	1060
		7.890	0. - 12674.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.941	0. - 12593.	$2s^2 2p^5 - 2s^2 2p^4(^1S)4s$	$g^2 P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1060
		7.993	0. - 12511.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2 P^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.005	196.955 - 12689.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.047	0. - 12427.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.069	196.955 - 12590.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.086	0. - 12367.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.154	0. - 12264.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2 P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.198	196.955 - 12395.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1060
		8.257	0. - 12111.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094
		9.145	0. - 10935.	$2s^2 2p^5 - 2s^2 p^5(^1P^o)3p$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		9.299	196.955 - 10951.	$2s^2 2p^5 - 2s^2 p^5(^1P^o)3p$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		9.316	196.955 - 10931.	$2s^2 2p^5 - 2s^2 p^5(^1P^o)3p$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094
		9.339	0. - 10708.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1094
		9.357	196.955 - 10884.	$2s^2 2p^5 - 2s^2 p^5(^1P^o)3p$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		9.425	0. - 10610.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		1094
		9.440	0. - 10593.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094
		9.468	0. - 10562.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		9.507	196.955 - 10716.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		9.518	0. - 10506.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$		1094
		9.562	0. - 10458.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$		1094
		9.601	0. - 10416.	$2s^2 2p^5 - 2s^2 p^5(^3P^o)3p$	$g^2 P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094
		9.751	0. - 10250.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	1061
		9.795	0. - 10209.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		939
	6	9.947	196.955 - 10250.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	70	9.962	0. - 10040.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094,939
	52	9.997	0. - 10003.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,964

ZN XXII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	10.007	0. - 9994.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	70	10.022	0. - 9975.6	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	65	10.099	0. - 9902.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	60	10.118	0. - 9899.1	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	65	10.144	196.955 - 10055.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094,939
	30	10.158	0. - 9844.5	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	60	10.201	0. - 9803.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		939
		10.206	196.955 - 9994.1	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094
	12	10.229	196.955 - 9975.6	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094,964
	65	10.245	0. - 9760.9	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	60	10.262	0. - 9744.7	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	45	10.285	0. - 9722.9	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	12	10.307	196.955 - 9899.1	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	40	10.353	196.955 - 9856.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		939
		10.408	196.955 - 9803.0	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$	P	1061
	30	10.472	196.955 - 9744.7	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		939
		10.496	196.955 - 9722.9	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$	P	1061
		10.561	0. - 9461.4	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	1061
	45	10.794	196.955 - 9461.4	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094,939
	55	10.865	0. - 9203.9	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	14	10.944	0. - 9138.3	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	20	10.976	0. - 9110.8	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	13	11.049	0. - 9050.6	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	25	11.094	196.955 - 9210.8	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	35	11.155	0. - 8964.6	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094,939
		11.183	196.955 - 9138.3	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094
	20	11.200	0. - 8928.6	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094,939
		11.232	196.955 - 9110.8	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1061
		11.286	196.955 - 9050.6	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$	P	1061
		11.406	196.955 - 8964.6	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P	1061
	775	73.943	0. - 1352.398	$2s^2 2p^5 - 2s 2p^6$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	1104,114
	150	86.547	196.955 - 1352.398	$2s^2 2p^5 - 2s 2p^6$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	1104,114
		507.73	0. - 196.955	$2s^2 2p^5 - 2s^2 2p^5$	$g^2 P^\circ - g^2 P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,1104

ZINC XXIII (Zn^{22+}), Z = 30
Ground State $1s^2 2s^2 2p^4(^3P_2)$ (8 electrons)
Ionization Potential [16 700 000] cm^{-1} ; [2070] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.445	178.853 - 13611.	$2s^2 2p^4 - 2s^2 2p^3(^3P^\circ)4d$	$g^3 P - ^3D^\circ$	1 - 1		1094
		7.486	0. - 13358.	$2s^2 2p^4 - 2s^2 2p^3(^3D^\circ)4d$	$g^3 P - ^3D^\circ$	2 - 3		1094
		7.525	0. - 13289.	$2s^2 2p^4 - 2s^2 2p^3(^3D^\circ)4d$	$g^3 P - ^3F^\circ$	2 - 3		1094
		7.583	267.394 - 13455.	$2s^2 2p^4 - 2s^2 2p^3(^3P^\circ)4d$	$^1D - ^3F^\circ$	2 - 3		1094
		7.623	512.767 - 13631.	$2s^2 2p^4 - 2s^2 2p^3(^3P^\circ)4d$	$^1S - ^1P^\circ$	0 - 1		1094
		7.623	0. - 13118.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	2 - 3		1094
		7.631	267.394 - 13372.	$2s^2 2p^4 - 2s^2 2p^3(^3D^\circ)4d$	$^1D - ^1F^\circ$	2 - 3		1094
		7.688	110.147 - 13117.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	0 - 1		1094
		7.741	178.853 - 13097.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	1 - 2		1094
		9.499	0. - 10520.6	$2s^2 2p^4 - 2s^2 2p^3(^3P^\circ)3d$	$g^3 P - ^3P^\circ$	2 - 2	Q	634
		9.518	178.853 - 10683.0	$2s^2 2p^4 - 2s^2 2p^3(^3P^\circ)3d$	$g^3 P - ^1D^\circ$	1 - 2	Q	1094
		9.534	178.853 - 10667.6	$2s^2 2p^4 - 2s^2 2p^3(^3P^\circ)3d$	$g^3 P - ^3D^\circ$	1 - 1		634

ZN XXIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		9.541	0. - 10477.7	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^3F^o$	2 - 3		1094
		9.557	178.853 - 10642.4	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	1 - 1		1094
		9.568	0. - 10451.3	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3S^o$	2 - 1		634
		9.586	0. - 10431.9	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	2 - 2		1094
		9.601	267.394 - 10683.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^1F^o$	2 - 3		1094
		9.628	0. - 10386.4	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^1P^o$	2 - 1		634
		9.635	178.853 - 10556.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$g^3P - ^3D^o$	1 - 2		634
		9.686	0. - 10324.5	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3G^o$	2 - 3		634
		9.695	0. - 10314.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3F^o$	2 - 3		634
		9.713	267.394 - 10556.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^3D^o$	2 - 2		634
		9.723	267.394 - 10552.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^3D^o$	2 - 3		634
		9.744	267.394 - 10530.1	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1D - ^3F^o$	2 - 2		634
		9.753	178.853 - 10431.9	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	1 - 2		1094
		9.761	178.853 - 10423.7	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	1 - 0		634
		9.794	512.767 - 10723.1	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3d$	$^1S - ^1P^o$	0 - 1		1094
		9.823	267.394 - 10447.6	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3d$	$^1D - ^1D^o$	2 - 2		634
		9.893	110.147 - 10218.1	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	0 - 1		634
		10.229	178.853 - 9955.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$g^3P - ^3P^o$	1 - 2		1094
		10.285	267.394 - 9990.3	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$^1D - ^1P^o$	2 - 1		1094
		10.307	0. - 9702.1	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	2 - 3		1094
		10.380	178.853 - 9812.8	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$g^3P - ^3P^o$	1 - 0		1094
		10.458						1094
		10.474	178.853 - 9729.0	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^1D^o$	1 - 2	Q	1094
		10.539	0. - 9489.2	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1		1094
		10.557	178.853 - 9651.2	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	1 - 1		1094
		10.569	267.394 - 9729.0	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$^1D - ^1D^o$	2 - 2		1094
		10.574	178.853 - 9635.0	$2s^2 2p^4 - 2s^2 2p^3(^2D^o)3s$	$g^3P - ^3D^o$	1 - 2		1094
		10.664	512.767 - 9881.0	$2s^2 2p^4 - 2s^2 2p^3(^2P^o)3s$	$^1S - ^3P^o$	0 - 1		1094
		10.738	178.853 - 9489.2	$2s^2 2p^4 - 2s^2 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1 - 1		1094
		61.482	0. - 1626.50	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^1P^o$	2 - 1	P	1104
350		73.578	267.394 - 1626.50	$2s^2 2p^4 - 2s2p^5$	$^1D - ^1P^o$	2 - 1	P	1104,114
150		77.957	0. - 1282.76	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 1	P	1104,114
150		83.233	178.853 - 1380.30	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 0	P	1104,114
200		85.034	0. - 1176.00	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 2	P	1104,114
50		85.279	110.147 - 1282.76	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	0 - 1	P	1104,114
30		89.788	512.767 - 1626.50	$2s^2 2p^4 - 2s2p^5$	$^1S - ^1P^o$	0 - 1	P	1104,114
50		90.587	178.853 - 1282.76	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 1	P	1104,114
		93.115	1626.50 - 2700.44 + L	$2s2p^5 - 2p^6$	$^1P^o - ^1S$	1 - 0	P	1104
		100.286	178.853 - 1176.00	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 2	P	1104
		195.02	0. - 512.767	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1104
		299.48	178.853 - 512.767	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1104
		373.98	0. - 267.394	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F,P	375,1104
		407.54	267.394 - 512.767	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1104
		559.12	0. - 178.853	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F,P	375,1104
		635.94	110.147 - 267.394	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1104
		907.88	0. - 110.147	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1104
		1129.	178.853 - 267.394	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 2	F,P	375,1104
		1455.	110.147 - 178.853	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	0 - 1	F,P	375,1104

ZINC XXIV (Zn²³⁺), Z = 30
Ground State 1s²2s²2p³(⁴S_{3/2}) (7 electrons)
Ionization Potential [17 870 000] cm⁻¹; [2216] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
120	75.50	75.50	245.5+L - 1570.0+L	2s ² 2p ³ - 2s2p ⁴	² D° - ² P	$\frac{3}{2} - \frac{3}{2}$		114
50	79.00	79.00	490.6+K - 1756.4+K	2s ² 2p ³ - 2s2p ⁴	² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		114
	87.73	87.73	174.4+R - 1314.3+R	2s ² 2p ³ - 2s2p ⁴	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		396
85	89.49	89.49	245.5+L - 1362.9+L	2s ² 2p ³ - 2s2p ⁴	² D° - ² D	$\frac{3}{2} - \frac{3}{2}$		114

ZINC XXVI (Zn²⁵⁺), Z = 30
Ground State 1s²2s²2p(²P°_{1/2}) (5 electrons)
Ionization Potential [19 990 000] cm⁻¹; [2479] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		450.0	0.0 - 222.23+E	2s ² 2p - 2s ² 2p	g ² P° - g ² P°	$\frac{1}{2} - \frac{1}{2}$	F,P	1122

ZINC XXVII (Zn²⁶⁺), Z = 30
Ground State 1s²2s²(¹S₀) (4 electrons)
Ionization Potential [21 350 000] cm⁻¹; [2647] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10	7.939	7.939	461.20+K - 13057.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	1 - 2		643
20	7.999	7.999	405.98+K - 12908.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ¹ P	0 - 1		643
0	8.009	8.009	644.14+K - 13130.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ D	2 - 3		643
	8.034	8.034	461.20+K - 12908.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ¹ P	1 - 1	P	619
20	8.056	8.056	0.0 - 12413.	1s ² 2s ² - 1s ² 2s3p	g ¹ S - ¹ P°	0 - 1		643
10	8.078	8.078	644.14+K - 13023.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ S	2 - 1		643
10	8.092	8.092	917.09+K - 13275.+K	1s ² 2s2p - 1s ² 2s3s	¹ P° - ¹ S	1 - 0		643
10	8.147	8.147	917.09+K - 13192.+K	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ D	1 - 2		643
	8.249	8.249	405.98+K - 12529.+K	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	0 - 1	P	619
	8.286	8.286	461.20+K - 12529.+K	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	1 - 2	P	619
80	8.340	8.340	917.09+K - 12908.+K	1s ² 2s2p - 1s ² 2p3p	¹ P° - ¹ P	1 - 1		643
0	8.389	8.389	8070.0+R - 19990.+R	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	2 - 2		643
	8.402	8.402	917.09+K - 12819.+K	1s ² 2s2p - 1s ² 2p3p	¹ P° - ³ D	1 - 1	P	619
0	8.414	8.414	644.14+K - 12529.+K	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	2 - 2		643
0	8.483	8.483	8298.1+R - 20086.+R	1s ² 2p ² - 1s ² 2p3d	¹ D - ¹ F°	2 - 3		643
30	8.500	8.500	8000.0+R - 19765.+R	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	1 - 1		643
10	8.550	8.550	8070.0+R - 19766.+R	1s ² 2p ² - 1s ² 2p3d	³ P - ³ P°	2 - 2		643
	8.566	8.566	461.20+K - 12136.+K	1s ² 2s2p - 1s ² 2s3s	³ P° - ³ S	1 - 1	P	619
30	8.576	8.576	917.09+K - 12578.+K	1s ² 2s2p - 1s ² 2s3d	¹ P° - ¹ D	1 - 2		643
30	8.658	8.658	8541.4+R - 20091.+R	1s ² 2p ² - 1s ² 2p3d	¹ S - ¹ P°	0 - 1		643
0	8.702	8.702	644.14+K - 12136.+K	1s ² 2s2p - 1s ² 2s3s	³ P° - ³ S	2 - 1		643
40	8.720	8.720	8298.1+R - 19766.+R	1s ² 2p ² - 1s ² 2p3d	¹ D - ³ P°	2 - 2		643
20	8.856	8.856	8298.1+R - 19590.+R	1s ² 2p ² - 1s ² 2p3s	¹ D - ¹ P°	2 - 1		643
20	9.051	9.051	8541.4+R - 19590.+R	1s ² 2p ² - 1s ² 2p3s	¹ S - ¹ P°	0 - 1		643

ZN XXVII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		217.	0.0 - 461.2+L	$1s^2 2s^2 - 1s^2 2s 2p$	$g^1 S - ^3 P^o$	0 - 1	P	375

ZINC XXVIII (Zn^{27+}), Z = 30
Ground State $1s^2 2s(^2S_{1/2})$ (3 electrons)
Ionization Potential [22 420 000] cm^{-1} ; [2780] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		142.4	0.0 - 702.12+D	$1s^2 2s - 1s^2 2p$	$g^2 S - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	P	375,977
		216.0	0.0 - 463.06+E	$1s^2 2s - 1s^2 2p$	$g^2 S - ^2 P^o$	$\frac{1}{2} - \frac{1}{2}$	P	375,977

ZINC XXIX (Zn^{28+}), Z = 30
Ground State $1s^2(^1S_0)$ (2 electrons)
Ionization Potential 95 701 000 cm^{-1} ; 11865.6 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1.087	0.0 - 91974.95	$1s^2 - 1s 5p$	$g^1 S - ^3 P^o$	0 - 1	P	728
		1.113	0.0 - 89867.60	$1s^2 - 1s 4p$	$g^1 S - ^3 P^o$	0 - 1	P	728
		1.172	0.0 - 85300.44	$1s^2 - 1s 3p$	$g^1 S - ^3 P^o$	0 - 1	P	728
		1.378	0.0 - 72582.71	$1s^2 - 1s 2p$	$g^1 S - ^1 P^o$	0 - 1	P	728
		1.385	0.0 - 72197.54	$1s^2 - 1s 2p$	$g^1 S - ^3 P^o$	0 - 1	P	728
		1.391	0.0 - 71895.01	$1s^2 - 1s 2s$	$g^1 S - ^3 S$	0 - 1	F,P	1105

ZINC XXX (Zn^{29+}), Z = 30
Ground State $1s(^2S_{1/2})$ (1 electron)
Ionization Potential 99 921 800 cm^{-1} ; 12388.8 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1.125	0.0 - 88904.1800	$1s - 3p$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.331	0.0 - 75157.1100	$1s - 2p$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.336	0.0 - 74851.5400	$1s - 2p$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{1}{2}$	P	375,1042

GALLIUM I (Ga⁰⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p²(²P_{1/2}) (31 electrons)
Ionization Potential 48 387.63 cm⁻¹; 5.999 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1505.5	0.0 - 66.422	4s ² 4p - 4s4p ²	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$	P	487
		1519.8	0.0 - 65.796	4s ² 4p - 4s4p ²	g ² P ^o - ² P	$\frac{1}{2} - \frac{1}{2}$	P	487
		1524.5	0.82619 - 66.422	4s ² 4p - 4s4p ²	g ² P ^o - ² P	$\frac{3}{2} - \frac{3}{2}$	P	487
		1539.2	0.82619 - 65.796	4s ² 4p - 4s4p ²	g ² P ^o - ² P	$\frac{3}{2} - \frac{1}{2}$	P	487
		1610.3	0.0 - 62.100	4s ² 4p - 4s4p ²	g ² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$	P	487
		1632.0	0.82619 - 62.100	4s ² 4p - 4s4p ²	g ² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$	P	487

GALLIUM II (Ga¹⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²(¹S₀) (30 electrons)
Ionization Potential 165 458 cm⁻¹; 20.51 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
3	30	829.60	0.0 - 120.540	4s ² - 4s5p	g ¹ S - ¹ P ^o	0 - 1		652
	30	958.67	48.750 - 153.061	4s4p - 4s7d	³ P ^o - ³ D	2 - 3		652
	1	960.57	47.816 - 151.921	4s4p - 4s8s	³ P ^o - ³ S	1 - 1		652
	30	969.29	48.750 - 151.921	4s4p - 4s8s	³ P ^o - ³ S	2 - 1		652
	30	998.52	47.368 - 147.516	4s4p - 4s6d	³ P ^o - ³ D	0 - 1		652
	50	1002.95	47.816 - 147.522	4s4p - 4s6d	³ P ^o - ³ D	1 - 2		652
	120	1012.38	48.750 - 147.527	4s4p - 4s6d	³ P ^o - ³ D	2 - 3		652
7	50	1019.10	47.368 - 145.492	4s4p - 4s7s	³ P ^o - ³ S	0 - 1		652
	120	1023.80	47.816 - 145.492	4s4p - 4s7s	³ P ^o - ³ S	1 - 1		652
7	250	1033.69	48.750 - 145.492	4s4p - 4s7s	³ P ^o - ³ S	2 - 1		652
	10	1113.87	47.368 - 137.145	4s4p - 4s5d	³ P ^o - ³ D	0 - 1		652
	50	1119.25	47.816 - 137.162	4s4p - 4s5d	³ P ^o - ³ D	1 - 2		652
6	120	1130.81	48.750 - 137.182	4s4p - 4s5d	³ P ^o - ³ D	2 - 3		652
	10	1167.62	47.368 - 133.011	4s4p - 4s6s	³ P ^o - ³ S	0 - 1		652
6	30	1173.78	47.816 - 133.011	4s4p - 4s6s	³ P ^o - ³ S	1 - 1		652
	50	1186.81	48.750 - 133.011	4s4p - 4s6s	³ P ^o - ³ S	2 - 1		652
6	1	1227.10	70.700 - 152.193	4s4p - 4s8s	¹ P ^o - ¹ S	1 - 0		652
	120	1286.38	70.700 - 148.438	4s4p - 4s7d	¹ P ^o - ¹ D	1 - 2		652
2	120	1327.81	70.700 - 146.012	4s4p - 4s7s	¹ P ^o - ¹ S	1 - 0		652
	1000	1414.44	0.0 - 70.700	4s ² - 4s4p	g ¹ S - ¹ P ^o	0 - 1		652
	120	1449.49	70.700 - 139.690	4s4p - 4s6d	¹ P ^o - ¹ D	1 - 2		652
	30	1463.65	47.816 - 116.137	4s4p - 4p ²	³ P ^o - ³ P	1 - 2		652
	50	1473.73	47.368 - 115.223	4s4p - 4p ²	³ P ^o - ³ P	0 - 1		652
	50	1483.52	47.816 - 115.223	4s4p - 4p ²	³ P ^o - ³ P	1 - 1		652
	50	1483.95	48.750 - 116.137	4s4p - 4p ²	³ P ^o - ³ P	2 - 2		652
	50	1495.11	47.816 - 114.701	4s4p - 4p ²	³ P ^o - ³ P	1 - 0		652
	50	1504.41	48.750 - 115.223	4s4p - 4p ²	³ P ^o - ³ P	2 - 1		652
	5	50	1505.01	47.368 - 113.814	4s4p - 4s4d	³ P ^o - ³ D	0 - 1	
5	120	1514.57	47.816 - 113.840	4s4p - 4s4d	³ P ^o - ³ D	1 - 2		652
5	50	1515.19	47.816 - 113.814	4s4p - 4s4d	³ P ^o - ³ D	1 - 1		652
5	250	1535.50	48.750 - 113.875	4s4p - 4s4d	³ P ^o - ³ D	2 - 3		652
5	120	1536.31	48.750 - 113.840	4s4p - 4s4d	³ P ^o - ³ D	2 - 2		652
5	10	1536.91	48.750 - 113.814	4s4p - 4s4d	³ P ^o - ³ D	2 - 1		652
	50	1669.38	47.816 - 107.718	4s4p - 4s4d	³ P ^o - ¹ D	1 - 2		652
	120	1695.85	48.750 - 107.718	4s4p - 4s4d	³ P ^o - ¹ D	2 - 2		652
	50	1770.2	70.700 - 127.19	4s4p - 4s5d	¹ P ^o - ¹ D	1 - 2		130

GA II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
4	120	1799.42	47.368 - 102.942	4s4p - 4s5s	$^3P^\circ - ^3S$	0 - 1		652
4	350	1813.98	47.816 - 102.942	4s4p - 4s5s	$^3P^\circ - ^3S$	1 - 1		652
4	650	1845.30	48.750 - 102.942	4s4p - 4s5s	$^3P^\circ - ^3S$	2 - 1		652

GALLIUM III (Ga^{2+}), Z = 31
Ground State $1s^22s^22p^63s^23p^63d^{10}4s(^2S_{1/2})$ (29 electrons)
Ionization Potential 247 700 cm^{-1} ; 30.71 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		619.96	0.0 - 161.300	4s - 5p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	487
		622.04	0.0 - 160.761	4s - 5p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	487
150	1267.25	65.167 - 144.078	4p - 4d	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$			402
200	1293.50	66.885 - 144.195	4p - 4d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$			402
100	1295.45	66.885 - 144.078	4p - 4d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			402
300	1323.15	65.167 - 140.744	4p - 5s	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$			402
400	1353.94	66.885 - 140.744	4p - 5s	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$			402
500	1495.10	0.0 - 66.885	4s - 4p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$			402
500	1534.51	0.0 - 65.167	4s - 4p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$			402

GALLIUM IV (Ga^{3+}), Z = 31
Ground State $1s^22s^22p^63s^23p^63d^{10}(^1S_0)$ (28 electrons)
Ionization Potential 517 600 cm^{-1} ; 64.2 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
600	422.102	0.0 - 236.9088	$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3D^\circ$	0 - 1		614	
1000	423.165	0.0 - 236.3144	$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^1P^\circ$	0 - 1		614	
300	439.904	0.0 - 227.3230	$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3P^\circ$	0 - 1		614	
65	839.800	224.2460 - 343.3210	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3P^\circ - ^3D$	2 - 3		614	
50	855.824	230.0423 - 346.8886	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3F^\circ - ^3D$	2 - 1		614	
35	857.704	227.3230 - 343.9141	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3P^\circ - ^3D$	1 - 2		614	
80	860.355	227.6837 - 343.9141	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3F^\circ - ^3D$	3 - 2		614	
25	864.768	227.6837 - 343.3210	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3F^\circ - ^3D$	3 - 3		614	
120	874.383	228.9544 - 343.3210	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3F^\circ - ^3D$	4 - 3		614	
60	875.579	233.1945 - 347.4047	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3D^\circ - ^1D$	3 - 2		614	
15	878.181	230.0423 - 343.9141	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3F^\circ - ^3D$	2 - 2		614	
50	889.184	234.9417 - 347.4047	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^1F^\circ - ^1D$	3 - 2		614	
25	892.590	236.3144 - 348.3479	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1P^\circ - ^1S$	1 - 0		614	
25	900.171	236.3144 - 347.4047	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^1P^\circ - ^1D$	1 - 2		614	
20	901.264	224.2460 - 335.2013	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^\circ - ^1P$	2 - 1		614	
20	904.866	227.3230 - 337.8362	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^\circ - ^1D$	1 - 2		614	
20	908.050	233.1945 - 343.3210	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3D^\circ - ^3D$	3 - 3		614	
80	908.365	233.8273 - 343.9141	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3D^\circ - ^3D$	2 - 2		614	

GA IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	909.258	236.9088 - 346.8886	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3D^o - ^3D$	1 - 1		614
	60	909.546	237.4604 - 347.4047	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^1D^o - ^1D$	2 - 2		614
	90	911.408	224.2460 - 333.9658	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3D$	2 - 3		614
	170	912.301	227.3230 - 336.9359	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3D$	1 - 1		614
	25	918.270	227.6837 - 336.5841	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3G$	3 - 3		614
	30	920.951	224.2460 - 332.8296	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3P$	2 - 1		614
	110	921.539	224.2460 - 332.7598	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3P$	2 - 2		614
	40	922.674	234.9417 - 343.3210	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^1F^o - ^3D$	3 - 3		614
	35	926.975	227.3230 - 335.2013	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^1P$	1 - 1		614
	10	927.310	228.9544 - 336.7932	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^1G$	4 - 4		614
	60	927.701	229.1429 - 336.9359	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3D$	0 - 1		614
	60	929.970	227.3230 - 334.8534	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3D$	1 - 2		614
	20	933.100	227.6837 - 334.8534	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3D$	3 - 2		614
	60	933.859	227.3230 - 334.4056	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3P$	1 - 0		614
	10	934.539	236.9088 - 343.9141	$3d^9(^2D)4p - 3d^9(^2D)5s$	$^3D^o - ^3D$	1 - 2		614
	15	935.518	230.0423 - 336.9359	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3D$	2 - 1		614
	60	935.888	227.6837 - 334.5344	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3F$	3 - 3		614
	60	938.601	230.0423 - 336.5841	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3G$	2 - 3		614
	25	940.894	227.6837 - 333.9658	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3D$	3 - 3		614
	80	942.871	229.1429 - 335.2013	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^1P$	0 - 1		614
	100	947.201	228.9544 - 334.5293	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3F$	4 - 4		614
	20	947.623	233.1945 - 338.7221	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3F$	3 - 2		614
	60	947.810	227.3230 - 332.8296	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3P$	1 - 1		614
	10	948.434	227.3230 - 332.7598	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3P$	1 - 2		614
	40	949.556	233.1945 - 338.5071	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^1F$	3 - 3		614
	10	951.694	227.6837 - 332.7598	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3P$	3 - 2		614
	100	951.936	227.6837 - 332.7322	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3G$	3 - 4		614
	30	952.280	228.9544 - 333.9658	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3D$	4 - 3		614
	30	953.338	233.8273 - 338.7221	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3F$	2 - 2		614
	40	954.097	230.0423 - 334.8534	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3D$	2 - 2		614
	90	956.753	224.2460 - 328.7662	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3S$	2 - 1		614
	100	957.010	230.0423 - 334.5344	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3F$	2 - 3		614
	20	963.603	228.9544 - 332.7322	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3G$	4 - 4		614
	180	965.238	228.9544 - 332.5557	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3F^o - ^3G$	4 - 5		614
	55	965.572	234.9417 - 338.5071	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1F^o - ^1F$	3 - 3		614
	10	967.218	233.1945 - 336.5841	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3G$	3 - 3		614
	90	973.167	233.8273 - 336.5841	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3G$	2 - 3		614
	70	976.488	236.3144 - 338.7221	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1P^o - ^3F$	1 - 2		614
	130	981.822	234.9417 - 336.7932	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1F^o - ^1G$	3 - 4		614
	10	982.187	236.9088 - 338.7221	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3F$	1 - 2		614
	10	983.839	234.9417 - 336.5841	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1F^o - ^3G$	3 - 3		614
	40	985.772	227.3230 - 328.7662	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3S$	1 - 1		614
	120	986.825	233.1945 - 334.5293	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3F$	3 - 4		614
	80	987.537	237.4604 - 338.7221	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1D^o - ^3F$	2 - 2		614
	140	989.639	237.4604 - 338.5071	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1D^o - ^1F$	2 - 3		614
	100	989.845	233.8273 - 334.8534	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3D$	2 - 2		614
	100	990.811	236.9088 - 337.8362	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^1D$	1 - 2		614
	100	992.346	233.1945 - 333.9658	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3D$	3 - 3		614
	90	992.975	233.8273 - 334.5344	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3F$	2 - 3		614
	70	993.819	236.3144 - 336.9359	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1P^o - ^3D$	1 - 1		614
	70	996.254	237.4604 - 337.8362	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1D^o - ^1D$	2 - 2		614
	50	999.725	236.9088 - 336.9359	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^o - ^3D$	1 - 1		614
	20	1003.780	229.1429 - 328.7662	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^o - ^3S$	0 - 1		614
	120	1004.135	234.9417 - 334.5293	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1F^o - ^3F$	3 - 4		614

GA IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	1004.370	233.1945 - 332.7598	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^3D^o - ^3P$	3 - 2		614
	30	1004.648	233.1945 - 332.7322	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^3D^o - ^3G$	3 - 4		614
	15	1005.275	237.4604 - 336.9359	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^1D^o - ^3D$	2 - 1		614
	25	1008.839	237.4604 - 336.5841	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^1D^o - ^3G$	2 - 3		614
	40	1011.253	236.3144 - 335.2013	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^1P^o - ^1P$	1 - 1		614
	40	1017.369	236.9088 - 335.2013	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^3D^o - ^1P$	1 - 1		614
	10	1020.985	236.9088 - 334.8534	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^3D^o - ^3D$	1 - 2		614
	70	1022.307	234.9417 - 332.7598	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^1F^o - ^3P$	3 - 2		614
	60	1023.119	237.4604 - 335.2013	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^1D^o - ^1P$	2 - 1		614
	40	1026.765	237.4604 - 334.8534	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^1D^o - ^3D$	2 - 2		614
	70	1036.105	236.3144 - 332.8296	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^1P^o - ^3P$	1 - 1		614
	40	1042.523	236.9088 - 332.8296	$3d^2(^2D)4p - 3d^2(^2D)4d$	$^3D^o - ^3P$	1 - 1		614
	60	1137.061	149.5144 - 237.4604	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^1D^o$	3 - 2		614
	110	1156.187	150.9693 - 237.4604	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^1D^o$	2 - 2		614
	100	1163.607	150.9693 - 236.9088	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3D^o$	2 - 1		614
	220	1170.586	149.5144 - 234.9417	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^1F^o$	3 - 3		614
	10	1171.712	150.9693 - 236.3144	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^1P^o$	2 - 1		614
	160	1185.225	153.0883 - 237.4604	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^1D^o$	1 - 2		614
	25	1186.058	149.5144 - 233.8273	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3D^o$	3 - 2		614
	220	1190.866	150.9693 - 234.9417	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^1F^o$	2 - 3		614
	180	1193.028	153.0883 - 236.9088	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3D^o$	1 - 1		614
	250	1195.029	149.5144 - 233.1945	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3D^o$	3 - 3		614
	110	1201.550	153.0883 - 236.3144	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^1P^o$	1 - 1		614
	260	1206.890	150.9693 - 233.8273	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3D^o$	2 - 2		614
	40	1216.172	150.9693 - 233.1945	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3D^o$	2 - 3		614
	600	1227.996	156.0268 - 237.4604	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^1D^o$	2 - 2		614
	150	1236.369	156.0268 - 236.9088	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^3D^o$	2 - 1		614
	200	1238.554	153.0883 - 233.8273	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3D^o$	1 - 2		614
	40	1241.803	149.5144 - 230.0423	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3F^o$	3 - 2		614
	600	1245.521	156.0268 - 236.3144	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^1P^o$	2 - 1		614
	1000	1258.812	149.5144 - 228.9544	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3F^o$	3 - 4		614
	300	1264.635	150.9693 - 230.0423	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3F^o$	2 - 2		614
	350	1267.186	156.0268 - 234.9417	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^1F^o$	2 - 3		614
	300	1279.268	149.5144 - 227.6837	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3F^o$	3 - 3		614
	300	1285.337	156.0268 - 233.8273	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^3D^o$	2 - 2		614
	650	1295.876	156.0268 - 233.1945	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^3D^o$	2 - 3		614
	600	1299.478	153.0883 - 230.0423	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3F^o$	1 - 2		614
	1000	1303.538	150.9693 - 227.6837	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3F^o$	2 - 3		614
	500	1309.696	150.9693 - 227.3230	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3P^o$	2 - 1		614
	650	1314.845	153.0883 - 229.1429	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3P^o$	1 - 0		614
	1000	1338.124	149.5144 - 224.2460	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3P^o$	3 - 2		614
	250	1347.077	153.0883 - 227.3230	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3P^o$	1 - 1		614
	150	1351.072	156.0268 - 230.0423	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^3F^o$	2 - 2		614
	200	1364.692	150.9693 - 224.2460	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3P^o$	2 - 2		614
	450	1395.541	156.0268 - 227.6837	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^3F^o$	2 - 3		614
	200	1402.597	156.0268 - 227.3230	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^3P^o$	2 - 1		614
	80	1405.327	153.0883 - 224.2460	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^3D - ^3P^o$	1 - 2		614
	150	1465.857	156.0268 - 224.2460	$3d^2(^2D)4s - 3d^2(^2D)4p$	$^1D - ^3P^o$	2 - 2		614

GALLIUM V (Ga⁴⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p⁶3d⁰(²D_{5/2}) (27 electrons)
Ionization Potential [726 000] cm⁻¹; [90] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
60	290.524		0.0 - 344.200	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - y ² G ^o	1/2 - 3/2		881
20	296.129		0.0 - 337.690	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ S ^o	1/2 - 3/2		866
120	296.815		0.0 - 336.909	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	1/2 - 3/2		881
1000	298.428		0.0 - 335.089	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	1/2 - 3/2		881
580	299.466		0.0 - 333.929	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	1/2 - 3/2		881
200	299.486		3.582 - 337.491	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² S ^o	1/2 - 3/2		866
830	300.006		3.582 - 336.909	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	1/2 - 3/2		881
760	300.564		0.0 - 332.707	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	1/2 - 3/2		881
180	300.774		0.0 - 332.473	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	1/2 - 3/2		881
620	301.187		3.582 - 335.605	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - y ² P ^o	1/2 - 3/2		881
50	302.718		3.582 - 333.929	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	1/2 - 3/2		881
360	302.871		0.0 - 330.174	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	1/2 - 3/2		881
650	303.837		3.582 - 332.707	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	1/2 - 3/2		881
20	303.856		0.0 - 329.103	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	1/2 - 3/2		866
100	304.052		3.582 - 332.473	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	1/2 - 3/2		881
160	306.230		0.0 - 326.549	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	1/2 - 3/2		881
890	307.016		0.0 - 325.713	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	1/2 - 3/2		881
230	307.202		3.582 - 329.103	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	1/2 - 3/2		881
600	308.253		0.0 - 324.407	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F ^o	1/2 - 3/2		881
240	308.343		0.0 - 324.314	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	1/2 - 3/2		881
240	309.627		3.582 - 326.549	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	1/2 - 3/2		881
20	311.242		3.582 - 324.874	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	1/2 - 3/2		881
700	311.786		3.582 - 324.314	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	1/2 - 3/2		881
360	312.412		0.0 - 320.093	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² P ^o	1/2 - 3/2		881
70	312.921		0.0 - 319.570	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	1/2 - 3/2		881
330	313.669		3.582 - 322.388	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F ^o	1/2 - 3/2		881
40	315.615		3.582 - 320.429	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	1/2 - 3/2		866
200	315.943		3.582 - 320.093	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	1/2 - 3/2		881
280	316.469		3.582 - 319.570	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	1/2 - 3/2		881
700	319.398		0.0 - 313.088	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	1/2 - 3/2		881
160	320.522		0.0 - 311.991	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	1/2 - 3/2		881
590	322.302		0.0 - 310.267	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	1/2 - 3/2		881
520	322.917		0.0 - 309.679	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² G ^o	1/2 - 3/2		881
960	322.980		0.0 - 309.616	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	1/2 - 3/2		881
380	323.098		3.582 - 313.088	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	1/2 - 3/2		881
750	324.243		3.582 - 311.991	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	1/2 - 3/2		881
50	324.820		0.0 - 307.864	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	1/2 - 3/2		881
520	324.945		0.0 - 307.745	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	1/2 - 3/2		881
410	326.126		0.0 - 306.628	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	1/2 - 3/2		881
400	326.759		3.582 - 309.616	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	1/2 - 3/2		881
40	328.457							866
280	328.644		3.582 - 307.864	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	1/2 - 3/2		881
0	330.15							866
0	330.583		0.0 - 302.499	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D ^o	1/2 - 3/2		866
0	332.972		3.582 - 303.911	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D ^o	1/2 - 3/2		866
0	333.178		0.0 - 300.144	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D ^o	1/2 - 3/2		866
0	334.54		3.582 - 302.499	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D ^o	1/2 - 3/2		866
100	336.612							866
0	337.197		3.582 - 300.144	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D ^o	1/2 - 3/2		866
5	832.50		210.052 - 330.174	3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	1/2 - 3/2		881
20	878.17		215.237 - 329.108	3d ⁸ (³ F)4s - 3d ⁸ (¹ D)4p	a ⁴ F - y ⁴ D ^o	1/2 - 3/2		881
10	943.58		231.711 - 337.690	3d ⁸ (¹ D)4s - 3d ⁸ (³ P)4p	b ² D - z ⁴ S ^o	1/2 - 3/2		881
10	978.34		231.711 - 333.929	3d ⁸ (¹ D)4s - 3d ⁸ (³ P)4p	b ² D - x ² D ^o	1/2 - 3/2		881
15	979.60		235.609 - 337.690	3d ⁸ (³ P)4s - 3d ⁸ (³ P)4p	a ⁴ P - z ⁴ S ^o	1/2 - 3/2		881

GA V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	980.98	235.752 - 337.690	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	1-1		881
	5	984.05	236.072 - 337.690	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4S^o$	1-1		881
	90	1014.47	246.093 - 344.668	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^o$	1-1		881
	15	1014.85	246.133 - 344.668	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^o$	1-1		881
	20	1015.62	231.711 - 330.174	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^o$	1-1		881
	90	1019.71	246.133 - 344.200	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - y^2G^o$	1-1		881
	10	1021.98	215.237 - 313.088	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	10	1032.38	235.609 - 332.473	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^2D^o$	1-1		881
	20	1033.55	215.237 - 311.991	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^o$	1-1		881
	30	1038.76	214.000 - 310.267	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	5	1040.20	232.968 - 329.103	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^4D^o$	1-1		881
	15	1045.80	212.121 - 307.745	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	30	1047.50	242.026 - 337.491	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - z^2S^o$	1-1		881
	120	1050.48	210.052 - 305.249	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	80	1054.56	212.121 - 306.947	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	1-1		881
	90	1058.12	212.121 - 306.628	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	80	1062.66	236.072 - 330.174	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	1-1		881
	10	1063.81	231.711 - 325.713	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^o$	1-1		881
	5	1065.37	214.000 - 307.864	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	80	1066.69	214.000 - 307.745	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	35	1068.59	232.968 - 326.549	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^o$	1-1		881
	30	1069.45	235.609 - 329.112	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	1-1		881
	60	1069.60	235.609 - 329.103	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	1-1		881
	45	1071.11	235.752 - 329.112	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	1-1		881
	55	1071.19	235.752 - 329.108	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^4D^o$	1-1		881
	80	1073.77	212.121 - 305.249	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	5	1074.89	236.072 - 329.103	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - y^4D^o$	1-1		881
	90	1078.83	231.711 - 324.407	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^o$	1-1		881
	110	1079.60	214.000 - 306.628	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	10	1080.55	243.053 - 335.605	$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^2P - y^2P^o$	1-1	Q	881
	60	1080.99	215.237 - 307.745	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^o$	1-1		881
	250	1085.01	210.052 - 302.217	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	1-1		881
	80	1087.37	218.301 - 310.267	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	1-1		881
	30	1088.08	232.968 - 324.874	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^o$	1-1		881
	90	1091.71	221.488 - 313.088	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2F^o$	1-1		881
	100	1094.36	218.301 - 309.679	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	1-1		881
	15	1094.74	232.968 - 324.314	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^o$	1-1		881
	80	1095.10	218.301 - 309.616	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	1-1		881
	40	1100.39	243.053 - 333.929	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	1-1		881
	70	1101.62	246.133 - 336.909	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^o$	1-1		881
	160	1102.83	210.052 - 300.730	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	1-1		881
	140	1103.03	212.121 - 302.779	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	1-1		881
	60	1104.93	221.488 - 311.991	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2D^o$	1-1		881
	20	1105.36				1-1		881
	75	1105.62	242.026 - 332.473	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	1-1		881
	75	1107.76	214.000 - 304.272	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	1-1		881
	10	1109.85	235.609 - 325.713	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	1-1		881
	40	1115.55	236.072 - 325.713	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	1-1		881
	80	1118.34	232.968 - 322.388	$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^o$	1-1		881
	20	1120.29	235.609 - 324.874	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	1-1		881
	55	1123.18	215.237 - 304.272	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	1-1		881
	80	1123.66	246.093 - 335.089	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^o$	1-1		881
	120	1126.40	214.000 - 302.779	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2G^o$	1-1		881
	10	1127.34	235.609 - 324.314	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	1-1		881

GA V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	80	1127.75	246.093 - 334.765	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		881
	130	1128.10	218.301 - 306.947	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	120	1128.53	212.121 - 300.730	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	100	1129.94	214.000 - 302.499	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	80	1131.43	231.711 - 320.093	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	30	1132.08	236.072 - 324.407	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	30	1132.16	218.301 - 306.628	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	25	1133.24	236.072 - 324.314	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	10	1134.69	221.488 - 309.616	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	130	1136.07	212.121 - 300.144	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	65	1138.20	231.711 - 319.570	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	30	1143.35	232.968 - 320.429	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	20	1145.98	215.237 - 302.499	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	30	1148.42	242.026 - 329.103	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	45	1150.09	218.301 - 305.249	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	130	1150.23	210.052 - 296.992	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		881
	10	1154.69	232.968 - 319.570	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	20	1155.96	246.093 - 332.600	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		881
	120	1156.51	246.133 - 332.600	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	35	1157.74	221.488 - 307.864	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	5	1159.33	221.488 - 307.745	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	15	1160.83	214.000 - 300.144	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	2	1163.17	218.301 - 304.272	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	5	1178.23	212.121 - 296.992	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	40	1178.95	235.609 - 320.429	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	10	1180.96	235.752 - 320.429	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		881
	15	1183.13	242.026 - 326.549	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	25	1183.63	235.609 - 320.093	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	5	1205.27	246.133 - 329.103	$3d^8(^1G)4s - 3d^8(^3P)4p$	$a^2G - y^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	10	1207.95	221.488 - 304.272	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	80	1213.17	218.301 - 300.730	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	10	1221.87	218.301 - 300.144	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881
	10	1222.15	243.053 - 324.874	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		881
	25	1230.13	221.488 - 302.779	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	30	1265.45	232.968 - 311.991	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		881
	30	1276.85	246.093 - 324.407	$3d^8(^1G)4s - 3d^8(^1D)4p$	$a^2G - y^2F^{\circ}$	$\frac{9}{2} - \frac{11}{2}$		881
	15	1283.64	231.711 - 309.616	$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^2D - z^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$		881
	10	1311.35	246.133 - 322.388	$3d^8(^1G)4s - 3d^8(^1D)4p$	$a^2G - y^2F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$		881

GALLIUM XII (Ga^{11+}), $Z = 31$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2(^3F_2)$ (20 electrons)
Ionization Potential [2 589 000] cm^{-1} ; [321] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	64.69	8.3 + D - 1554.1 + D	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^{\circ}$	4 - 5		878

GALLIUM XIII (Ga¹²⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p⁶3d²(²D_{3/2}) (19 electrons)
Ionization Potential [2 888 000] cm⁻¹; [358] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	20	59.975	0.0 - 1667.4	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	$\frac{3}{2} - \frac{1}{2}$		878
	30	60.171	6.00+D - 1667.9+D	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	$\frac{3}{2} - \frac{1}{2}$		878
	60	119.49	0.0 - 836.89	3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D°	$\frac{3}{2} - \frac{3}{2}$		878
	70	120.37	6.00+D - 836.77+D	3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D°	$\frac{3}{2} - \frac{1}{2}$		878
	50	130.18	6.00+D - 774.17+D	3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F°	$\frac{3}{2} - \frac{1}{2}$		878

GALLIUM XIV (Ga¹³⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p⁶(¹S₀) (18 electrons)
Ionization Potential [3 831 000] cm⁻¹; [475] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	55.72	500.0+D - 2294.7+D	3p ⁵ 3d - 3p ⁵ 4f	³ F° - ³ G	4 - 5		878
	60	123.80	0.0 - 807.8	3p ⁶ - 3p ⁵ 3d	g ¹ S - ¹ P°	0 - 1		878

GALLIUM XV (Ga¹⁴⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential [4 114 000] cm⁻¹; [510] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	51.57	380.0+D - 2319.1+D	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ D - ⁴ F°	$\frac{7}{2} - \frac{5}{2}$		878
	10	52.27	410.0+S - 2323.1+S	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ F - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		878
	30	127.48	0.0 - 784.44	3p ⁵ - 3p ⁴ 3d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		878
	20	128.31	40.645+R - 820.01+R	3p ⁵ - 3p ⁴ 3d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		878

GALLIUM XVI (Ga¹⁵⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [4 404 000] cm⁻¹; [546] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	48.69	2850.0+D - 4903.8+D	3p ³ (⁴ S°)3d - 3p ³ (⁴ S°)4f	⁵ D° - ⁵ F	4 - 5		878
		49.19	3350.0+L - 5382.9+L	3p ³ (² D°)3d - 3p ³ (² D°)4f	³ G° - ³ H	5 - 6		878
	20	132.19	0.0 - 756.49	3p ⁴ - 3p ³ 3d	g ³ P - ³ D°	2 - 3		878
	10	132.69	71.00+R - 824.64+R	3p ⁴ - 3p ³ 3d	¹ D - ¹ F°	2 - 3		878

GALLIUM XVII (Ga¹⁶⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [4 807 000] cm⁻¹; [596] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10	45.96		1650.0+D - 3825.8+D	3p ² 3d - 3p ² 4f	⁴ F - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		878
10	46.3		2100.0+S - 4260.+S	3p ² 3d - 3p ² 4f	² G - ² H°	$\frac{9}{2} - \frac{11}{2}$		878
30	138.54		1000.0+L - 1721.8+L	3p ³ - 3p ² 3d	² D° - ² F	$\frac{7}{2} - \frac{9}{2}$		878
20	144.23		0.0 - 693.34	3p ³ - 3p ² 3d	⁴ S° - ⁴ P	$\frac{7}{2} - \frac{9}{2}$		878

GALLIUM XVIII (Ga¹⁷⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [5 138 000] cm⁻¹; [637] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
30	150.86		44.90+S - 707.77+S	3p ² - 3p3d	³ P - ³ D°	2 - 3		878

GALLIUM XIX (Ga¹⁸⁺), Z = 31
Ground State 1s²2s²2p⁶3s²3p(²P_{1/2}) (13 electrons)
Ionization Potential [5 461 000] cm⁻¹; [677] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
20	155.01		0.0 - 645.12	3s ² 3p - 3s ² 3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		878
50	165.35		46.568+D - 651.35+D	3s ² 3p - 3s ² 3d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		878
20	194.83		46.568+D - 559.84+D	3s ² 3p - 3s3p ²	² P° - ² P	$\frac{1}{2} - \frac{3}{2}$		878

GALLIUM XX (Ga¹⁹⁺), Z = 31
Ground State 1s²2s²2p⁶3s(¹S₀) (12 electrons)
Ionization Potential [6 170 000] cm⁻¹; [765] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10	28.83		923.64+C - 4392.2+C	3s3d - 3s4f	³ D - ³ F°	3 - 4		878
20	31.797		359.337+C - 3504.3+C	3s3p - 3p4p	³ P° - ³ D	2 - 3		878
10	32.417		0.0 - 3084.8	3s ² - 3s4p	¹ S - ¹ P°	0 - 1		878
20	33.894		323.213+C - 3273.6+C	3s3p - 3s4d	³ P° - ³ D	1 - 2		878
30	34.250		359.337+C - 3279.0+C	3s3p - 3s4d	³ P° - ³ D	2 - 3		878
20	35.700		480.52 - 3281.6	3s3p - 3s4d	¹ P° - ¹ D	1 - 2		878
10	37.849		764.87 - 3406.9	3p ² - 3s4f	¹ D - ¹ F°	2 - 3		878
40	40.100		3000.0+D - 5493.8+D	3p3d - 3p4f	³ F° - ³ G	4 - 5		878
40	40.54		923.64+C - 3390.3+C	3s3d - 3s4f	³ D - ³ F°	3 - 4		878
20	41.798		3200.0+R - 5592.5+R	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		878
20	41.983		1025.03 - 3406.9	3s3d - 3s4f	¹ D - ¹ F°	2 - 3		878
10	165.36		310.351+C - 915.09+C	3s3p - 3s3d	³ P° - ³ D	0 - 1	P	878

GA XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
30	167.97		323.213 + C - 918.56 + C	3s3p - 3s3d	$^3P^\circ - ^3D$	1 - 2		878
50	177.21		359.337 + C - 923.64 + C	3s3p - 3s3d	$^3P^\circ - ^3D$	2 - 3		878
50	183.65		480.52 - 1025.03	3s3p - 3s3d	$^1P^\circ - ^1D$	1 - 2		878
50	208.11		0.0 - 480.52	$3s^2 - 3s3p$	$g^1S - ^1P^\circ$	0 - 1		878
	309.4		0.0 - 323.213 + C	$3s^2 - 3s3p$	$g^1S - ^3P^\circ$	0 - 1	P	1135

GALLIUM XXI (Ga^{20+}), Z = 31
Ground State $1s^2 2s^2 2p^6 3s^2 (S_{1/2})$ (11 electrons)
Ionization Potential 6 511 600 cm^{-1} ; 807.3 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
8	9.685		415.334 - 10740.	$2p^6 3p - 2p^5 3p(3d(^2D_{3/2}))$	$^2P^\circ - (0, \frac{3}{2})^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
5	9.720		0.0 - 10288.	$2p^6 3s - 2p^5 3s(3d(^2D_{3/2}))$	$g^2S - (1, \frac{3}{2})^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
8	9.739		915.479 - 11183.	$2p^6 3d -$ $2p^5(^2P_{1/2})(3d(^1G_4))$	$^2D - (\frac{3}{2}, 4)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
9	9.752		915.479 - 11170.	$2p^6 3d -$ $2p^5(^2P_{1/2})(3d(^3F_3))$	$^2D - (\frac{3}{2}, 3)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
7	9.772		0.0 - 10233.	$2p^6 3s - 2p^5 3s(3d(^2D_{3/2}))$	$g^2S - (1, \frac{3}{2})^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
8	9.780		364.718 - 10590.	$2p^6 3p - 2p^5 3p(3d(^2D_{3/2}))$	$^2P^\circ - (1, \frac{3}{2})^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
6	9.791		415.334 - 10629.	$2p^6 3p - 2p^5 3p(3d(^2D_{3/2}))$	$^2P^\circ - (2, \frac{3}{2})^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
5	9.812		906.935 - 11099.	$2p^6 3d -$ $2p^5(^2P_{1/2})(3d(^3F_2))$	$^2D - (\frac{3}{2}, 2)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
7	9.905		915.479 - 11011.	$2p^6 3d - 2p^5(^2P_{3/2})(3d(^1S_0))$	$^2D - (\frac{3}{2}, 0)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
6	9.920		906.935 - 10982.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d(^3F_4))$	$^2D - (\frac{3}{2}, 4)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
7	9.939		915.479 - 10982.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d(^3F_4))$	$^2D - (\frac{3}{2}, 4)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
9	9.961		915.479 - 10955.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d(^1G_4))$	$^2D - (\frac{3}{2}, 4)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
75	20.956		364.718 - 5136.61	$2p^6 3p - 2p^6 6d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		630
200	21.175		415.334 - 5137.80	$2p^6 3p - 2p^6 6d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
100	21.676		906.935 - 5520.30	$2p^6 3d - 2p^6 7f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		630
100	21.709		915.479 - 5521.90	$2p^6 3d - 2p^6 7f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		630
120	22.545		0.0 - 4435.63	$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		630
100	22.596		0.0 - 4425.56	$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		630
100	23.500		906.935 - 5162.20	$2p^6 3d - 2p^6 6f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$		630
200	23.540		915.479 - 5163.50	$2p^6 3d - 2p^6 6f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$		630
250	24.042		364.718 - 4524.08	$2p^6 3p - 2p^6 5d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P	630
300	24.326		415.334 - 4526.17	$2p^6 3p - 2p^6 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	630
320	27.308		906.935 - 4568.80	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	630
380	27.367		915.479 - 4569.56	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$	P	630
500	31.203		0.0 - 3204.76	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		630
350	31.401		0.0 - 3184.62	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$		630
500	33.084		364.718 - 3387.39	$2p^6 3p - 2p^6 4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		630
700	33.603		415.334 - 3391.25	$2p^6 3p - 2p^6 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
200	33.644		415.334 - 3387.39	$2p^6 3p - 2p^6 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{7}{2}$		630
300	37.414		364.718 - 3037.52	$2p^6 3p - 2p^6 4s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		630

GA XXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	400	38.136	415.334 - 3037.52	$2p^63p - 2p^64s$	$2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$		630
	700	38.922	906.935 - 3476.20	$2p^63d - 2p^64f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		630
	1000	39.030	915.479 - 3477.61	$2p^63d - 2p^64f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		630
	250	43.683	915.479 - 3204.76	$2p^63d - 2p^64p$	$2D - 2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		630
	180	43.904	906.935 - 3184.62	$2p^63d - 2p^64p$	$2D - 2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		630
	50	71.525	3037.52 - 4435.63	$2p^64s - 2p^65p$	$2S - 2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		630
	80	74.657	3184.62 - 4524.08	$2p^64p - 2p^65d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{3}{2}$		630
	100	75.677	3204.76 - 4526.17	$2p^64p - 2p^65d$	$2P^\circ - 2D$	$\frac{3}{2} - \frac{3}{2}$		630
	250	84.649	3387.39 - 4568.80	$2p^64d - 2p^65f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		630
	300	84.867	3391.25 - 4569.56	$2p^64d - 2p^65f$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		630
	400	91.071	3476.20 - 4574.25	$2p^64f - 2p^65g$	$2F^\circ - 2G$	$\frac{3}{2} - \frac{3}{2}$		630
	450	91.149	3477.61 - 4574.71	$2p^64f - 2p^65g$	$2F^\circ - 2G$	$\frac{3}{2} - \frac{3}{2}$		630
	800	184.428	364.718 - 906.935	$2p^63p - 2p^63d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$		630
	800	199.942	415.334 - 915.479	$2p^63p - 2p^63d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$		630
	300	203.417	415.334 - 906.935	$2p^63p - 2p^63d$	$2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$		630
	550	240.770	0.0 - 415.334	$2p^63s - 2p^63p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$		630
	20	274.18	0.0 - 364.718	$2p^63s - 2p^63p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	630,878

GALLIUM XXII (Ga^{21+}), Z = 31
Ground State $1s^22s^22p^6(^1S_0)$ (10 electrons)
Ionization Potential [16 212 000] cm^{-1} ; [2010] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		6.695	0.0 - 14937. +R	$2s^22p^6 - 2s^22p^5(^2P_{1/2})6d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1	P	1094
		6.797	0.0 - 14712.	$2s^22p^6 - 2s^22p^5(^2P_{3/2})6d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		7.009	0.0 - 14267.	$2s^22p^6 - 2s^22p^54p$	$g^1S - 1P^\circ$	0 - 1		1094
		7.119	0.0 - 14047.	$2s^22p^6 - 2s^22p^5(^2P_{3/2})5d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		7.130	0.0 - 14025. +R	$2s^22p^6 - 2s^22p^5(^2P_{3/2})5d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1	P	1094
		7.673	0.0 - 13033.	$2s^22p^6 - 2s^22p^5(^2P_{1/2})4d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		7.794	0.0 - 12830.	$2s^22p^6 - 2s^22p^5(^2P_{3/2})4d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		7.827	0.0 - 12776. +R	$2s^22p^6 - 2s^22p^5(^2P_{3/2})4d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1	P	1094
		7.887	0.0 - 12679.	$2s^22p^6 - 2s^22p^5(^2P_{1/2})4s$	$g^1S - \frac{5}{2}1^\circ$	0 - 1		1094
		8.028	0.0 - 12456.	$2s^22p^6 - 2s^22p^5(^2P_{3/2})4s$	$g^1S - \frac{3}{2}1^\circ$	0 - 1		1094
		9.027	0.0 - 11078.	$2s^22p^6 - 2s^22p^53p$	$g^1S - 1P^\circ$	0 - 1		1094
		9.081	0.0 - 11012.	$2s^22p^6 - 2s^22p^53p$	$g^1S - 3P^\circ$	0 - 1		1094
		9.643	0.0 - 10370.	$2s^22p^6 - 2s^22p^5(^2P_{1/2})3d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		9.842	0.0 - 10161.	$2s^22p^6 - 2s^22p^5(^2P_{3/2})3d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		9.961	0.0 - 10039.	$2s^22p^6 - 2s^22p^5(^2P_{3/2})3d$	$g^1S - (\frac{5}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		10.583	0.0 - 9449.1	$2s^22p^6 - 2s^22p^5(^2P_{1/2})3s$	$g^1S - \frac{5}{2}1^\circ$	0 - 1		1094
		10.833	0.0 - 9231.1	$2s^22p^6 - 2s^22p^5(^2P_{3/2})3s$	$g^1S - \frac{3}{2}1^\circ$	0 - 1		1094

GALLIUM XXIII (Ga²²⁺), Z = 31
Ground State 1s²2s²2p⁵(²P_{3/2}) (9 electrons)
Ionization Potential [17 100 000] cm⁻¹; [2120] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References	
		7.234	228.419 - 14052.	2s ² 2p ⁵ - 2s ² 2p ² (¹ S)4d	g ² P° - ² D	1-1 2-2 3-3 4-4	P	1094	
		7.264	0. - 13767.	2s ² 2p ⁵ - 2s ² 2p ² (¹ D)4d	g ² P° - ² D	1-1 2-2 3-3 4-4		1060	
		7.275	0. - 13746.	2s ² 2p ⁵ - 2s ² 2p ² (¹ D)4d	g ² P° - ² D	1-1 2-2 3-3 4-4		1094	
		7.275	0. - 13746.	2s ² 2p ⁵ - 2s ² 2p ² (¹ D)4d	g ² P° - ² P	1-1 2-2 3-3 4-4		1094	
		7.319	0. - 13663.	2s ² 2p ⁵ - 2s ² 2p ² (³ P)4d	g ² P° - ⁴ P	1-1 2-2 3-3 4-4		1094	
		7.371	0. - 13567.	2s ² 2p ⁵ - 2s ² 2p ² (³ P)4d	g ² P° - ⁴ D	1-1 2-2 3-3 4-4		1060	
		7.386	0. - 13539.	2s ² 2p ⁵ - 2s ² 2p ² (³ P)4d	g ² P° - ⁴ F	1-1 2-2 3-3 4-4		1094	
		7.404	228.419 - 13735.	2s ² 2p ⁵ - 2s ² 2p ² (¹ D)4d	g ² P° - ² S	1-1 2-2 3-3 4-4	1060		
		7.424	0. - 13470.	2s ² 2p ⁵ - 2s ² 2p ² (³ P)4d	g ² P° - ² D	1-1 2-2 3-3 4-4	1094		
		8.466	0. - 11812.0	2s ² 2p ⁵ - 2s2p ⁴ (¹ P)3p	g ² P° - ² D	1-1 2-2 3-3 4-4	1094		
		8.617	228.419 - 11833.4	2s ² 2p ⁵ - 2s2p ⁴ (¹ P)3p	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		8.633	228.419 - 11811.9	2s ² 2p ⁵ - 2s2p ⁴ (¹ P)3p	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		8.672	228.419 - 11759.8	2s ² 2p ⁵ - 2s2p ⁴ (¹ P)3p	g ² P° - ² D	1-1 2-2 3-3 4-4	1094		
		8.712	0. - 11478.4	2s ² 2p ⁵ - 2s2p ⁴ (³ P)3p	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1094		
		8.730	0. - 11454.8	2s ² 2p ⁵ - 2s2p ⁴ (³ P)3p	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		8.761	0. - 11414.2	2s ² 2p ⁵ - 2s2p ⁴ (³ P)3p	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		8.786	0. - 11381.7	2s ² 2p ⁵ - 2s2p ⁴ (³ P)3p	g ² P° - ² D	1-1 2-2 3-3 4-4	1094		
		8.807	228.419 - 11583.4	2s ² 2p ⁵ - 2s2p ⁴ (³ P)3p	g ² P° - ² S	1-1 2-2 3-3 4-4	1094		
		8.846	0. - 11304.5	2s ² 2p ⁵ - 2s2p ⁴ (³ P)3p	g ² P° - ⁴ D	1-1 2-2 3-3 4-4	1094		
		8.905	228.419 - 11458.1	2s ² 2p ⁵ - 2s2p ⁴ (³ P)3p	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1094		
		9.021	0. - 11085. + H	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3d	g ² P° - ² D	1-1 2-2 3-3 4-4	P	1061	
		9.185	228.419 - 11115.7	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3d	g ² P° - ² D	1-1 2-2 3-3 4-4		1094	
		9.201	0. - 10870.4	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² D	1-1 2-2 3-3 4-4		1094	
		9.233	0. - 10830.7	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² D	1-1 2-2 3-3 4-4		1094	
		9.248	0. - 10816.3	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² P	1-1 2-2 3-3 4-4		1094	
		9.263	0. - 10791.9	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² S	1-1 2-2 3-3 4-4		1094	
		9.314	0. - 10736.6	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² D	1-1 2-2 3-3 4-4		1094	
		9.325	0. - 10722.7	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² P	1-1 2-2 3-3 4-4	1061		
		9.339	0. - 10707.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² F	1-1 2-2 3-3 4-4	1061		
		9.357	0. - 10687.2	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ D	1-1 2-2 3-3 4-4	1094		
		9.381	228.419 - 10888.3	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		9.395	228.419 - 10870.4	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² D	1-1 2-2 3-3 4-4	1094		
		9.421	0. - 10614.6	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1061		
		9.431	0. - 10603.3	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ F	1-1 2-2 3-3 4-4	1061		
		9.442	228.419 - 10816.3	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		9.470	228.419 - 10791.9	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P° - ² S	1-1 2-2 3-3 4-4	1094		
		9.486	0. - 10541.8	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1094		
		9.507	0. - 10518.6	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1094		
		9.529	228.419 - 10722.7	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		9.548	0. - 10473.4	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P° - ⁴ D	1-1 2-2 3-3 4-4	1061		
		9.961	228.419 - 10267.6	2s ² 2p ⁵ - 2s ² 2p ² (¹ S)3s	g ² P° - ² S	1-1 2-2 3-3 4-4	1094		
		10.013	0. - 9987.0	2s ² 2p ⁵ - 2s ² 2p ² (¹ D)3s	g ² P° - ² D	1-1 2-2 3-3 4-4	1094		
		10.083	0. - 9918.5	2s ² 2p ⁵ - 2s ² 2p ² (³ P)3s	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		10.109	0. - 9892.2	2s ² 2p ⁵ - 2s ² 2p ² (³ P)3s	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1094		
		10.198	0. - 9805.8	2s ² 2p ⁵ - 2s ² 2p ² (³ P)3s	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1094		
		10.239	228.419 - 9995.0	2s ² 2p ⁵ - 2s ² 2p ² (¹ D)3s	g ² P° - ² D	1-1 2-2 3-3 4-4	1094		
		10.298	0. - 9710.6	2s ² 2p ⁵ - 2s ² 2p ² (³ P)3s	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		10.319	228.419 - 9918.5	2s ² 2p ⁵ - 2s ² 2p ² (³ P)3s	g ² P° - ² P	1-1 2-2 3-3 4-4	1094		
		10.333	0. - 9677.7	2s ² 2p ⁵ - 2s ² 2p ² (³ P)3s	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1094		
		10.347	228.419 - 9892.2	2s ² 2p ⁵ - 2s ² 2p ² (³ P)3s	g ² P° - ⁴ P	1-1 2-2 3-3 4-4	1061		
		69.787	0. - 1432.934	2s ² 2p ⁵ - 2s2p ⁶	g ² P° - ² S	1-1 2-2 3-3 4-4	P	1104	
		83.021	228.419 - 1432.934	2s ² 2p ⁵ - 2s2p ⁶	g ² P° - ² S	1-1 2-2 3-3 4-4		P	1104
		437.79	0. - 228.419	2s ² 2p ⁵ - 2s ² 2p ⁵	g ² P° - g ² P°	1-1 2-2 3-3 4-4		F,P	375,1104

GALLIUM XXIV (Ga²³⁺), Z = 31
Ground State 1s²2s²2p⁴(³P₂) (8 electrons)
Ionization Potential [18 080 000] cm⁻¹; [2242] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		8.807	209.198 - 11563.8	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ D°	1 - 2		1094
		8.827	0 - 11332.8	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ¹ F°	2 - 3		1094
		8.846	209.198 - 11513.7	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	g ³ P - ³ P°	1 - 1		1094
		8.864	0 - 11281.6	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ P°	2 - 2		1094
		8.882	0 - 11258.7	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3d	g ³ P - ³ D°	2 - 3		1094
		9.038	300.109 - 11364.5	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	¹ D - ³ P°	2 - 2		1094
		9.064	0 - 11032.7	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3d	g ³ P - ³ D°	2 - 3		1094
		9.081	576.182 + E - 11588.2 + E	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3d	¹ S - ¹ P°	0 - 1		1094
		9.442	209.198 - 10800.2	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	g ³ P - ³ P°	1 - 2		1094
		9.508	300.109 - 10817.6	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	¹ D - ¹ P°	2 - 1		1094
		9.508	0 - 10517.5	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	2 - 3		1094
		9.575	0 - 10442.5	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	2 - 2		1094
		9.609	209.198 - 10616.1	2s ² 2p ⁴ - 2s ² 2p ³ (² P°)3s	g ³ P - ³ P°	1 - 0		1094
		9.668	118.827 - 10454.0	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	0 - 1	Q	1094
		9.685	209.198 - 10533.4	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ¹ D°	1 - 2		1094
		9.739	0 - 10264.4	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3s	g ³ P - ³ S°	2 - 1		1094
		9.761	209.198 - 10454.0	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	1 - 1		1094
		9.772	209.198 - 10442.5	2s ² 2p ⁴ - 2s ² 2p ³ (² D°)3s	g ³ P - ³ D°	1 - 2		1094
		9.859	118.827 - 10264.4	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3s	g ³ P - ³ S°	0 - 1		1094
		9.946	209.198 - 10264.4	2s ² 2p ⁴ - 2s ² 2p ³ (⁴ S°)3s	g ³ P - ³ S°	1 - 1		1094
		57.765	0 - 1731.162	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ¹ P°	2 - 1	P	1104
		69.879	300.109 - 1731.162	2s ² 2p ⁴ - 2s2p ⁵	¹ D - ¹ P°	2 - 1	P	1104
		73.124	0 - 1367.535	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	2 - 1	P	1104
		78.419	209.198 - 1484.399	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1 - 0	P	1104
		80.083	118.827 - 1367.535	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	0 - 1	P	1104
		80.139	0 - 1247.838	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	2 - 2	P	1104
		86.331	209.198 - 1367.535	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1 - 1	P	1104
		86.582	576.182 + E - 1731.162	2s ² 2p ⁴ - 2s2p ⁵	¹ S - ¹ P°	0 - 1	P	1104
		96.280	209.198 - 1247.838	2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1 - 2	P	1104
		173.6	0 - 576.182 + E	2s ² 2p ⁴ - 2s ² 2p ⁴	g ³ P - ¹ S	2 - 0	F,P	375,1104
		272.5	209.198 - 576.182 + E	2s ² 2p ⁴ - 2s ² 2p ⁴	g ³ P - ¹ S	1 - 0	F,P	375,1104
		333.21	0.0 + G - 300.109	2s ² 2p ⁴ - 2s ² 2p ⁴	³ P - ¹ D	2 - 2	F,P	375,1104
		362.2	300.109 - 576.182 + E	2s ² 2p ⁴ - 2s ² 2p ⁴	¹ D - ¹ S	2 - 0	F,P	375,1104
		478.02	0 - 209.198	2s ² 2p ⁴ - 2s ² 2p ⁴	g ³ P - g ³ P	2 - 1	F,P	375,1104
		551.63	118.827 - 300.109	2s ² 2p ⁴ - 2s ² 2p ⁴	g ³ P - ¹ D	0 - 2	F,P	375,1104
		841.56	0 - 118.827	2s ² 2p ⁴ - 2s ² 2p ⁴	g ³ P - g ³ P	2 - 0	F,P	375,1104
		1100.0	209.198 - 300.109	2s ² 2p ⁴ - 2s ² 2p ⁴	g ³ P - ¹ D	1 - 2	F,P	375,1104
		1106.5	118.827 - 209.198	2s ² 2p ⁴ - 2s ² 2p ⁴	g ³ P - g ³ P	0 - 1	F,P	375,1104

GALLIUM XXVII (Ga²⁶⁺), Z = 31
Ground State 1s²2s²2p(²P°_{1/2}) (5 electrons)
Ionization Potential [21 520 000] cm⁻¹; [2668] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		389.7	0.0 - 256.60	2s ² 2p - 2s ² 2p	g ² P° - g ² P°	$\frac{1}{2} - \frac{3}{2}$	F,P	1122

GALLIUM XXVIII (Ga²⁷⁺), Z = 31
Ground State 1s²2s²(¹S₀) (4 electrons)
Ionization Potential [22 900 000] cm⁻¹; [2840] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		7.79	1438.1 - 14282.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	2 - 2	P	375,619
		7.95	1438.1 - 14019.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ P°	2 - 2	P	375,619
		8.00	1438.1 - 13940.	1s ² 2p ² - 1s ² 2p3d	³ P - ³ F°	2 - 2	P	375,619
		8.11	1687.4 - 14019.	1s ² 2p ² - 1s ² 2p3d	¹ D - ³ P°	2 - 2	P	375,619
		207.	0.0 - 482.8 + K	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ³ P°	0 - 1	P	375

GALLIUM XXIX (Ga²⁸⁺), Z = 31
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential [24 050 000] cm⁻¹; [2982] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		132.2	0.0 - 756.63 + D	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,977
		207.8	0.0 - 481.28 + E	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	375,977

GALLIUM XXX (Ga²⁹⁺), Z = 31
Ground State 1s²(¹S₀) (2 electrons)
Ionization Potential 102 408 000 cm⁻¹; 12697 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.096	0.0 - 91270.30	1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	P	728
		1.288	0.0 - 77660.86	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	P	1105
		1.295	0.0 - 77236.26	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	P	1105
		1.300	0.0 - 76920.43	1s ² - 1s2s	g ¹ S - ³ S	0 - 1	F,P	1105

GALLIUM XXXI (Ga³⁰⁺), Z = 31
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 106 781 800 cm⁻¹; 13239 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.053	0.0 - 95014.2200	1s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.245	0.0 - 80333.2100	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	1042
		1.250	0.0 - 79984.0900	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	1042

GERMANIUM I (Ge⁰⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p²(³P₀) (32 electrons)
Ionization Potential 63 713.24 cm⁻¹; 7.899 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	65	1571.23	1.409961 - 65.0541	4s ² 4p ² -	g ³ P - 23°	2 - 3	A	435
	50	1572.339	0.557134 - 64.15672	4s ² 4p ² -	g ³ P - 62°	1 - 2	A	435
	10	1572.369	0.0 - 63.59815	4s ² 4p ² -	g ³ P - 55°	0 - 1	A	435
	75	1572.67	1.409961 - 64.9956	4s ² 4p ² -	g ³ P - 15°	2 - 3	A	435
	10	1572.997	0.0 - 63.57291	4s ² 4p ² -	g ³ P - 39°	0 - 1	A	435
	20	1573.0	0.0 - 63.57291	4s ² 4p ² -	g ³ P - 39°	0 - 1	A	435
	10	1573.255	0.0 - 63.56246	4s ² 4p ² -	g ³ P - 34°	0 - 1	A	435
	12	1573.544	0.0 - 63.55078	4s ² 4p ² -	g ³ P - 29°	0 - 1	A	435
	15	1573.868	0.0 - 63.53776	4s ² 4p ² -	g ³ P - 23°	0 - 1	A	435
	18	1574.232	0.0 - 63.52300	4s ² 4p ² -	g ³ P - 17°	0 - 1	A	435
	75	1574.44	1.409961 - 64.9241	4s ² 4p ² -	g ³ P - 7°	2 - 3	A	435
	20	1574.648	0.0 - 63.50623	4s ² 4p ² -	g ³ P - 11°	0 - 1	A	435
	20	1574.8	1.409961 - 64.910	4s ² 4p ² -	g ³ P - 4°	2 - 3	A	435
	20	1575.120	0.0 - 63.48723	4s ² 4p ² -	g ³ P - 5°	0 - 1	A	435
	25	1575.660	0.0 - 63.46546	4s ² 4p ² -	g ³ P - 89°	0 - 1	A	435
	10	1576.228	0.0 - 63.44257	4s ² 4p ² -	g ³ P - 85°	0 - 1	A	435
	25	1576.282	0.0 - 63.44039	4s ² 4p ² -	g ³ P - 83°	0 - 1	A	435
	12	1576.495	1.409961 - 64.84172	4s ² 4p ² -	g ³ P - 90°	2 - 2	A	435
	80	1576.63	1.409961 - 64.8357	4s ² 4p ² -	g ³ P - 88°	2 - 3	A	435
	15	1576.948	0.0 - 63.41365	4s ² 4p ² -	g ³ P - 79°	0 - 1	A	435
	30	1577.003	0.0 - 63.41140	4s ² 4p ² -	g ³ P - 77°	0 - 1	A	435
	20	1577.1	1.409961 - 64.818	4s ² 4p ² -	g ³ P - 86°	2 - 3	A	435
	18	1577.784	0.0 - 63.38002	4s ² 4p ² -	g ³ P - 73°	0 - 1	A	435
	35	1577.844	0.0 - 63.37761	4s ² 4p ² -	g ³ P - 71°	0 - 1	A	435
	40	1578.827	0.0 - 63.33816	4s ² 4p ² -	g ³ P - 66°	0 - 1	A	435
	50	1579.019	0.0 - 63.33045	4s ² 4p ² - 4s ² 4p10s	g ³ P - 1P°	0 - 1	A	435
	15	1579.233	1.409961 - 64.73178	4s ² 4p ² -	g ³ P - 82°	2 - 2	A	435
	80	1579.405	1.409961 - 64.7244	4s ² 4p ² -	g ³ P - 81°	2 - 3	A	007,435
	45	1579.945	0.0 - 63.29333	4s ² 4p ² -	g ³ P - 57°	0 - 1	A	435
	15	1580.0	1.409961 - 64.701	4s ² 4p ² -	g ³ P - 79°	2 - 3	A	435
	10	1580.006	0.0 - 63.29086	4s ² 4p ² -	g ³ P - 56°	0 - 1	A	435
	10	1580.54	1.409961 - 64.680	4s ² 4p ² -	g ³ P - 78°	2 - 1	A	435
	70	1580.970	0.557134 - 63.80951	4s ² 4p ² -	g ³ P - 56°	1 - 2	A	435
	70	1580.996	0.0 - 63.25120	4s ² 4p ² - 4s ² 4p8d	g ³ P - 3P°	0 - 1	A	435
	25	1581.424	0.0 - 63.23416	4s ² 4p ² -	g ³ P - 50°	0 - 1	A	435
	25	1582.0	0.557134 - 63.7681	4s ² 4p ² -	g ³ P - 54°	1 - 1	A	435
	20	1582.756	1.409961 - 64.59078	4s ² 4p ² -	g ³ P - 75°	2 - 2	A	435
	100	1582.96	1.409961 - 64.5816	4s ² 4p ² -	g ³ P - 74°	2 - 3	A	435
	30	1583.141	0.0 - 63.16554	4s ² 4p ² -	g ³ P - 42°	0 - 1	A	435
	20	1583.369	0.0 - 63.15645	4s ² 4p ² -	g ³ P - 40°	0 - 1	A	435
	25	1583.6	1.409961 - 64.557	4s ² 4p ² -	g ³ P - 72°	2 - 3	A	435
	50	1585.060	0.0 - 63.08910	4s ² 4p ² -	g ³ P - 36°	0 - 1	A	435
	25	1587.403	1.409961 - 64.40588	4s ² 4p ² -	g ³ P - 69°	2 - 2	A	435
	10	1587.463	0.557134 - 63.55078	4s ² 4p ² -	g ³ P - 29°	1 - 1	A	435
	15	1587.520	0.557134 - 63.54846	4s ² 4p ² -	g ³ P - 27°	1 - 2	A	435
	90	1587.65	1.409961 - 64.396	4s ² 4p ² -	g ³ P - 68°	2 - 3	A	435
	12	1587.788	0.557134 - 63.53776	4s ² 4p ² -	g ³ P - 23°	1 - 1	A	435
	15	1587.854	0.557134 - 63.53522	4s ² 4p ² -	g ³ P - 21°	1 - 2	A	435
	18	1588.167	0.0 - 62.96559	4s ² 4p ² -	g ³ P - 26°	0 - 1	A	435
	15	1588.232	0.557134 - 63.52023	4s ² 4p ² -	g ³ P - 15°	1 - 2	A	435
	50	1588.593	0.0 - 62.94876	4s ² 4p ² -	g ³ P - 23°	0 - 1	A	435
	10	1588.659	0.557134 - 63.50329	4s ² 4p ² -	g ³ P - 9°	1 - 2	A	435
	15	1588.8	1.409961 - 64.351	4s ² 4p ² -	g ³ P - 66°	2 - 3	A	435
	10	1589.065	0.557134 - 63.48723	4s ² 4p ² -	g ³ P - 5°	1 - 1	A	435

GE I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	1589.143	0.557134 - 63.48412	$4s^2 4p^2 -$	$g^3P - 3^\circ$	1 - 2	A	435
	10	1589.615	0.557134 - 63.46546	$4s^2 4p^2 -$	$g^3P - 89^\circ$	1 - 1	A	435
	25	1589.695	0.557134 - 63.46229	$4s^2 4p^2 -$	$g^3P - 87^\circ$	1 - 2	A	435
	12	1590.249	0.557134 - 63.44039	$4s^2 4p^2 -$	$g^3P - 83^\circ$	1 - 1	A	435
	30	1590.327	0.557134 - 63.43727	$4s^2 4p^2 -$	$g^3P - 82^\circ$	1 - 2	A	435
	15	1590.982	0.557134 - 63.41140	$4s^2 4p^2 -$	$g^3P - 77^\circ$	1 - 1	A	435
	35	1591.053	0.557134 - 63.40858	$4s^2 4p^2 -$	$g^3P - 76^\circ$	1 - 2	A	435
	25	1591.679	0.0 - 62.82679	$4s^2 4p^2 -$	$g^3P - 19^\circ$	0 - 1	A	435
	20	1591.838	0.557134 - 63.37761	$4s^2 4p^2 -$	$g^3P - 71^\circ$	1 - 1	A	435
	40	1591.888	0.557134 - 63.37562	$4s^2 4p^2 -$	$g^3P - 70^\circ$	1 - 2	A	435
	40	1591.981	0.0 - 62.81488	$4s^2 4p^2 -$	$g^3P - 17^\circ$	0 - 1	A	435
	100	1592.846	0.557134 - 63.33789	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3F^\circ$	1 - 2	A	435
	10	1593.035	0.557134 - 63.33045	$4s^2 4p^2 - 4s^2 4p10s$	$g^3P - ^1P^\circ$	1 - 1	A	435
	40	1593.675	0.557134 - 63.30519	$4s^2 4p^2 -$	$g^3P - 60^\circ$	1 - 2	A	435
	20	1593.706	1.409961 - 64.15672	$4s^2 4p^2 -$	$g^3P - 62^\circ$	2 - 2	A	435
	60	1593.958	0.557134 - 63.29410	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3P^\circ$	1 - 2	A	435
	60	1593.977	0.557134 - 63.29333	$4s^2 4p^2 -$	$g^3P - 57^\circ$	1 - 1	A	435
	95	1594.00	1.409961 - 64.1453	$4s^2 4p^2 -$	$g^3P - 61^\circ$	2 - 3	A	435
	35	1595.049	0.557134 - 63.25120	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3P^\circ$	1 - 1	A	435
	100	1595.225	0.557134 - 63.24422	$4s^2 4p^2 -$	$g^3P - 51^\circ$	1 - 2	A	435
	20	1595.6	1.409961 - 64.082	$4s^2 4p^2 -$	$g^3P - 58^\circ$	2 - 3	A	435
	40	1596.230	0.557134 - 63.20474	$4s^2 4p^2 -$	$g^3P - 45^\circ$	1 - 2	A	435
	45	1596.446	0.0 - 62.63917	$4s^2 4p^2 - 4s^2 4p11d$	$g^3P - ^3D^\circ$	0 - 1	A	435
	40	1596.697	0.557134 - 63.18644	$4s^2 4p^2 -$	$g^3P - 44^\circ$	1 - 2	A	435
	35	1598.039	0.0 - 62.57674	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^1P^\circ$	0 - 1	A	435
	10	1599.593	0.557134 - 63.07311	$4s^2 4p^2 -$	$g^3P - 34^\circ$	1 - 1	A	435
	40	1600.826	0.0 - 62.46779	$4s^2 4p^2 - 4s^2 4p10d$	$g^3P - ^3D^\circ$	0 - 1	A	435
	25	1601.578	0.557134 - 62.99559	$4s^2 4p^2 -$	$g^3P - 27^\circ$	1 - 2	A	435
	10	1602.349	0.557134 - 62.96559	$4s^2 4p^2 -$	$g^3P - 26^\circ$	1 - 1	A	435
	20	1602.382	0.557134 - 62.96421	$4s^2 4p^2 -$	$g^3P - 25^\circ$	1 - 0	A	435
	25	1602.574	1.409961 - 63.80951	$4s^2 4p^2 -$	$g^3P - 56^\circ$	2 - 2	A	435
	35	1602.591	0.0 - 62.39894	$4s^2 4p^2 -$	$g^3P - 89^\circ$	0 - 1	A	435
	28	1602.781	0.557134 - 62.94876	$4s^2 4p^2 -$	$g^3P - 23^\circ$	1 - 1	A	435
	100	1602.9	1.409961 - 63.797	$4s^2 4p^2 -$	$g^3P - 55^\circ$	2 - 3	A	435
	30	1603.363	0.557134 - 62.92605	$4s^2 4p^2 -$	$g^3P - 21^\circ$	1 - 2	A	435
	25	1603.717	0.0 - 62.35515	$4s^2 4p^2 -$	$g^3P - 85^\circ$	0 - 1	A	435
	10	1603.869	0.557134 - 62.90637	$4s^2 4p^2 -$	$g^3P - 20^\circ$	1 - 2	A	435
	25	1605.1	1.409961 - 63.711	$4s^2 4p^2 -$	$g^3P - 53^\circ$	2 - 3	A	435
	22	1605.999	0.557134 - 62.82367	$4s^2 4p^2 -$	$g^3P - 18^\circ$	1 - 0	A	435
	35	1606.226	0.557134 - 62.81488	$4s^2 4p^2 -$	$g^3P - 17^\circ$	1 - 1	A	435
	39	1606.776	0.557134 - 62.79356	$4s^2 4p^2 -$	$g^3P - 15^\circ$	1 - 2	A	435
	25	1607.858	0.557134 - 62.75167	$4s^2 4p^2 -$	$g^3P - 13^\circ$	1 - 2	A	435
	10	1608.036	1.409961 - 63.59762	$4s^2 4p^2 -$	$g^3P - 54^\circ$	2 - 3	A	435
	15	1608.240	1.409961 - 63.58977	$4s^2 4p^2 -$	$g^3P - 48^\circ$	2 - 3	A	435
	19	1608.463	1.409961 - 63.58116	$4s^2 4p^2 -$	$g^3P - 43^\circ$	2 - 3	A	435
	30	1608.512	0.0 - 62.16926	$4s^2 4p^2 -$	$g^3P - 81^\circ$	0 - 1	A	435
	20	1608.711	1.409961 - 63.57158	$4s^2 4p^2 -$	$g^3P - 38^\circ$	2 - 3	A	435
	20	1608.987	1.409961 - 63.56090	$4s^2 4p^2 -$	$g^3P - 33^\circ$	2 - 3	A	435
	21	1609.296	1.409961 - 63.54900	$4s^2 4p^2 -$	$g^3P - 28^\circ$	2 - 3	A	435
	22	1609.642	1.409961 - 63.53568	$4s^2 4p^2 -$	$g^3P - 22^\circ$	2 - 3	A	435
	23	1610.031	1.409961 - 63.52069	$4s^2 4p^2 -$	$g^3P - 16^\circ$	2 - 3	A	435
	28	1610.471	1.409961 - 63.50372	$4s^2 4p^2 -$	$g^3P - 10^\circ$	2 - 3	A	435
	25	1610.553	0.557134 - 62.64761	$4s^2 4p^2 -$	$g^3P - 12^\circ$	1 - 1	A	435
	38	1610.772	0.557134 - 62.63917	$4s^2 4p^2 - 4s^2 4p11d$	$g^3P - ^3D^\circ$	1 - 1	A	435

GE I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	1610.875	0.557134 - 62.63522	$4s^2 4p^2 - 4s^2 4p11d$	$g^3P - ^3D^o$	1 - 2	A	435
	30	1610.972	1.409961 - 63.48437	$4s^2 4p^2 -$	$g^3P - 4^o$	2 - 3	A	435
	10	1611.458	1.409961 - 63.46546	$4s^2 4p^2 -$	$g^3P - 89^o$	2 - 1	A	435
	35	1611.543	1.409961 - 63.46229	$4s^2 4p^2 -$	$g^3P - 88^o$	2 - 3	A	435
	32	1611.735	0.0 - 62.04493	$4s^2 4p^2 -$	$g^3P - 77^o$	0 - 1	A	435
	10	1612.112	1.409961 - 63.44039	$4s^2 4p^2 -$	$g^3P - 83^o$	2 - 1	A	435
	45	1612.199	1.409961 - 63.43695	$4s^2 4p^2 -$	$g^3P - 81^o$	2 - 3	A	435
	30	1612.393	0.557134 - 62.57674	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^1P^o$	1 - 1	A	435
	10	1612.866	1.409961 - 63.41140	$4s^2 4p^2 -$	$g^3P - 77^o$	2 - 1	A	435
	25	1612.940	1.409961 - 63.40858	$4s^2 4p^2 -$	$g^3P - 76^o$	2 - 2	A	435
	30	1612.959	1.409961 - 63.40782	$4s^2 4p^2 -$	$g^3P - 75^o$	2 - 3	A	435
	50	1612.976	0.0 - 61.99714	$4s^2 4p^2 -$	$g^3P - 75^o$	0 - 1	A	435
	10	1613.204	0.557134 - 62.54556	$4s^2 4p^2 -$	$g^3P - 5^o$	1 - 2	A	435
	35	1613.569	0.557134 - 62.53156	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^3P^o$	1 - 2	A	435
	12	1613.745	1.409961 - 63.37761	$4s^2 4p^2 -$	$g^3P - 71^o$	2 - 1	A	435
	30	1613.797	1.409961 - 63.37562	$4s^2 4p^2 -$	$g^3P - 70^o$	2 - 2	A	435
	35	1613.831	1.409961 - 63.37434	$4s^2 4p^2 -$	$g^3P - 69^o$	2 - 3	A	435
	10	1614.137	1.409961 - 63.36252	$4s^2 4p^2 -$	$g^3P - 68^o$	2 - 2	A	435
	40	1614.786	1.409961 - 63.33789	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3F^o$	2 - 2	A	435
	40	1614.803	1.409961 - 63.33703	$4s^2 4p^2 -$	$g^3P - 63^o$	2 - 3	A	435
	40	1615.230	0.557134 - 62.46779	$4s^2 4p^2 - 4s^2 4p10d$	$g^3P - ^3D^o$	1 - 1	A	435
	10	1615.260	1.409961 - 63.31949	$4s^2 4p^2 -$	$g^3P - 61^o$	2 - 2	A	435
	40	1615.568	0.557134 - 62.45486	$4s^2 4p^2 - 4s^2 4p10d$	$g^3P - ^3D^o$	1 - 2	A	435
	35	1615.633	1.409961 - 63.30519	$4s^2 4p^2 -$	$g^3P - 60^o$	2 - 2	A	435
	40	1615.709	1.409961 - 63.3021	$4s^2 4p^2 - 4s^2 4p10s$	$g^3P - ^3P^o$	2 - 2	A	435
	28	1615.922	1.409961 - 63.29410	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3P^o$	2 - 2	A	435
	20	1615.942	1.409961 - 63.29333	$4s^2 4p^2 -$	$g^3P - 57^o$	2 - 1	A	435
	22	1616.009	1.409961 - 63.29086	$4s^2 4p^2 -$	$g^3P - 56^o$	2 - 1	A	435
	40	1616.518	1.409961 - 63.27131	$4s^2 4p^2 -$	$g^3P - 54^o$	2 - 3	A	435
	35	1617.043	1.409961 - 63.25120	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3P^o$	2 - 1	A	435
	50	1617.226	1.409961 - 63.24422	$4s^2 4p^2 -$	$g^3P - 51^o$	2 - 2	A	435
	30	1617.253	0.557134 - 62.39037	$4s^2 4p^2 -$	$g^3P - 88^o$	1 - 0	A	435
	18	1617.489	1.409961 - 63.23416	$4s^2 4p^2 -$	$g^3P - 50^o$	2 - 1	A	435
	20	1617.769	1.409961 - 63.22349	$4s^2 4p^2 -$	$g^3P - 47^o$	2 - 3	A	435
	15	1617.911	1.409961 - 63.21803	$4s^2 4p^2 -$	$g^3P - 46^o$	2 - 1	A	435
	30	1618.174	0.557134 - 62.35515	$4s^2 4p^2 -$	$g^3P - 85^o$	1 - 1	A	435
	38	1618.738	1.409961 - 63.18644	$4s^2 4p^2 -$	$g^3P - 44^o$	2 - 2	A	435
	40	1619.208	1.409961 - 63.16853	$4s^2 4p^2 -$	$g^3P - 43^o$	2 - 3	A	435
	10	1619.287	1.409961 - 63.16554	$4s^2 4p^2 -$	$g^3P - 42^o$	2 - 1	A	435
	12	1619.525	1.409961 - 63.15645	$4s^2 4p^2 -$	$g^3P - 40^o$	2 - 1	A	435
	35	1620.646	1.409961 - 63.11376	$4s^2 4p^2 -$	$g^3P - 37^o$	2 - 3	A	435
	10	1621.293	1.409961 - 63.08910	$4s^2 4p^2 -$	$g^3P - 36^o$	2 - 1	A	435
	40	1621.382	0.557134 - 62.23287	$4s^2 4p^2 -$	$g^3P - 83^o$	1 - 2	A	435
	25	1621.714	1.409961 - 63.07311	$4s^2 4p^2 -$	$g^3P - 34^o$	2 - 1	A	435
	25	1622.746	1.409961 - 63.03389	$4s^2 4p^2 -$	$g^3P - 30^o$	2 - 2	A	435
	20	1622.758	1.409961 - 63.03347	$4s^2 4p^2 -$	$g^3P - 29^o$	2 - 1	A	435
	45	1623.056	0.557134 - 62.16926	$4s^2 4p^2 -$	$g^3P - 81^o$	1 - 1	A	435
	15	1623.754	1.409961 - 62.99559	$4s^2 4p^2 -$	$g^3P - 27^o$	2 - 2	A	435
	2	1624.1300	0.0 - 61.57141	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3D^o$	0 - 1		370
	32	1624.227	0.557134 - 62.12489	$4s^2 4p^2 -$	$g^3P - 79^o$	1 - 0	A	435
	28	1624.548	1.409961 - 62.96559	$4s^2 4p^2 -$	$g^3P - 26^o$	2 - 1	A	435
	45	1624.794	0.0 - 61.54623	$4s^2 4p^2 - 4s^2 4p10s$	$g^3P - ^3P^o$	0 - 1	A	435
	35	1625.480	1.409961 - 62.93026	$4s^2 4p^2 -$	$g^3P - 22^o$	2 - 3	A	435
	25	1625.591	1.409961 - 62.92605	$4s^2 4p^2 -$	$g^3P - 21^o$	2 - 2	A	435

GE I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	1626.079	0.557134 - 62.054745	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3P^\circ$	1 - 2	A	435
	30	1626.338	0.557134 - 62.04493	$4s^2 4p^2 -$	$g^3P - 77^\circ$	1 - 1	A	435
	35	1626.431	0.557134 - 62.04145	$4s^2 4p^2 -$	$g^3P - 76^\circ$	1 - 0	A	435
	50	1627.604	0.557134 - 61.99714	$4s^2 4p^2 -$	$g^3P - 75^\circ$	1 - 1	A	435
	20	1628.218	1.409961 - 62.82679	$4s^2 4p^2 -$	$g^3P - 19^\circ$	2 - 1	A	435
	18	1628.534	1.409961 - 62.81488	$4s^2 4p^2 -$	$g^3P - 17^\circ$	2 - 1	A	435
	35	1629.100	1.409961 - 62.79356	$4s^2 4p^2 -$	$g^3P - 15^\circ$	2 - 2	A	435
	45	1629.142	1.409961 - 62.79197	$4s^2 4p^2 -$	$g^3P - 14^\circ$	2 - 3	A	435
	55	1629.585	0.557134 - 61.92247	$4s^2 4p^2 -$	$g^3P - 72^\circ$	1 - 2	A	435
	2	1630.1733	0.0 - 61.343172	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^1P^\circ$	0 - 1		370,368
	25	1631.533	0.557134 - 61.84922	$4s^2 4p^2 -$	$g^3P - 71^\circ$	1 - 2	A	435
	15	1632.981	1.409961 - 62.64761	$4s^2 4p^2 -$	$g^3P - 12^\circ$	2 - 1	A	435
	45	1633.312	1.409961 - 62.63522	$4s^2 4p^2 - 4s^2 4p11d$	$g^3P - ^3D^\circ$	2 - 2	A	435
	2	1633.468	1.409961 - 62.62923	$4s^2 4p^2 - 4s^2 4p11d$	$g^3P - ^3D^\circ$	2 - 3		796,007
	12	1634.873	1.409961 - 62.57674	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^1P^\circ$	2 - 1	A	435
	2	1635.2590	0.0 - 61.15237	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3D^\circ$	0 - 1		370
	20	1635.709	1.409961 - 62.54556	$4s^2 4p^2 -$	$g^3P - 5^\circ$	2 - 2	A	435
	45	1636.083	1.409961 - 62.53156	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^3P^\circ$	2 - 2	A	435
	60	1636.313	1.409961 - 62.52298	$4s^2 4p^2 - 4s^2 4p10d$	$g^3P - ^3D^\circ$	2 - 3	A	435
	30	1637.791	1.409961 - 62.46779	$4s^2 4p^2 - 4s^2 4p10d$	$g^3P - ^3D^\circ$	2 - 1	A	435
	45	1638.138	1.409961 - 62.45486	$4s^2 4p^2 - 4s^2 4p10d$	$g^3P - ^3D^\circ$	2 - 2	A	435
	55	1638.961	0.557134 - 61.57141	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3D^\circ$	1 - 1	A	435
	60	1639.638	0.557134 - 61.54623	$4s^2 4p^2 - 4s^2 4p10s$	$g^3P - ^3P^\circ$	1 - 1	A	435
	6	1639.7300	0.557134 - 61.54272	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3D^\circ$	1 - 2		370
	40	1639.828	0.557134 - 61.53912	$4s^2 4p^2 -$	$g^3P - 67^\circ$	1 - 0	A	435
	50	1640.397	1.409961 - 62.37079	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^1F^\circ$	2 - 3	A	435
	4	1643.1931	0.0 - 60.85712	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^3P^\circ$	0 - 1		370,386
	40	1644.118	1.409961 - 62.23287	$4s^2 4p^2 -$	$g^3P - 83^\circ$	2 - 2	A	435
	40	1644.526	0.557134 - 61.3649	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3P^\circ$	1 - 1	A	435
	1	1645.1146	0.557134 - 61.343172	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^1P^\circ$	1 - 1		370,368
	28	1645.839	1.409961 - 62.16926	$4s^2 4p^2 -$	$g^3P - 81^\circ$	2 - 1	A	435
	15	1646.108	0.0 - 60.749318	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^1P^\circ$	0 - 1	A	435
	2	1647.1222	0.557134 - 61.269082	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3D^\circ$	1 - 2		370,368
	3	1647.5310	0.557134 - 61.25402	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^3P^\circ$	1 - 2		370,368
	20	1648.947	1.409961 - 62.054745	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3P^\circ$	2 - 2	A	435
	25	1649.213	1.409961 - 62.04493	$4s^2 4p^2 -$	$g^3P - 77^\circ$	2 - 1	A	435
	4	1650.2945	0.557134 - 61.15237	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3D^\circ$	1 - 1		370
	3	1651.5288	0.0 - 60.549958	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3P^\circ$	0 - 1		370,368
	20	1651.685	0.557134 - 61.10137	$4s^2 4p^2 -$	$g^3P - 60^\circ$	1 - 1	A	435
	6	1651.9547	0.557134 - 61.09148	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^1D^\circ$	1 - 2		370,368
	30	1652.344	1.409961 - 61.93004	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3F^\circ$	2 - 3	A	435
	18	1652.551	1.409961 - 61.92247	$4s^2 4p^2 -$	$g^3P - 72^\circ$	2 - 2	A	435
	3	1658.3752	0.557134 - 60.85712	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^3P^\circ$	1 - 1		370,368
	2	1660.7956	0.557134 - 60.769238	$4s^2 4p^2 - 4s^2 4p9s$	$g^3P - ^3P^\circ$	1 - 0		370,368
	5	1661.3453	0.557134 - 60.749318	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^1P^\circ$	1 - 1		370,368
	30	1662.890	1.409961 - 61.54623	$4s^2 4p^2 - 4s^2 4p10s$	$g^3P - ^3P^\circ$	2 - 1	A	435
	3	1662.9860	1.409961 - 61.54272	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3D^\circ$	2 - 2		370
	10	1663.5393	1.409961 - 61.52273	$4s^2 4p^2 - 4s^2 4p8d$	$g^3P - ^3D^\circ$	2 - 3		370
	5	1665.2751	0.557134 - 60.607272	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3P^\circ$	1 - 0		370,368
	20	1666.866	0.557134 - 60.549958	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3P^\circ$	1 - 1	A	435
	6	1667.8015	0.557134 - 60.516308	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3P^\circ$	1 - 2		370,368
	9	1670.6085	1.409961 - 61.26839	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3D^\circ$	2 - 3		370,368
	2	1670.9490	0.557134 - 60.403365	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3F^\circ$	1 - 2		370,368
	3	1671.0096	1.409961 - 61.25402	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^3P^\circ$	2 - 2		370,368

GE I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1673.850	1.409961 - 61.15237	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^3D^o$	2 - 1		007
	9	1674.2703	0.0 - 59.727511	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	0 - 1		370,368
	12	1674.675	0.557134 - 60.270231	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3S^o$	1 - 1	A	435
	15	1675.283	1.409961 - 61.10137	$4s^2 4p^2 -$	$g^3P - 60^o$	2 - 1	A	435
	7	1675.5605	1.409961 - 61.09148	$4s^2 4p^2 - 4s^2 4p7d$	$g^3P - ^1D^o$	2 - 2		370,368
	2	1679.9868	0.0 - 59.524276	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^3P^o$	0 - 1		370,368
	7	1681.3426	1.409961 - 60.88624	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^1F^o$	2 - 3		370,368
	3	1685.2221	1.409961 - 60.749318	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^1P^o$	2 - 1		370,368
	10	1690.0349	0.557134 - 59.727511	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	1 - 1		370,368
	4	1690.9030	1.409961 - 60.549958	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3P^o$	2 - 1		370,368
	20	1691.0897	0.557134 - 59.690604	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	1 - 2		370,368
	7	1691.6254	0.0 - 59.114742	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^1P^o$	0 - 1		370,368
	7	1691.8656	1.409961 - 60.516308	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3P^o$	2 - 2		370,368
	4	1694.3424	1.409961 - 60.429908	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3F^o$	2 - 3		370,368
	8	1695.8597	0.557134 - 59.524276	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^3P^o$	1 - 1		370,368
	8	1696.7160	0.557134 - 59.494515	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^3P^o$	1 - 0		370,368
	10	1698.938	1.409961 - 60.270231	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3S^o$	2 - 1	A	435
	4	1702.3873	0.0 - 58.741040	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3D^o$	0 - 1		370,368
	10	1713.0806	0.557134 - 58.931503	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^3P^o$	1 - 2		370,368
	1	1714.7497	1.409961 - 59.727511	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	2 - 1		370,368
	15	1715.8355	1.409961 - 59.690604	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	2 - 2		370,368
	40	1716.7844	1.409961 - 59.658391	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	2 - 3		370,368
	6	1718.4933	0.557134 - 58.747644	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3D^o$	1 - 2		370,368
	10	1718.6883	0.557134 - 58.741040	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3D^o$	1 - 1		370,368
	8	1720.7464	1.409961 - 59.524276	$4s^2 4p^2 - 4s^2 4p8s$	$g^3P - ^3P^o$	2 - 1		370,368
	10	1724.3082	0.557134 - 58.551407	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^1D^o$	1 - 2		370,368
	2	1732.9586	1.409961 - 59.114742	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^1P^o$	2 - 1		370,368
	15	1738.1185	1.409961 - 58.943436	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3D^o$	2 - 3		370,368
	30	1738.4791	1.409961 - 58.931503	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^3P^o$	2 - 2		370,368
	25	1739.1024	0.557134 - 58.058060	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^1P^o$	1 - 1		370,368
	25	1742.1951	0.0 - 57.398852	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3P^o$	0 - 1		370,368
	15	1744.0537	1.409961 - 58.747644	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3D^o$	2 - 2		370,368
	15	1744.2546	1.409961 - 58.741040	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^3D^o$	2 - 1		370,368
	30	1746.0651	0.557134 - 57.82878	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3P^o$	1 - 0		370
	20	1748.8572	0.0 - 57.180198	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^3P^o$	0 - 1		370,368
	30	1750.0432	1.409961 - 58.551407	$4s^2 4p^2 - 4s^2 4p6d$	$g^3P - ^1D^o$	2 - 2		370,368
	40	1758.2792	0.557134 - 57.430924	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3P^o$	1 - 2		370,368
	15	1759.2712	0.557134 - 57.398852	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3P^o$	1 - 1		370,368
	30	1764.1852	1.409961 - 58.093352	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^1F^o$	2 - 3		370,368
	30	1765.2843	1.409961 - 58.058060	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^1P^o$	2 - 1		370,368
	25	1766.0648	0.557134 - 57.180198	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^3P^o$	1 - 1		370,368
	30	1766.4330	0.557134 - 57.16838	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^3P^o$	1 - 0		370,581
	40	1774.1755	0.557134 - 56.921345	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3F^o$	1 - 2		370,368
	50	1785.0460	1.409961 - 57.430924	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3P^o$	2 - 2		370,368
	40	1786.0686	1.409961 - 57.398852	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3P^o$	2 - 1		370,368
	40	1793.0711	1.409961 - 57.180198	$4s^2 4p^2 - 4s^2 4p7s$	$g^3P - ^3P^o$	2 - 1		370,368
	50	1801.4323	1.409961 - 56.921345	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3F^o$	2 - 2		370,368
7	40	1802.6246	0.0 - 55.474668	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3D^o$	0 - 1		370,368
	50	1804.4523	1.409961 - 56.828439	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3F^o$	2 - 3		370,368
	15	1805.135	7.125299 - 62.52298	$4s^2 4p^2 - 4s^2 4p10d$	$^1D - ^3D^o$	2 - 3		007
	4	1810.1006	7.125299 - 62.37079	$4s^2 4p^2 - 4s^2 4p7d$	$^1D - ^1F^o$	2 - 3		370
	15	1813.9087	0.557134 - 55.68670	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3D^o$	1 - 2		370,368
7	70	1824.3023	0.557134 - 55.372610	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^1D^o$	1 - 2		370,368
	70	1841.3275	1.409961 - 55.718604	$4s^2 4p^2 - 4s^2 4p5d$	$g^3P - ^3D^o$	2 - 3		370,368

GE I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
7	70	1842.4098	1.409961 - 55.68670	$4s^2 4p^2 - 4s^2 4p 5d$	$g^3 P - ^3 D^o$	2 - 2		370,368
	15	1844.4102	7.125299 - 61.343172	$4s^2 4p^2 - 4s^2 4p 8s$	$^1 D - ^1 P^o$	2 - 1		370,368
	70	1845.8723	0.0 - 54.174928	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^1 P^o$	0 - 1		370,368
20	20	1846.9578	7.125299 - 61.26839	$4s^2 4p^2 - 4s^2 4p 7d$	$^1 D - ^3 D^o$	2 - 3		370,368
	20	1849.6354	1.409961 - 55.474668	$4s^2 4p^2 - 4s^2 4p 5d$	$g^3 P - ^3 D^o$	2 - 1		370,368
	80	1853.1336	1.409961 - 55.372610	$4s^2 4p^2 - 4s^2 4p 5d$	$g^3 P - ^1 D^o$	2 - 2		370,368
19	50	1860.0865	7.125299 - 60.88624	$4s^2 4p^2 - 4s^2 4p 6d$	$^1 D - ^1 F^o$	2 - 3		370,368
	9	1861.0945	7.125299 - 60.85712	$4s^2 4p^2 - 4s^2 4p 9s$	$^1 D - ^3 P^o$	2 - 1		370,368
	70	1865.0525	0.557134 - 54.174928	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^1 P^o$	1 - 1		370,368
6	6	1872.9745	7.125299 - 60.516308	$4s^2 4p^2 - 4s^2 4p 6d$	$^1 D - ^3 P^o$	2 - 2		370,368
	200	1874.2565	0.557134 - 53.911624	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^3 P^o$	1 - 2		370,368
	10	1876.0104	7.125299 - 60.429908	$4s^2 4p^2 - 4s^2 4p 6d$	$^1 D - ^3 F^o$	2 - 3		370,368
6	8	1881.6470	7.125299 - 60.270231	$4s^2 4p^2 - 4s 4p^3$	$^1 D - ^3 S^o$	2 - 1		370,368
	100	1895.1968	1.409961 - 54.174928	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^1 P^o$	2 - 1		370,368
	8	1901.0607	7.125299 - 59.727511	$4s^2 4p^2 - 4s 4p^3$	$^1 D - ^3 D^o$	2 - 1		370,368
6	2	1902.3955	7.125299 - 59.690604	$4s^2 4p^2 - 4s 4p^3$	$^1 D - ^3 D^o$	2 - 2		370,368
	10	1903.5620	7.125299 - 59.658391	$4s^2 4p^2 - 4s 4p^3$	$^1 D - ^3 D^o$	2 - 3		370,368
	400	1904.7015	1.409961 - 53.911624	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^3 P^o$	2 - 2		370,368
1	50	1908.4342	7.125299 - 59.524276	$4s^2 4p^2 - 4s^2 4p 8s$	$^1 D - ^3 P^o$	2 - 1		370,368
	100	1912.4087	0.557134 - 52.847213	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^1 P^o$	1 - 1		370,368
	6	1917.5924	0.0 - 52.148726	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^3 P^o$	0 - 1		370,368
18	100	1923.4674	7.125299 - 59.114742	$4s^2 4p^2 - 4s^2 4p 7s$	$^1 D - ^1 P^o$	2 - 1		370,368
17	400	1929.8262	7.125299 - 58.943436	$4s^2 4p^2 - 4s^2 4p 6d$	$^1 D - ^3 D^o$	2 - 3		370,368
	8	1930.2707	7.125299 - 58.931503	$4s^2 4p^2 - 4s^2 4p 7s$	$^1 D - ^3 P^o$	2 - 2		370,368
5	100	1934.0482	0.0 - 51.705020	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	0 - 1		370,368
	8	1937.1456	7.125299 - 58.747644	$4s^2 4p^2 - 4s^2 4p 6d$	$^1 D - ^3 D^o$	2 - 2		370,368
6	300	1937.4825	0.557134 - 52.170504	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^3 P^o$	1 - 0		370,368
6	300	1938.3003	0.557134 - 52.148726	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^3 P^o$	1 - 1		370,368
5	150	1944.1163	1.409961 - 52.847213	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^1 P^o$	2 - 1		370,368
	300	1944.7313	0.557134 - 51.97815	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	1 - 0		370,368
5	100	1953.8018	1.409961 - 52.592224	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^1 F^o$	2 - 3		370,368
	200	1955.1150	0.557134 - 51.705020	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	1 - 1		370,368
16	500	1962.0133	7.125299 - 58.093352	$4s^2 4p^2 - 4s^2 4p 5d$	$^1 D - ^1 F^o$	2 - 3		370,368
	100	1963.3728	7.125299 - 58.058060	$4s^2 4p^2 - 4s^2 4p 5d$	$^1 D - ^1 P^o$	2 - 1		370,368
5	200	1965.3830	0.557134 - 51.437802	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	1 - 2		370,368
6	500	1970.8796	1.409961 - 52.148726	$4s^2 4p^2 - 4s^2 4p 6s$	$g^3 P - ^3 P^o$	2 - 1		370,368
5	300	1987.8492	7.125299 - 57.430924	$4s^2 4p^2 - 4s^2 4p 5d$	$^1 D - ^3 P^o$	2 - 2		370,368
	600	1988.2668	1.409961 - 51.705020	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	2 - 1		370,368
	100	1989.1174	7.125299 - 57.398852	$4s^2 4p^2 - 4s^2 4p 5d$	$^1 D - ^3 P^o$	2 - 1		370,368
5	150	1997.8064	7.125299 - 57.180198	$4s^2 4p^2 - 4s^2 4p 7s$	$^1 D - ^3 P^o$	2 - 1		370,368
	1000	1998.8869	1.409961 - 51.437802	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	2 - 2		370,368

GERMANIUM II (Ge^{1+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p(2P_{1/2})$ (31 electrons)
Ionization Potential $128\,521.3 \text{ cm}^{-1}$; 15.934 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	710.487	0.0 - 140.752	$4s^2(^1S)4p - 4s4p(^3P^o)5p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		676
	2	714.206	0.0 - 140.016	$4s^2(^1S)4p - 4s4p(^3P^o)5p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$		676
	5	719.487	1.76736 - 140.752	$4s^2(^1S)4p - 4s4p(^3P^o)5p$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		676
	0	822.968	0.0 - 121.51143	$4s^2(^1S)4p - 4s^2(^1S)9d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		676
	1	828.67						676
	3	829.91						676

GE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
9	0	834.97	1.76736 - 121.53234	$4s^2(^1S)4p - 4s^2(^1S)8f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
	2	835.083	1.76736 - 121.51591	$4s^2(^1S)4p - 4s^2(^1S)9d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		676
	0	837.70	0.0 - 119.37441	$4s^2(^1S)4p - 4s^2(^1S)7f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
	20	837.947	0.0 - 119.33925	$4s^2(^1S)4p - 4s^2(^1S)8d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		676
	2	838.91	1.76736 - 120.97705	$4s^2(^1S)4p - 4s^2(^1S)10s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	Q	676
	5	843.7165	0.0 - 118.52323	$4s^2(^1S)4p - 4s^2(^1S)9s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	2	850.29	1.76736 - 119.37403	$4s^2(^1S)4p - 4s^2(^1S)7f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
	15	850.495	1.76736 - 119.34595	$4s^2(^1S)4p - 4s^2(^1S)8d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		676
	10	856.4880	1.76736 - 118.52323	$4s^2(^1S)4p - 4s^2(^1S)9s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	10	861.76	0.0 - 116.04186	$4s^2(^1S)4p - 4s^2(^1S)6f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
9	50	862.2339	0.0 - 115.97781	$4s^2(^1S)4p - 4s^2(^1S)7d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,676
	10	872.3075	0.0 - 114.63847	$4s^2(^1S)4p - 4s^2(^1S)8s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	10	875.09	1.76736 - 116.041313	$4s^2(^1S)4p - 4s^2(^1S)6f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
	100	875.4927	1.76736 - 115.98876	$4s^2(^1S)4p - 4s^2(^1S)7d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,676
	10	875.5766	1.76736 - 115.97781	$4s^2(^1S)4p - 4s^2(^1S)7d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,796
	20	885.9663	1.76736 - 114.63847	$4s^2(^1S)4p - 4s^2(^1S)8s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	5	899.649	52.29095 - 163.445	$4s4p^2 - 4s4p(^3P^o)5d$	$^4P - 4^o$	$\frac{1}{2} - \frac{1}{2}$		676
	10	900.618	52.29095 - 163.3257	$4s4p^2 - 4s4p(^3P^o)5d$	$^4P - 3^o$	$\frac{1}{2} - \frac{1}{2}$		676
	2	904.93	0.0 - 110.50537	$4s^2(^1S)4p - 4s^2(^1S)5f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
	200	905.9771	0.0 - 110.37807	$4s^2(^1S)4p - 4s^2(^1S)6d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,676
8	10	908.50	51.57589 - 161.6471	$4s4p^2 - 4s4p(^3P^o)5d$	$^4P - 1^o$	$\frac{1}{2} - \frac{1}{2}$		676
	5	909.050				$\frac{1}{2} - \frac{1}{2}$		676
	3	909.432	53.36674 - 163.3257	$4s4p^2 - 4s4p(^3P^o)5d$	$^4P - 3^o$	$\frac{1}{2} - \frac{1}{2}$		676
	15	911.258	53.36674 - 163.105	$4s4p^2 - 4s4p(^3P^o)5d$	$^4P - 2^o$	$\frac{1}{2} - \frac{1}{2}$		676
	2	914.444	52.29095 - 161.6471	$4s4p^2 - 4s4p(^3P^o)5d$	$^4P - 1^o$	$\frac{1}{2} - \frac{1}{2}$		676
	15	919.65	1.76736 - 110.50466	$4s^2(^1S)4p - 4s^2(^1S)5f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
	400	920.5537	1.76736 - 110.39763	$4s^2(^1S)4p - 4s^2(^1S)6d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,676
	20	926.4736	0.0 - 107.93616	$4s^2(^1S)4p - 4s^2(^1S)6d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371
	2	926.93		$4s^2(^1S)4p - 4s^2(^1S)7s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	3	931.32				$\frac{1}{2} - \frac{1}{2}$		676
7	1	940.04				$\frac{1}{2} - \frac{1}{2}$		676
	50	941.8962	1.76736 - 107.93616	$4s^2(^1S)4p - 4s^2(^1S)7s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	8	942.845	52.29095 - 158.3534	$4s4p^2 - 4s4p(^3P^o)6s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		676
	1	943.75				$\frac{1}{2} - \frac{1}{2}$		676
	20	952.500	53.36674 - 158.3534	$4s4p^2 - 4s4p(^3P^o)6s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		676
	0	955.96	51.57589 - 156.1834	$4s4p^2 - 4s4p(^3P^o)6s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		676
	5	962.537	52.29095 - 156.1834	$4s4p^2 - 4s4p(^3P^o)6s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		676
	3	965.48	53.36674 - 156.942	$4s4p^2 - 4s4p(^3P^o)6s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$		676
	996.83	0.0 - 100.318049	$4s^2(^1S)4p - 4s^2(^1S)4f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676	
	500	999.1011	0.0 - 100.08997	$4s^2(^1S)4p - 4s^2(^1S)5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,676
7	10	1014.71	1.76736 - 100.317369	$4s^2(^1S)4p - 4s^2(^1S)4f$	$g^2P^o - ^2F^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	676
	500	1016.6377	1.76736 - 100.13082	$4s^2(^1S)4p - 4s^2(^1S)5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,676
	300	1017.0600	1.76736 - 100.08997	$4s^2(^1S)4p - 4s^2(^1S)5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$		371,676
	20	1044.24	65.18474 - 160.9482	$4s4p^2 - 4s4p(^3P^o)5d$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		676
	2	1046.05	65.01567 - 160.6115	$4s4p^2 - 4s4p(^3P^o)5d$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{1}{2}$		676
	5	1046.88				$\frac{1}{2} - \frac{1}{2}$		676
	100	1055.0261	0.0 - 94.78439	$4s^2(^1S)4p - 4s^2(^1S)6s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	300	1075.0720	1.76736 - 94.78439	$4s^2(^1S)4p - 4s^2(^1S)6s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	100	1085.513	0.0 - 92.12235	$4s^2(^1S)4p - 4s4p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		676
	1	1093.01				$\frac{1}{2} - \frac{1}{2}$		676
5	2	1098.08	65.01567 - 156.0838	$4s4p^2 - 4p^3$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		676
	200	1098.710	0.0 - 91.0155	$4s^2(^1S)4p - 4s4p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		676
	10	1100.98	65.18474 - 156.0130	$4s4p^2 - 4p^3$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		676

GE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
5	200	1106.737	1.76736 - 92.12235	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		676
5	200	1120.458	1.76736 - 91.0155	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		676
	5	1127.48	52.29095 - 140.983	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	20	1134.02	51.57589 - 139.76	$4s4p^2 - 4p^3$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1141.36	53.36674 - 140.983	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	40	1143.25	52.29095 - 139.76	$4s4p^2 - 4p^3$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	3	1146.972	51.57589 - 138.7618	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		676
	20	1149.547	51.57589 - 138.5670	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$		676
	20	1156.462	52.29095 - 138.7618	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	50	1157.50	53.36674 - 139.76	$4s4p^2 - 4p^3$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	50	1159.066	52.29095 - 138.5670	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	100	1164.273	0.0 - 85.89056	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		676
	75	1173.707	53.36674 - 138.5670	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	100	1178.957	53.36674 - 138.1875	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	1	1180.10						676
11	150	1181.194	51.57589 - 136.2357	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$		676
11	150	1181.650	51.57589 - 136.2034	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		676
	3	1185.154	65.01567 - 149.3931	$4s4p^2 - 4p^3$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	50	1187.323	65.01567 - 149.2382	$4s4p^2 - 4p^3$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	50	1187.539	65.18474 - 149.3931	$4s4p^2 - 4p^3$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	200	1188.732	1.76736 - 85.89056	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		676
11	150	1189.623	52.29095 - 136.3511	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
11	100	1191.264	52.29095 - 136.2357	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
11	15	1191.719	52.29095 - 136.2034	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		676
11	500	1194.787	53.36674 - 137.0647	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$		676
11	15	1205.049	53.36674 - 136.3511	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
11	3	1206.725	53.36674 - 136.2357	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
4	500	1237.0589	0.0 - 80.83689	$4s^2(^1S)4p - 4s^2(^1S)4d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		371,676
4	1000	1261.9053	1.76736 - 81.01261	$4s^2(^1S)4p - 4s^2(^1S)4d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		371,676
4	300	1264.7096	1.76736 - 80.83689	$4s^2(^1S)4p - 4s^2(^1S)4d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		371,676
	2	1268.444	51.57589 - 130.4128	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4F^\circ$	$\frac{1}{2} - \frac{3}{2}$		676
	5	1274.100	52.29095 - 130.7781	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	2	1280.050	52.29095 - 130.4128	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	15	1282.345	53.36674 - 131.3489	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	100	1290.07	65.18474 - 142.7011	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	2	1291.82	53.36674 - 130.7781	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^4P - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	50	1311.249	65.01567 - 141.2792	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1314.15	65.18474 - 141.2792	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1319.3	65.18474 - 140.983	$4s4p^2 - 4s4p(^3P^\circ)4d$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	5	1340.92	65.18474 - 139.76	$4s4p^2 - 4p^3$	$^2D - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
10	100	1380.425	52.29095 - 124.7325	$4s4p^2 - 4s4p(^3P^\circ)5s$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
10	100	1392.265	51.57589 - 123.4011	$4s4p^2 - 4s4p(^3P^\circ)5s$	$^4P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		676
10	200	1401.235	53.36674 - 124.7325	$4s4p^2 - 4s4p(^3P^\circ)5s$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
10	20	1406.105	51.57589 - 122.6944	$4s4p^2 - 4s4p(^3P^\circ)5s$	$^4P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$		676
10	20	1406.269	52.29095 - 123.4011	$4s4p^2 - 4s4p(^3P^\circ)5s$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
10	200	1420.385	52.29095 - 122.6944	$4s4p^2 - 4s4p(^3P^\circ)5s$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$		676
10	200	1427.877	53.36674 - 123.4011	$4s4p^2 - 4s4p(^3P^\circ)5s$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	5	1433.48						676
	2	1457.96						676
	1	1458.64	80.83689 - 149.3931	$4s^2(^1S)4d - 4p^3$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	5	1461.970	80.83689 - 149.2382	$4s^2(^1S)4d - 4p^3$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1462.388	81.01261 - 149.3931	$4s^2(^1S)4d - 4p^3$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	1	1465.73	81.01261 - 149.2382	$4s^2(^1S)4d - 4p^3$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
3	100	1538.0907	0.0 - 65.01567	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		371,676

GE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
3	500	1576.8547	1.76736 - 65.18474	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		371,676
	3	1578.598	85.89056 - 149.2382	$4s4p^2 - 4p^3$	$^2S - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
3	300	1581.0698	1.76736 - 65.01567	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		371,676
2	500	1602.4863	0.0 - 62.40303	$4s^2(^1S)4p - 4s^2(^1S)5s$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	2	1606.29	65.01567 - 127.2716	$4s4p^2 - 4s4p(^2P^\circ)4d$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	3	1610.640	65.18474 - 127.2716	$4s4p^2 - 4s4p(^2P^\circ)4d$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	3	1615.332	65.01567 - 126.9229	$4s4p^2 - 4s4p(^2P^\circ)4d$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	1	1619.74	65.18474 - 126.9229	$4s4p^2 - 4s4p(^2P^\circ)4d$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	100	1621.03	81.01261 - 142.7011	$4s^2(^1S)4d - 4s4p(^2P^\circ)4d$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
2	500	1649.1942	1.76736 - 62.40303	$4s^2(^1S)4p - 4s^2(^1S)5s$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		371,676
	75	1654.46	80.83689 - 141.2792	$4s^2(^1S)4d - 4s4p(^2P^\circ)4d$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	3	1659.29	81.01261 - 141.2792	$4s^2(^1S)4d - 4s4p(^2P^\circ)4d$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	676
	0	1676.26	65.18474 - 124.8413	$4s4p^2 - 4s^2(^1S)11f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	5	1677.99	80.83689 - 140.432	$4s^2(^1S)4d - 4s4p(^2P^\circ)4d$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	2	1679.335	65.18474 - 124.7325	$4s4p^2 - 4s4p(^2P^\circ)5s$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	0	1698.43	65.18474 - 124.0626	$4s4p^2 - 4s^2(^1S)10f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	0	1702.20	81.01261 - 139.76	$4s^2(^1S)4d - 4p^3$	$^2D - ^2S^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	2	1729.385	65.18474 - 123.00881	$4s4p^2 - 4s^2(^1S)9f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1750.85	92.12235 - 149.2382	$4s4p^2 - 4p^3$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	5	1769.377	65.01567 - 121.53264	$4s4p^2 - 4s^2(^1S)8f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1774.703	65.18474 - 121.53234	$4s4p^2 - 4s^2(^1S)8f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	1	1810.83	81.01261 - 136.2357	$4s^2(^1S)4d - 4s4p(^2P^\circ)4d$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1815.13	85.89056 - 140.983	$4s4p^2 - 4s4p(^2P^\circ)4d$	$^2S - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	676
	0	1837.460	65.18474 - 119.60788	$4s4p^2 - 4s^2(^1S)9p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	20	1839.634	65.01567 - 119.37441	$4s4p^2 - 4s^2(^1S)7f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	30	1845.388	65.18474 - 119.37403	$4s4p^2 - 4s^2(^1S)7f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	10	1856.81						676
1	20	1912.376	0.0 - 52.29095	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		488
1	100	1938.0077	1.76736 - 53.36674	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		371,676
1	100	1938.8906	0.0 - 51.57589	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		371,676
	2	1947.55	65.01567 - 116.36182	$4s4p^2 - 4s^2(^1S)8p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
	3	1952.29	65.18474 - 116.40666	$4s4p^2 - 4s^2(^1S)8p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
14	30	1959.781	65.01567 - 116.04186	$4s4p^2 - 4s^2(^1S)6f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		676
14	40	1966.3173	65.18474 - 116.041233	$4s4p^2 - 4s^2(^1S)6f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$		368,676
1	30	1979.2736	1.76736 - 52.29095	$4s^2(^1S)4p - 4s4p^2$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		371,676
	3	1986.6						676

GERMANIUM III (Ge^{2+}), $Z = 32$
Ground State $1s^22s^22p^63s^23p^63d^{10}4s^2(^1S_0)$ (30 electrons)
Ionization Potential $276\,036 \text{ cm}^{-1}$; 34.22 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	542.9	0.0 - 184.195	$4s^2 - 4s5p$	$g^1S - ^1P^\circ$	0 - 1	P	406
	20	660.5	61.730 - 213.126	$4s4p - 4s5d$	$^3P^\circ - ^3D$	0 - 1	P	406
	40	663.8	62.496 - 213.154	$4s4p - 4s5d$	$^3P^\circ - ^3D$	1 - 2	P	406
	10	669.3	61.730 - 211.139	$4s4p - 4s6s$	$^3P^\circ - ^3S$	0 - 1	P	406
	60	670.9	64.138 - 213.196	$4s4p - 4s5d$	$^3P^\circ - ^3D$	2 - 3	P	406
	5	671.1	64.138 - 213.154	$4s4p - 4s5d$	$^3P^\circ - ^3D$	2 - 2	P	406

GE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	672.8	62.496 - 211.139	4s4p - 4s6s	$^3P^\circ - ^3S$	1 - 1	P	406
	40	680.3	64.138 - 211.139	4s4p - 4s6s	$^3P^\circ - ^3S$	2 - 1	P	406
	40	952.8	62.496 - 167.454	4s4p - 4s5s	$^3P^\circ - ^1S$	1 - 0	P	406
	240	989.0	61.730 - 162.847	4s4p - 4s4d	$^3P^\circ - ^3D$	0 - 1	P	406
	300	995.7	62.496 - 162.924	4s4p - 4s4d	$^3P^\circ - ^3D$	1 - 2	P	406
	200	996.5	62.496 - 162.847	4s4p - 4s4d	$^3P^\circ - ^3D$	1 - 1	P	406
	300	1011.2	64.138 - 163.030	4s4p - 4s4d	$^3P^\circ - ^3D$	2 - 3	P	406
	200	1012.3	64.138 - 162.924	4s4p - 4s4d	$^3P^\circ - ^3D$	2 - 2	P	406
	40	1013.1	64.138 - 162.847	4s4p - 4s4d	$^3P^\circ - ^3D$	2 - 1	P	406
	160	1032.6	61.730 - 158.574	4s4p - 4s5s	$^3P^\circ - ^3S$	0 - 1	P	406
	240	1040.8	62.496 - 158.574	4s4p - 4s5s	$^3P^\circ - ^3S$	1 - 1	P	406
	240	1058.9	64.138 - 158.574	4s4p - 4s5s	$^3P^\circ - ^3S$	2 - 1	P	406
	800	1088.4	0.0 - 91.875	4s ² - 4s4p	$g^1S - ^1P^\circ$	0 - 1	P	406
	200	1137.9	62.496 - 150.374	4s4p - 4p ²	$^3P^\circ - ^3P$	1 - 2	P	406
	240	1150.6	61.730 - 148.644	4s4p - 4p ²	$^3P^\circ - ^3P$	0 - 1	P	406
	160	1159.2	62.496 - 148.766	4s4p - 4p ²	$^3P^\circ - ^1D$	1 - 2	P	406
	160	1159.6	64.138 - 150.374	4s4p - 4p ²	$^3P^\circ - ^3P$	2 - 2	P	406
	160	1160.8	62.496 - 148.644	4s4p - 4p ²	$^3P^\circ - ^3P$	1 - 1	P	406
	200	1173.8	62.496 - 147.691	4s4p - 4p ²	$^3P^\circ - ^3P$	1 - 0	P	406
	160	1212.4	62.496 - 144.974	4s4p - 4s4d	$^3P^\circ - ^1D$	1 - 2	P	406
	80	1323.1	91.875 - 167.454	4s4p - 4s5s	$^1P^\circ - ^1S$	1 - 0	P	406
	10	1499.3	91.875 - 158.574	4s4p - 4s5s	$^1P^\circ - ^3S$	1 - 1	P	406
	200	1525.3	144.974 - 210.534	4s4d - 4s4f	$^1D - ^1F^\circ$	2 - 3	P	406
	40	1527.2	144.974 - 210.453	4s4d - 4s4f	$^1D - ^3F^\circ$	2 - 2	P	406
	20	1542.9	148.766 - 213.577	4p ² - 4p4d	$^1D - ^1F^\circ$	2 - 3	P	406
	10	1569.5	148.644 - 212.359	4p ² - 4p4d	$^3P - ^1P^\circ$	1 - 1	P	406
	10	1572.5	148.766 - 212.359	4p ² - 4p4d	$^1D - ^1P^\circ$	2 - 1	P	406
	180	1600.1	0.0 - 62.496	4s ² - 4s4p	$g^1S - ^3P^\circ$	0 - 1	P	406
	20	1613.3	150.374 - 212.359	4p ² - 4p4d	$^3P - ^1P^\circ$	2 - 1	P	406
	5	1619.0	148.766 - 210.534	4p ² - 4s4f	$^1D - ^1F^\circ$	2 - 3	P	406
	10	1619.9						406
	10	1620.0	0.0 + G - 61.730	4s ² - 4s4p	$^1S - ^3P^\circ$	0 - 0	F,P	406
	10	1620.6	148.766 - 210.471	4p ² - 4s4f	$^1D - ^3F^\circ$	2 - 3	P	406
	10	1621.1	148.766 - 210.453	4p ² - 4s4f	$^1D - ^3F^\circ$	2 - 2	P	406
	5	1709.4	91.875 - 150.374	4s4p - 4p ²	$^1P^\circ - ^3P$	1 - 2	P	406
	120	1883.3	91.875 - 144.974	4s4p - 4s4d	$^1P^\circ - ^1D$	1 - 2	P	406
	5	1917.6	144.974 - 197.122	4s4d - 4p4d	$^1D - ^1D^\circ$	2 - 2	P	406
	10	1933.8	184.195 - 235.907	4s5p - 4d ²	$^1P^\circ - ^1D$	1 - 2	P	406
	20	1974.2	162.924 - 213.577	4s4d - 4p4d	$^3D - ^1F^\circ$	2 - 3	P	406
	40	1978.4	163.030 - 213.577	4s4d - 4p4d	$^3D - ^1F^\circ$	3 - 3	P	406

GERMANIUM IV (Ge³⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s(²S_{1/2}) (29 electrons)
Ionization Potential 368 701 cm⁻¹; 45.71 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	439.8	0.0 - 227.395	3d ¹⁰ 4s - 3d ¹⁰ 5p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	406
	20	441.6	0.0 - 226.457	3d ¹⁰ 4s - 3d ¹⁰ 5p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	406
	20	529.8	81.313 - 270.055	3d ¹⁰ 4p - 3d ¹⁰ 6s	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	406
	20	537.8	84.104 - 270.055	3d ¹⁰ 4p - 3d ¹⁰ 6s	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	406
	60	847.8	81.313 - 199.267	3d ¹⁰ 4p - 3d ¹⁰ 5s	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	406
	60	868.3	84.104 - 199.267	3d ¹⁰ 4p - 3d ¹⁰ 5s	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	406

GE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	160	915.0	81.313 - 190.606	$3d^{10}4p - 3d^{10}4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P	406
	160	936.7	84.104 - 190.857	$3d^{10}4p - 3d^{10}4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P	406
	80	938.9	84.104 - 190.606	$3d^{10}4p - 3d^{10}4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P	406
	20	1073.4	190.606 - 283.768	$3d^{10}4d - 3d^{10}6p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	406
	40	1078.0	190.857 - 283.618	$3d^{10}4d - 3d^{10}6p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	406
	300	1183.3	199.267 - 283.768	$3d^{10}5s - 3d^{10}6p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	406
	300	1183.4	199.267 - 283.768	$3d^{10}5s - 3d^{10}6p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	406
	10	1185.5	199.267 - 283.618	$3d^{10}5s - 3d^{10}6p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	406
	400	1189.0	0.0 - 84.104	$3d^{10}4s - 3d^{10}4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	406
	400	1229.8	0.0 - 81.313	$3d^{10}4s - 3d^{10}4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	406
	40	1494.9	190.606 - 257.501	$3d^{10}4d - 3d^{10}4f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	P	406
	120	1500.6	190.857 - 257.497	$3d^{10}4d - 3d^{10}4f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	P	406
	60	1648.2	199.267 - 259.939	$3d^{10}5s - 3d^9 4s^2$	$^2S - ^2D$	$\frac{1}{2} - \frac{5}{2}$	F,P	406

GERMANIUM V (Ge^{4+}), Z = 32
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} ({}^1S_0)$ (28 electrons)
Ionization Potential $753\,800 \text{ cm}^{-1}$; 93.5 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	700	294.515	0.0 - 339.5402	$3d^{10} - 3d^9 ({}^2D)4p$	$g^1S - ^3D^\circ$	0 - 1		615
	1000	295.651	0.0 - 338.2375	$3d^{10} - 3d^9 ({}^2D)4p$	$g^1S - ^1P^\circ$	0 - 1		615
	200	304.984	0.0 - 327.8910	$3d^{10} - 3d^9 ({}^2D)4p$	$g^1S - ^3P^\circ$	0 - 1		615
		413.33	0.0 - 241.9352	$3d^{10} - 3d^9 ({}^2D)4s$	$g^1S - ^1D$	0 - 2	F,P	375,615
		423.79	0.0 - 235.9670	$3d^{10} - 3d^9 ({}^2D)4s$	$g^1S - ^3D$	0 - 2	F,P	375,615
	3	595.185	327.8910 - 495.9077	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3P^\circ - ^1D$	1 - 2		615
	2	597.383	327.8910 - 495.2884	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3P^\circ - ^3D$	1 - 1		615
	15	598.826	323.7489 - 490.7417	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3P^\circ - ^3D$	2 - 3		615
	1	605.633	330.7906 - 495.9077	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3F^\circ - ^1D$	2 - 2		615
	2	606.220	330.3325 - 495.2884	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3P^\circ - ^3D$	0 - 1		615
	7	607.912	330.7906 - 495.2884	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3F^\circ - ^3D$	2 - 1		615
	9	610.913	327.7530 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3F^\circ - ^3D$	3 - 2		615
	3	611.429	327.8910 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3P^\circ - ^3D$	1 - 2		615
	20	621.524	329.8478 - 490.7417	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3F^\circ - ^3D$	4 - 3		615
	9	622.097	335.1613 - 495.9077	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3D^\circ - ^1D$	3 - 2		615
	5	622.459	330.7906 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3F^\circ - ^3D$	2 - 2		615
	1	623.534	335.5303 - 495.9077	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3D^\circ - ^1D$	2 - 2		615
	12	629.960	337.1681 - 495.9077	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^1F^\circ - ^1D$	3 - 2		615
	6	634.238	338.2375 - 495.9077	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^1P^\circ - ^1D$	1 - 2		615
	4	639.865	335.1613 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3D^\circ - ^3D$	3 - 2		615
	9	641.380	335.5303 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3D^\circ - ^3D$	2 - 2		615
	5	642.059	339.5402 - 495.2884	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3D^\circ - ^3D$	1 - 1		615
	8	642.624	340.2957 - 495.9077	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^1D^\circ - ^1D$	2 - 2		615
	7	642.757	335.1613 - 490.7417	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3D^\circ - ^3D$	3 - 3		615
	3	645.193	340.2957 - 495.2884	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^1D^\circ - ^3D$	2 - 1		615
	1	648.188	337.1681 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^1F^\circ - ^3D$	3 - 2		615
	9	651.156	337.1681 - 490.7417	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^1F^\circ - ^3D$	3 - 3		615
	2	652.716	338.2375 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^1P^\circ - ^3D$	1 - 2		615
	3	658.314	339.5402 - 491.4433	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)5s$	$^3D^\circ - ^3D$	1 - 2		615
	2	704.227	327.8910 - 469.8896	$3d^9 ({}^2D)4p - 3d^9 ({}^2D)4d$	$^3P^\circ - ^3F$	1 - 2		615

GE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	704.548	327.7530 - 469.6864	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^1F$	3 - 3		615
	8	708.692	323.7489 - 464.8527	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^1P$	2 - 1		615
	1	709.514	327.7530 - 468.6958	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^1D$	3 - 2		615
	2	709.702	323.7489 - 464.6522	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3D$	2 - 2		615
	9	710.200	327.8910 - 468.6958	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^1D$	1 - 2		615
	35	716.264	323.7489 - 463.3616	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3D$	2 - 3		615
	8	718.710	327.8910 - 467.0291	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3D$	1 - 1		615
	25	718.913	330.7906 - 469.8896	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3F$	2 - 2		615
	15	719.282	327.7530 - 466.7802	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3G$	3 - 3		615
	50	724.214	323.7489 - 461.8285	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3P$	2 - 2		615
	20	724.284	323.7489 - 461.8149	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3P$	2 - 1		615
	13	725.134	330.7906 - 468.6958	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^1D$	2 - 2		615
	17	727.067	329.8478 - 467.3867	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^1G$	4 - 4		615
	16	730.127	327.8910 - 464.8527	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^1P$	1 - 1		615
	13	730.463	327.7530 - 464.6522	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3D$	3 - 2		615
	30	731.200	327.8910 - 464.6522	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3D$	1 - 2		615
	25	731.546	330.3325 - 467.0291	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3D$	0 - 1		615
	35	733.542	327.7530 - 464.0770	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3F$	3 - 3		615
	7	734.002	330.7906 - 467.0291	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3D$	2 - 1		615
	25	734.933	327.8910 - 463.9579	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3P$	1 - 0		615
	35	735.353	330.7906 - 466.7802	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3G$	2 - 3		615
	17	737.411	327.7530 - 463.3616	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3D$	3 - 3		615
	35	741.516	329.8478 - 464.7057	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3F$	4 - 4		615
	5	742.232	335.1613 - 469.8896	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^3F$	3 - 2		615
	25	743.364	335.1613 - 469.6864	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^1F$	3 - 3		615
	10	744.272	335.5303 - 469.8896	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^3F$	2 - 2		615
	7	745.845	327.7530 - 461.8285	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3P$	3 - 2		615
	6	746.620	327.8910 - 461.8285	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3P$	1 - 2		615
	17	746.687	327.8910 - 461.8149	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3P$	1 - 1		615
	60	746.882	327.7530 - 461.6426	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3G$	3 - 4		615
	11	747.040	330.7906 - 464.6522	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3D$	2 - 2		615
	3	748.039	338.2375 - 471.9203	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1P^o - ^1S$	1 - 0		615
	2	748.865	335.1613 - 468.6958	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^1D$	3 - 2		615
	11	748.985	329.8478 - 463.3616	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3D$	4 - 3		615
	40	750.265	330.7906 - 464.0770	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3F$	2 - 3		615
	2	750.939	335.5303 - 468.6958	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^1D$	2 - 2		615
	2	753.447	337.1681 - 469.8896	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1F^o - ^3F$	3 - 2		615
	13	754.613	337.1681 - 469.6864	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1F^o - ^1F$	3 - 3		615
	35	755.836	323.7489 - 456.0518	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3P^o - ^3S$	2 - 1		615
	20	756.285	335.1613 - 467.3867	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^1G$	3 - 4		615
	12	758.757	329.8478 - 461.6426	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3G$	4 - 4		615
	20	759.579	338.2375 - 469.8896	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1P^o - ^3F$	1 - 2		615
	4	759.765	335.1613 - 466.7802	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^3G$	3 - 3		615
	60	760.053	329.8478 - 461.4175	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3F^o - ^3G$	4 - 5		615
	30	761.905	335.5303 - 466.7802	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^3G$	2 - 3		615
	5	767.168	339.5402 - 469.8896	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^3F$	1 - 2		615
	40	767.938	337.1681 - 467.3867	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1F^o - ^1G$	3 - 4		615
	2	771.532	337.1681 - 466.7802	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1F^o - ^3G$	3 - 3		615
	10	771.644	340.2957 - 469.8896	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1D^o - ^3F$	2 - 2		615
	40	771.937	335.1613 - 464.7057	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^3F$	3 - 4		615
	30	772.855	340.2957 - 469.6864	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1D^o - ^1F$	2 - 3		615
	20	774.267	339.5402 - 468.6958	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^1D$	1 - 2		615
	17	774.464	335.5303 - 464.6522	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^3D^o - ^3D$	2 - 2		615
	9	776.454	338.2375 - 467.0291	$3d^3(^2D)4p - 3d^3(^2D)4d$	$^1P^o - ^3D$	1 - 1		615

GE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	12	777.931	335.5303 - 464.0770	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3F$	2 - 3		615
	10	778.816	340.2957 - 468.6958	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1D^\circ - ^1D$	2 - 2		615
	15	780.028	335.1613 - 463.3616	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3D$	3 - 3		615
	9	780.271	327.8910 - 456.0518	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^\circ - ^3S$	1 - 1		615
	1	782.282	335.5303 - 463.3616	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3D$	2 - 3		615
	5	784.086	337.1681 - 464.7057	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1F^\circ - ^3F$	3 - 4		615
	7	784.391	339.5402 - 467.0291	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3D$	1 - 1		615
	1	789.058	340.2957 - 467.0291	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1D^\circ - ^3D$	2 - 1		615
	9	789.475	335.1613 - 461.8285	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3P$	3 - 2		615
	5	789.799	338.2375 - 464.8527	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1P^\circ - ^1P$	1 - 1		615
	5	790.623	335.1613 - 461.6426	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3G$	3 - 4		615
	3	791.047	338.2375 - 464.6522	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1P^\circ - ^3D$	1 - 2		615
	8	791.871	335.5303 - 461.8149	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3P$	2 - 1		615
	20	792.439	337.1681 - 463.3616	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1F^\circ - ^3D$	3 - 3		615
	3	795.423	330.3325 - 456.0518	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3P^\circ - ^3S$	0 - 1		615
	8	798.011	339.5402 - 464.8527	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^1P$	1 - 1		615
	11	802.187	337.1681 - 461.8285	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1F^\circ - ^3P$	3 - 2		615
	10	802.849	340.2957 - 464.8527	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1D^\circ - ^1P$	2 - 1		615
	5	804.148	340.2957 - 464.6522	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1D^\circ - ^3D$	2 - 2		615
	9	809.214	338.2375 - 461.8149	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^1P^\circ - ^3P$	1 - 1		615
	5	817.833	339.5402 - 461.8149	$3d^9(^2D)4p - 3d^9(^2D)4d$	$^3D^\circ - ^3P$	1 - 1		615
	30	942.720	234.2193 - 340.2957	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1D^\circ$	3 - 2		615
	60	958.508	235.9670 - 340.2957	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1D^\circ$	2 - 2		615
	50	965.499	235.9670 - 339.5402	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	2 - 1		615
	300	971.351	234.2193 - 337.1681	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1F^\circ$	3 - 3		615
	20	977.798	235.9670 - 338.2375	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1P^\circ$	2 - 1		615
	150	984.924	238.7649 - 340.2957	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1D^\circ$	1 - 2		615
	10	987.064	234.2193 - 335.5303	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	3 - 2		615
	200	988.132	235.9670 - 337.1681	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1F^\circ$	2 - 3		615
	300	990.661	234.2193 - 335.1613	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	3 - 3		615
	150	992.308	238.7649 - 339.5402	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	1 - 1		615
	300	1004.384	235.9670 - 335.5303	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	2 - 2		615
	50	1005.304	238.7649 - 338.2375	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1P^\circ$	1 - 1		615
	50	1008.128	235.9670 - 335.1613	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	2 - 3		615
	300	1016.665	241.9352 - 340.2957	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^1D^\circ$	2 - 2		615
	50	1024.540	241.9352 - 339.5402	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3D^\circ$	2 - 1		615
	150	1033.428	238.7649 - 335.5303	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^\circ$	1 - 2		615
	20	1035.512	234.2193 - 330.7906	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^\circ$	3 - 2		615
	250	1038.397	241.9352 - 338.2375	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^1P^\circ$	2 - 1		615
	900	1045.713	234.2193 - 329.8478	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^\circ$	3 - 4		615
	400	1050.053	241.9352 - 337.1681	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^1F^\circ$	2 - 3		615
	300	1054.590	235.9670 - 330.7906	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^\circ$	2 - 2		615
	300	1068.429	241.9352 - 335.5303	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3D^\circ$	2 - 2		615
	400	1069.133	234.2193 - 327.7530	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^\circ$	3 - 3		615
	700	1072.664	241.9352 - 335.1613	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3D^\circ$	2 - 3		615
	600	1086.651	238.7649 - 330.7906	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^\circ$	1 - 2		615
	500	1087.854	235.9670 - 327.8910	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^\circ$	2 - 1		615
	800	1089.491	235.9670 - 327.7530	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^\circ$	2 - 3		615
	300	1092.089	238.7649 - 330.3325	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^\circ$	1 - 0		615
	1000	1116.944	234.2193 - 323.7489	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^\circ$	3 - 2		615
	300	1122.006	238.7649 - 327.8910	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^\circ$	1 - 1		615
	150	1125.418	241.9352 - 330.7906	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3F^\circ$	2 - 2		615
	150	1139.184	235.9670 - 323.7489	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^\circ$	2 - 2		615
	700	1163.390	241.9352 - 327.8910	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3P^\circ$	2 - 1		615

GE V — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	1165.261	241.9352 - 327.7530	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3F^o$	2 - 3		615
	200	1176.689	238.7649 - 323.7489	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^o$	1 - 2		615
	700	1222.301	241.9352 - 323.7489	$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3P^o$	2 - 2		615

GERMANIUM VI (Ge^{5+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9(^2D_{5/2})$ (27 electrons)
Ionization Potential [968 000] cm^{-1} ; [120] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	70	218.164	0.0 - 458.3741	$3d^9 - 3d^8(a^1G)4p$	$ga^2D - y^2G^o$	$\frac{3}{2} - \frac{1}{2}$		889
	100	222.147	0.0 - 450.1485	$3d^9 - 3d^8(a^1G)4p$	$ga^2D - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	600	223.321	0.0 - 447.7806	$3d^9 - 3d^8(a^1G)4p$	$ga^2D - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	270	223.527	0.0 - 447.3729	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - x^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	200	224.380	0.0 - 445.6831	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - x^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	700	224.418	4.564 - 450.1485	$3d^9 - 3d^8(a^1G)4p$	$ga^2D - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	600	224.495	0.0 - 445.4500	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	400	224.952	4.564 - 449.103	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	450	225.833	0.0 - 442.8042	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	150	226.695	4.564 - 445.6831	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - x^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	350	226.817	4.564 - 445.4500	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	200	227.851	0.0 - 438.8860	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	1000	228.409	0.0 - 437.8143	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	600	229.263	0.0 - 436.1868	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	300	229.337	0.0 - 436.0378	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	300	230.244	4.564 - 438.8860	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	100	230.813	4.564 - 437.8143	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	50	231.084	4.564 - 437.3086	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	700	231.766	4.564 - 436.0378	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	450	232.150	0.0 - 430.7514	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	100	232.547	0.0 - 430.0123	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	500	233.120	4.564 - 433.5216	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	280	234.640	4.564 - 430.7514	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	400	235.047	4.564 - 430.0123	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$		889
	750	235.563	0.0 - 424.5145	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	220	236.384	0.0 - 423.0382	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	420	237.348	0.0 - 421.3170	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	600	237.785	0.0 - 420.5485	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2G^o$	$\frac{3}{2} - \frac{1}{2}$		889
	950	238.025	0.0 - 420.1240	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	400	238.119	4.564 - 424.5145	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	500	238.964	4.564 - 423.0382	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	600	239.266	0.0 - 417.9518	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	70	239.349	0.0 - 417.8015	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	500	239.972	0.0 - 416.7155	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{1}{2}$		889
	320	240.635	4.564 - 420.1240	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$		889
	400	241.990	4.564 - 417.8015	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{1}{2}$		889
		290.98	0.0 - 343.6699	$3d^9 - 3d^8(a^1G)4s$	$ga^2D - a^2G$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,889
		291.02	0.0 - 343.6234	$3d^9 - 3d^8(a^1G)4s$	$ga^2D - a^2G$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,889
		293.66	0.0 - 340.5252	$3d^9 - 3d^8(a^3P)4s$	$ga^2D - a^2P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,889
		294.68	0.0 - 339.3509	$3d^9 - 3d^8(a^3P)4s$	$ga^2D - a^2P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,889
		294.89	4.564 - 343.6699	$3d^9 - 3d^8(a^1G)4s$	$ga^2D - a^2G$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,889
		297.65	4.564 - 340.5252	$3d^9 - 3d^8(a^3P)4s$	$ga^2D - a^2P$	$\frac{3}{2} - \frac{1}{2}$	F,P	375,889

GE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		298.70	4.564 - 339.3509	$3d^9 - 3d^8(a^3P)4s$	$ga^2D - a^2P$	2-2	F,P	375,889
		303.87	0.0 - 329.0889	$3d^9 - 3d^8(a^1D)4s$	$ga^2D - b^2D$	1-1	F,P	375,889
		305.29	0.0 - 327.5526	$3d^9 - 3d^8(a^1D)4s$	$ga^2D - b^2D$	2-2	F,P	375,889
		308.14	4.564 - 329.0889	$3d^9 - 3d^8(a^1D)4s$	$ga^2D - b^2D$	2-2	F,P	375,889
		309.61	4.564 - 327.5526	$3d^9 - 3d^8(a^1D)4s$	$ga^2D - b^2D$	1-1	F,P	375,889
		319.46	0.0 - 313.0305	$3d^9 - 3d^8(a^3F)4s$	$ga^2D - a^2F$	2-2	F,P	375,889
		320.12	4.564 - 316.9445	$3d^9 - 3d^8(a^3F)4s$	$ga^2D - a^2F$	1-1	F,P	375,889
		326.53	0.0 - 306.2488	$3d^9 - 3d^8(a^3F)4s$	$ga^2D - a^2F$	2-2	F,P	375,889
		328.84	4.564 - 308.6634	$3d^9 - 3d^8(a^3F)4s$	$ga^2D - a^2F$	1-1	F,P	375,889
		329.27	0.0 - 303.7021	$3d^9 - 3d^8(a^3F)4s$	$ga^2D - a^2F$	2-2	F,P	375,889
		331.47	4.564 - 306.2488	$3d^9 - 3d^8(a^3F)4s$	$ga^2D - a^2F$	1-1	F,P	375,889
	50	839.458	332.3917 - 451.5160	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^4P - z^4S^o$	2-2		889
	50	840.174	332.4927 - 451.5160	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^4P - z^4S^o$	1-1		889
	340	866.637	343.6234 - 459.0120	$3d^8(a^1G)4s - 3d^8(a^1G)4p$	$a^2G - y^2G^o$	2-2		889
	35	866.985	343.6699 - 459.0120	$3d^8(a^1G)4s - 3d^8(a^1G)4p$	$a^2G - y^2G^o$	1-1		889
	120	867.669	327.5526 - 442.8042	$3d^8(a^1D)4s - 3d^8(a^1D)4p$	$b^2D - y^4D^o$	2-2		889
	300	871.806	343.6699 - 458.3741	$3d^8(a^1G)4s - 3d^8(a^1G)4p$	$a^2G - y^2G^o$	2-2		889
	50	874.85	306.2488 - 420.5485	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2G^o$	1-1		889
	70	882.680	332.3917 - 445.6831	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - x^2D^o$	1-1		889
	70	886.283	310.2086 - 423.0382	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2D^o$	2-2		889
	70	887.681	308.6634 - 421.3170	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2F^o$	1-1		889
	50	892.680	339.3509 - 451.3731	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^2P - z^2S^o$	1-1		889
	50	893.783	308.6634 - 420.5485	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2G^o$	1-1		889
	100	897.174	308.6634 - 420.1240	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2D^o$	2-2		889
	550	897.292	303.7021 - 415.1485	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4F^o$	2-2		889
	240	899.463	306.2488 - 417.4268	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2G^o$	1-1		889
	360	905.253	306.2488 - 416.7155	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4F^o$	2-2		889
	140	910.765	329.0889 - 438.8860	$3d^8(a^1D)4s - 3d^8(a^1D)4p$	$b^2D - z^2P^o$	2-2		889
	250	911.104	333.0477 - 442.8042	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^4D^o$	2-2		889
		915.010	308.6634 - 417.9518	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4F^o$	2-2		889
	240	917.351	332.3917 - 441.4015	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^4D^o$	2-2		889
	360	918.278	306.2488 - 415.1485	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4F^o$	2-2		889
	100	919.024	332.4927 - 441.3038	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^4D^o$	2-2		889
	200	919.287	332.4927 - 441.2726	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^4D^o$	1-1		889
	120	919.754	329.0889 - 437.8143	$3d^8(a^1D)4s - 3d^8(a^1D)4p$	$b^2D - y^2D^o$	2-2		889
	340	920.516	327.5526 - 436.1868	$3d^8(a^1D)4s - 3d^8(a^1D)4p$	$b^2D - y^2F^o$	1-1		889
	300	925.473	308.6634 - 416.7155	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4F^o$	2-2		889
	1000	926.824	303.7021 - 411.5975	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2G^o$	2-2		889
	200	928.133	310.2086 - 417.9518	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4F^o$	1-1		889
	250	929.429	310.2086 - 417.8015	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4F^o$	2-2		889
	340	929.626	316.9445 - 424.5145	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^2F^o$	2-2		889
	500	930.074	313.0305 - 420.5485	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^2G^o$	2-2		889
	290	933.766	313.0305 - 420.1240	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^2D^o$	2-2		889
	200	935.912	340.5252 - 447.3729	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^2P - x^2D^o$	1-1		889
	220	939.156	343.6699 - 450.1485	$3d^8(a^1G)4s - 3d^8(a^1G)4p$	$a^2G - x^2F^o$	2-2		889
	290	940.448	339.3509 - 445.6831	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^2P - x^2D^o$	2-2		889
	150	942.515	339.3509 - 445.4500	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^2P - y^2P^o$	1-1		889
	160	942.573	316.9445 - 423.0382	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^2D^o$	2-2		889
	70	944.846	333.0477 - 438.8860	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - z^2P^o$	2-2		889
	450	946.589	306.2488 - 411.8917	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2G^o$	2-2		889
	530	947.937	303.7021 - 409.1945	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2G^o$	2-2		889
	35	948.553	332.3917 - 437.8143	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^2D^o$	1-1		889
	310	951.746	308.6634 - 413.7335	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^2G^o$	2-2		889
	140	953.144	332.3917 - 437.3086	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^2P^o$	2-2		889

GE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
240	954.506		333.0477 - 437.8143	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		889
360	957.543		329.0889 - 433.5216	$3d^8(a^1D)4s - 3d^8(a^1D)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		889
850	957.884		313.0305 - 417.4268	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$		889
650	958.100		316.9445 - 421.3170	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$		889
300	960.084		343.6234 - 447.7806	$3d^8(a^1G)4s - 3d^8(a^1G)4p$	$a^2G - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$		889
140	964.463		313.0305 - 416.7155	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		889
300	964.567		310.2086 - 413.8820	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$		889
50	964.813		332.3917 - 436.0378	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		889
140	965.203		316.9445 - 420.5485	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$		889
460	965.914		310.2086 - 413.7335	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		889
380	967.300		308.6634 - 412.0438	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		889
530	968.723		308.6634 - 411.8917	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		889
340	969.003		327.5526 - 430.7514	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$b^2D - z^4P^o$	$\frac{5}{2} - \frac{5}{2}$		889
140	969.568		333.0477 - 436.1868	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		889
140	970.976		333.0477 - 436.0378	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$		889
	971.384		306.2488 - 409.1945	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		889
600	973.353		306.2488 - 408.9865	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		889
240	975.993		327.5526 - 430.0123	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		889
180	979.258		313.0305 - 415.1485	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$		889
170	979.903		339.3509 - 441.4015	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^2P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$		889
120	980.697		329.0889 - 431.0572	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		889
50	983.652		329.0889 - 430.7514	$3d^8(a^1D)4s - 3d^8(a^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		889
	988.180		303.7021 - 404.8982	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$		889
120	991.882		343.6234 - 444.4417	$3d^8(a^1G)4s - 3d^8(a^1G)4p$	$a^2G - z^2H^o$	$\frac{3}{2} - \frac{3}{2}$		889
	992.341		343.6699 - 444.4417	$3d^8(a^1G)4s - 3d^8(a^1G)4p$	$a^2G - z^2H^o$	$\frac{3}{2} - \frac{3}{2}$		889
35	993.047		313.0305 - 413.7335	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		889
170	995.296		333.0477 - 433.5216	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^4P - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$		889
100	1004.667		339.3509 - 438.8860	$3d^8(a^3P)4s - 3d^8(a^1D)4p$	$a^2P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$		889
180	1013.527		332.3917 - 431.0572	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		889
70	1023.497		333.0477 - 430.7514	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		889
70	1024.374		332.3917 - 430.0123	$3d^8(a^3P)4s - 3d^8(a^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$		889
100	1033.173		316.9445 - 413.7335	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		889
300	1039.892		313.0305 - 409.1945	$3d^8(a^3F)4s - 3d^8(a^3F)4p$	$a^2F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$		889

GERMANIUM VII (Ge⁶⁺), Z = 32
Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 3d^8(^3F_4)$ (26 electrons)
Ionization Potential [1 218 000] cm⁻¹; [151] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
3	164.914		22.658 - 629.030	$3d^8 - 3d^7(b^2D)4p$	$a^1D - ^3D^o$	2 - 3		1095
5	165.241		22.658 - 627.836	$3d^8 - 3d^7(b^2D)4p$	$a^1D - ^1D^o$	2 - 2		1095
2	165.791		22.658 - 625.831	$3d^8 - 3d^7(b^2D)4p$	$a^1D - ^3D^o$	2 - 1		1095
20	166.609		28.827 - 629.030	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3D^o$	2 - 3		1095
6	167.318		28.827 - 626.486	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3D^o$	2 - 2		1095
4	167.425		29.212 - 626.486	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3D^o$	1 - 2		1095
4	167.610		29.212 - 625.831	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3D^o$	1 - 1		1095
2	167.767		29.769 - 625.831	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3D^o$	0 - 1		1095
1	168.999		28.827 - 620.548	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^1P^o$	2 - 1		1095
8	169.174		37.923 - 629.030	$3d^8 - 3d^7(b^2D)4p$	$a^1G - ^3D^o$	4 - 3		1095
8	170.016		22.658 - 610.842	$3d^8 - 3d^7(b^2D)4p$	$a^1D - ^3P^o$	2 - 1		1095
40	170.292		22.658 - 609.889	$3d^8 - 3d^7(b^2D)4p$	$a^1D - ^3P^o$	2 - 2		1095

GE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	171.135	0.0 - 584.334	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	4 - 5		1095
	5	171.199	0.0 - 584.117	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	4 - 4		1095
	540	171.382	37.923 - 621.415	$3d^8 - 3d^7(b^2D)4p$	$a^1G - ^1F^\circ$	4 - 3		1095
	50	171.536	0.0 - 582.970	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	4 - 3		1095
	80	171.566	29.212 - 612.078	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	1 - 0		1095
	50	171.816	28.827 - 610.842	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	2 - 1		1095
	30	171.929	29.212 - 610.842	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	1 - 1		1095
	330	172.098	29.769 - 610.842	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	0 - 1		1095
	50	172.190	0.0 - 580.755	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	4 - 3		1095
	120	172.212	29.212 - 609.889	$3d^8 - 3d^7(b^2D)4p$	$a^3P - ^3P^\circ$	1 - 2		1095
	10	172.395	4.055 - 584.117	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	3 - 4		1095
	50	172.539	4.055 - 583.649	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	3 - 2		1095
	30	172.549	0.0 - 579.535	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	4 - 4		1095
	15	172.867	4.055 - 582.536	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	3 - 2		1095
	50	173.218	6.468 - 583.780	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	2 - 1		1095
	1	173.260	6.468 - 583.649	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	2 - 2		1095
	6	173.401	4.055 - 580.755	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	3 - 3		1095
	2	173.460	6.468 - 582.970	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3F^\circ$	2 - 3		1095
	3	173.769	4.055 - 579.535	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	3 - 4		1095
	2	174.024	4.055 - 578.689	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	3 - 3		1095
	0	174.130	6.468 - 580.755	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	2 - 3		1095
	6	174.758	6.468 - 578.689	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3G^\circ$	2 - 3		1095
	10	175.273	6.468 - 577.013	$3d^8 - 3d^7(a^2F)4p$	$ga^3F - ^3D^\circ$	2 - 2		1095
	9	175.454	22.658 - 592.608	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^1F^\circ$	2 - 3		1095
	1	176.603	0.0 - 566.253	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^1F^\circ$	4 - 3		1095
	60	177.374	28.827 - 592.608	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^1F^\circ$	2 - 3		1095
	20	177.873	4.055 - 566.253	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^1F^\circ$	3 - 3		1095
	2	177.907	6.468 - 568.569	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3P^\circ$	2 - 1		1095
	0	178.215	22.658 - 583.780	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^3D^\circ$	2 - 1		1095
	30	178.472	22.658 - 582.970	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^3F^\circ$	2 - 3		1095
	100	178.610	22.658 - 582.536	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^3F^\circ$	2 - 2		1095
	1	178.966	0.0 - 558.770	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^\circ$	4 - 3		1095
	160	179.180	22.658 - 580.755	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^3D^\circ$	2 - 3		1095
	290	179.351	0.0 - 557.566	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^\circ$	4 - 4		1095
	10	179.721	4.055 - 560.475	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^1D^\circ$	3 - 2		1095
	5	179.845	22.658 - 578.689	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^3G^\circ$	2 - 3		1095
	30	179.928	4.055 - 559.832	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^\circ$	3 - 2		1095
	160	180.240	28.827 - 583.649	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^\circ$	2 - 2		1095
	790	180.280	37.923 - 592.608	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^1F^\circ$	4 - 3		1095
	110	180.319	29.212 - 583.780	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^\circ$	1 - 1		1095
	470	180.366	29.212 - 583.649	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^\circ$	1 - 2		1095
	180	180.389	22.658 - 577.013	$3d^8 - 3d^7(a^2F)4p$	$a^1D - ^1D^\circ$	2 - 2		1095
	220	180.458	28.827 - 582.970	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3F^\circ$	2 - 3		1095
	180	180.500	29.769 - 583.780	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^\circ$	0 - 1		1095
	30	180.665	4.055 - 557.566	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^\circ$	3 - 4		1095
	60	180.715	6.468 - 559.832	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3F^\circ$	2 - 2		1095
	70	180.721	29.212 - 582.536	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3F^\circ$	1 - 2		1095
	15	180.892	0.0 - 552.820	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	4 - 3		1095
	400	181.182	28.827 - 580.755	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3D^\circ$	2 - 3		1095
	810	181.219	0.0 - 551.822	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^\circ$	4 - 3		1095
	310	181.327	4.055 - 555.545	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	3 - 2		1095
	2	181.862	28.827 - 578.689	$3d^8 - 3d^7(a^2F)4p$	$a^3P - ^3G^\circ$	2 - 3		1095
	300	181.907	0.0 - 549.735	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	4 - 3		1095
	380	181.929	4.055 - 553.723	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	3 - 2		1095

GE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	120	182.011	0.0 - 549.415	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	4 - 4		1095
	280	182.124	6.468 - 555.545	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	2 - 2		1095
	500	182.162	4.055 - 553.022	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3D^\circ$	3 - 2		1095
	60	182.227	4.055 - 552.820	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	3 - 3		1095
	310	182.283	6.468 - 555.065	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3P^\circ$	2 - 1		1095
	910	182.312	0.0 - 548.515	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3D^\circ$	4 - 3		1095
	950	182.409	0.0 - 548.219	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3G^\circ$	4 - 5		1095
	1000	182.540	4.055 - 551.880	$3d^8 - 3d^7(a^2H)4p$	$ga^3F - ^3G^\circ$	3 - 4		1095
	300	182.559	4.055 - 551.822	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^\circ$	3 - 3		1095
	110	182.703	0.0 - 547.336	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	4 - 5		1095
	400	182.732	6.468 - 553.723	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	2 - 2		1095
	380	182.776	0.0 - 547.115	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1F^\circ$	4 - 3		1095
	110	182.888	4.055 - 550.837	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3P^\circ$	3 - 2		1095
	540	182.939	37.923 - 584.553	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^1G^\circ$	4 - 4		1095
	30	183.033	6.468 - 552.820	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	2 - 3		1095
	720	183.093	0.0 - 546.170	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1G^\circ$	4 - 4		1095
	170	183.146	0.0 - 546.012	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^5P^\circ$	4 - 3		1095
	60	183.181	22.658 - 568.569	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3P^\circ$	2 - 1		1095
	110	183.258	4.055 - 549.735	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	3 - 3		1095
	140	183.366	6.468 - 551.822	$3d^8 - 3d^7(a^2D)4p$	$ga^3F - ^3D^\circ$	2 - 3		1095
	70	183.462	4.055 - 549.124	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	3 - 2		1095
	370	183.578	22.658 - 567.383	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^1P^\circ$	2 - 1		1095
	80	183.600	0.0 - 544.657	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	4 - 3		1095
	430	183.960	22.658 - 566.253	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^1F^\circ$	2 - 3		1095
	1	184.073	6.468 - 549.735	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3G^\circ$	2 - 3		1095
	560	184.144	4.055 - 547.115	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1F^\circ$	3 - 3		1095
	50	184.218	37.923 - 580.755	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^3D^\circ$	4 - 3		1095
	680	184.280	6.468 - 549.124	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	2 - 2		1095
	8	184.305	4.055 - 546.631	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^1D^\circ$	3 - 2		1095
	130	184.377	0.0 - 542.367	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3H^\circ$	4 - 4		1095
	100	184.386	6.468 - 548.802	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^3D^\circ$	2 - 1		1095
	20	184.463	4.055 - 546.170	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1G^\circ$	3 - 4		1095
	30	184.578	22.658 - 564.436	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3P^\circ$	2 - 2		1095
	40	184.633	37.923 - 579.535	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^3G^\circ$	4 - 4		1095
	70	184.661	4.055 - 545.588	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^5P^\circ$	3 - 2		1095
	0	184.921	37.923 - 578.689	$3d^8 - 3d^7(a^2F)4p$	$a^1G - ^3G^\circ$	4 - 3		1095
	200	184.966	6.468 - 547.115	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^1F^\circ$	2 - 3		1095
	670	184.980	4.055 - 544.657	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	3 - 3		1095
	830	185.117	0.0 - 540.199	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	4 - 4		1095
	330	185.131	6.468 - 546.631	$3d^8 - 3d^7(a^2P)4p$	$ga^3F - ^1D^\circ$	2 - 2		1095
	120	185.308	29.212 - 568.854	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^\circ$	1 - 0		1095
	100	185.406	29.212 - 568.569	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^\circ$	1 - 1		1095
	1	185.489	6.468 - 545.588	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^5P^\circ$	2 - 2		1095
	60	185.598	29.769 - 568.569	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^\circ$	0 - 1		1095
	330	185.683	28.827 - 567.383	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1P^\circ$	2 - 1		1095
	210	185.798	22.658 - 560.882	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^1P^\circ$	2 - 1		1095
	270	185.809	6.468 - 544.657	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	2 - 3		1095
	580	185.936	22.658 - 560.475	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^1D^\circ$	2 - 2		1095
	2	186.006	29.769 - 567.383	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1P^\circ$	0 - 1		1095
	70	186.070	28.827 - 566.253	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^1F^\circ$	2 - 3		1095
	280	186.122	22.658 - 559.944	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^3S^\circ$	2 - 1		1095
	50	186.159	22.658 - 559.832	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3F^\circ$	2 - 2		1095
	100	186.517	4.055 - 540.199	$3d^8 - 3d^7(a^2G)4p$	$ga^3F - ^3F^\circ$	3 - 4		1095
	110	186.528	22.658 - 558.770	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3F^\circ$	2 - 3		1095

GE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	500	186.706	28.827 - 564.436	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^o$	2 - 2		1095
	90	186.837	29.212 - 564.436	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3P^o$	1 - 2		1095
	5	186.894	6.468 - 541.538	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^5D^o$	2 - 1		1095
	240	187.145	86.203 - 620.548	$3d^8 - 3d^7(b^2D)4p$	$a^1S - ^1P^o$	0 - 1		1095
	5	187.828	22.658 - 555.065	$3d^8 - 3d^7(a^4P)4p$	$a^1D - ^3P^o$	2 - 1		1095
	740	187.858	37.923 - 570.240	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^1H^o$	4 - 5		1095
	90	187.949	28.827 - 560.882	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1P^o$	2 - 1		1095
	20	188.088	29.212 - 560.882	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1P^o$	1 - 1		1095
	2	188.173	6.468 - 537.898	$3d^8 - 3d^7(a^4P)4p$	$ga^3F - ^3S^o$	2 - 1		1095
	160	188.282	28.827 - 559.944	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3S^o$	2 - 1		1095
	190	188.302	22.658 - 553.723	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^3D^o$	2 - 2		1095
	100	188.418	29.212 - 559.944	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3S^o$	1 - 1		1095
	20	188.457	29.212 - 559.832	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3F^o$	1 - 2		1095
	30	188.552	22.658 - 553.022	$3d^8 - 3d^7(a^4P)4p$	$a^1D - ^3D^o$	2 - 2		1095
	10	188.620	29.769 - 559.944	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3S^o$	0 - 1		1095
	300	188.699	28.827 - 558.770	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3F^o$	2 - 3		1095
	80	188.978	22.658 - 551.822	$3d^8 - 3d^7(a^2D)4p$	$a^1D - ^3D^o$	2 - 3		1095
	30	189.047	29.212 - 558.181	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^o$	1 - 0		1095
	250	189.274	37.923 - 566.253	$3d^8 - 3d^7(a^2D)4p$	$a^1G - ^1F^o$	4 - 3		1095
	120	189.724	22.658 - 549.735	$3d^8 - 3d^7(a^2G)4p$	$a^1D - ^3G^o$	2 - 3		1095
	870	189.881	37.923 - 564.569	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^1G^o$	4 - 4		1095
	10	189.990	29.212 - 555.545	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3D^o$	1 - 2		1095
	120	190.026	28.827 - 555.065	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^o$	2 - 1		1095
	40	190.062	22.658 - 548.802	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^3D^o$	2 - 1		1095
	20	190.285	37.923 - 563.451	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^3H^o$	4 - 4		1095
	730	190.406	0.0 - 525.193	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^o$	4 - 3		1095
	2	190.512	28.827 - 553.723	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3D^o$	2 - 2		1095
	2	190.606	86.203 - 610.842	$3d^8 - 3d^7(b^2D)4p$	$a^1S - ^3P^o$	0 - 1		1095
	90	190.652	29.212 - 553.723	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3D^o$	1 - 2		1095
	270	190.673	22.658 - 547.115	$3d^8 - 3d^7(a^2G)4p$	$a^1D - ^1F^o$	2 - 3		1095
	100	190.724	37.923 - 562.241	$3d^8 - 3d^7(a^2H)4p$	$a^1G - ^3H^o$	4 - 5		1095
	20	190.767	28.827 - 553.022	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^o$	2 - 2		1095
	50	190.821	0.0 - 524.050	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^o$	4 - 4		1095
	20	190.851	22.658 - 546.631	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^1D^o$	2 - 2		1095
	3	190.906	29.212 - 553.022	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^o$	1 - 2		1095
	70	191.081	0.0 - 523.336	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^o$	4 - 3		1095
	580	191.163	4.055 - 527.167	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^o$	3 - 2		1095
	20	191.204	28.827 - 551.822	$3d^8 - 3d^7(a^2D)4p$	$a^3P - ^3D^o$	2 - 3		1095
	10	191.230	29.212 - 552.128	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^o$	1 - 1		1095
	40	191.306	22.658 - 545.385	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^3P^o$	2 - 1		1095
	10	191.339	4.055 - 526.686	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^o$	3 - 3		1095
	10	191.439	29.769 - 552.128	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^o$	0 - 1		1095
	10	191.466	22.658 - 544.945	$3d^8 - 3d^7(a^2P)4p$	$a^1D - ^3P^o$	2 - 2		1095
	230	191.505	6.468 - 528.647	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^o$	2 - 1		1095
	30	191.570	28.827 - 550.837	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3P^o$	2 - 2		1095
	30	191.578	22.658 - 544.657	$3d^8 - 3d^7(a^2G)4p$	$a^1D - ^3F^o$	2 - 3		1095
	30	191.847	29.212 - 550.460	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1S^o$	1 - 0		1095
	60	191.887	4.055 - 525.193	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^o$	3 - 3		1095
	100	191.994	37.923 - 558.770	$3d^8 - 3d^7(a^2D)4p$	$a^1G - ^3F^o$	4 - 3		1095
	730	192.081	0.0 - 520.614	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^o$	4 - 4		1095
	380	192.223	0.0 - 520.229	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^o$	4 - 5		1095
	180	192.310	4.055 - 524.050	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3G^o$	3 - 4		1095
	5	192.343	29.212 - 549.124	$3d^8 - 3d^7(a^2G)4p$	$a^3P - ^3F^o$	1 - 2		1095
	0	192.423	28.827 - 548.515	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3D^o$	2 - 3		1095

GE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	850	192.570	4.055 - 523.336	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^o$	3 - 3		1095
	130	192.685	28.827 - 547.808	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5P^o$	2 - 1		1095
	10	192.722	22.658 - 541.538	$3d^8 - 3d^7(a^4F)4p$	$a^1D - ^5D^o$	2 - 1		1095
	5	192.781	6.468 - 525.193	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3D^o$	2 - 3		1095
	60	192.860	6.468 - 524.979	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5S^o$	2 - 2		1095
	130	192.943	28.827 - 547.115	$3d^8 - 3d^7(a^2G)4p$	$a^3P - ^1F^o$	2 - 3		1095
	30	193.122	28.827 - 546.631	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^1D^o$	2 - 2		1095
	70	193.473	6.468 - 523.336	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^o$	2 - 3		1095
	10	193.513	28.827 - 545.588	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5P^o$	2 - 2		1095
	120	193.589	4.055 - 520.614	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^3F^o$	3 - 4		1095
	1	193.655	29.212 - 545.588	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5P^o$	1 - 2		1095
	230	193.732	29.212 - 545.385	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3P^o$	1 - 1		1095
	20	193.754	28.827 - 544.945	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3P^o$	2 - 2		1095
	1	193.864	28.827 - 544.657	$3d^8 - 3d^7(a^2G)4p$	$a^3P - ^3F^o$	2 - 3		1095
	110	193.900	29.212 - 544.945	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3P^o$	1 - 2		1095
	20	194.084	22.658 - 537.898	$3d^8 - 3d^7(a^4P)4p$	$a^1D - ^3S^o$	2 - 1		1095
	20	194.146	29.212 - 544.288	$3d^8 - 3d^7(a^2P)4p$	$a^3P - ^3P^o$	1 - 0		1095
	10	195.044	28.827 - 541.538	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5D^o$	2 - 1		1095
	10	195.383	37.923 - 549.735	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^3G^o$	4 - 3		1095
	170	195.411	37.923 - 549.664	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^1H^o$	4 - 5		1095
	20	195.507	37.923 - 549.415	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^3G^o$	4 - 4		1095
	10	195.676	29.212 - 540.261	$3d^8 - 3d^7(a^4P)4p$	$a^3P - 5$	1 - 0		1095
	3	195.755	28.827 - 539.670	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5D^o$	2 - 3		1095
	10	196.067	29.212 - 539.242	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^5D^o$	1 - 2		1095
	10	196.155	4.055 - 513.858	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - ^5D^o$	3 - 3		1095
	30	196.304	37.923 - 547.336	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^3G^o$	4 - 5		1095
	20	196.391	37.923 - 547.115	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^1F^o$	4 - 3		1095
	30	196.439	28.827 - 537.898	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3S^o$	2 - 1		1095
	1	196.584	29.212 - 537.898	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3S^o$	1 - 1		1095
	0	196.798	29.769 - 537.898	$3d^8 - 3d^7(a^4P)4p$	$a^3P - ^3S^o$	0 - 1		1095
	130	197.344	37.923 - 544.657	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^3F^o$	4 - 3		1095
	10	198.214	22.658 - 527.167	$3d^8 - 3d^7(a^4F)4p$	$a^1D - ^3D^o$	2 - 2		1095
	2	198.761	22.658 - 525.778	$3d^8 - 3d^7(a^4F)4p$	$a^1D - ^3F^o$	2 - 2		1095
	170	198.992	22.658 - 525.193	$3d^8 - 3d^7(a^4F)4p$	$a^1D - ^3D^o$	2 - 3		1095
	10	199.111	37.923 - 540.155	$3d^8 - 3d^7(a^2G)4p$	$a^1G - ^3H^o$	4 - 5		1095
	30	199.730	22.658 - 523.336	$3d^8 - 3d^7(a^4F)4p$	$a^1D - ^3F^o$	2 - 3		1095
	60	200.227	29.212 - 528.647	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^o$	1 - 1		1095
	100	200.450	29.769 - 528.647	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^o$	0 - 1		1095
	20	200.668	28.827 - 527.167	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^o$	2 - 2		1095
	220	200.820	29.212 - 527.167	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^o$	1 - 2		1095
	20	201.382	29.212 - 525.778	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3F^o$	1 - 2		1095
	270	201.465	28.827 - 525.193	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3D^o$	2 - 3		1095
	60	202.220	28.827 - 523.336	$3d^8 - 3d^7(a^4F)4p$	$a^3P - ^3F^o$	2 - 3		1095
	10	207.312	86.203 - 568.569	$3d^8 - 3d^7(a^2D)4p$	$a^1S - ^3P^o$	0 - 1		1095
	20	207.824	86.203 - 567.383	$3d^8 - 3d^7(a^2D)4p$	$a^1S - ^1P^o$	0 - 1		1095
		1573.7	22.658 - 86.203	$3d^8 - 3d^8$	$a^1D - a^1S$	2 - 0	F,P	375,1095
		1742.9	28.827 - 86.203	$3d^8 - 3d^8$	$a^3P - a^1S$	2 - 0	F,P	375,1095
		1754.7	29.212 - 86.203	$3d^8 - 3d^8$	$a^3P - a^1S$	1 - 0	F,P	375,1095

GERMANIUM XIII (Ge¹²⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p⁶3d²(³F₂) (20 electrons)
Ionization Potential [2 976 000] cm⁻¹; [369] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	30	56.93	9.90+D - 1766.44+D	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ G°	4 - 5		878

GERMANIUM XIV (Ge¹³⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p⁶3d(²D_{3/2}) (19 electrons)
Ionization Potential [3 299 000] cm⁻¹; [409] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	20	53.165	0.0 - 1880.94	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	$\frac{3}{2} - \frac{5}{2}$		878
	30	53.378	7.20+D - 1880.63+D	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	$\frac{3}{2} - \frac{7}{2}$		878
	335	112.96	0.0 - 885.27	3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D°	$\frac{3}{2} - \frac{3}{2}$		878,1134
	470	113.93	7.20+D - 884.93+D	3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D°	$\frac{5}{2} - \frac{5}{2}$		878,1134
	360	122.82	7.20+D - 821.40+D	3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F°	$\frac{3}{2} - \frac{7}{2}$		878,1134

GERMANIUM XV (Ge¹⁴⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p⁶(¹S₀) (18 electrons)
Ionization Potential [4 299 000] cm⁻¹; [533] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	49.73	510.00+D - 2520.86+D	3p ⁵ 3d - 3p ⁵ 4f	³ F° - ³ G	4 - 5		878
	430	117.25	0.0 - 852.88	3p ⁶ - 3p ⁵ 3d	g ¹ S - ¹ P°	0 - 1		878,1134

GERMANIUM XVI (Ge¹⁵⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential [4 581 000] cm⁻¹; [568] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	46.25	420.00+D - 2582.16+D	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ D - ⁴ F°	$\frac{7}{2} - \frac{9}{2}$		878
	10	46.9	460.00+S - 2592.20+S	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ F - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		878
	445	120.9	0.0 - 827.1	3p ⁵ - 3p ⁴ 3d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		1134
	420	121.8	47.944 - 868.96	3p ⁵ - 3p ⁴ 3d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		1134

GERMANIUM XVII (Ge¹⁶⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [4 896 000] cm⁻¹; [607] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10	43.88	44.29	3200.00+D - 5478.94+D	3p ³ (⁴ S°)3d - 3p ³ (⁴ S°)4f	³ D° - ⁵ F	4 - 5		878
			3800.00+L - 6057.85+L	3p ³ (² D°)3d - 3p ³ (² D°)4f	³ G° - ³ H	5 - 6		878
	375	125.0	0.0 - 800.0	3p ⁴ - 3p ³ 3d	^g 3P - ³ D°	2 - 3		1134
			73.47 - 864.6	3p ⁴ - 3p ³ 3d	¹ D - ¹ F°	2 - 3		1134
	400	126.4	41.54 - 146.48	3p ⁴ - 3p ⁴	^g 3P - ¹ S	1 - 0	F,Q	1145
			1361.	0.0 - 73.47	3p ⁴ - 3p ⁴	^g 3P - ¹ D	2 - 2	F,P

GERMANIUM XVIII (Ge¹⁷⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [5 307 000] cm⁻¹; [658] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
10	41.53	41.81	1800.0+D - 4207.9+D	3p ² (³ P)3d - 3p ² (³ P)4f	⁴ F - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		878
			2300.0+S - 4691.8+S	3p ² (¹ D)3d - 3p ² (¹ D)4f	² G - ² H°	$\frac{9}{2} - \frac{11}{2}$		878
310	131.3	136.7	73.640 - 835.2	3s ² 3p ³ - 3p ² (¹ D)3d	² D° - ² F	$\frac{3}{2} - \frac{7}{2}$		1134
			0.0 - 731.5	3s ² 3p ³ - 3p ² (³ P)3d	^g 4S° - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		1134
215	136.7	703.6	0.0 - 142.126	3s ² 3p ³ - 3s ² 3p ³	^g 4S° - ² P°	$\frac{3}{2} - \frac{3}{2}$	F	1139
			890.2	0.0 - 112.330	3s ² 3p ³ - 3s ² 3p ³	^g 4S° - ² P°	$\frac{3}{2} - \frac{1}{2}$	F,Q
	1162.5	1358.0	56.112 - 142.126	3s ² 3p ³ - 3s ² 3p ³	² D° - ² P°	$\frac{3}{2} - \frac{3}{2}$	F,P	1139
			0.0 - 73.640	3s ² 3p ³ - 3s ² 3p ³	^g 4S° - ² D°	$\frac{3}{2} - \frac{3}{2}$	F,P	1139
	1460.2	1778.8	73.640 - 142.126	3s ² 3p ³ - 3s ² 3p ³	² D° - ² P°	$\frac{3}{2} - \frac{3}{2}$	F,P	1139
			56.112 - 112.330	3s ² 3p ³ - 3s ² 3p ³	² D° - ² P°	$\frac{3}{2} - \frac{1}{2}$	F,Q	1139
	1782.0		0.0 - 56.112	3s ² 3p ³ - 3s ² 3p ³	^g 4S° - ² D°	$\frac{3}{2} - \frac{1}{2}$	F,Q	1139

GERMANIUM XIX (Ge¹⁸⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [5 654 000] cm⁻¹; [701] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
380	143.04	754.1	53.413 - 752.52	3p ² - 3p3d	^g 3P - ³ D°	2 - 3		878,1134
			34.077 - 166.68	3p ² - 3p ²	^g 3P - ^g 1S	0 - 1	F	1145
			34.077 - 108.65	3p ² - 3p ²	^g 3P - ^g 1D	1 - 2	F,P	1145
			53.413 - 108.65	3p ² - 3p ²	^g 3P - ^g 1D	2 - 2	F,Q	1145

GERMANIUM XX (Ge¹⁹⁺), Z = 32
Ground State 1s²2s²2p⁶3s²3p²(²P_{1/2}) (13 electrons)
Ionization Potential [6 001 000] cm⁻¹; [744] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	355	146.61	0.0 - 682.08	3s ² 3p - 3s ² 3d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		878,1134
	350	157.55	54.564 - 689.28	3s ² 3p - 3s ² 3d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		878,1134
	300	184.38	54.564 - 596.92	3s ² 3p - 3s3p ²	g ² P° - ² P	$\frac{1}{2} - \frac{3}{2}$		878,1134
		1832.7	0.0 - 54.564	3s ² 3p - 3s ² 3p	g ² P° - g ² P°	$\frac{1}{2} - \frac{3}{2}$	F	1145

GERMANIUM XXI (Ge²⁰⁺), Z = 32
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential [6 743 000] cm⁻¹; [836] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	23.002	383.37 - 4730.82	3s3p - 3s5d	³ P° - ³ D	2 - 3		878
	10	26.22	975.44 - 4789.34	3s3d - 3s5f	³ D - ³ F°	3 - 4		878
	10	29.739	0.0 - 3362.59	3s ² - 3s4p	g ¹ S - ¹ P°	0 - 1		878
	10	31.055	325.96 + C - 3546.05 + C	3s3p - 3s4d	³ P° - ³ D	0 - 1		878
	20	31.188	340.83 - 3547.19	3s3p - 3s4d	³ P° - ³ D	1 - 2		878
	30	31.451	383.37 - 3562.92	3s3p - 3s4d	³ P° - ³ D	2 - 3		878
	20	32.727	508.72 - 3564.30	3s3p - 3s4d	¹ P° - ¹ D	1 - 2		878
	10	34.604	810.07 - 3699.91	3p ² - 3s4f	¹ D - ¹ F°	2 - 3		878
	40	36.560	3200.00 + D - 5935.23 + D	3p3d - 3p4f	³ F° - ³ G	4 - 5		878
	20	36.741	3213.48 + D - 5935.23 + D	3p3d - 3p4f	³ F° - ³ G	3 - 4		878
	40	36.95	975.44 - 3681.83	3s3d - 3s4f	³ D - ³ F°	3 - 4		878
	20	37.994	3400.00 + R - 6031.99 + R	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		878
	20	38.182	1080.87 - 3699.91	3s3d - 3s4f	¹ D - ¹ F°	2 - 3		878
	30	159.14	340.83 - 969.21	3s3p - 3s3d	³ P° - ³ D	1 - 2		878
	50	168.90	383.37 - 975.44	3s3p - 3s3d	³ P° - ³ D	2 - 3		878
	50	174.78	508.72 - 1080.87	3s3p - 3s3d	¹ P° - ¹ D	1 - 2		878
	680	196.57	0.0 - 508.72	3s ² - 3s3p	g ¹ S - ¹ P°	0 - 1		878
	280	293.4	0.0 - 340.83	3s ² - 3s3p	g ¹ S - ³ P°	0 - 1		1134

GERMANIUM XXII (Ge²¹⁺), Z = 32
Ground State 1s²2s²2p⁶3s(²S_{1/2}) (11 electrons)
Ionization Potential 7 101 260 cm⁻¹; 880.45 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		9.168	966.111 - 11874.	2p ⁶ 3d - 2p ⁵ (² P _{3/2})(3d ² (¹ S ₀))	² D - (³ ,0) ^o	$\frac{5}{2} - \frac{3}{2}$		1094
		9.190	955.795 - 11836.	2p ⁶ 3d - 2p ⁵ (² P _{3/2})(3d ² (³ F ₄))	² D - (³ ,4) ^o	$\frac{3}{2} - \frac{5}{2}$		1094
		9.200	966.111 - 11836.	2p ⁶ 3d - 2p ⁵ (² P _{3/2})(3d ² (³ F ₄))	² D - (³ ,4) ^o	$\frac{5}{2} - \frac{5}{2}$		1094

GE XXII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		9.220	966.111 - 11812.	$2p^6 3d - 2p^5(^2P_{3/2})(3d^2(^1G_4))$	$^2D - (^3,4)^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		1094
150	19.41	441.491 - 5593.50		$2p^6 3p - 2p^6 6d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
130	19.79	966.111 - 6019.2		$2p^6 3d - 2p^6 7f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
150	20.718	0.0 - 4826.70		$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630
100	20.764	0.0 - 4816.00		$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630
100	21.438	955.795 - 5620.50		$2p^6 3d - 2p^6 6f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
150	21.481	966.111 - 5621.30		$2p^6 3d - 2p^6 6f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
150	22.033	382.387 - 4921.04		$2p^6 3p - 2p^6 5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
300	22.312	441.491 - 4923.42		$2p^6 3p - 2p^6 5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
300	24.920	955.795 - 4968.66		$2p^6 3d - 2p^6 5f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
400	24.979	966.111 - 4969.47		$2p^6 3d - 2p^6 5f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
450	28.709	0.0 - 3483.23		$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630
300	28.900	0.0 - 3460.24		$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630
600	30.373	382.387 - 3674.79		$2p^6 3p - 2p^6 4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
800	30.885	441.491 - 3679.31		$2p^6 3p - 2p^6 4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
250	30.926	441.491 - 3674.79		$2p^6 3p - 2p^6 4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
250	34.213	382.387 - 3305.38		$2p^6 3p - 2p^6 4s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{3}{2}$		630
350	34.916	441.491 - 3305.38		$2p^6 3p - 2p^6 4s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{3}{2}$		630
900	35.534	955.795 - 3769.98		$2p^6 3d - 2p^6 4f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
1000	35.643	966.111 - 3771.71		$2p^6 3d - 2p^6 4f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
300	39.728	966.111 - 3483.23		$2p^6 3d - 2p^6 4p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630
200	39.929	955.795 - 3460.24		$2p^6 3d - 2p^6 4p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630
60	69.435	3483.23 - 4923.42		$2p^6 4p - 2p^6 5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
80	77.287	3674.79 - 4968.66		$2p^6 4d - 2p^6 5f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
100	77.510	3679.31 - 4969.47		$2p^6 4d - 2p^6 5f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$		630
300	82.975	3769.98 - 4975.07		$2p^6 4f - 2p^6 5g$	$^2F^{\circ} - ^2G$	$\frac{3}{2} - \frac{7}{2}$		630
350	83.058	3771.71 - 4975.69		$2p^6 4f - 2p^6 5g$	$^2F^{\circ} - ^2G$	$\frac{3}{2} - \frac{7}{2}$		630
600	174.396	382.387 - 955.795		$2p^6 3p - 2p^6 3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
500	190.614	441.491 - 966.111		$2p^6 3p - 2p^6 3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
150	194.435	441.491 - 955.795		$2p^6 3p - 2p^6 3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
500	226.505	0.0 - 441.491		$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630
100	261.52	0.0 - 382.387		$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$		630

GERMANIUM XXIII (Ge^{22+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 (^1S_0)$ (10 electrons)
 Ionization Potential [17 583 000] cm^{-1} ; [2180] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		5.923	0.0 - 16883.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})8d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		5.936	0.0 - 16846.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})9d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.003	0.0 - 16658.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})8d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.016	0.0 - 16622.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})7d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.112	0.0 - 16361.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})7d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.177	0.0 - 16189.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})6d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.275	0.0 - 15936.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})6d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.464	0.0 - 15470.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})5d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.574	0.0 - 15211.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})5d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		6.584	0.0 - 15188.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})5d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		1094
		7.081	0.0 - 14122.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})4d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643
		7.205	0.0 - 13879.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})4d$	$g^1S - (^3, \frac{5}{2})^{\circ}$	0 - 1		643

GE XXIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.273						1094
		7.359	0.0 - 13589.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{1/2})4s$	$g^1S - \frac{3}{2} \frac{1}{2}^{\circ}$	0 - 1		643
		7.411	0.0 - 13493.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{3/2})4s$	$g^1S - \frac{3}{2} \frac{1}{2}^{\circ}$	0 - 1		643
100		8.369	0.0 - 11949.	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^{\circ}$	0 - 1		643
80		8.423	0.0 - 11872.	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^{\circ}$	0 - 1		643
150		8.916	0.0 - 11216.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{1/2})3d$	$g^1S - (\frac{3}{2}, \frac{1}{2})^{\circ}$	0 - 1		643
150		9.110	0.0 - 10977.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{3/2})3d$	$g^1S - (\frac{3}{2}, \frac{1}{2})^{\circ}$	0 - 1		643
60		9.222	0.0 - 10844.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{3/2})3d$	$g^1S - (\frac{3}{2}, \frac{1}{2})^{\circ}$	0 - 1		643
90		9.762	0.0 - 10244.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{1/2})3s$	$g^1S - \frac{3}{2} \frac{1}{2}^{\circ}$	0 - 1		643
100		10.010	0.0 - 9990.0	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{3/2})3s$	$g^1S - \frac{3}{2} \frac{1}{2}^{\circ}$	0 - 1		643

GERMANIUM XXIV (Ge^{23+}), Z = 32
Ground State $1s^2 2s^2 2p^5(^2P^{\circ}_{3/2})$ (9 electrons)
Ionization Potential [18 500 000] cm^{-1} ; [2294] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		6.594	0. - 15165. +H	$2s^2 2p^5 - 2s^2 2p^4(^1S)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$	P	1060
		6.709	263.567 - 15169. +H	$2s^2 2p^5 - 2s^2 2p^4(^1S)4d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P	1060
		6.727	0. - 14865.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$		1094
		6.727	0. - 14865.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.761	0. - 14786.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P	1060
		6.768	0. - 14775.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094
		6.823	0. - 14656.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.838	263.567 - 14888.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$		1094
		6.871	0. - 14554.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.886	0. - 14522.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.922	0. - 14447. +H	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P	1060
		7.010	0. - 14265.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$		1094
		7.043	0. - 14198.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$		1094
		7.859	0. - 12724.	$2s^2 2p^5 - 2s 2p^5(^1P^{\circ})3p$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.012	263.567 - 12745.	$2s^2 2p^5 - 2s 2p^5(^1P^{\circ})3p$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.027	263.567 - 12722.	$2s^2 2p^5 - 2s 2p^5(^1P^{\circ})3p$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.068	263.567 - 12658.	$2s^2 2p^5 - 2s 2p^5(^1P^{\circ})3p$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.099	0. - 12347.	$2s^2 2p^5 - 2s 2p^5(^3P^{\circ})3p$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.110	0. - 12330.	$2s^2 2p^5 - 2s 2p^5(^3P^{\circ})3p$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$		1094
		8.136	0. - 12291.	$2s^2 2p^5 - 2s 2p^5(^3P^{\circ})3p$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.176	263.567 - 12494.	$2s^2 2p^5 - 2s 2p^5(^3P^{\circ})3p$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.182	263.567 - 12483.	$2s^2 2p^5 - 2s 2p^5(^3P^{\circ})3p$	$g^2P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$		1094
		8.212	0. - 12177.	$2s^2 2p^5 - 2s 2p^5(^3P^{\circ})3p$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$		1094
12		8.512	0. - 11745.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$		964
30		8.527	263.567 - 11991.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$		1094,939
40		8.560	0. - 11682.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$		1094,939
		8.567	0. - 11680.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$		1094
20		8.588	0. - 11644.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$		1094,964
35		8.643	0. - 11570.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$		1094,939
		8.653	0. - 11557.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$		1094
8		8.676	0. - 11526.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{1}{2}$		1094,964
20		8.710	263.567 - 11745.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$		1094,939
25		8.724	263.567 - 11727.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$		1094,939
25		8.734	0. - 11450. +H	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	Q	939
13		8.754	263.567 - 11680.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$		1094,964
30		8.767	0. - 11406.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$		1094,939

GE XXIV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	25	8.788	0. - 11379.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	20	8.805	0. - 11357.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	20	8.826	263.567 - 11594.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094,939
		9.200	263.567 - 11133.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094
	30	9.257	0. - 10803.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	12	9.316	0. - 10734.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	11	9.340	0. - 10707.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	5	9.439	0. - 10594.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094,939
	8	9.481	263.567 - 10811.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,939
	12	9.533	0. - 10490.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094,939
	8	9.553	0. - 10468.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094,939
		9.762	263.567 - 10490.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		1094
	350	65.898	0. - 1517.49	$2s^2 2p^5 - 2s2p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	1104,114
	250	79.750	263.57 - 1517.49	$2s^2 2p^5 - 2s2p^6$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	1104,114
		379.41	0. - 263.57	$2s^2 2p^5 - 2s^2 2p^5$	$g^2P^\circ - g^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	1122

GERMANIUM XXV (Ge^{24+}), Z = 32
Ground State $1s^2 2s^2 2p^4(^3P_2)$ (8 electrons)
Ionization Potential [19 530 000] cm^{-1} ; [2421] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		8.176	243.263 - 12474.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$g^3P - ^3D^\circ$	1 - 2		1094
		8.200	0. - 12200.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^1F^\circ$	2 - 3		1094
		8.212	243.263 - 12420.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$g^3P - ^3P^\circ$	1 - 1		1094
		8.233	0. - 12146.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3P^\circ$	2 - 2		1094
		8.246	0. - 12127.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3D^\circ$	2 - 3		1094
		8.274	0. - 12086.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^1P^\circ$	2 - 1		634
		8.302	127.797 - 12174.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3S^\circ$	0 - 1	Q	634
		8.315	0. - 12026.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3G^\circ$	2 - 3		634
		8.324	0. - 12013.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3F^\circ$	2 - 3		634
		8.379	243.263 - 12174.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3S^\circ$	1 - 1		634
		8.394	336.635 - 12250.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^3P^\circ$	2 - 2		1094
		8.410	243.263 - 12134.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3P^\circ$	1 - 0		634
		8.427	0. - 11866.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3d$	$g^3P - ^3D^\circ$	2 - 3		1094
		8.439	647.274 + E - 12497. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1S - ^1P^\circ$	0 - 1		1094
		8.439	336.635 - 12186.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^3F^\circ$	2 - 3		1094
		8.448	336.635 - 12174.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$^1D - ^1D^\circ$	2 - 2		634
		8.512	127.797 - 11876.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3d$	$g^3P - ^3D^\circ$	0 - 1		634
		8.754	243.263 - 11667.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$g^3P - ^3P^\circ$	1 - 2		1094
		8.805	336.635 - 11694.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$^1D - ^1P^\circ$	2 - 1		1094
		8.825	336.635 - 11668.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$^1D - ^1D^\circ$	2 - 2		1094
		8.825	0. - 11331.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$g^3P - ^3D^\circ$	2 - 3		1094
		8.880	0. - 11261.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$g^3P - ^3D^\circ$	2 - 2		1094
		9.142	127.797 - 11076.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3s$	$g^3P - ^3S^\circ$	0 - 1	Q	1094
		9.156	336.635 - 11261.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$^1D - ^3D^\circ$	2 - 2	Q	1094
		9.227	243.263 - 11076.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3s$	$g^3P - ^3S^\circ$	1 - 1		1094
		54.263	0. - 1842.88	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^1P^\circ$	2 - 1	P	1104
	120	66.390	336.635 - 1842.88	$2s^2 2p^4 - 2s2p^5$	$^1D - ^1P^\circ$	2 - 1	P	1104,114
	50	68.647	0. - 1456.73	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^\circ$	2 - 1	P	1104,114
	30	73.914	243.263 - 1596.18	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^\circ$	1 - 0	P	1104,114
	10	75.249	127.797 - 1456.73	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^\circ$	0 - 1	P	1104,114

GE XXV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
85		75.548	0. - 1323.66	$2s^2 2p^4 - 2s 2p^5$	$g^3 P - ^3 P^\circ$	2 - 2	P	1104, 114
		82.409	243.263 - 1456.73	$2s^2 2p^4 - 2s 2p^5$	$g^3 P - ^3 P^\circ$	1 - 1	P	1104
10		83.640	647.27 + E - 1842.88	$2s^2 2p^4 - 2s 2p^5$	$^1 S - ^1 P^\circ$	0 - 1	P	1104
		92.559	243.263 - 1323.66	$2s^2 2p^4 - 2s 2p^5$	$g^3 P - ^3 P^\circ$	1 - 2	P	1104, 114
		154.5	0. - 647.274 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - ^1 S$	2 - 0	F, P	375, 1104
		247.5	243.263 - 647.274 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - ^1 S$	1 - 0	F, P	375, 1104
		297.06	0. - 336.635	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - ^1 D$	2 - 2	F, P	375, 1104
		321.9	336.635 - 647.274 + E	$2s^2 2p^4 - 2s^2 2p^4$	$^1 D - ^1 S$	2 - 0	F, P	375, 1104
		411.08	0. - 243.263	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - g^3 P$	2 - 1	F, P	375, 1104
		478.84	127.797 - 336.635	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - ^1 D$	0 - 2	F, P	375, 1104
		782.49	0. - 127.797	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - g^3 P$	2 - 0	F, P	375, 1104
		866.06	127.797 - 243.263	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - g^3 P$	0 - 1	F, P	375, 1104
	1071.0	243.263 - 336.635	$2s^2 2p^4 - 2s^2 2p^4$	$g^3 P - ^1 D$	1 - 2	F, P	375, 1104	

GERMANIUM XXVI (Ge^{25+}), Z = 32
Ground State $1s^2 2s^2 2p^3 (^4S_{3/2})$ (7 electrons)
Ionization Potential [20 780 000] cm^{-1} ; [2577] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		319.2	0.0 - 313.28	$2s^2 2p^3 - 2s^2 2p^3$	$g^4 S^\circ - ^2 D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F	1120
		427.9	0.0 - 233.70	$2s^2 2p^3 - 2s^2 2p^3$	$g^4 S^\circ - ^2 D^\circ$	$\frac{1}{2} - \frac{1}{2}$	F	1120

GERMANIUM XXVII (Ge^{26+}), Z = 32
Ground State $1s^2 2s^2 2p^2 (^3P_0)$ (6 electrons)
Ionization Potential [21 960 000] cm^{-1} ; [2723] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		454.8	0.0 - 219.9	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - g^3 P$	0 - 1	F	1120
		1470.	219.9 - 287.9	$2s^2 2p^2 - 2s^2 2p^2$	$g^3 P - g^3 P$	1 - 2	F	1120

GERMANIUM XXVIII (Ge^{27+}), Z = 32
Ground State $1s^2 2s^2 2p (^2P_{1/2}^\circ)$ (5 electrons)
Ionization Potential [23 090 000] cm^{-1} ; [2863] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		339.1	0.0 - 294.89	$2s^2 2p - 2s^2 2p$	$g^2 P^\circ - g^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F, P	1122

GERMANIUM XXIX (Ge²⁸⁺), Z = 32
Ground State 1s²2s²(¹S₀) (4 electrons)
Ionization Potential [24 530 000] cm⁻¹; [3041] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	6.872	504.90+K - 15057.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	1 - 1		643
	10	6.905	742.60+K - 15225.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ P	2 - 2		643
	10	6.962	742.60+K - 15106.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ³ S	2 - 1		643
	40	7.005	742.60+K - 15018.+K	1s ² 2s2p - 1s ² 2p3p	³ P° - ¹ D	2 - 2		643
		7.041	0.0 - 14203.+D	1s ² 2s ² - 1s ² 2s3p	g ¹ S - ³ P°	0 - 1	P	619
	100	7.081	1060.20+L - 15182.+L	1s ² 2s2p - 1s ² 2s3s	¹ P° - ¹ S	1 - 0		643
	100	7.205	504.90+K - 14380.+K	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	1 - 1		643
	10	7.230	1437.4+B - 15269.+B	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	1 - 2		643
	20	7.274	1521.1+B - 15269.+B	1s ² 2p ² - 1s ² 2p3d	³ P - ³ D°	2 - 3		643
		7.281	742.60+K - 14477.+C	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	2 - 3	P	619
	20	7.333	742.60+K - 14380.+K	1s ² 2s2p - 1s ² 2s3d	³ P° - ³ D	2 - 1		643
		7.377	1804.7+S - 15360.+F	1s ² 2p ² - 1s ² 2p3d	¹ D - ¹ F°	2 - 3	P	619
		7.428	504.90+K - 13966.+C	1s ² 2s2p - 1s ² 2s3s	³ P° - ³ S	1 - 1	P	619
		7.442	1060.20+L - 14498.+C	1s ² 2s2p - 1s ² 2s3d	¹ P° - ¹ D	1 - 2	P	619
		7.520	2063.2+S - 15361.+F	1s ² 2p ² - 1s ² 2p3d	¹ S - ¹ P°	0 - 1	P	619
		7.562	742.60+K - 13966.+C	1s ² 2s2p - 1s ² 2s3s	³ P° - ³ S	2 - 1	P	619
		7.696	1804.7+S - 14798.+F	1s ² 2p ² - 1s ² 2p3s	¹ D - ¹ P°	2 - 1	P	619
		7.852	2063.2+S - 14798.+F	1s ² 2p ² - 1s ² 2p3s	¹ S - ¹ P°	0 - 1	P	619
	198.		0.0 - 504.90+K	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ³ P°	0 - 1	P	375

GERMANIUM XXX (Ge²⁹⁺), Z = 32
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential [25 750 000] cm⁻¹; [3192] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		122.6	0.0 - 815.38+D	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,977
		200.1	0.0 - 499.72+E	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	375,977

GERMANIUM XXXI (Ge³⁰⁺), Z = 32
Ground State 1s²(¹S₀) (2 electrons)
Ionization Potential 109 350 000 cm⁻¹; 13558 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1.026	0.0 - 97449.50	1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	P	728
		1.206	0.0 - 82918.72	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	P	1105
		1.213	0.0 - 82450.64	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	P	1105
		1.218	0.0 - 82121.38	1s ² - 1s2s	g ¹ S - ³ S	0 - 1	F,P	1105

GERMANIUM XXXII (Ge³¹⁺), Z = 32
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 113 879 000 cm⁻¹; 14119 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		0.987	0.0 - 101336.4400	1s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.167	0.0 - 85690.5800	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.172	0.0 - 85293.3200	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	375,1042

ARSENIC I (As⁰⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p³(⁴S_{3/2}) (33 electrons)
Ionization Potential 79 165 cm⁻¹; 9.81 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	3	1323.12	0.0 - 75.5787	4s ² 4p ³ -	g ⁴ S° - 12	1 - 1	P	573
	2	1350.44	0.0 - 74.0497	4s ² 4p ³ -	g ⁴ S° - 8	1 - 1	P	573
	4	1378.94	0.0 - 72.5194	4s ² 4p ³ -	g ⁴ S° - 4	1 - 1	P	573
	4	1390.35	0.0 - 71.9244	4s ² 4p ³ - 4s ² 4p ² (¹ D)4d	g ⁴ S° - ² P	1 - 1	P	573
	2	1407.34	0.0 - 71.0552	4s ² 4p ³ -	g ⁴ S° - 3	1 - 1		480
	2	1412.95						480
	2	1422.95						480
	1	1434.66						480
	3	1434.77	0.0 - 69.6983	4s ² 4p ³ -	g ⁴ S° - 2	1 - 1		480
	5	1442.69	0.0 - 69.3149	4s ² 4p ³ - 4s ² 4p ² (³ P)6s	g ⁴ S° - ² P	1 - 1		480
	3	1461.92	0.0 - 68.4027	4s ² 4p ³ - 4s4p ⁴	g ⁴ S° - ² D	1 - 1		480
	5	1463.81	0.0 - 68.3145	4s ² 4p ³ - 4s ² 4p ² (³ P)6s	g ⁴ S° - ² P	1 - 1	P	573
	2	1464.10	0.0 - 68.3006	4s ² 4p ³ - 4s4p ⁴	g ⁴ S° - ² D	2 - 2		480
	2	1468.42						480
	3	1470.09						480
	4	1472.32	0.0 - 67.9201	4s ² 4p ³ - 4s ² 4p ² (³ P)6s	g ⁴ S° - ⁴ P	2 - 2		480
	5	1484.36						480
	4	1492.34	0.0 - 67.0088	4s ² 4p ³ - 4s ² 4p ² (³ P)6s	g ⁴ S° - ⁴ P	2 - 2		480
	1	1492.81						480
	1	1503.47						480
	2	1504.09	0.0 - 66.4852	4s ² 4p ³ - 4s ² 4p ² (³ P)4d	g ⁴ S° - ² P	1 - 1		480
	2	1506.99	10.9146 - 77.2725	4s ² 4p ³ -	² D° - 17	1 - 1		480
	3	1509.60	10.5925 - 76.8356	4s ² 4p ³ -	² D° - 15	1 - 1		480
	3	1509.70						480
	6	1510.41	10.9146 - 77.1217	4s ² 4p ³ -	² D° - 16	2 - 2		480
	6	1510.70						480
	20	1515.48						480
	1	1516.97	10.9146 - 76.8356	4s ² 4p ³ -	² D° - 15	2 - 2		480
	1	1518.10						480
	1	1521.81						480
	2	1526.78	0.0 - 65.4974	4s ² 4p ³ - 4s4p ⁴	g ⁴ S° - ² P	1 - 1		480
	3	1533.60	10.5925 - 75.7994	4s ² 4p ³ -	² D° - 13	1 - 1		480
	3	1533.67						480
	4	1534.65	10.9146 - 76.0762	4s ² 4p ³ -	² D° - 14	1 - 1		480
	20	1538.79	10.5925 - 75.5787	4s ² 4p ³ -	² D° - 12	1 - 1		480
	4	1542.94	0.0 - 64.8115	4s ² 4p ³ - 4s4p ⁴	g ⁴ S° - ² P	1 - 1		480
	2	1546.45	10.9146 - 75.5787	4s ² 4p ³ -	² D° - 12	1 - 1		480
	3	1547.59						480
	4	1554.19	0.0 - 64.3424	4s ² 4p ³ - 4s ² 4p ² (³ P)4d	g ⁴ S° - ² D	1 - 1		480
	40	1556.14	10.9146 - 75.176	4s ² 4p ³ - 4s ² 4p ² (¹ D)4d	² D° - 25	1 - 1		480
	30	1557.20	10.5925 - 74.8105	4s ² 4p ³ - 4s ² 4p ² (¹ S)4d	² D° - ² D	1 - 1		480
	4	1558.28						480
	4	1559.48						480
	4	1559.53	0.0 - 64.1220	4s ² 4p ³ - 4s ² 4p ² (³ P)4d	g ⁴ S° - ² P	1 - 1		480
	10	1562.95	0.0 - 63.9817	4s ² 4p ³ - 4s ² 4p ² (³ P)4d	g ⁴ S° - ⁴ P	1 - 1		480
	7	1565.05	10.9146 - 74.8105	4s ² 4p ³ - 4s ² 4p ² (¹ S)4d	² D° - ² D	1 - 1		480
	15	1566.39						480
	1	1572.19						480
	60	1573.85	10.9146 - 74.4531	4s ² 4p ³ - 4s ² 4p ² (¹ S)4d	² D° - ² D	1 - 1		480
	30	1574.72	0.0 - 63.5036	4s ² 4p ³ - 4s ² 4p ² (³ P)4d	g ⁴ S° - ⁴ P	1 - 1		480
	20	1575.87	10.5925 - 74.0497	4s ² 4p ³ -	² D° - 8	1 - 1		480
	2	1583.90	10.9146 - 74.0497	4s ² 4p ³ -	² D° - 8	1 - 1		480
	20	1587.97	10.5925 - 73.5660	4s ² 4p ³ -	² D° - 6	1 - 1		480
	100	1593.60	0.0 - 62.7511	4s ² 4p ³ - 4s ² 4p ² (³ P)4d	g ⁴ S° - ⁴ P	1 - 1		480

AS I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1594.39	10.9146 - 73.6350	$4s^2 4p^3 -$	$^2D^\circ - 7$	$\frac{5}{2} - \frac{3}{2}$		480
	2	1596.13	10.9146 - 73.5660	$4s^2 4p^3 -$	$^2D^\circ - 6$	$\frac{3}{2} - \frac{1}{2}$		480
	2	1597.48						480
	3	1608.07	10.5925 - 72.7790	$4s^2 4p^3 -$	$^2D^\circ - 5$	$\frac{3}{2} - \frac{1}{2}$		480
	4	1612.57						480
	5	1614.82	10.5925 - 72.5194	$4s^2 4p^3 -$	$^2D^\circ - 4$	$\frac{1}{2} - \frac{1}{2}$		480
	6	1616.44	10.9146 - 72.7790	$4s^2 4p^3 -$	$^2D^\circ - 5$	$\frac{5}{2} - \frac{3}{2}$		480
	5	1620.94						480
	2	1623.26	10.9146 - 72.5194	$4s^2 4p^3 -$	$^2D^\circ - 4$	$\frac{5}{2} - \frac{3}{2}$		480
	1	1625.17	10.5925 - 72.1250	$4s^2 4p^3 - 4s^2 4p^2(^1D)4d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	4	1630.48	10.5925 - 71.9244	$4s^2 4p^3 - 4s^2 4p^2(^1D)4d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	5	1633.71	10.9146 - 72.1250	$4s^2 4p^3 - 4s^2 4p^2(^1D)4d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	2	1643.79	0.0 - 60.8348	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$g^4S^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480
	5	1644.33	0.0 - 60.8150	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$g^4S^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480
	2	1649.55						480
	4	1653.92	10.5925 - 71.0552	$4s^2 4p^3 -$	$^2D^\circ - 3$	$\frac{3}{2} - \frac{1}{2}$		480
	2	1662.76	10.9146 - 71.0552	$4s^2 4p^3 -$	$^2D^\circ - 3$	$\frac{3}{2} - \frac{1}{2}$		480
	2	1670.12						480
	4	1670.79						480
	2	1671.88						480
	3	1674.59						480
	2	1679.14						480
	1	1681.47						480
	2	1684.63						480
	3	1687.12						480
	7	1691.87	10.5925 - 69.6983	$4s^2 4p^3 -$	$^2D^\circ - 2$	$\frac{3}{2} - \frac{1}{2}$		480
	15	1701.16	10.9146 - 69.6983	$4s^2 4p^3 -$	$^2D^\circ - 2$	$\frac{3}{2} - \frac{1}{2}$		480
	30	1701.22						480
	3	1702.94	10.5925 - 69.3149	$4s^2 4p^3 - 4s^2 4p^2(^3P)6s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	4	1705.74	18.6475 - 77.2725	$4s^2 4p^3 -$	$^2P^\circ - 17$	$\frac{3}{2} - \frac{1}{2}$		480
	2	1709.03						480
	2	1709.26						480
	7	1710.16	18.6475 - 77.1217	$4s^2 4p^3 -$	$^2P^\circ - 16$	$\frac{3}{2} - \frac{1}{2}$		480
	10	1712.32	10.9146 - 69.3149	$4s^2 4p^3 - 4s^2 4p^2(^3P)6s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	1	1718.55	18.6475 - 76.8356	$4s^2 4p^3 -$	$^2P^\circ - 15$	$\frac{3}{2} - \frac{1}{2}$		480
	4	1722.37						480
	7	1724.77						480
	4	1727.38	18.1861 - 76.0762	$4s^2 4p^3 -$	$^2P^\circ - 14$	$\frac{1}{2} - \frac{1}{2}$		480
	30	1729.80	10.5925 - 68.4027	$4s^2 4p^3 - 4s^2 4p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480
	30	1732.44	10.5925 - 68.3145	$4s^2 4p^3 - 4s^2 4p^2(^3P)6s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	30	1732.86	10.5925 - 68.3006	$4s^2 4p^3 - 4s^2 4p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480
	3	1735.70	18.1861 - 75.7994	$4s^2 4p^3 -$	$^2P^\circ - 13$	$\frac{1}{2} - \frac{1}{2}$		480
	60	1739.49	10.9146 - 68.4027	$4s^2 4p^3 - 4s^2 4p^4$	$^2D^\circ - ^2D$	$\frac{5}{2} - \frac{3}{2}$		480
	3	1740.93						480
	10	1741.28	18.6475 - 76.0762	$4s^2 4p^3 -$	$^2P^\circ - 14$	$\frac{3}{2} - \frac{1}{2}$		480
	10	1742.59	10.9146 - 68.3006	$4s^2 4p^3 - 4s^2 4p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480
	1	1745.60						480
	1	1749.72	18.6475 - 75.7994	$4s^2 4p^3 -$	$^2P^\circ - 13$	$\frac{3}{2} - \frac{1}{2}$		480
	2	1750.37						480
	10	1754.21	10.9146 - 67.9201	$4s^2 4p^3 - 4s^2 4p^2(^3P)6s$	$^2D^\circ - ^4P$	$\frac{5}{2} - \frac{3}{2}$		480
	2	1756.51	18.6475 - 75.5787	$4s^2 4p^3 -$	$^2P^\circ - 12$	$\frac{3}{2} - \frac{1}{2}$		480
	4	1757.47	18.1861 - 75.0860	$4s^2 4p^3 -$	$^2P^\circ - 10$	$\frac{1}{2} - \frac{1}{2}$		480
	100	1758.60	0.0 - 56.8636	$4s^2 4p^3 - 4s^2 4p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		480
	6	1767.97						480

AS I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	5	1768.97						480
	2	1771.84	18.6475 - 75.0860	$4s^2 4p^3 -$	$^2P^\circ - 10$	$\frac{1}{2} - \frac{3}{2}$		480
	8	1772.54	10.5925 - 67.0088	$4s^2 4p^3 - 4s^2 4p^2(^3P)6s$	$^2D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	2	1775.12						480
	50	1780.52	18.6475 - 74.8105	$4s^2 4p^3 - 4s^2 4p^2(^1S)4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		480
	50	1781.48	10.5925 - 66.7254	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	3	1785.84	10.5925 - 66.5883	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$		480
	6	1787.07	18.1861 - 74.1438	$4s^2 4p^3 -$	$^2P^\circ - 9$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	15	1789.14	10.5925 - 66.4852	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	50	1789.85	10.9146 - 66.7852	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2F$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	40	1791.77	10.9146 - 66.7254	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	9	1798.61						480
	2	1799.51	10.9146 - 66.4852	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		480
	3	1801.92	18.6475 - 74.1438	$4s^2 4p^3 -$	$^2P^\circ - 9$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	10	1803.46	18.1861 - 73.6350	$4s^2 4p^3 -$	$^2P^\circ - 7$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	200	1806.15	0.0 - 55.3664	$4s^2 4p^3 - 4s4p^4$	$g^4S^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	10	1816.72						480
	5	1818.59	18.6475 - 73.6350	$4s^2 4p^3 -$	$^2P^\circ - 7$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	2	1821.32	10.5925 - 65.4974	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		480
	50	1831.30	0.0 - 54.6053	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	30	1831.74	18.1861 - 72.7790	$4s^2 4p^3 -$	$^2P^\circ - 5$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	10	1840.48	18.1861 - 72.5194	$4s^2 4p^3 -$	$^2P^\circ - 4$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	40	1844.36	10.5925 - 64.8115	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	40	1844.57	18.1861 - 72.3994	$4s^2 4p^3 - 4s^2 4p^2(^1S)5s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	10	1847.32	18.6475 - 72.7790	$4s^2 4p^3 -$	$^2P^\circ - 5$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	40	1850.24	10.5925 - 64.6395	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2F$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	20	1853.21						480
	3	1853.95	18.1861 - 72.1250	$4s^2 4p^3 - 4s^2 4p^2(^1D)4d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	10	1855.39	10.9146 - 64.8115	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	2	1856.24	18.6475 - 72.5194	$4s^2 4p^3 -$	$^2P^\circ - 4$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	80	1860.40	18.6475 - 72.3994	$4s^2 4p^3 - 4s^2 4p^2(^1S)5s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	80	1860.46	10.5925 - 64.3424	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	5	1860.87	18.1861 - 71.9244	$4s^2 4p^3 - 4s^2 4p^2(^1D)4d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	8	1865.10						480
	15	1869.94	18.6475 - 72.1250	$4s^2 4p^3 - 4s^2 4p^2(^1D)4d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	2	1871.14						480
	30	1871.68	10.9146 - 64.3424	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	40	1873.02	10.5925 - 63.9817	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	2	1876.98	18.6475 - 71.9244	$4s^2 4p^3 - 4s^2 4p^2(^1D)4d$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	40	1881.96	0.0 - 53.1356	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	5	1889.95	10.5925 - 63.5036	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	1000	1890.42	0.0 - 52.8979	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	5	1891.47	18.1861 - 71.0552	$4s^2 4p^3 -$	$^2P^\circ - 3$	$\frac{1}{2} - \frac{3}{2}$		480
	5	1901.54	10.9146 - 63.5036	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	6	1902.31						480
	1	1908.13	18.6475 - 71.0552	$4s^2 4p^3 -$	$^2P^\circ - 3$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	20	1917.21	10.5925 - 62.7511	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	3	1918.39						480
	1	1919.72						480
	1	1928.30						480
	3	1929.14	10.9146 - 62.7511	$4s^2 4p^3 - 4s^2 4p^2(^3P)4d$	$^2D^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	900	1937.59	0.0 - 51.6102	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{3}{2}$		480
	5	1941.36						480
	2	1943.30	18.1861 - 69.6448	$4s^2 4p^3 -$	$^2P^\circ - 1$	$\frac{1}{2} - \frac{3}{2}$		480

AS I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	2	1950.38						
	20	1958.82	18.6475 - 69.6983	$4s^2 4p^3$	$^2P^\circ - 2$	$\frac{3}{2} - \frac{1}{2}$		480
	40	1958.91						480
	2	1960.89	18.6475 - 69.6448	$4s^2 4p^3$	$^2P^\circ - 1$	$\frac{3}{2} - \frac{1}{2}$		480
	800	1972.62	0.0 - 50.6938	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		480
	3	1973.65	18.6475 - 69.3149	$4s^2 4p^3 - 4s^2 4p^2(^3P)6s$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	200	1990.35	10.5925 - 60.8348	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480
	100	1991.13	10.5925 - 60.8150	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480
	20	1994.89	18.1861 - 68.3145	$4s^2 4p^3 - 4s^2 4p^2(^3P)6s$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		480
	100	1995.43	18.1861 - 68.3006	$4s^2 4p^3 - 4s 4p^4$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		480

ARSENIC II (As $^{1+}$), Z = 33
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2(^3P_0)$ (32 electrons)
Ionization Potential 149 930 cm^{-1} ; 18.589 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	701.915	1.06349 - 143.531	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})8d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 0		425
	0	706.44	1.06349 - 142.619	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})9s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
	0	713.888	2.54135 - 142.619	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})9s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
	0	715.789	0.0 - 139.70594	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})9s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		425
	10	719.303	1.06349 - 140.08642	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 0		425
	1	719.574	1.06349 - 140.03444	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 1		425
	5	720.59	1.06349 - 139.83849	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
	0	721.409	1.06349 - 139.681	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})9s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 0		425
	25	726.51	2.54135 - 140.18677	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
	0	726.661	1.06349 - 138.67912	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})8s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 1		425
	1	727.272	1.06349 - 138.56523	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})8s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
	20	727.311	2.54135 - 140.03444	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 1		425
	25	728.042	0.0 - 137.35494	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		425
	0	729.05	2.54135 - 139.70594	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})9s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 1		425
	0	733.721	1.06349 - 137.35494	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 1		425
	25	735.09	1.06349 - 137.10141	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
	5	735.17	2.54135 - 138.56523	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})8s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
	1	736.759	1.06349 - 136.79272	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
	25	739.990	0.0 - 135.137295	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		425
	1	742.556	1.06349 - 135.73347	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})8s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 1		425
	25	743.037	2.54135 - 137.12472	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 3		425
	1	743.101	1.06349 - 135.63436	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})8s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 0		425
	1	743.161	2.54135 - 137.10141	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
	2	744.869	2.54135 - 136.79272	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
	0	745.855	1.06349 - 135.137295	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 1		425
	25	750.64	1.06349 - 134.28357	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 0		425
	75	750.77	1.06349 - 134.26188	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 1		425
	15	750.937	1.06349 - 134.230790	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
	50	752.680	1.06349 - 133.922710	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
	0	754.176	2.54135 - 135.137295	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 1		425
	0	754.270	10.09582 - 142.67421	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})9s$	$^1D - (\frac{1}{2}, \frac{1}{2})^\circ$	2 - 1		425
	50	756.92	2.54135 - 134.655774	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 3		425
	50	758.047	0.0 - 131.918529	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})7s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		425
	50	759.186	2.54135 - 134.26188	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 1		425
	150	759.366	2.54135 - 134.230790	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
	125	760.766	0.0 - 131.44735	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})6d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		425

AS II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
30	761.148		2.54135 - 133.922710	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	2 - 2		425
170	761.239		2.54135 - 133.906504	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	2 - 3		425
25	764.209		1.06349 - 131.918529	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7s$	$g^3 P - (3/2)^{\circ}$	1 - 1		425
0	766.41		1.06349 - 131.540920	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7s$	$g^3 P - (3/2)^{\circ}$	1 - 2		425
1	766.97		1.06349 - 131.44735	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	1 - 1		425
150	768.091		1.06349 - 131.25689	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	1 - 2		425
25	768.697		10.09582 - 140.18677	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
10	769.60		10.09582 - 140.03444	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7d$	$^1 D - (3/2)^{\circ}$	2 - 1		425
25	770.76		10.09582 - 139.83849	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
25	771.561		1.06349 - 130.670844	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	1 - 2		425
50	775.198		2.54135 - 131.540920	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7s$	$g^3 P - (3/2)^{\circ}$	2 - 2		425
0	775.759		2.54135 - 131.44735	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	2 - 1		425
75	776.91		2.54135 - 131.25689	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	2 - 2		425
15	777.06		0.0 - 128.689741	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7s$	$g^3 P - (3/2)^{\circ}$	0 - 1		425
150	777.57		2.54135 - 131.146750	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	2 - 3		425
15	777.71		10.09582 - 138.67912	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 8s$	$^1 D - (3/2)^{\circ}$	2 - 1		425
25	780.46		2.54135 - 130.670844	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$g^3 P - (3/2)^{\circ}$	2 - 2		425
15	783.542		1.06349 - 128.689741	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7s$	$g^3 P - (3/2)^{\circ}$	1 - 1		425
50	784.26		1.06349 - 128.573364	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7s$	$g^3 P - (3/2)^{\circ}$	1 - 0		425
0	785.799		10.09582 - 137.35494	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7d$	$^1 D - (3/2)^{\circ}$	2 - 1		425
50	787.224		10.09582 - 137.12472	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7d$	$^1 D - (3/2)^{\circ}$	2 - 3		425
15	787.37		10.09582 - 137.10141	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
15	789.288		10.09582 - 136.79272	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
50	789.841		0.0 - 126.608206	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	0 - 1		425
60	792.720		2.54135 - 128.689741	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7s$	$g^3 P - (3/2)^{\circ}$	2 - 1		425
1	795.94		10.09582 - 135.73347	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 8s$	$^1 D - (3/2)^{\circ}$	2 - 1		425
0	796.528		1.06349 - 126.608206	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	1 - 1		425
25	799.74		10.09582 - 135.137295	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 1		425
170	802.83		10.09582 - 134.655774	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 3		425
110	805.576		10.09582 - 134.230790	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
0	806.016		2.54135 - 126.608206	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	2 - 1		425
60	807.58		10.09582 - 133.922710	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
5	807.68		10.09582 - 133.906504	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 3		425
1	809.720		0.0 - 123.499734	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	0 - 1		425
10	814.83		1.06349 - 123.788477	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	1 - 2		425
80	816.607		1.06349 - 123.521898	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	1 - 0		425
100	816.755		1.06349 - 123.499734	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	1 - 1		425
100	818.571		1.06349 - 123.228054	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	1 - 2		425
10	820.651		2.54135 - 124.396093	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	2 - 3		425
20	820.868		10.09582 - 131.918529	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7s$	$^1 D - (3/2)^{\circ}$	2 - 1		425
30	823.417		10.09582 - 131.540920	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 7s$	$^1 D - (3/2)^{\circ}$	2 - 2		425
80	823.998		0.0 - 121.359361	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	0 - 1		425
50	824.055		10.09582 - 131.44735	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 1		425
80	824.763		2.54135 - 123.788477	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	2 - 2		425
30	825.349		10.09582 - 131.25689	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
60	826.100		10.09582 - 131.146750	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 3		425
80	826.733		2.54135 - 123.499734	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	2 - 1		425
125	828.594		2.54135 - 123.228054	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	2 - 2		425
50	829.360		10.09582 - 130.670844	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 6d$	$^1 D - (3/2)^{\circ}$	2 - 2		425
150	835.349		1.06349 - 120.774336	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	1 - 2		425
80	840.233		0.0 - 119.014770	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^1 P^{\circ}$	0 - 1		425
10	841.625		2.54135 - 121.359361	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	2 - 1		425
10	843.215		10.09582 - 128.689741	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 7s$	$^1 D - (3/2)^{\circ}$	2 - 1		425
80	845.789		2.54135 - 120.774336	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2}^{\circ}) 5d$	$g^3 P - (3/2)^{\circ}$	2 - 2		425

AS II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	25	847.809	1.06349 - 119.014770	$4s^2 4p^2 - 4s4p^3$	$g^3 P - ^1 P^\circ$	1 - 1		425
	80	848.692	1.06349 - 118.892262	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	1 - 2		425
	60	849.294	0.0 - 117.745351	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	150	854.727	2.54135 - 119.538062	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 3		425
	25	857.032	1.06349 - 117.745351	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	1 - 1		425
	125	858.280	10.09582 - 126.608206	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 1		425
	60	859.472	2.54135 - 118.892262	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 2		425
	125	859.682	1.06349 - 117.385841	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	1 - 2		425
	2	861.467	22.5986 - 138.67912	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 8s$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	10	868.027	2.54135 - 117.745351	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 1		425
	150	870.747	2.54135 - 117.385841	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 2		425
	10	871.410	22.5986 - 137.35494	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 7d$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	125	871.823	0.0 - 114.701293	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	150	874.893	10.09582 - 124.396093	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 3		425
	125	879.563	10.09582 - 123.788477	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 2		425
	80	879.989	1.06349 - 114.701293	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	1 - 1		425
	125	881.557	1.06349 - 114.499257	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	1 - 0		425
	20	881.805	10.09582 - 123.499734	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 1		425
	125	883.921	10.09582 - 123.228054	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 2		425
	40	886.941	10.09582 - 122.842921	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 3		425
	80	888.584	22.5986 - 135.137295	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 6d$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	125	891.587	2.54135 - 114.701293	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 6s$	$g^3 P - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 1		425
	125	898.768	10.09582 - 121.359361	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 1		425
	150	903.521	10.09582 - 120.774336	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 2		425
	100	905.240	1.06349 - 111.531735	$4s^2 4p^2 - 4s4p^3$	$g^3 P - ^1 D^\circ$	1 - 2		425
	125	913.727	10.09582 - 119.538062	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 3		425
	80	914.746	22.5986 - 131.918529	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 7s$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	100	917.131	0.0 - 109.03601	$4s^2 4p^2 - 4s4p^3$	$g^3 P - ^3 S^\circ$	0 - 1		425
	150	917.513	2.54135 - 111.531735	$4s^2 4p^2 - 4s4p^3$	$g^3 P - ^1 D^\circ$	2 - 2		425
	150	918.115	10.09582 - 119.014770	$4s^2 4p^2 - 4s4p^3$	$^1 D - ^1 P^\circ$	2 - 1		425
	10	918.706	22.5986 - 131.44735	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 6d$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	150	919.152	10.09582 - 118.892262	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 2		425
	100	928.941	10.09582 - 117.745351	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 6s$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 1		425
	100	942.585	22.5986 - 128.689741	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 7s$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	125	955.976	10.09582 - 114.701293	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 6s$	$^1 D - (\frac{3}{2}, \frac{3}{2})^\circ$	2 - 1		425
	0	961.443	22.5986 - 126.608206	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	190	974.712	0.0 - 102.594946	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 P^\circ$	0 - 1		425
	200	984.919	1.06349 - 102.594946	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 P^\circ$	1 - 1		425
	220	985.345	1.06349 - 102.550086	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 P^\circ$	1 - 0		425
	220	985.847	10.09582 - 111.531735	$4s^2 4p^2 - 4s4p^3$	$^1 D - ^1 D^\circ$	2 - 2		425
	125	987.634	1.06349 - 102.315401	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 P^\circ$	1 - 2		425
	0	991.068	22.5986 - 123.499734	$4s^2 4p^2 - 4s^2 4p(^2 P_{3/2}^\circ) 5d$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	190	995.772	1.06349 - 101.488243	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^1 P^\circ$	1 - 1		425
	190	999.465	2.54135 - 102.594946	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 P^\circ$	2 - 1		425
	220	1000.538	2.54135 - 102.487088	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^1 F^\circ$	2 - 3		425
	250	1002.261	2.54135 - 102.315401	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 P^\circ$	2 - 2		425
	220	1009.427	0.0 - 99.066007	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 D^\circ$	0 - 1		425
	190	1010.647	2.54135 - 101.488243	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^1 P^\circ$	2 - 1		425
	125	1012.546	22.5986 - 121.359361	$4s^2 4p^2 - 4s^2 4p(^2 P_{1/2}^\circ) 5d$	$^1 S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		425
	300	1015.375	1.06349 - 99.548817	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 D^\circ$	1 - 2		425
	200	1020.379	1.06349 - 99.066007	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 D^\circ$	1 - 1		425
	350	1021.965	2.54135 - 100.391099	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 D^\circ$	2 - 3		425
	200	1030.846	2.54135 - 99.548817	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 D^\circ$	2 - 2		425
	100	1036.004	2.54135 - 99.066007	$4s^2 4p^2 - 4s^2 4p(^2 P^\circ) 4d$	$g^3 P - ^3 D^\circ$	2 - 1		425

AS II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
160	1037.169		22.5986 - 119.014770	$4s^2 4p^2 - 4s 4p^3$	$^1S - ^1P^\circ$	0 - 1		425
150	1051.005		22.5986 - 117.745351	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})6s$	$^1S - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		425
190	1081.090		10.09582 - 102.594946	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^3P^\circ$	2 - 1		425
350	1082.350		10.09582 - 102.487088	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^1F^\circ$	2 - 3		425
190	1084.370		10.09582 - 102.315401	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^3P^\circ$	2 - 2		425
150	1085.729		22.5986 - 114.701293	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})6s$	$^1S - (\frac{1}{2}, \frac{1}{2})^\circ$	0 - 1		425
225	1094.183		10.09582 - 101.488243	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^1P^\circ$	2 - 1		425
300	1107.476		10.09582 - 100.391099	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^3D^\circ$	2 - 3		425
200	1117.903		10.09582 - 99.548817	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^3D^\circ$	2 - 2		425
225	1123.977		10.09582 - 99.066007	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^3D^\circ$	2 - 1		425
500	1139.395		1.06349 - 88.829143	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3F^\circ$	1 - 2		425
600	1149.306		2.54135 - 89.549654	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3F^\circ$	2 - 3		425
10	1156.908		22.5986 - 109.03601	$4s^2 4p^2 - 4s 4p^3$	$^1S - ^3S^\circ$	0 - 1		425
300	1158.908		2.54135 - 88.829143	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3F^\circ$	2 - 2		425
550	1181.506		0.0 - 84.636186	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^\circ$	0 - 1		425
550	1189.870		1.06349 - 85.10586	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^\circ$	1 - 2		425
600	1196.383		1.06349 - 84.648426	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^\circ$	1 - 0		425
600	1196.561		1.06349 - 84.636186	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^\circ$	1 - 1		425
350	1207.441		0.0 - 82.819214	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})5s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	0 - 1		425
800	1211.170		2.54135 - 85.10586	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^\circ$	2 - 2		425
800	1218.099		2.54135 - 84.636186	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^\circ$	2 - 1		425
225	1218.95		1.06349 - 83.100804	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^1D^\circ$	1 - 2		425
350	1223.149		1.06349 - 82.819214	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})5s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 1		425
750	1241.311		2.54135 - 83.100804	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^1D^\circ$	2 - 2		425
950	1243.081		1.06349 - 81.508925	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})5s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	1 - 2		425
850	1245.668		2.54135 - 82.819214	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})5s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 1		425
0	1247.949		54.81708 - 134.94863	$4s 4p^3 - 4s^2 4p(^2P_{3/2})7p$	$^5S^\circ - \frac{3}{2} \frac{1}{2} \frac{1}{2}^\circ$	2 - 1		425
300	1250.058		22.5986 - 102.594946	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1S - ^3P^\circ$	0 - 1		425
5	1252.916		54.81708 - 134.630929	$4s 4p^3 - 4s^2 4p(^2P_{3/2})7p$	$^5S^\circ - \frac{3}{2} \frac{1}{2} \frac{1}{2}^\circ$	2 - 3		425
800	1258.585		10.09582 - 89.549654	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^3F^\circ$	2 - 3		425
950	1263.770		0.0 - 79.12833	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})5s$	$g^3P - (\frac{1}{2}, \frac{1}{2})^\circ$	0 - 1		425
800	1266.340		2.54135 - 81.508925	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})5s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
800	1267.588		22.5986 - 101.488243	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1S - ^1P^\circ$	0 - 1		425
5	1270.110		10.09582 - 88.829143	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^3F^\circ$	2 - 2		425
700	1280.987		1.06349 - 79.12833	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})5s$	$g^3P - (\frac{1}{2}, \frac{1}{2})^\circ$	1 - 1		425
700	1287.538		1.06349 - 78.730893	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})5s$	$g^3P - (\frac{1}{2}, \frac{1}{2})^\circ$	1 - 0		425
700	1305.701		2.54135 - 79.12833	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})5s$	$g^3P - (\frac{1}{2}, \frac{1}{2})^\circ$	2 - 1		425
350	1307.74		22.5986 - 99.066007	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1S - ^3D^\circ$	0 - 1		425
750	1333.147		10.09582 - 85.10586	$4s^2 4p^2 - 4s 4p^3$	$^1D - ^3P^\circ$	2 - 2		425
950	1341.549		10.09582 - 84.636186	$4s^2 4p^2 - 4s 4p^3$	$^1D - ^3P^\circ$	2 - 1		425
750	1355.933		0.0 - 73.74989	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^\circ$	0 - 1		425
950	1369.770		10.09582 - 83.100804	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$^1D - ^1D^\circ$	2 - 2		425
800	1373.650		1.06349 - 73.86233	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^\circ$	1 - 2		425
1000	1375.074		10.09582 - 82.819214	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})5s$	$^1D - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 1		425
750	1375.783		1.06349 - 73.74989	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^\circ$	1 - 1		425
800	1394.64		2.54135 - 74.24442	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^\circ$	2 - 3		425
800	1400.306		10.09582 - 81.508925	$4s^2 4p^2 - 4s^2 4p(^2P_{3/2})5s$	$^1D - (\frac{3}{2}, \frac{1}{2})^\circ$	2 - 2		425
10	1402.114		2.54135 - 73.86233	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^\circ$	2 - 2		425
5	1404.323		2.54135 - 73.74989	$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^\circ$	2 - 1		425
0	1419.855		54.81708 - 125.246483	$4s 4p^3 - 4s^2 4p(^2P_{3/2})4f$	$^5S^\circ - \frac{3}{2} \frac{1}{2} \frac{1}{2}^\circ$	2 - 2		425
0	1420.624		54.81708 - 125.208426	$4s 4p^3 - 4s^2 4p(^2P_{3/2})4f$	$^5S^\circ - \frac{3}{2} \frac{1}{2} \frac{1}{2}^\circ$	2 - 1		425
0	1431.817		54.81708 - 124.658219	$4s 4p^3 - 4s^2 4p(^2P_{3/2})4f$	$^5S^\circ - \frac{3}{2} \frac{1}{2} \frac{1}{2}^\circ$	2 - 3		425
0	1433.053		54.81708 - 124.59917	$4s 4p^3 - 4s^2 4p(^2P_{3/2})6p$	$^5S^\circ - \frac{3}{2} \frac{1}{2} \frac{1}{2}^\circ$	2 - 1		425
500	1448.593		10.09582 - 79.12833	$4s^2 4p^2 - 4s^2 4p(^2P_{1/2})5s$	$^1D - (\frac{1}{2}, \frac{1}{2})^\circ$	2 - 1		425

AS II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	1493.259	73.86233 - 140.82984	$4s4p^3 - 4s^24p(^2P_{1/2}^o)7f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1496.598	73.74989 - 140.56830	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	1 - 2		425
	0	1497.547	73.74989 - 140.52567	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	1 - 1		425
	0	1498.058	54.81708 - 121.570374	$4s4p^3 - 4s^24p(^2P_{1/2}^o)4f$	$^3S^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1499.108	73.86233 - 140.56830	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 2		425
	0	1499.168	54.81708 - 121.521337	$4s4p^3 - 4s^24p(^2P_{1/2}^o)4f$	$^3S^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1500.074	73.86233 - 140.52567	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 1		425
	0	1502.615	74.24442 - 140.79503	$4s4p^3 - 4s^24p(^2P_{1/2}^o)7f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 2		425
	150	1504.20	73.86233 - 140.34271	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 2		425
	2	1505.556	73.86233 - 140.28309	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	5	1507.145	73.86233 - 140.21283	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	2	1514.260	74.24442 - 140.28309	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 3		425
	20	1515.207	74.24442 - 140.24191	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 4		425
	500	1558.884	10.09582 - 74.24442	$4s^24p^2 - 4s4p^3$	$^1D - ^3D^o$	2 - 3		425
	225	1568.225	10.09582 - 73.86233	$4s^24p^2 - 4s4p^3$	$^1D - ^3D^o$	2 - 2		425
	10	1569.385	73.74989 - 137.46902	$4s4p^3 - 4s^24p(^2P_{1/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	1 - 2		425
	500	1570.993	10.09582 - 73.74989	$4s^24p^2 - 4s4p^3$	$^1D - ^3D^o$	2 - 1		425
	10	1572.644	73.86233 - 137.44954	$4s4p^3 - 4s^24p(^2P_{1/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	5	1582.406	74.24442 - 137.439511	$4s4p^3 - 4s^24p(^2P_{1/2}^o)6f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 4		425
	225	1611.927	22.5986 - 84.636186	$4s^24p^2 - 4s4p^3$	$^1S - ^3P^o$	0 - 1		425
	0	1629.565	73.74989 - 135.116015	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	1 - 1		425
	0	1631.725	73.86233 - 135.14743	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 2		425
	4	1634.298	82.819214 - 144.0076	$4s^24p(^2P_{3/2}^o)5s - 4s^24p(^2P_{3/2}^o)9p$	$(\frac{3}{2})^o - \frac{3}{2}^1D^o$	1 - 0		425
	0	1637.033	73.86233 - 134.94863	$4s4p^3 - 4s^24p(^2P_{3/2}^o)7p$	$^3D^o - \frac{3}{2}^1D^o$	2 - 1		425
	10	1637.470	73.74989 - 134.819701	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	1 - 2		425
	5	1639.979	73.86233 - 134.838836	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	1	1640.491	73.86233 - 134.819701	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 2		425
	5	1643.619	73.86233 - 134.70390	$4s4p^3 - 4s^24p(^2P_{3/2}^o)7p$	$^3D^o - \frac{3}{2}^1D^o$	2 - 2		425
	1	1645.590	73.86233 - 134.630929	$4s4p^3 - 4s^24p(^2P_{3/2}^o)7p$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	10	1647.527	73.86233 - 134.559487	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	1	1650.319	74.24442 - 134.838836	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 3		425
	0	1650.842	74.24442 - 134.819701	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 2		425
	5	1656.004	74.24442 - 134.630929	$4s4p^3 - 4s^24p(^2P_{3/2}^o)7p$	$^3D^o - \frac{3}{2}^1D^o$	3 - 3		425
	50	1656.704	74.24442 - 134.605348	$4s4p^3 - 4s^24p(^2P_{3/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 4		425
	500	1660.554	22.5986 - 82.819214	$4s^24p^2 - 4s^24p(^2P_{3/2}^o)5s$	$^1S - (\frac{3}{2})^o$	0 - 1		425
	0	1714.069	79.12833 - 137.46902	$4s^24p(^2P_{1/2}^o)5s - 4s^24p(^2P_{1/2}^o)6f$	$(\frac{3}{2})^o - \frac{3}{2}^1D^o$	1 - 2		425
	1	1716.962	73.74989 - 131.99229	$4s4p^3 - 4s^24p(^2P_{1/2}^o)7p$	$^3D^o - \frac{3}{2}^1D^o$	1 - 2		425
	50	1719.802	73.74989 - 131.896272	$4s4p^3 - 4s^24p(^2P_{1/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	1 - 2		425
	2	1722.680	82.819214 - 140.8683	$4s^24p(^2P_{3/2}^o)5s - 4s^24p(^2P_{3/2}^o)8p$	$(\frac{3}{2})^o - \frac{3}{2}^1D^o$	1 - 0		425
	0	1723.852	73.86233 - 131.872196	$4s4p^3 - 4s^24p(^2P_{1/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	1	1725.846	73.86233 - 131.805040	$4s4p^3 - 4s^24p(^2P_{1/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1731.671	74.24442 - 131.99229	$4s4p^3 - 4s^24p(^2P_{1/2}^o)7p$	$^3D^o - \frac{3}{2}^1D^o$	3 - 2		425
	0	1732.236	83.100804 - 140.82984	$4s^24p(^2P^o)4d - 4s^24p(^2P_{1/2}^o)7f$	$^1D^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1735.081	74.24442 - 131.878814	$4s4p^3 - 4s^24p(^2P_{1/2}^o)5f$	$^3D^o - \frac{3}{2}^1D^o$	3 - 4		425
	5	1750.945	83.100804 - 140.21283	$4s^24p(^2P^o)4d - 4s^24p(^2P_{3/2}^o)6f$	$^1D^o - \frac{3}{2}^1D^o$	2 - 3		425
	225	1768.985	22.5986 - 79.12833	$4s^24p^2 - 4s^24p(^2P_{1/2}^o)5s$	$^1S - (\frac{3}{2})^o$	0 - 1		425
	0	1787.885	84.636186 - 140.56830	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3P^o - \frac{3}{2}^1D^o$	1 - 2		425
	5	1789.643	84.648426 - 140.52567	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3P^o - \frac{3}{2}^1D^o$	0 - 1		425
	0	1794.567	85.10586 - 140.82984	$4s4p^3 - 4s^24p(^2P_{1/2}^o)7f$	$^3P^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1803.028	85.10586 - 140.56830	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3P^o - \frac{3}{2}^1D^o$	2 - 2		425
	5	1812.350	85.10586 - 140.28309	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3P^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1814.660	85.10586 - 140.21283	$4s4p^3 - 4s^24p(^2P_{3/2}^o)6f$	$^3P^o - \frac{3}{2}^1D^o$	2 - 3		425
	0	1820.009	90.927421 - 145.87230	$4s^24p(^2P^o)4d - 4s^24p(^2P_{3/2}^o)8f$	$^3F^o - \frac{3}{2}^1D^o$	4 - 5		425
	5	1839.978	83.100804 - 137.44954	$4s^24p(^2P^o)4d - 4s^24p(^2P_{1/2}^o)6f$	$^1D^o - \frac{3}{2}^1D^o$	2 - 3		425

AS II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	350	1860.342	1.06349 - 54.81708	$4s^2 4p^2 - 4s 4p^3$	$g^2 P^\circ - ^2 S^\circ$	1 - 2		425
	50	1891.278	82.819214 - 135.6935	$4s^2 4p(2P_{3/2}^\circ) 5s - 4s^2 4p(2P_{3/2}^\circ) 7p$	$(\frac{3}{2})^\circ - \frac{3}{2}^\circ$	1 - 0		425
	1	1894.661	90.927421 - 143.70738	$4s^2 4p(2P^\circ) 4d - 4s^2 4p(2P_{3/2}^\circ) 7f$	$^3 F^\circ - \frac{3}{2}^\circ$	4 - 5		425
	500	1912.938	2.54135 - 54.81708	$4s^2 4p^2 - 4s 4p^3$	$g^2 P^\circ - ^2 S^\circ$	2 - 2		425
	0	1933.530	83.100804 - 134.819701	$4s^2 4p(2P^\circ) 4d - 4s^2 4p(2P_{3/2}^\circ) 5f$	$^1 D^\circ - \frac{3}{2}^\circ$	2 - 2		425
	0	1937.869	83.100804 - 134.70390	$4s^2 4p(2P^\circ) 4d - 4s^2 4p(2P_{3/2}^\circ) 7p$	$^1 D^\circ - \frac{3}{2}^\circ$	2 - 2		425
	1	1941.876	73.74989 - 125.246483	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	1 - 2		425
	0	1943.305	83.100804 - 134.559487	$4s^2 4p(2P^\circ) 4d - 4s^2 4p(2P_{3/2}^\circ) 5f$	$^1 D^\circ - \frac{3}{2}^\circ$	2 - 3		425
	40	1943.317	73.74989 - 125.208426	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	1 - 1		425
	1	1946.137	88.829143 - 140.21283	$4s^2 4p(2P^\circ) 4d - 4s^2 4p(2P_{3/2}^\circ) 6f$	$^3 F^\circ - \frac{3}{2}^\circ$	2 - 3		425
	0	1947.572	73.86233 - 125.208426	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	2 - 1		425
	0	1951.393	89.549654 - 140.79503	$4s^2 4p(2P^\circ) 4d - 4s^2 4p(2P_{3/2}^\circ) 7f$	$^3 F^\circ - \frac{3}{2}^\circ$	3 - 2		425
	0	1952.541	73.74989 - 124.965312	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 6p$	$^3 D^\circ - \frac{3}{2}^\circ$	1 - 2		425
	0	1956.835	73.86233 - 124.965312	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 6p$	$^3 D^\circ - \frac{3}{2}^\circ$	2 - 2		425
	3	1965.036	89.549654 - 140.43935	$4s^2 4p(2P^\circ) 4d - 4s^2 4p(2P_{3/2}^\circ) 6f$	$^3 F^\circ - \frac{3}{2}^\circ$	3 - 4		425
	20	1968.660	73.86233 - 124.658219	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	2 - 3		425
	20	1968.855	73.86233 - 124.653170	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	2 - 2		425
	0	1970.953	73.86233 - 124.59917	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 6p$	$^3 D^\circ - \frac{3}{2}^\circ$	2 - 1		425
	0	1971.580	74.24442 - 124.965312	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 6p$	$^3 D^\circ - \frac{3}{2}^\circ$	3 - 2		425
	1	1975.270	74.24442 - 124.870466	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	3 - 4		425
	10	1979.755	84.636186 - 135.14743	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 5f$	$^3 P^\circ - \frac{3}{2}^\circ$	1 - 2		425
	2	1980.992	84.636186 - 135.116015	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 5f$	$^3 P^\circ - \frac{3}{2}^\circ$	1 - 1		425
	10	1981.466	84.648426 - 135.116015	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 5f$	$^3 P^\circ - \frac{3}{2}^\circ$	0 - 1		425
	100	1983.581	74.24442 - 124.658219	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	3 - 3		425
	3	1983.787	74.24442 - 124.653170	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	3 - 2		425
	20	1988.018	73.86233 - 124.163580	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 6p$	$^3 D^\circ - \frac{3}{2}^\circ$	2 - 2		425
	100	1988.955	73.86233 - 124.139913	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 4f$	$^3 D^\circ - \frac{3}{2}^\circ$	2 - 3		425
	5	1992.682	84.636186 - 134.819701	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 5f$	$^3 P^\circ - \frac{3}{2}^\circ$	1 - 2		425
	10	1998.340	85.10586 - 135.14743	$4s 4p^3 - 4s^2 4p(2P_{3/2}^\circ) 5f$	$^3 P^\circ - \frac{3}{2}^\circ$	2 - 2		425

**ARSENIC III (As^{2+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p(2P_{1/2}^\circ)$ (31 electrons)
 Ionization Potential 228 670 cm^{-1} ; 28.351 eV**

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	603.79	0.0 - 165.623	$4s^2 4p - 4s^2 5d$	$g^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		580
	150	614.38	2.940 - 165.708	$4s^2 4p - 4s^2 5d$	$g^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		580
	50	614.70	2.940 - 165.623	$4s^2 4p - 4s^2 5d$	$g^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		580
	450	849.99	0.0 - 117.651	$4s^2 4p - 4s^2 4d$	$g^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		580
	350	866.36	0.0 - 115.424	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		580
	500	871.07	2.940 - 117.744	$4s^2 4p - 4s^2 4d$	$g^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		580
	400	871.79	2.940 - 117.651	$4s^2 4p - 4s^2 4d$	$g^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		580
	350	877.67	0.0 - 113.936	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		580
	400	889.03	2.940 - 115.424	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 P$	$\frac{3}{2} - \frac{5}{2}$		580
	300	900.94	2.940 - 113.936	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 P$	$\frac{3}{2} - \frac{5}{2}$		580
	200	927.57	0.0 - 107.808	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		580
	300	937.26	0.0 - 106.694	$4s^2 4p - 4s^2 5s$	$g^2 P^\circ - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		580
	200	953.55	2.940 - 107.808	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 S$	$\frac{3}{2} - \frac{5}{2}$		580
	400	963.80	2.940 - 106.694	$4s^2 4p - 4s^2 5s$	$g^2 P^\circ - ^2 S$	$\frac{1}{2} - \frac{3}{2}$		580
	500	1172.16	0.0 - 85.310	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		580
	500	1209.29	2.940 - 85.633	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		580
	100	1214.00	2.940 - 85.310	$4s^2 4p - 4s 4p^2$	$g^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		580
	300	1268.95	85.310 - 164.115	$4s 4p^2 - 4s^2 4f$	$^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$		580

AS III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	450	1274.27	85.633 - 164.107	$4s4p^2 - 4s^24f$	$^2D - ^2F^{\circ}$	$\frac{1}{2} - \frac{7}{2}$		580

ARSENIC IV (As^{3+}), $Z = 33$
Ground State $1s^22s^22p^63s^23p^63d^{10}4s^2(^1S_0)$ (30 electrons)
Ionization Potential $404\,369 \text{ cm}^{-1}$; 50.13 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	100	530.0	112.022 - 300.6989	$4s4p - 4s6s$	$^1P^{\circ} - ^1S$	1 - 0		584
	150	537.4	112.022 - 298.117	$4s4p -$	$^1P^{\circ} - 1$	1 - 2		584
	50	550.0	112.022 - 293.8344	$4s4p - 4s5d$	$^1P^{\circ} - ^1D$	1 - 2		584
	20	655.9	76.962 - 229.4205	$4s4p - 4s5s$	$^3P^{\circ} - ^1S$	1 - 0		584
	250	692.9	75.812 - 220.1276	$4s4p - 4s5s$	$^3P^{\circ} - ^3S$	0 - 1		584
	350	698.5	76.962 - 220.1276	$4s4p - 4s5s$	$^3P^{\circ} - ^3S$	1 - 1		584
	400	711.1	79.492 - 220.1276	$4s4p - 4s5s$	$^3P^{\circ} - ^3S$	2 - 1		584
	400	741.9	75.812 - 210.5970	$4s4p - 4s4d$	$^3P^{\circ} - ^3D$	0 - 1		584
	450	747.6	76.962 - 210.7298	$4s4p - 4s4d$	$^3P^{\circ} - ^3D$	1 - 2		584
	400	748.3	76.962 - 210.5970	$4s4p - 4s4d$	$^3P^{\circ} - ^3D$	1 - 1		584
	500	760.8	79.492 - 210.9326	$4s4p - 4s4d$	$^3P^{\circ} - ^3D$	2 - 3		584
	400	762.0	79.492 - 210.7298	$4s4p - 4s4d$	$^3P^{\circ} - ^3D$	2 - 2		584
	200	762.7	79.492 - 210.5970	$4s4p - 4s4d$	$^3P^{\circ} - ^3D$	2 - 1		584
	500	851.8	112.022 - 229.4205	$4s4p - 4s5s$	$^1P^{\circ} - ^1S$	1 - 0		584
	500	892.7	0.0 - 112.022	$4s^2 - 4s4p$	$g^1S - ^1P^{\circ}$	0 - 1		584
	50	925.0	112.022 - 220.1276	$4s4p - 4s5s$	$^1P^{\circ} - ^3S$	1 - 1		584
	400	930.8	76.962 - 184.394	$4s4p - 4p^2$	$^3P^{\circ} - ^3P$	1 - 2		584
	250	941.9	179.563 - 285.73	$4s4d - 4s4f$	$^1D - ^1F^{\circ}$	2 - 3		584
	450	946.5	75.812 - 181.468	$4s4p - 4p^2$	$^3P^{\circ} - ^3P$	0 - 1		584
	400	953.3	79.492 - 184.394	$4s4p - 4p^2$	$^3P^{\circ} - ^3P$	2 - 2		584
	450	956.9	76.962 - 181.468	$4s4p - 4p^2$	$^3P^{\circ} - ^3P$	1 - 1		584
	500	971.1	76.962 - 179.934	$4s4p - 4p^2$	$^3P^{\circ} - ^3P$	1 - 0		584
	450	974.6	76.962 - 179.563	$4s4p - 4s4d$	$^3P^{\circ} - ^1D$	1 - 2		584
	500	980.6	79.492 - 181.468	$4s4p - 4p^2$	$^3P^{\circ} - ^3P$	2 - 1		584
	450	999.3	79.492 - 179.563	$4s4p - 4s4d$	$^3P^{\circ} - ^1D$	2 - 2		584
	100	999.4	184.394 - 284.456	$4p^2 - 4s4f$	$^3P - ^3F^{\circ}$	2 - 2		584
	400	1003.4	112.022 - 211.683	$4s4p - 4p^2$	$^1P^{\circ} - ^1S$	1 - 0		584
	350	1079.5	112.022 - 204.658	$4s4p - 4p^2$	$^1P^{\circ} - ^1D$	1 - 2		584
	500	1299.3	0.0 - 76.962	$4s^2 - 4s4p$	$g^1S - ^3P^{\circ}$	0 - 1		584
	100	1333.3	210.7298 - 285.73	$4s4d - 4s4f$	$^3D - ^1F^{\circ}$	2 - 3		584
	20	1336.9	210.9326 - 285.73	$4s4d - 4s4f$	$^3D - ^1F^{\circ}$	3 - 3		584
	350	1342.7	179.563 - 254.0399	$4s4d - 4s5p$	$^1D - ^1P^{\circ}$	2 - 1		584
	450	1347.5	210.9326 - 285.143	$4s4d - 4s4f$	$^3D - ^3F^{\circ}$	3 - 4		584
	350	1351.3	210.7298 - 284.73	$4s4d - 4s4f$	$^3D - ^3F^{\circ}$	2 - 3		584
	300	1353.9	210.5970 - 284.456	$4s4d - 4s4f$	$^3D - ^3F^{\circ}$	1 - 2		584
	100	1355.1	210.9326 - 284.73	$4s4d - 4s4f$	$^3D - ^3F^{\circ}$	3 - 3		584
	100	1356.4	210.7298 - 284.456	$4s4d - 4s4f$	$^3D - ^3F^{\circ}$	2 - 2		584
	500	1375.1	179.563 - 252.2850	$4s4d - 4s5p$	$^1D - ^1P^{\circ}$	2 - 2		584
	300	1381.7	112.022 - 184.394	$4s4p - 4p^2$	$^1P^{\circ} - ^3P$	1 - 2		584
	20	1390.7	179.563 - 251.4669	$4s4d - 4s5p$	$^1D - ^1P^{\circ}$	2 - 1		584
	200	1435.8	184.394 - 254.0399	$4p^2 - 4s5p$	$^3P - ^1P^{\circ}$	2 - 1		584
	100	1440.0	112.022 - 181.468	$4s4p - 4p^2$	$^1P^{\circ} - ^3P$	1 - 1		584

AS IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	1472.5	112.022 - 179.934	4s4p - 4p ²	¹ P° - ³ P	1 - 0		584
	50	1472.9	184.394 - 252.2850	4p ² - 4s5p	³ P - ³ P°	2 - 2		584
	450	1480.6	112.022 - 179.563	4s4p - 4s4d	¹ P° - ¹ D	1 - 2		584

ARSENIC V (As⁴⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s(²S_{1/2}) (29 electrons)
Ionization Potential 505 136 cm⁻¹; 62.63 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	600.7	97.135 - 263.596	3d ¹⁰ 4p - 3d ¹⁰ 5s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		651
	200	615.9	101.245 - 263.596	3d ¹⁰ 4p - 3d ¹⁰ 5s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		651
	350	715.5	97.135 - 236.897	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		651
	400	734.8	101.245 - 237.342	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		651
	250	737.2	101.245 - 236.897	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		651
	500	987.7	0.0 - 101.245	3d ¹⁰ 4s - 3d ¹⁰ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		651
	500	1029.5	0.0 - 97.135	3d ¹⁰ 4s - 3d ¹⁰ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		651
	200	1051.6	236.897 - 331.987	3d ¹⁰ 4d - 3d ¹⁰ 4f	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$		651
	250	1056.7	236.897 - 331.987	3d ¹⁰ 4d - 3d ¹⁰ 4f	² D - ² F°	$\frac{5}{2} - \frac{3}{2}$		651

ARSENIC VI (As⁵⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰(¹S₀) (28 electrons)
Ionization Potential 974 000 cm⁻¹; 121 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	19	121.578	0.0 - 822.52	3d ¹⁰ - 3d ⁹ 5f	g ¹ S - ¹ P°	0 - 1		996
	17	122.433	0.0 - 816.77	3d ¹⁰ - 3d ⁹ 5f	g ¹ S - ³ D°	0 - 1		996
	2	122.936	0.0 - 813.43	3d ¹⁰ - 3d ⁹ 5f	g ¹ S - ³ P°	0 - 1		996
	24	136.485	0.0 - 732.68	3d ¹⁰ - 3d ⁹ 4f	g ¹ S - ¹ P°	0 - 1		996
	22	137.605	0.0 - 726.72	3d ¹⁰ - 3d ⁹ 4f	g ¹ S - ³ D°	0 - 1		996
	6	138.194	0.0 - 723.62	3d ¹⁰ - 3d ⁹ 4f	g ¹ S - ³ P°	0 - 1		996
	25	142.184	0.0 - 703.31	3d ¹⁰ - 3d ⁹ 5p	g ¹ S - ¹ P°	0 - 1		996
	20	143.197	0.0 - 698.34	3d ¹⁰ - 3d ⁹ 5p	g ¹ S - ³ P°	0 - 1		996
	72	219.990	0.0 - 454.5652	3d ¹⁰ - 3d ⁹ 4p	g ¹ S - ³ D°	0 - 1		996
	73	221.044	0.0 - 452.3987	3d ¹⁰ - 3d ⁹ 4p	g ¹ S - ¹ P°	0 - 1		996
	44	226.836	0.0 - 440.8467	3d ¹⁰ - 3d ⁹ 4p	g ¹ S - ³ P°	0 - 1		996
	5	584.296	435.4246 - 606.5710	3d ⁹ 4p - 3d ⁹ 4d	³ P° - ³ P	2 - 1		996
	7	585.981	440.8467 - 611.4991	3d ⁹ 4p - 3d ⁹ 4d	³ P° - ¹ D	1 - 2		996
	63	590.930	435.4246 - 604.6486	3d ⁹ 4p - 3d ⁹ 4d	³ P° - ³ D	2 - 3		996
	41	591.186	443.8028 - 612.9540	3d ⁹ 4p - 3d ⁹ 4d	³ F° - ³ F	2 - 2		996
	27	591.671	439.9186 - 608.9305	3d ⁹ 4p - 3d ⁹ 4d	³ F° - ¹ F	3 - 3		996
	7	594.002	440.8467 - 609.1951	3d ⁹ 4p - 3d ⁹ 4d	³ P° - ³ D	1 - 1		996
	16	596.317	443.8028 - 611.4991	3d ⁹ 4p - 3d ⁹ 4d	³ F° - ¹ D	2 - 2		996

AS VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	69	597.453	435.4246 - 602.8018	$3d^4p - 3d^4d$	$^3P^o - ^3P$	2 - 2		996
	27	597.706	435.4246 - 602.7305	$3d^4p - 3d^4d$	$^3P^o - ^1P$	2 - 1		996
	35	599.705	443.0820 - 609.8303	$3d^4p - 3d^4d$	$^3F^o - ^3F$	4 - 4		996
	17	600.844	439.9186 - 606.3513	$3d^4p - 3d^4d$	$^3F^o - ^3D$	3 - 2		996
	27	603.411	440.8467 - 606.5710	$3d^4p - 3d^4d$	$^3P^o - ^3P$	1 - 1		996
		603.768	439.9186 - 605.5388	$3d^4p - 3d^4d$	$^3F^o - ^3G$	3 - 3		996
	59	604.206	440.8467 - 606.3513	$3d^4p - 3d^4d$	$^3P^o - ^3D$	1 - 2		996
	7	604.621	443.8028 - 609.1951	$3d^4p - 3d^4d$	$^3F^o - ^3D$	2 - 1		996
	55	605.534	444.0513 - 609.1951	$3d^4p - 3d^4d$	$^3P^o - ^3D$	0 - 1		996
	65	605.590	443.8028 - 608.9305	$3d^4p - 3d^4d$	$^3F^o - ^1F$	2 - 3		996
	34	607.054	439.9186 - 604.6486	$3d^4p - 3d^4d$	$^3F^o - ^3D$	3 - 3		996
	44	607.288	440.8467 - 605.5132	$3d^4p - 3d^4d$	$^3P^o - ^3P$	1 - 0		996
	25	611.659	449.4620 - 612.9540	$3d^4p - 3d^4d$	$^1D^o - ^3F$	2 - 2		996
	67	611.899	443.0820 - 606.5083	$3d^4p - 3d^4d$	$^3F^o - ^1G$	4 - 4		996
	43	612.561	449.4672 - 612.7154	$3d^4p - 3d^4d$	$^1F^o - ^3F$	3 - 3		996
	52	613.917	439.9186 - 602.8018	$3d^4p - 3d^4d$	$^3F^o - ^3P$	3 - 2		996
	73	615.204	439.9186 - 602.4658	$3d^4p - 3d^4d$	$^3F^o - ^3G$	3 - 4		996
	30	615.310	444.0513 - 606.5710	$3d^4p - 3d^4d$	$^3P^o - ^3P$	0 - 1		996
	31	617.141	449.4620 - 611.4991	$3d^4p - 3d^4d$	$^1D^o - ^1D$	2 - 2		996
	38	617.724	440.8467 - 602.7305	$3d^4p - 3d^4d$	$^3P^o - ^1P$	1 - 1		996
	70	618.290	443.8028 - 605.5388	$3d^4p - 3d^4d$	$^3F^o - ^3G$	2 - 3		996
	24	618.941	443.0820 - 604.6486	$3d^4p - 3d^4d$	$^3F^o - ^3D$	4 - 3		996
	40	621.446	451.8005 - 612.7154	$3d^4p - 3d^4d$	$^3D^o - ^3F$	3 - 3		996
	59	622.836	452.3987 - 612.9540	$3d^4p - 3d^4d$	$^1P^o - ^3F$	1 - 2		996
	25	623.587	449.4672 - 609.8303	$3d^4p - 3d^4d$	$^1F^o - ^3F$	3 - 4		996
	72	625.724	435.4246 - 595.2392	$3d^4p - 3d^4d$	$^3P^o - ^3S$	2 - 1		996
	69	627.082	449.4620 - 608.9305	$3d^4p - 3d^4d$	$^1D^o - ^1F$	2 - 3		996
	33	627.417	443.0820 - 602.4658	$3d^4p - 3d^4d$	$^3F^o - ^3G$	4 - 4		996
	73	628.340	443.0820 - 602.2356	$3d^4p - 3d^4d$	$^3F^o - ^3G$	4 - 5		996
	7	631.362	454.5652 - 612.9540	$3d^4p - 3d^4d$	$^3D^o - ^3F$	1 - 2		996
	71	632.790	451.8005 - 609.8303	$3d^4p - 3d^4d$	$^3D^o - ^3F$	3 - 4		996
	47	635.330	455.5565 - 612.9540	$3d^4p - 3d^4d$	$^3D^o - ^3F$	2 - 2		996
	69	636.301	455.5565 - 612.7154	$3d^4p - 3d^4d$	$^3D^o - ^3F$	2 - 3		996
	9	636.412	451.8005 - 608.9305	$3d^4p - 3d^4d$	$^3D^o - ^1F$	3 - 3		996
	71	636.777	449.4672 - 606.5083	$3d^4p - 3d^4d$	$^1F^o - ^1G$	3 - 4		996
	66	637.210	454.5652 - 611.4991	$3d^4p - 3d^4d$	$^3D^o - ^1D$	1 - 2		996
	63	637.393	449.4620 - 606.3513	$3d^4p - 3d^4d$	$^1D^o - ^3D$	2 - 2		996
	36	637.772	452.3987 - 609.1951	$3d^4p - 3d^4d$	$^1P^o - ^3D$	1 - 1		996
	53	640.714	449.4620 - 605.5388	$3d^4p - 3d^4d$	$^1D^o - ^3G$	2 - 3		996
	43	641.264	455.5565 - 611.4991	$3d^4p - 3d^4d$	$^3D^o - ^1D$	2 - 2		996
	65	644.404	449.4672 - 604.6486	$3d^4p - 3d^4d$	$^1F^o - ^3D$	3 - 3		996
	4	646.382	451.8005 - 606.5083	$3d^4p - 3d^4d$	$^3D^o - ^1G$	3 - 4		996
	18	646.707	454.5652 - 609.1951	$3d^4p - 3d^4d$	$^3D^o - ^3D$	1 - 1		996
	33	647.701	440.8467 - 595.2392	$3d^4p - 3d^4d$	$^3P^o - ^3S$	1 - 1		996
	14	648.629	452.3987 - 606.5710	$3d^4p - 3d^4d$	$^1P^o - ^3P$	1 - 1		996
	8	649.561	452.3987 - 606.3513	$3d^4p - 3d^4d$	$^1P^o - ^3D$	1 - 2		996
	5	650.455	451.8005 - 605.5388	$3d^4p - 3d^4d$	$^3D^o - ^3G$	3 - 3		996
	31	652.169	449.4672 - 602.8018	$3d^4p - 3d^4d$	$^1F^o - ^3P$	3 - 2		996
	22	652.450	449.4620 - 602.7305	$3d^4p - 3d^4d$	$^1D^o - ^1P$	2 - 1		996
	6	653.604	449.4672 - 602.4658	$3d^4p - 3d^4d$	$^1F^o - ^3G$	3 - 4		996
	60	654.247	451.8005 - 604.6486	$3d^4p - 3d^4d$	$^3D^o - ^3D$	3 - 3		996
	18	657.872	454.5652 - 606.5710	$3d^4p - 3d^4d$	$^3D^o - ^3P$	1 - 1		996
	17	662.192	455.5565 - 606.5710	$3d^4p - 3d^4d$	$^3D^o - ^3P$	2 - 1		996
	25	662.250	451.8005 - 602.8018	$3d^4p - 3d^4d$	$^3D^o - ^3P$	3 - 2		996

AS VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	59	663.152	455.5565 - 606.3513	$3d^9 4p - 3d^9 4d$	$^3D^\circ - ^3D$	2 - 2		996
	25	665.196	452.3987 - 602.7305	$3d^9 4p - 3d^9 4d$	$^1P^\circ - ^1P$	1 - 1		996
	11	674.923	454.5652 - 602.7305	$3d^9 4p - 3d^9 4d$	$^3D^\circ - ^1P$	1 - 1		996
	13	803.957	331.1714 - 455.5565	$3d^9 4s - 3d^9 4p$	$^3D - ^3D^\circ$	3 - 2		996
	27	817.448	333.2252 - 455.5565	$3d^9 4s - 3d^9 4p$	$^3D - ^3D^\circ$	2 - 2		996
	38	824.132	333.2252 - 454.5652	$3d^9 4s - 3d^9 4p$	$^3D - ^3D^\circ$	2 - 1		996
	52	828.987	331.1714 - 451.8005	$3d^9 4s - 3d^9 4p$	$^3D - ^3D^\circ$	3 - 3		996
	9	839.114	333.2252 - 452.3987	$3d^9 4s - 3d^9 4p$	$^3D - ^1P^\circ$	2 - 1		996
	42	842.467	336.8569 - 455.5565	$3d^9 4s - 3d^9 4p$	$^3D - ^3D^\circ$	1 - 2		996
	45	843.346	333.2252 - 451.8005	$3d^9 4s - 3d^9 4p$	$^3D - ^3D^\circ$	2 - 3		996
	52	845.341	331.1714 - 449.4672	$3d^9 4s - 3d^9 4p$	$^3D - ^1F^\circ$	3 - 3		996
	47	849.561	336.8569 - 454.5652	$3d^9 4s - 3d^9 4p$	$^3D - ^3D^\circ$	1 - 1		996
	44	860.295	333.2252 - 449.4672	$3d^9 4s - 3d^9 4p$	$^3D - ^1F^\circ$	2 - 3		996
	49	860.318	333.2252 - 449.4620	$3d^9 4s - 3d^9 4p$	$^3D - ^1D^\circ$	2 - 2		996
	44	865.486	336.8569 - 452.3987	$3d^9 4s - 3d^9 4p$	$^3D - ^1P^\circ$	1 - 1		996
	49	867.061	340.2248 - 455.5565	$3d^9 4s - 3d^9 4p$	$^1D - ^3D^\circ$	2 - 2		996
	16	874.575	340.2248 - 454.5652	$3d^9 4s - 3d^9 4p$	$^1D - ^3D^\circ$	2 - 1		996
	4	887.849	331.1714 - 443.8028	$3d^9 4s - 3d^9 4p$	$^3D - ^3F^\circ$	3 - 2		996
	27	888.058	336.8569 - 449.4620	$3d^9 4s - 3d^9 4p$	$^3D - ^1D^\circ$	1 - 2		996
	29	891.470	340.2248 - 452.3987	$3d^9 4s - 3d^9 4p$	$^1D - ^1P^\circ$	2 - 1		996
	59	893.570	331.1714 - 443.8020	$3d^9 4s - 3d^9 4p$	$^3D - ^3F^\circ$	3 - 4		996
	47	896.249	340.2248 - 451.8005	$3d^9 4s - 3d^9 4p$	$^1D - ^3D^\circ$	2 - 3		996
	42	904.344	333.2252 - 443.8028	$3d^9 4s - 3d^9 4p$	$^3D - ^3F^\circ$	2 - 2		996
	64	915.398	340.2248 - 449.4672	$3d^9 4s - 3d^9 4p$	$^1D - ^1F^\circ$	2 - 3		996
	63	915.436	340.2248 - 449.4620	$3d^9 4s - 3d^9 4p$	$^1D - ^1D^\circ$	2 - 2		996
	58	919.568	331.1714 - 439.9186	$3d^9 4s - 3d^9 4p$	$^3D - ^3F^\circ$	3 - 3		996
	58	929.186	333.2252 - 440.8467	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^\circ$	2 - 1		996
	58	932.885	336.8569 - 444.0513	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^\circ$	1 - 0		996
	62	935.054	336.8569 - 443.8028	$3d^9 4s - 3d^9 4p$	$^3D - ^3F^\circ$	1 - 2		996
	70	937.256	333.2252 - 439.9186	$3d^9 4s - 3d^9 4p$	$^3D - ^3F^\circ$	2 - 3		996
	65	959.204	331.1714 - 435.4246	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^\circ$	3 - 2		996
	63	961.670	336.8569 - 440.8467	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^\circ$	1 - 1		996
	24	965.451	340.2248 - 443.8028	$3d^9 4s - 3d^9 4p$	$^1D - ^3F^\circ$	2 - 2		996
	8	978.488	333.2252 - 435.4246	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^\circ$	2 - 2		996
	39	993.820	340.2248 - 440.8467	$3d^9 4s - 3d^9 4p$	$^1D - ^3P^\circ$	2 - 1		996
	21	1003.075	340.2248 - 439.9186	$3d^9 4s - 3d^9 4p$	$^1D - ^3F^\circ$	2 - 3		996
	4	1050.429	340.2248 - 435.4246	$3d^9 4s - 3d^9 4p$	$^1D - ^3P^\circ$	2 - 2		996

ARSENIC VII (As⁶⁺), Z = 33
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 (^2D_{5/2})$ (27 electrons)
Ionization Potential [1 242 000] cm^{-1} ; [154] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	15	119.779	5.705 - 840.575	$3d^9 - 3p^5 3d^{10}$	$g^2 D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		996
	40	125.014	0.0 - 799.920	$3d^9 - 3p^5 3d^{10}$	$g^2 D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		996
	10	125.910	5.705 - 799.920	$3d^9 - 3p^5 3d^{10}$	$g^2 D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		996
	28	158.666	0.0 - 630.2561	$3d^9 - 3d^8(^1S)4p$	$g^2 D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$		996
	4	160.115	5.705 - 630.2561	$3d^9 - 3d^8(^1S)4p$	$g^2 D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		996
	25	161.619	5.705 - 624.4437	$3d^9 - 3d^8(^1S)4p$	$g^2 D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$		996

AS VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	18	171.131	0.0 - 584.3477	$3d^9 - 3d^8(^1G)4p$	$g^2D - ^2G^o$	2-2		996
	13	173.817	0.0 - 575.3159	$3d^9 - 3d^8(^1G)4p$	$g^2D - ^2F^o$	2-2		996
	35	174.606	0.0 - 572.7130	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2D^o$	2-2		996
	56	174.699	0.0 - 572.4110	$3d^9 - 3d^8(^1G)4p$	$g^2D - ^2F^o$	2-2		996
	34	175.014	5.705 - 577.0867	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2S^o$	2-2		996
	15	175.205	0.0 - 570.7604	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2D^o$	2-2		996
	50	175.462	0.0 - 569.9255	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2P^o$	2-2		996
	56	175.559	5.705 - 575.3159	$3d^9 - 3d^8(^1G)4p$	$g^2D - ^2F^o$	2-2		996
	44	175.836	5.705 - 574.4176	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2P^o$	2-2		996
	52	176.320	0.0 - 567.1511	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4D^o$	2-2		996
	22	176.364	5.705 - 572.7130	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2D^o$	2-2		996
	39	176.932	0.0 - 565.1883	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4D^o$	2-2		996
	25	176.974	5.705 - 570.7604	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2D^o$	2-2		996
	40	177.236	5.705 - 569.9255	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^2P^o$	2-2		996
	24	177.591	0.0 - 563.0927	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2P^o$	2-2		996
	55	178.018	0.0 - 561.7408	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2D^o$	2-2		996
	51	178.634	0.0 - 559.8028	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2F^o$	2-2		996
	30	178.700	5.705 - 565.3024	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4D^o$	2-2		996
	15	178.779	5.705 - 565.0537	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4D^o$	2-2		996
	28	179.408	5.705 - 563.0927	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2P^o$	2-2		996
	16	179.843	5.705 - 561.7408	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2D^o$	2-2		996
	8	180.264	5.705 - 560.4459	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2P^o$	2-2		996
	50	180.541	5.705 - 559.5968	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2D^o$	2-2		996
	38	180.797	0.0 - 553.1050	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4P^o$	2-2		996
	18	181.093	0.0 - 552.2014	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4P^o$	2-2		996
	39	181.574	5.705 - 556.4451	$3d^9 - 3d^8(^1D)4p$	$g^2D - ^2F^o$	2-2		996
	53	182.515	0.0 - 547.9008	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2F^o$	2-2		996
	31	182.682	5.705 - 553.1050	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4P^o$	2-2		996
	40	182.984	5.705 - 552.2014	$3d^9 - 3d^8(^3P)4p$	$g^2D - ^4P^o$	2-2		996
	21	183.135	0.0 - 546.0465	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2D^o$	2-2		996
	33	183.681	0.0 - 544.4233	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2G^o$	2-2		996
	52	184.067	0.0 - 543.2806	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2F^o$	2-2		996
	53	184.310	0.0 - 542.5633	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2D^o$	2-2		996
	33	184.435	5.705 - 547.9008	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2F^o$	2-2		996
	47	185.068	5.705 - 546.0465	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2D^o$	2-2		996
	55	185.206	0.0 - 539.9381	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^4F^o$	2-2		996
	13	185.381	0.0 - 539.4121	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^4F^o$	2-2		996
	49	185.659	0.0 - 538.6215	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^4F^o$	2-2		996
	40	186.269	5.705 - 542.5633	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^2D^o$	2-2		996
	40	187.369	5.705 - 539.4121	$3d^9 - 3d^8(^3F)4p$	$g^2D - ^4F^o$	2-2		996

ARSENIC XIV (As^{13+}), $Z = 33$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 (^3F_2)$ (20 electrons)
Ionization Potential [3 396 000] cm^{-1} ; [421] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	50.68	12.0 + D - 1985.2 + D	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^o$	4 - 5		878

ARSENIC XV (As¹⁴⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p⁶3d(²D_{3/2}) (19 electrons)
Ionization Potential [3 726 000] cm⁻¹; [462] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	20	47.514	0.0 - 2104.6	3p ⁶ 3d - 3p ⁶ 4f	g ² D - ² F°	$\frac{3}{2} - \frac{5}{2}$		878
	30	47.711	8.6 + D - 2104.6 + D	3p ⁶ 3d - 3p ⁶ 4f	² D - ² F°	$\frac{3}{2} - \frac{7}{2}$		878

ARSENIC XVI (As¹⁵⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p⁶(¹S₀) (18 electrons)
Ionization Potential [4 791 000] cm⁻¹; [594] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	44.66	530.0 + D - 2769.1 + D	3p ⁵ 3d - 3p ⁵ 4f	³ F° - ³ G	4 - 5		878

ARSENIC XVII (As¹⁶⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential [5 081 000] cm⁻¹; [630] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	41.84	460.0 + D - 2850.1 + D	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ D - ⁴ F°	$\frac{7}{2} - \frac{9}{2}$		878
	10	42.4	520.0 + S - 2878.5 + S	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ F - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		878
		1780.0	0.0 - 56.18 + C	3p ⁵ - 3p ⁵	g ² P° - g ² P°	$\frac{3}{2} - \frac{1}{2}$	F,P	1145

ARSENIC XVIII (As¹⁷⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [5 404 000] cm⁻¹; [670] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	39.7	3600. + D - 6119. + D	3p ³ (⁴ S°)3d - 3p ³ (⁴ S°)4f	⁵ D° - ⁵ F	4 - 5		878

ARSENIC XXI (As²⁰⁺), Z = 33
Ground State 1s²2s²2p⁶3s²3p²(²P_{1/2}^o) (13 electrons)
Ionization Potential [6 557 000] cm⁻¹; [813] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	20	138.77	0.0 - 720.62	3s ² 3p - 3s ² 3d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		878
	50	150.22	63.569+C - 729.26+C	3s ² 3p - 3s ² 3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		878
	20	174.67	63.569+C - 636.08+C	3s ² 3p - 3s3p ²	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		878
		1573.1	0.0 - 63.569+C	3s ² 3p - 3s ² 3p	g ² P ^o - g ² P ^o	$\frac{1}{2} - \frac{3}{2}$	F,P	1145

ARSENIC XXII (As²¹⁺), Z = 33
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential [7 340 000] cm⁻¹; [910] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	21.142	408.207+C - 5138.1+C	3s3p - 3s5d	³ P ^o - ³ D	2 - 3		878
	10	23.95	1028.5+C - 5203.9+C	3s3d - 3s5f	³ D - ³ F ^o	3 - 4		878
	10	27.432	0.0 - 3645.4	3s ² - 3s4p	g ¹ S - ¹ P ^o	0 - 1		878
	10	28.601	341.726+C - 3838.1+C	3s3p - 3s4d	³ P ^o - ³ D	0 - 1		878
	20	28.699	358.266+C - 3842.7+C	3s3p - 3s4d	³ P ^o - ³ D	1 - 2		878
	30	28.972	408.207+C - 3859.8+C	3s3p - 3s4d	³ P ^o - ³ D	2 - 3		878
	20	30.084	538.01 - 3862.0	3s3p - 3s4d	¹ P ^o - ¹ D	1 - 2		878
	10	31.765	851.9+D - 4000.0+D	3p ² - 3s4f	¹ D - ¹ F ^o	2 - 3		878
	40	33.445	3400.0+L - 6390.0+L	3p3d - 3p4f	³ F ^o - ³ G	4 - 5		878
	20	33.519	3406.6+L - 6390.0+L	3p3d - 3p4f	³ F ^o - ³ G	3 - 4		878
	40	33.84	1028.5+C - 3983.6+C	3s3d - 3s4f	³ D - ³ F ^o	3 - 4		878
	20	34.732	3800.0+R - 6679.2+R	3p3d - 3p4f	¹ F ^o - ¹ G	3 - 4		878
	50	161.21	408.207+C - 1028.5+C	3s3p - 3s3d	³ P ^o - ³ D	2 - 3		878
	50	166.52	538.01 - 1138.5	3s3p - 3s3d	¹ P ^o - ¹ D	1 - 2		878
	50	185.87	0.0 - 538.01	3s ² - 3s3p	g ¹ S - ¹ P ^o	0 - 1		878
		279.1	0.0 - 358.266+C	3s ² - 3s3p	g ¹ S - ³ P ^o	0 - 1	P	1135
		1504.	341.726+C - 408.207+C	3s3p - 3s3p	³ P ^o - ³ P ^o	0 - 2	F,P	375,1145

ARSENIC XXIII (As²²⁺), Z = 33
Ground State 1s²2s²2p⁶3s(²S_{1/2}) (11 electrons)
Ionization Potential 7 717 360 cm⁻¹; 956.8 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		8.312	468.894 - 12500.	2p ⁶ 3p - 2p ⁵ (² P _{1/2} ^o)3p(3d(² D _{3/2}))	² P ^o - (0, $\frac{3}{2}$) ^o	$\frac{3}{2} - \frac{5}{2}$		1094
		8.332	0.0 - 12002.	2p ⁶ 3s - 2p ⁵ (² P _{1/2} ^o)3s(3d(² D _{3/2}))	g ² S - (1, $\frac{3}{2}$) ^o	$\frac{1}{2} - \frac{3}{2}$		1094
		8.341	1006.118 - 12995.	2p ⁶ 3d - 2p ⁵ (² P _{1/2} ^o)(3d(² F ₂))	² D - ($\frac{1}{2}$, 2) ^o	$\frac{3}{2} - \frac{3}{2}$		1094
		8.356	1018.317 - 12986.	2p ⁶ 3d - 2p ⁵ (² P _{1/2} ^o)(3d(² G ₄))	² D - ($\frac{3}{2}$, 4) ^o	$\frac{5}{2} - \frac{7}{2}$		1094
		8.374	1018.317 - 12960.	2p ⁶ 3d - 2p ⁵ (² P _{1/2} ^o)(3d(² F ₂))	² D - ($\frac{3}{2}$, 2) ^o	$\frac{5}{2} - \frac{5}{2}$		1094
		8.392	400.292 - 12316.	2p ⁶ 3p - 2p ⁵ (² P _{1/2} ^o)3p(3d(² D _{3/2}))	² P ^o - (1, $\frac{3}{2}$) ^o	$\frac{1}{2} - \frac{3}{2}$		1094

AS XXIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		8.406	468.894 - 12365.	$2p^6 3p -$ $2p^5(^2P_{3/2})3p(3d(^2D_{5/2}))$	$^2P^\circ - (2, \frac{3}{2})^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.422	1006.118 - 12880.	$2p^6 3d -$ $2p^5(^2P_{1/2})(3d^2(^2F_2))$	$^2D - (\frac{3}{2}, 2)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.507	1006.118 - 12760.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d^2(^1S_0))$	$^2D - (\frac{3}{2}, 0)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.517	1018.317 - 12760.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d^2(^1S_0))$	$^2D - (\frac{3}{2}, 0)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.534	1006.118 - 12724.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d^2(^2F_4))$	$^2D - (\frac{3}{2}, 4)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.543	1018.317 - 12724.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d^2(^2F_4))$	$^2D - (\frac{3}{2}, 4)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.567	1018.317 - 12691.	$2p^6 3d -$ $2p^5(^2P_{3/2})(3d^2(^1G_4))$	$^2D - (\frac{3}{2}, 4)^\circ$	$\frac{3}{2} - \frac{3}{2}$		1094
100	19.090	0.0 - 5238.34	$2p^6 3s - 2p^6 5p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$			878, 630
200	19.649	1018.317 - 6107.00	$2p^6 3d - 2p^6 6f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$			878, 630
200	20.261	400.292 - 5335.88	$2p^6 3p - 2p^6 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
400	20.536	468.894 - 5338.57	$2p^6 3p - 2p^6 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
130	22.828	1006.118 - 5386.65	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
250	22.887	1018.317 - 5387.73	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
500	26.495	0.0 - 3774.60	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$			630
400	26.685	0.0 - 3747.57	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$			630
700	27.976	400.292 - 3974.95	$2p^6 3p - 2p^6 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
900	28.479	468.894 - 3980.27	$2p^6 3p - 2p^6 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
400	31.397	400.292 - 3585.34	$2p^6 3p - 2p^6 4s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{3}{2}$			630
500	32.088	468.894 - 3585.34	$2p^6 3p - 2p^6 4s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{3}{2}$			630
900	32.574	1006.118 - 4076.10	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
1000	32.680	1018.317 - 4078.30	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
400	36.277	1018.317 - 3774.60	$2p^6 3d - 2p^6 4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
200	36.475	1006.118 - 3747.57	$2p^6 3d - 2p^6 4p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
60	62.96	3747.57 - 5335.88	$2p^6 4p - 2p^6 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
80	63.94	3774.60 - 5338.57	$2p^6 4p - 2p^6 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
100	70.845	3974.95 - 5386.65	$2p^6 4d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
150	71.050	3980.27 - 5387.73	$2p^6 4d - 2p^6 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$			630
200	75.916	4076.10 - 5393.39	$2p^6 4f - 2p^6 5g$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{3}{2}$			630
300	76.003	4078.30 - 5394.04	$2p^6 4f - 2p^6 5g$	$^2F^\circ - ^2G$	$\frac{3}{2} - \frac{3}{2}$			630
900	165.064	400.292 - 1006.118	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
950	182.009	468.894 - 1018.317	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
180	186.142	468.894 - 1006.118	$2p^6 3p - 2p^6 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$			630
650	213.268	0.0 - 468.894	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$			630
350	249.82	0.0 - 400.292	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$			630, 878

ARSENIC XXIV (As²³⁺), Z = 33
Ground State $1s^2 2s^2 2p^6 (^1S_0)$ (10 electrons)
Ionization Potential [19 010 000] cm^{-1} ; [2357] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		5.701	0.0 - 17541.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})6d$	$g^1S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		5.801	0.0 - 17238.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})6d$	$g^1S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		5.811	0.0 - 17209. + H	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})6d$	$g^1S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1	P	1094
		5.973	0.0 - 16742.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{1/2})5d$	$g^1S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		6.081	0.0 - 16445.	$2s^2 2p^6 - 2s^2 2p^5(^2P_{3/2})5d$	$g^1S - (\frac{3}{2}, \frac{3}{2})^\circ$	0 - 1		1094
		6.106	0.0 - 16377.	$2s^2 2p^6 - 2s^2 2p^6 4p$	$g^1S - ^1P^\circ$	0 - 1		1094

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		6.117	0.0 - 16348.	$2s^2 2p^6 - 2s 2p^6 4p$	$g^1 S - ^3 P^o$	0 - 1		1094
		6.551	0.0 - 15265.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 4d$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1		1094
		6.676	0.0 - 14979.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 4d$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1		1094
		6.699	0.0 - 14928. + H	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 4d$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1	P	1094
		6.723	0.0 - 14878.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 4s$	$g^1 S - \frac{1}{2} \frac{1}{2}^o$	0 - 1		1094
		6.861	0.0 - 14575.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 4s$	$g^1 S - \frac{3}{2} \frac{1}{2}^o$	0 - 1		1094
		7.777	0.0 - 12858.	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^1 P^o$	0 - 1		1094
		7.829	0.0 - 12773.	$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^3 P^o$	0 - 1		1094
		8.271	0.0 - 12090.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 3d$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1		1094
		8.464	0.0 - 11815.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 3d$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1		1094
		8.567	0.0 - 11673.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 3d$	$g^1 S - (\frac{3}{2}, \frac{3}{2})^o$	0 - 1		1094
		9.034	0.0 - 11069.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{1/2}) 3s$	$g^1 S - \frac{1}{2} \frac{1}{2}^o$	0 - 1		1094
		9.269	0.0 - 10789.	$2s^2 2p^6 - 2s^2 2p^5 (^2P_{3/2}) 3s$	$g^1 S - \frac{3}{2} \frac{1}{2}^o$	0 - 1		1094

ARSENIC XXV (As^{24+}), Z = 33
Ground State $1s^2 2s^2 2p^5 (^2P_{3/2})$ (9 electrons)
Ionization Potential [19 950 000] cm^{-1} ; [2474] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		6.217	302.687 - 16388.	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.236	0.0 - 16036.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1094
		6.274	0.0 - 15939.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4d$	$g^2 P^o - ^4 P$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.331	0.0 - 15795.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4d$	$g^2 P^o - ^4 F$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.344	302.687 - 16066.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.376	0.0 - 15684.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4s$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1094
		6.390	302.687 - 15952.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4d$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.413	0.0 - 15593.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4s$	$g^2 P^o - ^4 P$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.492	302.687 - 15706.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 4s$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.551	0.0 - 15265.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 4s$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1094
		7.306	0.0 - 13687.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.438	0.0 - 13441.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		1094
		7.459	302.687 - 13709.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.473	302.687 - 13684.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$		1094
		7.515	302.687 - 13609.	$2s^2 2p^5 - 2s 2p^5 (^1P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.529	0.0 - 13282.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^4 P$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.569	0.0 - 13212.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		1094
		7.581	0.0 - 13191.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1094
		7.602	302.687 - 13457.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.613	302.687 - 13441.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$		1094
		7.655	0.0 - 13063.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^4 D$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.701	302.687 - 13288.	$2s^2 2p^5 - 2s 2p^5 (^3P^o) 3p$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.902	0.0 - 12653.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 3d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		1094
		7.923	302.687 - 12924.	$2s^2 2p^5 - 2s^2 2p^4 (^1S) 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.951	0.0 - 12577.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 3d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		1094
		7.969	0.0 - 12549.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 3d$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.020	0.0 - 12469.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 3d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.047	0.0 - 12427.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 3d$	$g^2 P^o - ^4 D$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.070	0.0 - 12392.	$2s^2 2p^5 - 2s^2 2p^4 (^3P) 3d$	$g^2 P^o - ^4 D$	$\frac{3}{2} - \frac{5}{2}$		1094
		8.097	302.687 - 12653.	$2s^2 2p^5 - 2s^2 2p^4 (^1D) 3d$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$		1094

AS XXV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		8.137	0.0 - 12290.	$2s^2 2p^5 - 2s^2 2p^4(^1P)3d$	$g^2P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		1061
		8.150	0.0 - 12270.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.166	302.687 - 12549.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094
		8.181	0.0 - 12223.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.200	0.0 - 12195.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094
		8.217	302.687 - 12473.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.248	302.687 - 12427.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.534	302.687 - 12021.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094
		8.588	0.0 - 11644.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.641	0.0 - 11573.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		1094
		8.661	0.0 - 11546.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.753	0.0 - 11425.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094
		8.810	302.687 - 11653.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		8.855	0.0 - 11293.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094
		8.873	0.0 - 11270.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094
		62.253	0.0 - 1606.352	$2s^2 2p^5 - 2s2p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	1104
		76.707	302.687 - 1606.352	$2s^2 2p^5 - 2s2p^6$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	1104
		330.37	0.0 - 302.687	$2s^2 2p^5 - 2s^2 2p^5$	$g^2P^\circ - g^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	1122

ARSENIC XXVI (As^{25+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^4(^3P_2)$ (8 electrons)
 Ionization Potential [21 020 000] cm^{-1} ; [2606] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		5.916	281.33 + E - 17185. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)4d$	$^3P - ^3D^\circ$	1 - 2		1094
		5.973	0.0 - 16742.	$2s^2 2p^4 - 2s^2 2p^3(^1D^\circ)4d$	$g^3P - ^3D^\circ$	2 - 3		1094
		6.047	377.30 + E - 16914. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)4d$	$^1D - ^3F^\circ$	2 - 3		1094
		6.081	0.0 - 16445.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3P - ^3D^\circ$	2 - 3		1094
		6.117	137.32 + E - 16485. + E	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$^3P - ^3D^\circ$	0 - 1		1094
		6.175	281.33 + E - 16476. + E	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$^3P - ^3D^\circ$	1 - 2		1094
		7.602	281.33 + E - 13436. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)3d$	$^3P - ^3D^\circ$	1 - 2		1094
		7.632	0.0 - 13098. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)3d$	$g^3P - ^3F^\circ$	2 - 3		1094
		7.655	281.33 + E - 13345. + E	$2s^2 2p^4 - 2s^2 2p^3(^1D^\circ)3d$	$^3P - ^3P^\circ$	1 - 1		1094
		7.665	377.30 + E - 13424. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)3d$	$^1D - ^1F^\circ$	2 - 3		1094
		7.829	377.30 + E - 13150. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)3d$	$^1D - ^3P^\circ$	2 - 2		1094
		7.847	0.0 - 12744.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3d$	$g^3P - ^3D^\circ$	2 - 3		1094
		7.861	377.30 + E - 13121. + E	$2s^2 2p^4 - 2s^2 2p^3(^1D^\circ)3d$	$^1D - ^1F^\circ$	2 - 3		1094
		8.133	281.33 + E - 12577. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)3s$	$^3P - ^3P^\circ$	1 - 2		1094
		8.182	0.0 - 12222. + E	$2s^2 2p^4 - 2s^2 2p^3(^1D^\circ)3s$	$g^3P - ^3D^\circ$	2 - 3		1094
		8.292	281.33 + E - 12341. + E	$2s^2 2p^4 - 2s^2 2p^3(^1P^\circ)3s$	$^3P - ^3P^\circ$	1 - 0		1094
		8.392	0.0 - 11914.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3s$	$g^3P - ^3S^\circ$	2 - 1		1094
		8.422	377.30 + E - 12251. + E	$2s^2 2p^4 - 2s^2 2p^3(^1D^\circ)3s$	$^1D - ^1D^\circ$	2 - 2		1094
		8.437	281.33 + E - 12134. + E	$2s^2 2p^4 - 2s^2 2p^3(^1D^\circ)3s$	$^3P - ^3D^\circ$	1 - 2		1094
		8.491	137.32 + E - 11914.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3s$	$^3P - ^3S^\circ$	0 - 1		1094
		8.600	281.33 + E - 11914.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3s$	$^3P - ^3S^\circ$	1 - 1		1094
		50.959	0.0 - 1962.37 + E	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^1P^\circ$	2 - 1	P	1104
		63.089	377.30 + E - 1962.37 + E	$2s^2 2p^4 - 2s2p^5$	$^1D - ^1P^\circ$	2 - 1	P	1104
		64.494	0.0 - 1550.53 + E	$2s^2 2p^4 - 2s2p^5$	$g^3P - ^3P^\circ$	2 - 1	P	1104

AS XXVI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		69.693	281.33 + E - 1716.19 + E	$2s^2 2p^4 - 2s 2p^5$	$^3P - ^3P^{\circ}$	1 - 0	P	1104
		70.761	137.32 + E - 1550.53 + E	$2s^2 2p^4 - 2s 2p^5$	$^3P - ^3P^{\circ}$	0 - 1	P	1104
		71.238	0.0 - 1403.75 + E	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^{\circ}$	2 - 2	P	1104
		78.790	281.33 + E - 1550.53 + E	$2s^2 2p^4 - 2s 2p^5$	$^3P - ^3P^{\circ}$	1 - 1	P	1104
		80.920	726.58 + E - 1962.37 + E	$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^{\circ}$	0 - 1	P	1104
		89.093	281.33 + E - 1403.75 + E	$2s^2 2p^4 - 2s 2p^5$	$^3P - ^3P^{\circ}$	1 - 2	P	1104
		137.6	0.0 - 726.58 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1104
		169.7	137.32 + E - 726.58 + E	$2s^2 2p^4 - 2s^2 2p^4$	$^3P - ^1S$	0 - 0	F,P	375,1104
		224.6	281.33 + E - 726.58 + E	$2s^2 2p^4 - 2s^2 2p^4$	$^3P - ^1S$	1 - 0	F,P	375,1104
		265.0	0.0 - 377.30 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F,P	375,1104
		286.3	377.30 + E - 726.58 + E	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1104
		355.5	0.0 - 281.33 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^3P$	2 - 1	F,P	375,1104
		694.0	137.32 + E - 281.33 + E	$2s^2 2p^4 - 2s^2 2p^4$	$^3P - ^3P$	0 - 1	F,P	375,1104
		728.2	0.0 - 137.32 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^3P$	2 - 0	F,P	375,1104
		1042.	281.33 + E - 377.30 + E	$2s^2 2p^4 - 2s^2 2p^4$	$^3P - ^1D$	1 - 2	F,P	375,1104

ARSENIC XXIX (As^{28+}), Z = 33
Ground State $1s^2 2s^2 2p(^2P_{1/2})$ (5 electrons)
Ionization Potential [24 720 000] cm^{-1} ; [3065] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		296.4	0.0 - 337.40	$2s^2 2p - 2s^2 2p$	$g^2P^{\circ} - g^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F,P	1122

ARSENIC XXX (As^{29+}), Z = 33
Ground State $1s^2 2s^2(^1S_0)$ (4 electrons)
Ionization Potential [26 200 000] cm^{-1} ; [3248] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		190.	0.0 - 527.3 + K	$1s^2 2s^2 - 1s^2 2s 2p$	$g^1S - ^3P^{\circ}$	0 - 1	P	375,619

ARSENIC XXXI (As³⁰⁺), Z = 33
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential [27 470 000] cm⁻¹; [3409] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		113.8	0.0 - 878.70+D	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,977
		192.9	0.0 - 518.37+E	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	375,977

ARSENIC XXXII (As³¹⁺), Z = 33
Ground State 1s²(¹S₀) (2 electrons)
Ionization Potential 116 529 000 cm⁻¹; 14448 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		0.963	0.0 - 103839.0	1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	P	375,918
		1.132	0.0 - 88357.31	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	P	375,918
		1.138	0.0 - 87841.40	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	P	375,918
		1.143	0.0 - 87498.59	1s ² - 1s2s	g ¹ S - ³ S	0 - 1	F,P	375,918

ARSENIC XXXIII (As³²⁺), Z = 33
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 121 214 000 cm⁻¹; 15029 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		0.927	0.0 - 107871.4000	1s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.096	0.0 - 91229.7600	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.102	0.0 - 90779.5000	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	375,1042

SELENIUM I (Se⁰⁺), Z = 34
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p⁴(³P₂) (34 electrons)
Ionization Potential 78 658.22 cm⁻¹; 9.752 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	Referenc
	30	1313.53	0. - 76.12878	4p ⁴ - 4p ³ (⁴ S°)8d	g ³ P - ³ D°	2 - 3		600
	30	1316.26	0. - 75.9736	4p ⁴ - 4p ³ (² D°)4d	g ³ P - 3°	2 - 2		600
	10	1322.06	0. - 75.63812	4p ⁴ - 4p ³ (⁴ S°)9s	g ³ P - ³ S°	2 - 1		600
	20	1326.83	0. - 75.36492	4p ⁴ - 4p ³ (⁴ S°)7d	g ³ P - ³ D°	2 - 1		600
	10	1327.80	0. - 75.311904	4p ⁴ - 4p ³ (⁴ S°)7d	g ³ P - ³ D°	2 - 3		600
	40	1328.75	0. - 75.25847	4p ⁴ - 4p ³ (² D°)4d	g ³ P - 2°	2 - 1		600
	40	1330.55	0. - 75.153961	4p ⁴ - 4p ³ (⁴ S°)7d	g ³ P - ⁵ D°	2 - 1		600
	40	1342.04						600
	40	1345.54	0. - 74.318113	4p ⁴ - 4p ³ (⁴ S°)8s	g ³ P - ³ S°	2 - 1		600
	0	1346.58	1.989497 - 76.24869	4p ⁴ - 4p ³ (⁴ S°)8d	g ³ P - ³ D°	1 - 2		600
	10	1347.50	0. - 74.209875	4p ⁴ - 4p ³ (⁴ S°)8s	g ³ P - ⁵ S°	2 - 2		600
	50	1348.40	0. - 74.161558	4p ⁴ -	g ³ P - 1°	2 - 2		600
	40	1351.62	1.989497 - 75.9736	4p ⁴ - 4p ³ (² D°)4d	g ³ P - 3°	1 - 2		600
	70	1353.02						600
	70	1353.86	0. - 73.860519	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ³ D°	2 - 3		600
	50	1354.63	0. - 73.819878	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ³ D°	2 - 2		600
	0	1357.79	1.989497 - 75.63812	4p ⁴ - 4p ³ (⁴ S°)9s	g ³ P - ³ S°	1 - 1		600
	20	1359.66	0. - 73.547560	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ³ D°	2 - 3	P	600
	10	1359.78	0. - 73.541330	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ⁵ D°	2 - 2	P	600
	10	1363.80	1.989497 - 75.312706	4p ⁴ - 4p ³ (⁴ S°)7d	g ³ P - ³ D°	1 - 2		600
	10	1366.78	1.989497 - 75.153961	4p ⁴ - 4p ³ (⁴ S°)7d	g ³ P - ³ D°	1 - 1		600
	0	1367.91	2.53436 - 75.63812	4p ⁴ - 4p ³ (⁴ S°)9s	g ³ P - ³ S°	0 - 1		600
	20	1373.03	2.53436 - 75.36492	4p ⁴ - 4p ³ (⁴ S°)7d	g ³ P - ³ D°	0 - 1		600
	20	1375.03	2.53436 - 75.25847	4p ⁴ - 4p ³ (² D°)4d	g ³ P - 2°	0 - 1		600
11	20	1377.04	2.53436 - 75.153961	4p ⁴ - 4p ³ (⁴ S°)7d	g ³ P - ⁵ D°	0 - 1		600
	100	1377.98	0. - 72.56856	4p ⁴ - 4p ³ (² P°)5s	g ³ P - ¹ P°	2 - 1		600
	0	1379.50						600
	30	1382.56	1.989497 - 74.318113	4p ⁴ - 4p ³ (⁴ S°)8s	g ³ P - ³ S°	1 - 1		600
	20	1384.63	1.989497 - 74.209875	4p ⁴ - 4p ³ (⁴ S°)8s	g ³ P - ⁵ S°	1 - 2		600
	80	1385.54	1.989497 - 74.161558	4p ⁴ -	g ³ P - 1°	1 - 2		600
	60	1390.99	0. - 71.890213	4p ⁴ - 4p ³ (⁴ S°)7s	g ³ P - ³ S°	2 - 1		600
	40	1391.32	1.989497 - 73.863760	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ³ D°	1 - 1	P	600
	50	1392.17	1.989497 - 73.819878	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ³ D°	1 - 2	P	600
	40	1393.07	2.53436 - 74.318113	4p ⁴ - 4p ³ (⁴ S°)8s	g ³ P - ³ S°	0 - 1	P	600
8	100	1395.50	0. - 71.65902	4p ⁴ - 4p ³ (² P°)5s	g ³ P - ³ P°	2 - 2	P	600
10	100	1395.88	0. - 71.63828	4p ⁴ - 4p ³ (⁴ S°)7s	g ³ P - ⁵ S°	2 - 2		600
	20	1397.59	1.989497 - 73.541330	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ⁵ D°	1 - 2	P	600
	40	1401.95	2.53436 - 73.863760	4p ⁴ - 4p ³ (⁴ S°)6d	g ³ P - ³ D°	0 - 1	P	600
	10	1402.63						600
8	80	1404.50	0. - 71.199533	4p ⁴ - 4p ³ (² P°)5s	g ³ P - ³ P°	2 - 1	P	600
9	100	1405.39	0. - 71.154790	4p ⁴ - 4p ³ (⁴ S°)5d	g ³ P - ³ D°	2 - 3	P	600
9	100	1406.35	0. - 71.106054	4p ⁴ - 4p ³ (⁴ S°)5d	g ³ P - ³ D°	2 - 1	P	600
9	100	1406.55	0. - 71.096053	4p ⁴ - 4p ³ (⁴ S°)5d	g ³ P - ³ D°	2 - 2	P	600
11	80	1416.84	1.989497 - 72.56856	4p ⁴ - 4p ³ (² P°)5s	g ³ P - ¹ P°	1 - 1		600
	60	1420.62	0. - 70.391553	4p ⁴ - 4p ³ (⁴ S°)5d	g ³ P - ³ D°	2 - 3	P	600
	20	1420.68	0. - 70.388936	4p ⁴ - 4p ³ (⁴ S°)5d	g ³ P - ³ D°	2 - 2	P	600
	60	1427.87	2.53436 - 72.56856	4p ⁴ - 4p ³ (² P°)5s	g ³ P - ¹ P°	0 - 1		600
	60	1430.58	1.989497 - 71.890213	4p ⁴ - 4p ³ (⁴ S°)7s	g ³ P - ³ S°	1 - 1		600

SE I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
8	120	1435.35	1.989497 - 71.65902	$4p^4 - 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	1 - 2	P	600
10	120	1435.78	1.989497 - 71.63828	$4p^4 - 4p^3(^4S^o)7s$	$g^3P - ^3S^o$	1 - 2	P	600
	50	1441.84	2.53436 - 71.890213	$4p^4 - 4p^3(^4S^o)7s$	$g^3P - ^3S^o$	0 - 1	P	600
8	100	1444.88	1.989497 - 71.199533	$4p^4 - 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	1 - 1	P	600
9	100	1446.83	1.989497 - 71.106054	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	1 - 1	P	600
9	100	1447.04	1.989497 - 71.096053	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	1 - 2	P	600
8	150	1449.16	1.989497 - 70.9950	$4p^4 - 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	1 - 0		600
8	120	1456.34	2.53436 - 71.199533	$4p^4 - 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	0 - 1	P	600
9	80	1458.33	2.53436 - 71.106054	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	0 - 1	P	600
	60	1461.99	1.989497 - 70.388936	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	1 - 2		600
	30	1496.44	9.576149 - 76.40041	$4p^4 - 4p^3(^2D^o)4d$	$^1D - 4^o$	2 - 3		600
7	150	1500.98	0. - 66.623266	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^3S^o$	2 - 1	P	600
	20	1502.57	9.576149 - 76.12878	$4p^4 - 4p^3(^4S^o)8d$	$^1D - ^3D^o$	2 - 3		600
	30	1506.09	9.576149 - 75.9736	$4p^4 - 4p^3(^2D^o)4d$	$^1D - 3^o$	2 - 2		600
	20	1511.27						600
	80	1515.39	0. - 65.989536	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^5S^o$	2 - 2	P	600
	40	1519.99	9.576149 - 75.36492	$4p^4 - 4p^3(^4S^o)7d$	$^1D - ^3D^o$	2 - 1		600
	30	1521.20	9.576149 - 75.312706	$4p^4 - 4p^3(^4S^o)7d$	$^1D - ^3D^o$	2 - 2		600
	60	1522.45	9.576149 - 75.25847	$4p^4 - 4p^3(^2D^o)4d$	$^1D - 2^o$	2 - 1		600
	60	1524.91	9.576149 - 75.153961	$4p^4 - 4p^3(^4S^o)7d$	$^1D - ^3D^o$	2 - 1	P	600
6	250	1530.46	0. - 65.339738	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3	P	600
6	150	1531.40	0. - 65.299554	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 1	P	600
6	200	1531.91	0. - 65.277939	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 2	P	600
7	120	1547.18	1.989497 - 66.623266	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^3S^o$	1 - 1	P	600
	80	1548.34	9.576149 - 74.161558	$4p^4 -$	$^1D - 1^o$	2 - 2	P	600
	40	1555.59	9.576149 - 73.860519	$4p^4 - 4p^3(^4S^o)6d$	$^1D - ^3D^o$	2 - 3	P	600
	10	1556.57	9.576149 - 73.819878	$4p^4 - 4p^3(^4S^o)6d$	$^1D - ^3D^o$	2 - 2	P	600
7	120	1560.33	2.53436 - 66.623266	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^3S^o$	0 - 1	P	600
	20	1562.50	1.989497 - 65.989536	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^3S^o$	1 - 2		600
	20	1563.30	9.576149 - 73.543586	$4p^4 - 4p^3(^4S^o)6d$	$^1D - ^3D^o$	2 - 1	P	600
5	150	1575.32	0. - 63.479257	$4p^4 - 4p^3(^2D^o)5s$	$g^3P - ^1D^o$	2 - 2	P	600
4	150	1577.61	0. - 63.387416	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3		600
4	150	1577.96	0. - 63.373144	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 2	P	600
6	150	1579.53	1.989497 - 65.299554	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 1	P	600
6	200	1580.07	1.989497 - 65.277939	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2	P	600
19	150	1587.49	9.576149 - 72.56856	$4p^4 - 4p^3(^2P^o)5s$	$^1D - ^1P^o$	2 - 1	P	600
6	150	1593.24	2.53436 - 65.299554	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1	P	600
	40	1604.77	9.576149 - 71.890213	$4p^4 - 4p^3(^4S^o)7s$	$^1D - ^3S^o$	2 - 1	P	600
3	250	1606.49	0. - 62.247602	$4p^4 - 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 3	P	600
17	100	1610.75	9.576149 - 71.65902	$4p^4 - 4p^3(^2P^o)5s$	$^1D - ^3P^o$	2 - 2	P	600
18	100	1611.29	9.576149 - 71.63828	$4p^4 - 4p^3(^4S^o)7s$	$^1D - ^3S^o$	2 - 2	P	600
3	200	1617.38	0. - 61.828493	$4p^4 - 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 2	P	600
3	150	1621.24	0. - 61.681263	$4p^4 - 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 1	P	600
17	100	1622.76	9.576149 - 71.199533	$4p^4 - 4p^3(^2P^o)5s$	$^1D - ^3P^o$	2 - 1	P	600
	50	1623.94	9.576149 - 71.154790	$4p^4 - 4p^3(^4S^o)5d$	$^1D - ^3D^o$	2 - 3	P	600
	70	1625.23	9.576149 - 71.106054	$4p^4 - 4p^3(^4S^o)5d$	$^1D - ^3D^o$	2 - 1	P	600
	60	1625.49	9.576149 - 71.096053	$4p^4 - 4p^3(^4S^o)5d$	$^1D - ^3D^o$	2 - 2	P	600
5	120	1626.29	1.989497 - 63.479257	$4p^4 - 4p^3(^2D^o)5s$	$g^3P - ^1D^o$	1 - 2	P	600
4	60	1628.84	1.989497 - 63.382766	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 1	P	600
4	20	1628.89	1.989497 - 63.380874	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 0	P	600
4	60	1629.10	1.989497 - 63.373144	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2	P	600
	10	1635.80						600
4	150	1643.43	2.53436 - 63.382766	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1	P	600
3	250	1671.15	1.989497 - 61.828493	$4p^4 - 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	1 - 2		600

SE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
2	800	1013.40	0.0 - 98.6744	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$			468
11	800	1014.01	13.7844 - 112.4034	$4s^2 4p^3 -$	$^2D^{\circ} - 12$			468
	10	1022.11	23.8948 - 121.73	$4s^2 4p^3 -$	$^2P^{\circ} - 15$			468
	350	1029.56	13.1682 - 110.2974	$4s^2 4p^3 -$	$^2D^{\circ} - 11$			468
2	1000	1033.60	0.0 - 96.7533	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$			468
	100	1036.16	13.7844 - 110.2974	$4s^2 4p^3 -$	$^2D^{\circ} - 11$			468
	100	1038.36	23.0383 - 119.343	$4s^2 4p^3 -$	$^2P^{\circ} - 13$			468
	150	1045.31	13.1682 - 108.8339	$4s^2 4p^3 -$	$^2D^{\circ} - 10$			468
	10	1047.67	23.8948 - 119.343	$4s^2 4p^3 -$	$^2P^{\circ} - 13$			468
	1000	1049.51	13.1682 - 108.4498	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2D^{\circ} - ^2D$			354
2	1000	1049.65	0.0 - 95.2700	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$			468
	50	1050.57	13.1682 - 108.3557	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2D^{\circ} - ^2D$			468
	100	1052.09	13.7844 - 108.8339	$4s^2 4p^3 -$	$^2D^{\circ} - 10$			468
10	800	1057.41	13.7844 - 108.3557	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2D^{\circ} - ^2D$			468
	150	1077.54	13.1682 - 105.9738	$4s^2 4p^3 -$	$^2D^{\circ} - 9$			468
	250	1085.88	13.1682 - 105.2580	$4s^2 4p^3 -$	$^2D^{\circ} - 8$			468
	10	1090.43	13.1682 - 104.8737	$4s^2 4p^3 -$	$^2D^{\circ} - 7$			468
9	600	1097.82	13.7844 - 104.8737	$4s^2 4p^3 -$	$^2D^{\circ} - 7$			468
	100	1099.97	13.7844 - 104.6944	$4s^2 4p^3 -$	$^2D^{\circ} - 6$			468
	10	1119.04	23.0383 - 112.4034	$4s^2 4p^3 -$	$^2P^{\circ} - 12$			468
	1	1129.79	23.8948 - 112.4034	$4s^2 4p^3 -$	$^2P^{\circ} - 12$			468
	10	1130.48	13.1682 - 101.6315	$4s^2 4p^3 -$	$^2D^{\circ} - 5$			468
	10	1133.89	13.1682 - 101.3560	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2D^{\circ} - ^2P$			468
	1	1138.36	13.7844 - 101.6315	$4s^2 4p^3 -$	$^2D^{\circ} - 5$			468
7	800	1141.94	13.7844 - 101.3560	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2D^{\circ} - ^2P$			468
8	500	1155.99	13.7844 - 100.2951	$4s^2 4p^3 - 4s 4p^4$	$^2D^{\circ} - ^2P$			468
1	600	1156.91	0.0 - 86.4377	$4s^2 4p^3 - 4s 4p^4$	$g^4S^{\circ} - ^4P$			468
	150	1157.31	23.8948 - 110.2974	$4s^2 4p^3 -$	$^2P^{\circ} - 11$			468
7	250	1166.53	13.1682 - 98.8961	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2D^{\circ} - ^2P$			468
1	600	1168.53	0.0 - 85.5795	$4s^2 4p^3 - 4s 4p^4$	$g^4S^{\circ} - ^4P$			468
	50	1170.76	23.0383 - 108.4498	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2P^{\circ} - ^2D$			468
	10	1177.31	23.8948 - 108.8339	$4s^2 4p^3 -$	$^2P^{\circ} - 10$			468
	150	1178.05	13.7844 - 98.6744	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$			468
	100	1182.65	23.8948 - 108.4498	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2P^{\circ} - ^2D$			468
	50	1183.99	23.8948 - 108.3557	$4s^2 4p^3 - 4s^2 4p^2(^1D)5s$	$^2P^{\circ} - ^2D$			468
1	1000	1192.29	0.0 - 83.8767	$4s^2 4p^3 - 4s 4p^4$	$g^4S^{\circ} - ^4P$			468
	50	1196.40	13.1682 - 96.7533	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$			468
	1	1199.72	13.1682 - 96.5174	$4s^2 4p^3 -$	$^2D^{\circ} - 1$			468
	100	1205.25	13.7844 - 96.7533	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$			468
17	500	1205.69	23.0383 - 105.9738	$4s^2 4p^3 -$	$^2P^{\circ} - 9$			468
	150	1218.01	13.1682 - 95.2700	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$			468
17	50	1218.27	23.8948 - 105.9738	$4s^2 4p^3 -$	$^2P^{\circ} - 9$			468
16	50	1221.94	23.0383 - 104.8737	$4s^2 4p^3 -$	$^2P^{\circ} - 7$			468
	100	1224.63	23.0383 - 104.6944	$4s^2 4p^3 -$	$^2P^{\circ} - 6$			468
	50	1229.04	23.8948 - 105.2580	$4s^2 4p^3 -$	$^2P^{\circ} - 8$			468
16	500	1234.88	23.8948 - 104.8737	$4s^2 4p^3 -$	$^2P^{\circ} - 7$			468
	100	1237.61	23.8948 - 104.6944	$4s^2 4p^3 -$	$^2P^{\circ} - 6$			468
14	50	1276.84	23.0383 - 101.3560	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^{\circ} - ^2P$			468
	100	1286.41	23.8948 - 101.6315	$4s^2 4p^3 -$	$^2P^{\circ} - 5$			468
14	600	1290.97	23.8948 - 101.3560	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^{\circ} - ^2P$			468
15	100	1294.41	23.0383 - 100.2951	$4s^2 4p^3 - 4s 4p^4$	$^2P^{\circ} - ^2P$			468
15	600	1308.89	23.8948 - 100.2951	$4s^2 4p^3 - 4s 4p^4$	$^2P^{\circ} - ^2P$			468
14	500	1318.25	23.0383 - 98.8961	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^{\circ} - ^2P$			468
14	100	1333.32	23.8948 - 98.8961	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^{\circ} - ^2P$			468

SE II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1337.23	23.8948 - 98.6744	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		468
	10	1347.31	23.8948 - 98.1182	$4s^2 4p^3 -$	$^2P^\circ - 3$	$\frac{3}{2} - \frac{1}{2}$		468
	1	1356.57	23.0383 - 96.7533	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		468
	1	1360.86	23.0383 - 96.5174	$4s^2 4p^3 -$	$^2P^\circ - 1$	$\frac{1}{2} - \frac{1}{2}$		468
	50	1364.83	13.1682 - 86.4377	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		468
	10	1372.51	23.8948 - 96.7533	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		468
	10	1380.96	13.1682 - 85.5795	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		468
	1	1392.81	13.7844 - 85.5795	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		468
	1	1401.01	23.8948 - 95.2700	$4s^2 4p^3 - 4s^2 4p^2(^3P)5s$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		468
	50	1414.25	13.1682 - 83.8767	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		468
	250	1426.65	13.7844 - 83.8767	$4s^2 4p^3 - 4s4p^4$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		468
	10	1577.29	23.0383 - 86.4377	$4s^2 4p^3 - 4s4p^4$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		354
	10	1598.95	23.0383 - 85.5795	$4s^2 4p^3 - 4s4p^4$	$^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		468
	50	1667.15	23.8948 - 83.8767	$4s^2 4p^3 - 4s4p^4$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		468

SELENIUM III (Se^{2+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2(^3P_0)$ (32 electrons)
 Ionization Potential 248 583 cm^{-1} ; 30.820 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	517.6	1.741 - 194.9505	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3P^\circ$	1 - 1		587
	1	518.2	1.741 - 194.7270	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3P^\circ$	1 - 2		587
	10	522.0	1.741 - 193.3044	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^1D^\circ$	1 - 2		587
	1	523.5	3.937 - 194.9505	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3P^\circ$	2 - 1		587
	30	524.0	0.0 - 190.8412	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3D^\circ$	0 - 1		587
	50	524.1	3.937 - 194.7270	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3P^\circ$	2 - 2		587
	1	525.2	1.741 - 192.1618	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)6s$	$g^3P - ^1P^\circ$	1 - 1		587
	85	526.4	3.937 - 193.9150	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3D^\circ$	2 - 3		587
	50	531.1	1.741 - 190.0202	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3D^\circ$	1 - 2		587
	10	533.1	3.937 - 191.5230	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)6s$	$g^3P - ^3P^\circ$	2 - 2		587
	1	537.4	3.937 - 190.0202	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$g^3P - ^3D^\circ$	2 - 2		587
	30	538.5	1.741 - 187.4265	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)6s$	$g^3P - ^3P^\circ$	1 - 1		587
	1	539.3	1.741 - 187.1687	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)6s$	$g^3P - ^3P^\circ$	1 - 0		587
	30	544.0	13.032 - 196.8454	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$^1D - ^1F^\circ$	2 - 3		587
	10	545.0	3.937 - 187.4265	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)6s$	$g^3P - ^3P^\circ$	2 - 1		587
	1	550.4	13.032 - 194.7270	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$^1D - ^3P^\circ$	2 - 2		587
	10	554.7	13.032 - 193.3044	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$^1D - ^1D^\circ$	2 - 2		587
	10	558.3	13.032 - 192.1618	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)6s$	$^1D - ^1P^\circ$	2 - 1		587
	1	565.0	13.032 - 190.0202	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$^1D - ^3D^\circ$	2 - 2		587
	0	566.2	13.032 - 189.6479	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)5d$	$^1D - ^3F^\circ$	2 - 3		587
	1	573.4	13.032 - 187.4265	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)6s$	$^1D - ^3P^\circ$	2 - 1		587
	120	674.5						587
	10	684.6	1.741 - 147.82	$4s^2 4p^2 -$	$g^3P - X^\circ$	1 - 1		014
	1	690.9	3.937 - 148.675	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^1F^\circ$	2 - 3		030
	30	695.0	3.937 - 147.82	$4s^2 4p^2 -$	$g^3P - X^\circ$	2 - 1		014
	0	700.5	0.0 - 142.7582	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3P^\circ$	0 - 1		014
	200	709.1	1.741 - 142.7582	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3P^\circ$	1 - 1		014
	200	709.4	1.741 - 142.7061	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3P^\circ$	1 - 2		014
	150	711.0	0.0 - 140.6397	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3D^\circ$	0 - 1		014
	150	711.4	1.741 - 142.3158	$4s^2 4p^2 - 4s^2 4p(^2P^\circ)4d$	$g^3P - ^3P^\circ$	1 - 0		014

SE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	719.9	1.741 - 140.6397	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3D^o$	1 - 1		014
	150	720.4	3.937 - 142.7582	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3P^o$	2 - 1		014
	200	720.6	3.937 - 142.7061	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3P^o$	2 - 2		014
	300	724.2	3.937 - 142.0146	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3D^o$	2 - 3		014
	250	726.4	1.741 - 139.4097	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3D^o$	1 - 2		014
	10	727.5	1.741 - 139.2037	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^1D^o$	1 - 2		014
	30	730.2	0.0 - 136.9465	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^1P^o$	0 - 1		014
	50	731.5	3.937 - 140.6397	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3D^o$	2 - 1		014
	200	737.2	13.032 - 148.675	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^1F^o$	2 - 3		014
	50	738.2	3.937 - 139.4097	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3D^o$	2 - 2		014
	50	739.3	3.937 - 139.2037	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^1D^o$	2 - 2		014
	120	739.6	1.741 - 136.9465	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^1P^o$	1 - 1		014
	200	741.9	13.032 - 147.82	$4s^2 4p^2 -$	$^1D - X^o$	2 - 1		014
	150	751.8	3.937 - 136.9465	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^1P^o$	2 - 1		014
	30	759.6	0.0 - 131.6559	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^1P^o$	0 - 1		014
	10	769.7	1.741 - 131.6559	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^1P^o$	1 - 1		014
	150	770.9	13.032 - 142.7582	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^3P^o$	2 - 1		014
	1	775.3	13.032 - 142.0146	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^3D^o$	2 - 3		014
	250	777.3	1.741 - 130.3910	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^3P^o$	1 - 2		014
	30	783.0	3.937 - 131.6559	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^1P^o$	2 - 1		014
	50	783.7	13.032 - 140.6397	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^3D^o$	2 - 1		014
	150	788.8	0.0 - 126.7814	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^3P^o$	0 - 1		014
	200	790.8	3.937 - 130.3910	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^3P^o$	2 - 2		014
	1	791.3	13.032 - 139.4097	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^3D^o$	2 - 2		014
	120	792.6	13.032 - 139.2037	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^1D^o$	2 - 2		014
	85	799.7	1.741 - 126.7814	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^3P^o$	1 - 1		014
	150	803.0	1.741 - 126.2769	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^3P^o$	1 - 0		014
	120	807.0	13.032 - 136.9465	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^1P^o$	2 - 1		014
	150	814.0	3.937 - 126.7814	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$g^3P - ^3P^o$	2 - 1		014
	85	817.6	1.741 - 124.0519	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3F^o$	1 - 2		014
	150	823.9	3.937 - 125.3098	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$g^3P - ^3F^o$	2 - 3		014
	150	828.5						587
	120	833.1						587
	120	836.1						587
	300	843.0	13.032 - 131.6559	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$^1D - ^1P^o$	2 - 1		014
	50	852.1	13.032 - 130.3910	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$^1D - ^3P^o$	2 - 2		014
	200	879.1	13.032 - 126.7814	$4s^2 4p^2 - 4s^2 4p(^2P^o)5s$	$^1D - ^3P^o$	2 - 1		014
	50	887.4						587
	50	890.6	13.032 - 125.3098	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^3F^o$	2 - 3		014
	10	900.7	13.032 - 124.0519	$4s^2 4p^2 - 4s^2 4p(^2P^o)4d$	$^1D - ^3F^o$	2 - 2		014
	150	938.2	0.0 - 106.591	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3P^o$	0 - 1		014
	250	953.7	1.741 - 106.591	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3P^o$	1 - 1		014
	200	954.4	1.741 - 106.515	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3P^o$	1 - 2		014
	200	954.7	1.741 - 106.482	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3P^o$	1 - 0		014
	150	974.1	3.937 - 106.591	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3P^o$	2 - 1		014
	300	974.9	3.937 - 106.515	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3P^o$	2 - 2		014
	150	1000.4						587
	10	1068.8	13.032 - 106.591	$4s^2 4p^2 - 4s4p^3$	$^1D - ^3P^o$	2 - 1		014
	10	1069.7	13.032 - 106.515	$4s^2 4p^2 - 4s4p^3$	$^1D - ^3P^o$	2 - 2		014
	250	1079.8	3.937 - 96.548	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	2 - 3		014
	150	1097.8	0.0 - 91.091	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	0 - 1		014
	300	1099.1	1.741 - 92.723	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	1 - 2		014
	350	1119.2	1.741 - 91.091	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	1 - 1		014
	50	1126.3	3.937 - 92.723	$4s^2 4p^2 - 4s4p^3$	$g^3P - ^3D^o$	2 - 2		014

SE III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	1206.5						587
	0	1254.8	13.032 - 92.723	$4s^2 4p^2 - 4s 4p^3$	$^1D - ^3D^o$	2 - 2		030
	30	1534.9	92.723 - 157.8742	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3D^o - ^3P$	2 - 2		587
	50	1571.4	92.723 - 156.3604	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3D^o - ^3P$	2 - 1		587
	10	1644.8	92.723 - 153.5209	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3D^o - ^3D$	2 - 2		587
	10	1829.7	106.515 - 161.1702	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3P^o - ^1D$	2 - 2		587
	50	1845.0						587
	120	1893.2	106.482 - 159.3029	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3P^o - ^3S$	0 - 1		587
	85	1894.4	106.515 - 159.3029	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3P^o - ^3S$	2 - 1		587
	85	1897.1	106.591 - 159.3029	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3P^o - ^3S$	1 - 1		587
	120	1947.1	106.515 - 157.8742	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3P^o - ^3P$	2 - 2		587
	120	1950.0	106.591 - 157.8742	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3P^o - ^3P$	1 - 2		587
	30	1992.9	106.515 - 156.6929	$4s 4p^3 - 4s^2 4p(^2P^o)5p$	$^3P^o - ^3D$	2 - 3		587

SELENIUM IV (Se^{3+}), $Z = 34$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p(^2P^o_{1/2})$ (31 electrons)
Ionization Potential $346\,375 \text{ cm}^{-1}$; 42.944 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	85	630.7						587
	50	631.0						587
	50	631.1						587
	250	636.0	0.0 - 157.241	$4s^2 4p - 4s^2 5s$	$g^2 P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		585
	50	640.5						587
	85	640.9						587
	120	642.7						587
	85	644.8						587
	300	652.7	0.0 - 153.217	$4s^2 4p - 4s^2 4d$	$g^2 P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		585
	250	654.2	4.376 - 157.241	$4s^2 4p - 4s^2 5s$	$g^2 P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		585
	350	670.1	4.376 - 153.606	$4s^2 4p - 4s^2 4d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		585
	250	671.9	4.376 - 153.217	$4s^2 4p - 4s^2 4d$	$g^2 P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		585
	85	705.264						930,588
	10	714.093						930,588
	10	716.662						930,588
	50	720.959						930,588
	200	722.8	0.0 - 138.354	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		585
	10	728.856						930,588
	250	734.6	0.0 - 136.134	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		585
	350	746.4	4.376 - 138.354	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		585
	1	756.519						930,588
	250	759.0	4.376 - 136.134	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$		585
	30	771.586						930,588
	50	772.257						930,588
	30	774.198						930,588
	250	776.5	0.0 - 128.787	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		585
	85	778.166						930,588
	120	782.8						587
	85	796.8	104.211 - 229.714	$4s 4p^2 - 4s^2 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$		585
	150	798.1						587

SE IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	799.9	104.706 - 229.714	$4s4p^2 - 4s^24f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	120	800.1	104.706 - 229.684	$4s4p^2 - 4s^24f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		585
	250	803.8	4.376 - 128.787	$4s^24p - 4s4p^2$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{3}{2}$		585
	35	817.466	104.211 - 226.5376	$4s4p^2 - 4p^3$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	Q	930,639
	5	868.6	104.211 - 219.3325	$4s4p^2 - 4p^3$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	25	872.4	104.706 - 219.3325	$4s4p^2 - 4p^3$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	120	882.1	83.5892 - 196.9565	$4s4p^2 - 4p^3$	$^4P - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		587
	300	959.6	0.0 - 104.211	$4s^24p - 4s4p^2$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		585
	350	996.7	4.376 - 104.706	$4s^24p - 4s4p^2$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		585
	85	1001.7	4.376 - 104.211	$4s^24p - 4s4p^2$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		585
	30	1018.0						585
	25	1023.0	128.787 - 226.5376	$4s4p^2 - 4p^3$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		639
	30	1030.6						585
	20	1078.2	104.211 - 196.9565	$4s4p^2 - 4p^3$	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	35	1084.0	104.706 - 196.9565	$4s4p^2 - 4p^3$	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	30	1087.9	189.913 - 281.8335	$4s^25p - 4s^27s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$		639
	15	1102.3	191.111 - 281.8335	$4s^25p - 4s^27s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$		639
	10	1104.4	128.787 - 219.3325	$4s4p^2 - 4p^3$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		639
	25	1106.2	136.134 - 226.5376	$4s4p^2 - 4p^3$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		639
	35	1134.0	138.354 - 226.5376	$4s4p^2 - 4p^3$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		639
	10	1150.7	104.211 - 191.111	$4s4p^2 - 4s^25p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		585
	120	1157.3	104.706 - 191.111	$4s4p^2 - 4s^25p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		585
	85	1166.8	104.211 - 189.913	$4s4p^2 - 4s^25p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$		585
	40	1169.6	104.211 - 189.7134	$4s4p^2 - 4p^3$	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	60	1176.4	104.706 - 189.7134	$4s4p^2 - 4p^3$	$^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		639
	40	1201.9	136.134 - 219.3325	$4s4p^2 - 4p^3$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		639
	60	1234.9	138.354 - 219.3325	$4s4p^2 - 4p^3$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	25	1249.2	79.3954 - 159.4491	$4s4p^2 - 4p^3$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	60	1259.5	0.0 - 79.3954	$4s^24p - 4s4p^2$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$		639
	50	1262.4	4.376 - 83.5892	$4s^24p - 4s4p^2$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		639
	30	1274.4	80.9803 - 159.4491	$4s4p^2 - 4p^3$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	45	1305.4	4.376 - 80.9803	$4s^24p - 4s4p^2$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		639
	200	1307.2	153.217 - 229.714	$4s^24d - 4s^24f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		585
	10	1313.9	153.606 - 229.714	$4s^24d - 4s^24f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		639
	250	1314.4	153.606 - 229.684	$4s^24d - 4s^24f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		585
	60	1318.2	83.5892 - 159.4491	$4s4p^2 - 4p^3$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	45	1332.9						639
	0	1512.5	153.217 - 219.3325	$4s^24d - 4p^3$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	20	1636.0	128.787 - 189.913	$4s4p^2 - 4s^25p$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$		639
	35	1641.3	128.787 - 189.7134	$4s4p^2 - 4p^3$	$^2S - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$		639
	25	1706.4	138.354 - 196.9565	$4s4p^2 - 4p^3$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	10	1826.7	104.706 - 159.4491	$4s4p^2 - 4p^3$	$^2D - ^4S^{\circ}$	$\frac{5}{2} - \frac{3}{2}$		639
	30	1885.3						587
	30	1887.7						587
	150	1920.3						587
	45	1947.1	138.354 - 189.7134	$4s4p^2 - 4p^3$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$		639
	85	1967.3	189.913 - 240.745	$4s^25p - 4s^26s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$		585

SELENIUM V (Se⁴⁺), Z = 34
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²(¹S₀) (30 electrons)
Ionization Potential [551 000] cm⁻¹; [68.3] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	30	505.9	89.756 - 287.426	4s4p - 4s5s	³ P° - ³ S	0 - 1		651
	50	510.0	91.351 - 287.426	4s4p - 4s5s	³ P° - ³ S	1 - 1		651
	85	519.6	94.961 - 287.426	4s4p - 4s5s	³ P° - ³ S	2 - 1		651
	120	596.0	89.756 - 257.534	4s4p - 4s4d	³ P° - ³ D	0 - 1		651
	85	601.0	91.351 - 257.748	4s4p - 4s4d	³ P° - ³ D	1 - 2		651
	85	601.7	91.351 - 257.534	4s4p - 4s4d	³ P° - ³ D	1 - 1		651
	120	613.0	94.961 - 258.083	4s4p - 4s4d	³ P° - ³ D	2 - 3		651
	85	614.3	94.961 - 257.748	4s4p - 4s4d	³ P° - ³ D	2 - 2		651
	10	615.1	94.961 - 257.534	4s4p - 4s4d	³ P° - ³ D	2 - 1		651
	85	634.511						930,588
	85	635.820						930,588
	30	642.3	131.733 - 287.426	4s4p - 4s5s	¹ P° - ³ S	1 - 1		585
	1	655.108						930,588
	10	665.449						930,588
	250	674.520	213.194 - 361.448	4s4d - 4s4f	¹ D - ¹ F°	2 - 3	Q	930,588
	50	678.865						930,588
	1	680.478						930,588
	10	684.205						930,588
	10	686.458						930,588
	30	687.608						930,588
	10	689.946						930,588
	30	690.354						930,588
	120	785.8	91.351 - 218.615	4s4p - 4p ²	³ P° - ³ P	1 - 2		651
	120	804.3	89.756 - 214.087	4s4p - 4p ²	³ P° - ³ P	0 - 1		651
	200	808.7	94.961 - 218.615	4s4p - 4p ²	³ P° - ³ P	2 - 2		651
	150	814.8	91.351 - 214.087	4s4p - 4p ²	³ P° - ³ P	1 - 1		651
	30	818.609						930,588
	200	820.7	91.351 - 213.194	4s4p - 4s4d	³ P° - ¹ D	1 - 2		585
	150	830.3	91.351 - 211.789	4s4p - 4p ²	³ P° - ³ P	1 - 0		651
	85	839.4	94.961 - 214.087	4s4p - 4p ²	³ P° - ³ P	2 - 1		651
	300	845.8	94.961 - 213.194	4s4p - 4s4d	³ P° - ¹ D	2 - 2		585
	150	854.299						930,588
	300	1094.7	0.0 - 91.351	4s ² - 4s4p	g ¹ S - ³ P°	0 - 1		585
	200	1151.0	131.733 - 218.615	4s4p - 4p ²	¹ P° - ³ P	1 - 2		585
	350	1227.6	131.733 - 213.194	4s4p - 4s4d	¹ P° - ¹ D	1 - 2		585

SELENIUM VI (Se⁵⁺), Z = 34
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s(²S_{1/2}) (29 electrons)
Ionization Potential 658 994 cm⁻¹; 81.70 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	30	452.8	112.762 - 333.594	3d ¹⁰ 4p - 3d ¹⁰ 5s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		651
	30	464.8	118.462 - 333.594	3d ¹⁰ 4p - 3d ¹⁰ 5s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$		651
	85	588.0	112.762 - 282.83	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		651
	30	599.901						930,588
	85	605.9	118.462 - 283.509	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		651
	50	608.4	118.462 - 282.83	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{5}{2} - \frac{3}{2}$		651

SE VI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	611.087						
	120	844.2	0.0 - 118.462	$3d^{10}4s - 3d^{10}4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		930,588 651
	50	860.498						930,588
	120	886.8	0.0 - 112.762	$3d^{10}4s - 3d^{10}4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		651

SELENIUM VII (Se⁶⁺), Z = 34
Ground State $1s^22s^22p^63s^23p^63d^{10}(^1S_0)$ (28 electrons)
Ionization Potential $1\ 253\ 300 \text{ cm}^{-1}$; 155.4 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	730	171.974	0. - 581.4850	$3d^{10} - 3d^94p$	$g^1S - ^3D^o$	0 - 1		930
	980	172.928	0. - 578.2700	$3d^{10} - 3d^94p$	$g^1S - ^1P^o$	0 - 1		930
	270	176.791	0. - 565.6400	$3d^{10} - 3d^94p$	$g^1S - ^3P^o$	0 - 1		930
	80	180.2						363
	1	561.249						930,588
	1	563.677						930,588
	10	572.0						588
	1	591.243						930,588
	1	607.161						930,588
	50	613.649						930,588
	50	622.523						930,588
	30	626.549						930,588
	130	699.274	439.7495 - 582.7530	$3d^94s - 3d^94p$	$^3D - ^3D^o$	3 - 2		930
	720	711.050	442.1165 - 582.7530	$3d^94s - 3d^94p$	$^3D - ^3D^o$	2 - 2		930
	410	717.527	442.1165 - 581.4850	$3d^94s - 3d^94p$	$^3D - ^3D^o$	2 - 1		930
	760	721.392	439.7495 - 578.3700	$3d^94s - 3d^94p$	$^3D - ^3D^o$	3 - 3		930
	730	733.932	442.1165 - 578.3700	$3d^94s - 3d^94p$	$^3D - ^3D^o$	2 - 3		930
	750	734.484	442.1165 - 578.2700	$3d^94s - 3d^94p$	$^3D - ^1P^o$	2 - 1		930
	820	736.359	439.7495 - 575.5525	$3d^94s - 3d^94p$	$^3D - ^1F^o$	3 - 3		930
	760	742.283	446.7650 - 581.4850	$3d^94s - 3d^94p$	$^3D - ^3D^o$	1 - 1		930
	680	749.421	442.1165 - 575.5525	$3d^94s - 3d^94p$	$^3D - ^1F^o$	2 - 3		930
	830	751.914	442.1165 - 575.1100	$3d^94s - 3d^94p$	$^3D - ^1D^o$	2 - 2		930
	810	755.002	450.3030 - 582.7530	$3d^94s - 3d^94p$	$^1D - ^3D^o$	2 - 2		930
	30	759.810						930,588
	800	760.425	446.7650 - 578.2700	$3d^94s - 3d^94p$	$^3D - ^1P^o$	1 - 1		930
	1	761.984						930,588
	300	762.292	450.3030 - 581.4850	$3d^94s - 3d^94p$	$^1D - ^3D^o$	2 - 1		930
	30	765.156						930,588
	840	779.007	439.7495 - 568.1180	$3d^94s - 3d^94p$	$^3D - ^3F^o$	3 - 4		930
	680	779.149	446.7650 - 575.1100	$3d^94s - 3d^94p$	$^3D - ^1D^o$	1 - 2		930
	0	779.900						930,588
	810	780.831	450.3030 - 578.3700	$3d^94s - 3d^94p$	$^1D - ^3D^o$	2 - 3		930
	720	781.412	450.3030 - 578.2700	$3d^94s - 3d^94p$	$^1D - ^1P^o$	2 - 1		930
	790	791.024	442.1165 - 568.5365	$3d^94s - 3d^94p$	$^3D - ^3F^o$	2 - 2		930
	830	798.434	450.3030 - 575.5525	$3d^94s - 3d^94p$	$^1D - ^1F^o$	2 - 3		930
	700	801.233	450.3030 - 575.1100	$3d^94s - 3d^94p$	$^1D - ^1D^o$	2 - 2		930
	790	807.326	439.7495 - 563.6155	$3d^94s - 3d^94p$	$^3D - ^3F^o$	3 - 3		930
	800	809.563	442.1165 - 565.6400	$3d^94s - 3d^94p$	$^3D - ^3P^o$	2 - 1		930
	690	812.930	446.7650 - 569.7770	$3d^94s - 3d^94p$	$^3D - ^3P^o$	1 - 0		930
	10	818.937						930,588
	820	821.202	446.7650 - 568.5365	$3d^94s - 3d^94p$	$^3D - ^3F^o$	1 - 2		930
	840	823.053	442.1165 - 563.6155	$3d^94s - 3d^94p$	$^3D - ^3F^o$	2 - 3		930

SE VII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1		840.249						930,588
790		840.687	439.7495 - 558.7020	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^o$	3 - 2		930
500		841.223	446.7650 - 565.6400	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^o$	1 - 1		930
40		857.761	442.1165 - 558.7020	$3d^9 4s - 3d^9 4p$	$^3D - ^3P^o$	2 - 2		930
720		867.017	450.3030 - 565.6400	$3d^9 4s - 3d^9 4p$	$^1D - ^3P^o$	2 - 1		930
740		882.521	450.3030 - 563.6155	$3d^9 4s - 3d^9 4p$	$^1D - ^3F^o$	2 - 3		930
12		922.516	450.3030 - 558.7020	$3d^9 4s - 3d^9 4p$	$^1D - ^3P^o$	2 - 2		930

SELENIUM VIII (Se⁷⁺), Z = 34
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 (^2D_{5/2})$ (27 electrons)
Ionization Potential [1 541 000] cm^{-1} ; [191] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
19		111.196	7.0373 - 906.350	$3d^9 - 3p^5 3d^{10}$	$ga^2D - ^2P^o$	2 - 1		930
43		116.235	0. - 860.326	$3d^9 - 3p^5 3d^{10}$	$ga^2D - ^2P^o$	2 - 2		930
5		117.195	7.0373 - 860.326	$3d^9 - 3p^5 3d^{10}$	$ga^2D - ^2P^o$	2 - 3		930
310		129.654	0. - 771.2843	$3d^9 - 3d^8(a^1S)4p$	$ga^2D - x^2P^o$	2 - 1		641
1000		130.849	7.0373 - 771.2843	$3d^9 - 3d^8(a^1S)4p$	$ga^2D - x^2P^o$	2 - 2		641
210		132.132	7.0373 - 763.8582	$3d^9 - 3d^8(a^1S)4p$	$ga^2D - x^2P^o$	2 - 2		641
300		140.910	0. - 709.6740	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - x^2D^o$	2 - 3		641
950		141.092	0. - 708.7573	$3d^9 - 3d^8(a^1G)4p$	$ga^2D - x^2F^o$	2 - 2		641
770		141.376	7.0373 - 714.3723	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^2S^o$	2 - 1		641
770		141.676	0. - 705.8395	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^2P^o$	2 - 2		641
970		141.824	7.0373 - 712.1358	$3d^9 - 3d^8(a^1G)4p$	$ga^2D - x^2F^o$	2 - 2		641
470		142.002	7.0373 - 711.2629	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^2P^o$	2 - 2		641
800		142.269	0. - 702.8936	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^4D^o$	2 - 1		641
130		142.320	7.0373 - 709.6740	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - x^2D^o$	2 - 1		641
120		142.585	0. - 701.3431	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^4D^o$	2 - 2		641
640		142.743	0. - 700.5619	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - z^2P^o$	2 - 3		641
270		142.768	7.0373 - 707.4756	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - x^2D^o$	2 - 1		641
50		143.088	0. - 698.8724	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^4D^o$	2 - 2		641
500		143.101	7.0373 - 705.8395	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^2P^o$	2 - 2		641
720		143.431	0. - 697.2038	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	2 - 2		641
710		143.885	0. - 694.9994	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2F^o$	2 - 2		641
230		143.939	0. - 694.7439	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	2 - 2		641
220		144.027	7.0373 - 701.3431	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^4D^o$	2 - 2		641
120		144.243	7.0373 - 700.3128	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^4D^o$	2 - 1		641
120		144.543	7.0373 - 698.8724	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - y^4D^o$	2 - 2		641
120		144.892	7.0373 - 697.2038	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	2 - 2		641
20		145.218	7.0373 - 695.6572	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - z^2P^o$	2 - 1		641
750		145.410	7.0373 - 694.7439	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2D^o$	2 - 2		641
330		145.582	0. - 686.8933	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	2 - 2		641
100		145.782	0. - 685.9543	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	2 - 2		641
400		146.221	7.0373 - 690.9368	$3d^9 - 3d^8(a^1D)4p$	$ga^2D - y^2F^o$	2 - 2		641
780		146.422	0. - 682.9545	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2F^o$	2 - 2		641
150		146.914	0. - 680.6673	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^o$	2 - 2		641
310		147.091	7.0373 - 686.8933	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	2 - 2		641
270		147.218	0. - 679.2636	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2G^o$	2 - 2		641
420		147.294	7.0373 - 685.9543	$3d^9 - 3d^8(a^3P)4p$	$ga^2D - z^4P^o$	2 - 2		641

SE VIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	730	147.568	0. - 677.6552	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2F^{\circ}$	4 - 7		641
	590	147.784	0. - 676.6546	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^{\circ}$	2 - 2		641
	240	147.948	7.0373 - 682.9545	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2F^{\circ}$	2 - 2		641
	800	148.451	7.0373 - 680.6673	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^{\circ}$	2 - 2		641
	800	148.499	0. - 673.4052	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^{\circ}$	2 - 2		641
	50	148.731	0. - 672.3629	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^{\circ}$	2 - 2		641
	780	148.803	0. - 672.0296	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4F^{\circ}$	4 - 7		641
	360	149.341	7.0373 - 676.6546	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^{\circ}$	2 - 2		641
	20	149.685	0. - 668.0696	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4D^{\circ}$	2 - 2		641
	80	149.780	0. - 667.6439	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4G^{\circ}$	2 - 2		641
	380	150.301	7.0373 - 672.3629	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^2D^{\circ}$	2 - 2		641
	80	152.348	0. - 656.3899	$3d^9 - 3d^8(a^3F)4p$	$ga^2D - z^4D^{\circ}$	2 - 2		641
	30	642.969						930,588

SELENIUM XV (Se^{14+}), Z = 34
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2(^3F_2)$ (20 electrons)
Ionization Potential [3 831 000] cm^{-1} ; [475] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	45.56	14. +D - 2209. +D	$3p^6 3d^2 - 3p^6 3d 4f$	$g^3F - ^3G^{\circ}$	4 - 5		878

SELENIUM XVI (Se^{16+}), Z = 34
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d(^2D_{3/2})$ (19 electrons)
Ionization Potential [4 186 000] cm^{-1} ; [519] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	42.91	10. +D - 2340. +D	$3p^6 3d - 3p^6 4f$	$g^2D - ^2F^{\circ}$	4 - 7		878
	340	102.2	10. +D - 988.5 +D	$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^{\circ}$	2 - 2		1134
	430	102.6	0.0 - 974.6	$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^{\circ}$	2 - 2		1134
		109.9	10. +D - 919.9 +D	$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^{\circ}$	2 - 2		1134

SELENIUM XVII (Se¹⁶⁺), Z = 34
Ground State 1s²2s²2p⁶3s²3p⁶(¹S₀) (18 electrons)
Ionization Potential [5 299 000] cm⁻¹; [657] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	460	105.9	0.0 - 944.3	3p ⁶ - 3p ⁵ 3d	g ¹ S - ¹ P°	0 - 1		1134

SELENIUM XVIII (Se¹⁷⁺), Z = 34
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential [5 606 000] cm⁻¹; [695] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	37.9	510. +D - 3149. +D	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ D° - ⁴ F°	$\frac{7}{2} - \frac{9}{2}$		878
	10	38.6	580. +S - 3171. +S	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ F° - ⁴ G°	$\frac{9}{2} - \frac{11}{2}$		878
	445	109.1	0.0 - 916.6	3p ⁵ - 3p ⁴ 3d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		1134
	460	109.9	65.454 - 975.4	3p ⁵ - 3p ⁴ 3d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		1134
		1527.8	0.0 - 65.454	3p ⁵ - 3p ⁵	g ² P° - g ² P°	$\frac{3}{2} - \frac{1}{2}$	F	1145

SELENIUM XIX (Se¹⁸⁺), Z = 34
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [5 936 000] cm⁻¹; [736] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	36.2	800. +D - 3560. +D	3p ³ (⁴ S°)3d - 3p ³ (⁴ S°)4f	⁵ D° - ⁵ F	4 - 5		878
	335	112.5	0.0 - 888.9	3p ⁴ - 3p ³ 3d	g ³ P - ³ D°	2 - 3		1134
	420	114.0	91.93 - 969.1	3p ⁴ - 3p ³ 3d	¹ D - ¹ F°	2 - 3		1134
		808.8	57.88 - 181.52	3p ⁴ - 3p ⁴	g ³ P - ¹ S	1 - 0	F, Q	1145
		1088.	0.0 - 91.93	3p ⁴ - 3p ⁴	g ³ P - ¹ D	2 - 2	F, P	1145
		1727.7	0.0 - 57.88	3p ⁴ - 3p ⁴	g ³ P - g ³ P	2 - 1	F	1145

SELENIUM XX (Se¹⁹⁺), Z = 34
Ground State 1s²2s²2p⁶3s²3p³(⁴S_{3/2}) (15 electrons)
Ionization Potential [6 396 000] cm⁻¹; [793] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	265	119.7	88.067 - 923.49	3s ² 3p ³ - 3s ² 3p ² (¹ D)3d	² D° - ² F	$\frac{3}{2} - \frac{7}{2}$		1134
	235	123.3	0.0 - 811.03	3s ² 3p ³ - 3s ² 3p ² (³ P)3d	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{7}{2}$		1134
		572.3	0.0 - 174.724	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² P°	$\frac{3}{2} - \frac{3}{2}$	F, P	1139
		766.6	0.0 - 130.444	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² P°	$\frac{3}{2} - \frac{1}{2}$	F, Q	1139
		908.8	64.687 - 174.724	3s ² 3p ³ - 3s ² 3p ³	² D° - ² P°	$\frac{3}{2} - \frac{3}{2}$	F, Q	1139
		1135.5	0.0 - 88.067	3s ² 3p ³ - 3s ² 3p ³	g ⁴ S° - ² D°	$\frac{3}{2} - \frac{5}{2}$	F, P	1139

SE XX — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		1154.0	88.067 - 174.724	$3s^23p^3 - 3s^23p^3$	$^2D^\circ - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F,P	1139
		1520.8	64.687 - 130.444	$3s^23p^3 - 3s^23p^3$	$^2D^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	1139
		1545.9	0.0 - 64.687	$3s^23p^3 - 3s^23p^3$	$g^4S^\circ - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F	1139

SELENIUM XXI (Se²⁰⁺), Z = 34
Ground State $1s^22s^22p^63s^23p^2(^3P_0)$ (14 electrons)
Ionization Potential [6 767 000] cm^{-1} ; [839] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	290	129.5	71.695 - 843.9	$3s^23p^2 - 3s^23p3d$	$g^3P - ^3D^\circ$	2 - 3		1134
		639.6	48.956 - 205.30	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1S$	1 - 0	F,Q	1145
		1069.	48.956 - 142.48 + D	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1D$	1 - 2	F,P	1145
		1413.	71.695 - 142.48 + D	$3s^23p^2 - 3s^23p^2$	$g^3P - ^1D$	2 - 2	F,P	1145

SELENIUM XXII (Se²¹⁺), Z = 34
Ground State $1s^22s^22p^63s^23p^2(^2P_{1/2}^\circ)$ (13 electrons)
Ionization Potential [7 146 000] cm^{-1} ; [886] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	285	131.61	0.0 - 759.82	$3s^23p - 3s^23d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		878,1134
	345	143.57	73.64 + D - 770.16 + D	$3s^23p - 3s^23d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{1}{2}$		878,1134
	280	165.62	73.64 + D - 677.43 + D	$3s^23p - 3s^23p^2$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		878,1134
		1358.	0.0 - 73.64 + D	$3s^23p - 3s^23p$	$g^2P^\circ - g^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F,P	1145

SELENIUM XXIII (Se²²⁺), Z = 34
Ground State $1s^22s^22p^63s^2(^1S_0)$ (12 electrons)
Ionization Potential [7 961 000] cm^{-1} ; [987] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	25.36	0.0 - 3943.	$3s^2 - 3s4p$	$g^1S - ^1P^\circ$	0 - 1		878
	30	26.76	434.70 - 4172.	$3s3p - 3s4d$	$^3P^\circ - ^3D$	2 - 3		878
	20	27.75	568.44 - 4172.	$3s3p - 3s4d$	$^1P^\circ - ^1D$	1 - 2		878
	10	29.20	898. - 4322.	$3p^2 - 3s4f$	$^1D - ^1F^\circ$	2 - 3		878
	40	31.10	1083.9 - 4299.	$3s3d - 3s4f$	$^3D - ^3F^\circ$	3 - 4		878
	20	31.85	4200. + D - 7340. + D	$3p3d - 3p4f$	$^1F^\circ - ^1G$	3 - 4		878
	20	32.01	1197.9 - 4322.	$3s3d - 3s4f$	$^1D - ^1F^\circ$	2 - 3		878
	10	140.85	357.64 + C - 1067.6 + C	$3s3p - 3s3d$	$^3P^\circ - ^3D$	0 - 1		878
	30	143.36	376.36 - 1073.9	$3s3p - 3s3d$	$^3P^\circ - ^3D$	1 - 2		878
	50	154.04	434.70 - 1083.9	$3s3p - 3s3d$	$^3P^\circ - ^3D$	2 - 3		878
	50	158.86	568.44 - 1197.9	$3s3p - 3s3d$	$^1P^\circ - ^1D$	1 - 2		878
	735	175.92	0.0 - 568.44	$3s^2 - 3s3p$	$g^1S - ^1P^\circ$	0 - 1		878,1134

SE XXIII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	290	265.7 1714.1	0.0 - 376.36 376.36 - 434.70	$3s^2 - 3s3p$ $3s3p - 3s3p$	$g^1S - ^3P^o$ $^3P^o - ^3P^o$	0 - 1 1 - 2	F	1134 1145

SELENIUM XXIV (Se^{23+}), Z = 34
Ground State $1s^2 2s^2 2p^6 3s^2 (^2S_{1/2})$ (11 electrons)
Ionization Potential 8 360 200 cm^{-1} ; 1037 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.718	497.340 - 13454.	$2p^6 3p -$	$^2P^o - (0, \frac{3}{2})^o$	$\frac{3}{2} - \frac{3}{2}$		1094
		7.757	1071.663 - 13963.	$2p^5(^2P_{1/2}^o)3p(3d(^2D_{3/2}))$ $2p^6 3d -$	$^2D - (\frac{3}{2}, 4)^o$	$\frac{5}{2} - \frac{7}{2}$		1094
		7.782	1071.663 - 13922.	$2p^5(^2P_{1/2}^o)(3d^2(^1G_4))$ $2p^6 3d -$ $2p^5(^2P_{1/2}^o)(3d^2(^3F_3))$	$^2D - (\frac{3}{2}, 3)^o$	$\frac{5}{2} - \frac{5}{2}$		1094
		7.790	418.008 - 13255.	$2p^6 3p -$	$^2P^o - (1, \frac{3}{2})^o$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.805	497.340 - 13310.	$2p^5(^2P_{1/2}^o)3p(3d(^2D_{3/2}))$ $2p^6 3p -$	$^2P^o - (2, \frac{3}{2})^o$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.821	1057.116 - 13843.	$2p^5(^2P_{3/2}^o)3p(3d(^2D_{5/2}))$ $2p^6 3d -$ $2p^5(^2P_{1/2}^o)(3d^2(^3F_2))$	$^2D - (\frac{3}{2}, 2)^o$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.945	1071.663 - 13658.	$2p^6 3d -$	$^2D - (\frac{3}{2}, 4)^o$	$\frac{5}{2} - \frac{5}{2}$		1094
		7.969	1071.663 - 13620.	$2p^5(^2P_{3/2}^o)(3d^2(^3F_4))$ $2p^6 3d -$ $2p^5(^2P_{3/2}^o)(3d^2(^1G_4))$	$^2D - (\frac{3}{2}, 4)^o$	$\frac{5}{2} - \frac{7}{2}$		1094
	30	18.98	497.340 - 5766.	$2p^6 3p - 2p^6 5d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		878
	60	21.07	1071.663 - 5818.	$2p^6 3d - 2p^6 5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$		878
	60	24.53	0.0 - 4077.	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		878
	50	24.73	0.0 - 4044.	$2p^6 3s - 2p^6 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		878
	70	25.83	418.008 - 4290.	$2p^6 3p - 2p^6 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		878
	80	26.35	497.340 - 4292.	$2p^6 3p - 2p^6 4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		878
	20	28.907	418.008 - 3876.8	$2p^6 3p - 2p^6 4s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$		878
	40	29.596	497.340 - 3876.8	$2p^6 3p - 2p^6 4s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$		878
	90	29.960	1057.116 - 4394.9	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$		878
	90	30.068	1071.663 - 4397.5	$2p^6 3d - 2p^6 4f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$		878
	800	156.468	418.008 - 1057.116	$2p^6 3p - 2p^6 3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		630
	650	174.118	497.340 - 1071.663	$2p^6 3p - 2p^6 3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$		630
	250	178.643	497.340 - 1057.116	$2p^6 3p - 2p^6 3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		630
	900	201.07	0.0 - 497.340	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$		630
	480	239.23	0.0 - 418.008	$2p^6 3s - 2p^6 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		375, 1134, 630

SELENIUM XXV (Se²⁴⁺), Z = 34
Ground State 1s²2s²2p⁶(¹S₀) (10 electrons)
Ionization Potential [20 500 000] cm⁻¹; [2542] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		5.252	0.0 - 19040.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})7d	g ¹ S - (³ 2) ^o	0 - 1		643
		5.300	0.0 - 18868.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})6d	g ¹ S - (³ 2) ^o	0 - 1		643
		5.395	0.0 - 18536.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})6d	g ¹ S - (³ 2) ^o	0 - 1		643
		5.547	0.0 - 18028.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})5d	g ¹ S - (³ 2) ^o	0 - 1		643
		5.650	0.0 - 17700.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})5d	g ¹ S - (³ 2) ^o	0 - 1		643
		5.678	0.0 - 17612.	2s ² 2p ⁶ - 2s2p ⁶ 4p	g ¹ S - ¹ P ^o	0 - 1		1094
		5.689	0.0 - 17578.	2s ² 2p ⁶ - 2s2p ⁶ 4p	g ¹ S - ³ P ^o	0 - 1		1094
		6.078	0.0 - 16453.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4d	g ¹ S - (³ 2) ^o	0 - 1		643
		6.201	0.0 - 16126.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4d	g ¹ S - (³ 2) ^o	0 - 1		643
		6.322	0.0 - 15818.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4s	g ¹ S - (³ 2) ^o	0 - 1		643
		6.368	0.0 - 15704.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4s	g ¹ S - (³ 2) ^o	0 - 1		643
	100	7.243	0.0 - 13806.	2s ² 2p ⁶ - 2s2p ⁶ 3p	g ¹ S - ¹ P ^o	0 - 1		643
	80	7.294	0.0 - 13710.	2s ² 2p ⁶ - 2s2p ⁶ 3p	g ¹ S - ³ P ^o	0 - 1		643
	150	7.685	0.0 - 13012.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})3d	g ¹ S - (³ 2) ^o	0 - 1		643
	200	7.874	0.0 - 12700.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3d	g ¹ S - (³ 2) ^o	0 - 1		643
	60	7.967	0.0 - 12552.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3d	g ¹ S - (³ 2) ^o	0 - 1		643
	100	8.374	0.0 - 11942.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})3s	g ¹ S - (³ 2) ^o	0 - 1		643
	100	8.615	0.0 - 11608.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3s	g ¹ S - (³ 2) ^o	0 - 1		643

SELENIUM XXVI (Se²⁵⁺), Z = 34
Ground State 1s²2s²2p⁵(²P_{3/2}) (9 electrons)
Ionization Potential [21 460 000] cm⁻¹; [2661] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		5.781	0.0 - 17298.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)4d	g ² P ^o - ² D	2 - 2		1094
		5.796	0.0 - 17253.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)4d	g ² P ^o - ² D	2 - 2		1094
		5.829	0.0 - 17156.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ⁴ P	1 - 1		1094
		5.889	0.0 - 16981.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ⁴ F	2 - 2		1094
		5.906	346.08 - 17278.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)4d	g ² P ^o - ² D	2 - 2		1094
		5.930	0.0 - 16863.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4d	g ² P ^o - ² D	2 - 2		1094
		6.045	0.0 - 16543.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)4s	g ² P ^o - ² D	2 - 2		1094
		6.075	0.0 - 16461.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)4s	g ² P ^o - ² P	1 - 1		1094
		6.808	0.0 - 14689.	2s ² 2p ⁵ - 2s2p ⁵ (¹ P ^o)3p	g ² P ^o - ² D	2 - 2		1094
		6.963	346.08 - 14708.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ² P	2 - 2		1094
		6.988	346.08 - 14656.	2s ² 2p ⁵ - 2s2p ⁵ (¹ P ^o)3p	g ² P ^o - ² P	1 - 1		1094
		7.015	346.08 - 14601.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ² D	2 - 2		1094
		7.057	0.0 - 14170.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ² P	2 - 2		1094
		7.085	0.0 - 14114.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ² D	2 - 2		1094
		7.097	0.0 - 14090.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ⁴ D	2 - 2		1094
		7.116	346.08 - 14399.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ² S	1 - 1		1094
		7.138	0.0 - 14010.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ⁴ D	2 - 2		1094
		7.190	346.08 - 14254.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ⁴ P	2 - 2		1094
	12	7.353	0.0 - 13597.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² P	2 - 1		964
		7.368	0.0 - 13568.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² D	2 - 2		1094
	20	7.379	346.08 - 13898.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3d	g ² P ^o - ² D	1 - 1		1094,964
	40	7.400	0.0 - 13514.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² D	1 - 1		1094,964
	28	7.417	0.0 - 13473.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² S	1 - 1		1094,964
	23	7.465	0.0 - 13396.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ² D	2 - 2		1094,964

SE XXVI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	13	7.487	0.0 - 13356.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		1094,964
	13	7.548	346.08 - 13597.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		1094,964
	14	7.565	346.08 - 13568.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	12	7.596	346.08 - 13500.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		964
	24	7.610	0.0 - 13141.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		1094,964
	16	7.623	0.0 - 13118.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094,964
	12	7.637	0.0 - 13094.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094,964
	10	7.658	346.08 - 13404.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094,964
		7.685	346.08 - 13356.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2 P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$	Q	1094
		7.945	346.08 - 12933.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		1094
	27	7.978	0.0 - 12534.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094,964
	9	8.026	0.0 - 12457.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		964
	13	8.042	0.0 - 12435.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1094,964
		8.156	0.0 - 12261.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1094
	8	8.197	346.08 - 12546.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094,964
	15	8.237	0.0 - 12137.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1094,964
	5	8.259	0.0 - 12108.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094,964
		8.483	346.08 - 12137.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		1094
		58.8	0.0 - 1699.8 + K	$2s^2 2p^5 - 2s2p^6$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	375,122
		73.9	346.08 - 1699.8 + K	$2s^2 2p^5 - 2s2p^6$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	375,122
		288.95	0.0 - 346.08	$2s^2 2p^5 - 2s^2 2p^5$	$g^2 P^\circ - g^2 P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	1122

SELENIUM XXVII (Se^{26+}), Z = 34
Ground State $1s^2 2s^2 2p^4(^3P_2)$ (8 electrons)
Ionization Potential [22 570 000] cm^{-1} ; [2798] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		5.537	0. - 18060.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)4d$	$g^3 P - ^3D^\circ$	2 - 3		1094
		5.643	422.38 + E - 18143. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)4d$	$^1D - ^3F^\circ$	2 - 3		1094
		5.669	0. - 17640.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	2 - 3		1094
		5.713	147.76 + E - 17652. + E	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	0 - 1		1094
		5.781	323.69 + E - 17622. + E	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3 P - ^3D^\circ$	1 - 2		1094
		7.091	323.69 + E - 14426. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$g^3 P - ^3D^\circ$	1 - 2		1094
		7.124	0. - 14039.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3 P - ^3S^\circ$	2 - 1		634
		7.138	422.38 + E - 14428. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^1F^\circ$	2 - 3		1094
		7.150	0. - 13986.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3 P - ^3F^\circ$	2 - 2		634
		7.170	422.38 + E - 14377. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^3P^\circ$	2 - 1	Q	634
		7.177	0. - 13933.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3 P - ^1P^\circ$	2 - 1		634
		7.207	0. - 13875.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3 P - ^3G^\circ$	2 - 3		634
		7.214	0. - 13862.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3 P - ^3F^\circ$	2 - 3		634
		7.290	323.69 + E - 14042. + E	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3 P - ^1D^\circ$	1 - 2		634
		7.294	422.38 + E - 14132. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^3P^\circ$	2 - 2		1094
		7.301	422.38 + E - 14119. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^3F^\circ$	2 - 2		634
		7.316	323.69 + E - 13992. + E	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3 P - ^3P^\circ$	1 - 0		634
		7.329	0. - 13644.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3d$	$g^3 P - ^3D^\circ$	2 - 3		1094
		7.340	814.60 + E - 14439. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1S - ^1P^\circ$	0 - 1		1094
		7.353	0. - 13600.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3d$	$g^3 P - ^3D^\circ$	2 - 2		634
		7.400	147.76 + E - 13661. + E	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3d$	$g^3 P - ^3D^\circ$	0 - 1		634
		7.565	323.69 + E - 13542. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$g^3 P - ^3P^\circ$	1 - 2		1094
		7.610	422.38 + E - 13560. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$^1D - ^1P^\circ$	2 - 1		1094
		7.623	0. - 13118.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$g^3 P - ^3D^\circ$	2 - 3		1094

SE XXVII — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.782	814.60 + E - 13661. + E	$2s^2 2p^4 - 2s^2 2p^3(^4S^o) 3d$	$^1S - ^3D^o$	0 - 1	Q	1094
		7.801	323.69 + E - 13168. + E	$2s^2 2p^4 - 2s^2 2p^3(^2D^o) 3s$	$g^3P - ^1D^o$	1 - 2	Q	1094
		7.821	0. - 12786.	$2s^2 2p^4 - 2s^2 2p^3(^4S^o) 3s$	$g^3P - ^3S^o$	2 - 1		1094
		7.846	814.60 + E - 13560. + E	$2s^2 2p^4 - 2s^2 2p^3(^2P^o) 3s$	$^1S - ^1P^o$	0 - 1		1094
		7.874	323.69 + E - 13024. + E	$2s^2 2p^4 - 2s^2 2p^3(^2D^o) 3s$	$g^3P - ^3D^o$	1 - 2		1094
		47.844	0. - 2090.12 + E	$2s^2 2p^4 - 2s 2p^3$	$g^3P - ^1P^o$	2 - 1	P	1104
		59.962	422.38 + E - 2090.12 + E	$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^o$	2 - 1	P	1104
		60.639	0. - 1649.10 + E	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2 - 1	P	1104
		65.732	323.69 + E - 1845.03 + E	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 0	P	1104
		66.607	147.76 + E - 1649.10 + E	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	0 - 1	P	1104
		67.185	0. - 1488.42 + E	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2 - 2	P	1104
		75.448	323.69 + E - 1649.10 + E	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 1	P	1104
		78.400	814.60 + E - 2090.12 + E	$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^o$	0 - 1	P	1104
		85.857	323.69 + E - 1488.42 + E	$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 2	P	1104
		122.8	0. - 814.60 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1104
		203.7	323.69 + E - 814.60 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1104
		236.8	0. - 422.38 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F,P	375,1104
		255.0	422.38 + E - 814.60 + E	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1104
		308.9	0. - 323.69 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F,P	375,1104
		364.1	147.76 + E - 422.38 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1104
		568.4	147.76 + E - 323.69 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	0 - 1	F,P	375,1104
		676.8	0. - 147.76 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1104
		1013.	323.69 + E - 422.38 + E	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 1	F,P	375,1104

SELENIUM XXX (Se²⁹⁺), Z = 34
Ground State $1s^2 2s^2 2p(^2P^o_{1/2})$ (5 electrons)
Ionization Potential [26 410 000] cm^{-1} ; [3274] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		260.1	0.0 - 384.46	$2s^2 2p - 2s^2 2p$	$g^2P^o - g^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F,P	1122

SELENIUM XXXI (Se³⁰⁺), Z = 34
Ground State $1s^2 2s^2(^1S_0)$ (4 electrons)
Ionization Potential [27 930 000] cm^{-1} ; [3463] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	0	5.952						643
	0	6.011	550.3 + K - 17186. + K	$1s^2 2s 2p - 1s^2 2p 3p$	$^3P^o - ^3P$	1 - 1		643
	0	6.048	864.6 + K - 17399. + K	$1s^2 2s 2p - 1s^2 2p 3p$	$^3P^o - ^3P$	2 - 2		643
	10	6.129	550.3 + K - 16866. + K	$1s^2 2s 2p - 1s^2 2p 3p$	$^3P^o - ^3P$	1 - 0		643
	30	6.177	864.6 + K - 17054. + K	$1s^2 2s 2p - 1s^2 2p 3p$	$^3P^o - ^1D$	2 - 2		643
	30	6.234	1195.5 + K - 17237. + K	$1s^2 2s 2p - 1s^2 2p 3p$	$^1P^o - ^1P$	1 - 1		643

SE XXXI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	6.238	864.6+K - 16895.+K	$1s^2 2s 2p - 1s^2 2p 3p$	$^3P^\circ - ^3S$	2 - 1		643
	30	6.308	550.3+K - 16403.+K	$1s^2 2s 2p - 1s^2 2s 3d$	$^3P^\circ - ^3D$	1 - 1		643
	20	6.322	1699.7+L - 17517.+L	$1s^2 2p^2 - 1s^2 2p 3d$	$^3P - ^3P^\circ$	2 - 1		643
	20	6.368	1699.7+L - 17403.+L	$1s^2 2p^2 - 1s^2 2p 3d$	$^3P - ^3D^\circ$	2 - 2		643
		182.	0.0 - 550.3+K	$1s^2 2s^2 - 1s^2 2s 2p$	$g^1S - ^3P^\circ$	0 - 1	P	375

SELENIUM XXXII (Se^{31+}), Z = 34
Ground State $1s^2 2s(^2S_{1/2})$ (3 electrons)
Ionization Potential [29 300 000] cm^{-1} ; [3633] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		105.6	0.0 - 946.92+D	$1s^2 2s - 1s^2 2p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	375,977
		186.1	0.0 - 537.26+E	$1s^2 2s - 1s^2 2p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	375,977

SELENIUM XXXIII (Se^{32+}), Z = 34
Ground State $1s^2(^1S_0)$ (2 electrons)
Ionization Potential 123 946 000 cm^{-1} ; 15367 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		0.905	0.0 - 110439.9	$1s^2 - 1s 3p$	$g^1S - ^3P^\circ$	0 - 1	P	375,918
		1.064	0.0 - 93977.80	$1s^2 - 1s 2p$	$g^1S - ^1P^\circ$	0 - 1	P	1105
		1.071	0.0 - 93409.41	$1s^2 - 1s 2p$	$g^1S - ^3P^\circ$	0 - 1	P	1105
		1.075	0.0 - 93052.92	$1s^2 - 1s 2s$	$g^1S - ^3S$	0 - 1	F,P	1105

SELENIUM XXXIV (Se^{33+}), Z = 34
Ground State $1s(^2S_{1/2})$ (1 electron)
Ionization Potential 128 788 000 cm^{-1} ; 15968 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		0.872	0.0 - 114620.2600	$1s - 3p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.031	0.0 - 96951.8400	$1s - 2p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P	375,1042
		1.037	0.0 - 96443.3000	$1s - 2p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P	375,1042

BROMINE I (Br^{0+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^5 (^2P_{3/2})$ (35 electrons)
Ionization Potential 95 284.8 cm^{-1} ; 11.814 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
10	1067.559		0.0 - 93.67192	$4s^2 4p^5 - 4s^2 4p^4 (^1D) 4d$	$g^2 P^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		757
15	1067.805		0.0 - 93.65035	$4s^2 4p^5 - 4s^2 4p^4 (^1D) 4d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		757
10	1068.256		0.0 - 93.60989	$4s^2 4p^5 - 4s^2 4p^4 (^1D) 4d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
3	1068.849		0.0 - 93.55798	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 11s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
70	1073.912		0.0 - 93.11718	$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 6d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
70	1074.243		0.0 - 93.08862	$4s^2 4p^5 - 4s^2 4p^4 (^1D) 4d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		757
10	1074.803		0.0 - 93.03929	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 10s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
15	1075.345		0.0 - 92.99267	$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 6d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
20	1076.964		0.0 - 92.85362	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		757
15	1077.873		0.0 - 92.77491	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
15	1078.124		0.0 - 92.75369	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
30	1078.242		0.0 - 92.74316	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		757
30	1079.320		0.0 - 92.65045	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		757
50	1080.882		0.0 - 92.51691	$4s^2 4p^5 - 4s^2 4p^4 (^1D) 4d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		757
10	1084.810		0.0 - 92.18230	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 9s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
15	1085.050		0.0 - 92.16145	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 9s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
5	1085.896		0.0 - 92.08961	$4s^2 4p^5 - 4s^2 4p^4 (^3P_0) 7s$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		757
30	1087.468		0.0 - 91.95655	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 7d$	$g^2 P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		757
40	1087.687		0.0 - 91.93795	$4s^2 4p^5 - 4s^2 4p^4 (^1D) 5s$	$g^2 P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		757
20	1087.819		0.0 - 91.92688	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 7d$	$g^2 P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		757
30	1089.039		0.0 - 91.82395	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 7d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
15	1089.203		0.0 - 91.81029	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 7d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
20	1089.322		0.0 - 91.80015	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 7d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
85	1090.623		0.0 - 91.69094	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 7d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
100	1094.722		0.0 - 91.34768	$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 7s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		757
100	1095.481		0.0 - 91.28403	$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 7s$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
100	1096.788		0.0 - 91.17518	$4s^2 4p^5 - 4s^2 4p^4 (^3P_0) 5d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		757
100	1098.881		0.0 - 91.00135	$4s^2 4p^5 - 4s^2 4p^4 (^3P_0) 5d$	$g^2 P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		757
50	1101.347		0.0 - 90.79755	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
	1101.456		0.0 - 90.78890	$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8s$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P	757
210	1101.498	3.68524 - 94.4707		$4s^2 4p^5 - 4s^2 4p^4 (^1D) 6s$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		757
60	1103.924	0.0 - 90.58526		$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 5d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
60	1104.168	0.0 - 90.56585		$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 5d$	$g^2 P^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$		757
50	1105.460	0.0 - 90.45975		$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 5d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
50	1105.844	0.0 - 90.42850		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 6d$	$g^2 P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		757
70	1105.994	0.0 - 90.41644		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 6d$	$g^2 P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		757
50	1107.442	3.68524 - 93.98318		$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 8s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
50	1107.512	0.0 - 90.29234		$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 5d$	$g^2 P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		757
20	1109.422	3.68524 - 93.82147		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 10d$	$g^2 P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		757
100	1110.904	3.68524 - 93.70148		$4s^2 4p^5 - 4s^2 4p^4 (^1D) 4d$	$g^2 P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		757
50	1111.579							757
40	1111.751	0.0 - 89.94797		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 6d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		757
20	1112.743	0.0 - 89.86769		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 6d$	$g^2 P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
30	1115.448	3.68524 - 93.33531		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 9d$	$g^2 P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		757
40	1116.105	3.68524 - 93.28258		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 9d$	$g^2 P^\circ - ^4D$	$\frac{1}{2} - \frac{1}{2}$		757
90	1118.173	3.68524 - 93.11718		$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 6d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		757
60	1119.140	3.68524 - 93.03929		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 10s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757
90	1119.725	3.68524 - 92.99267		$4s^2 4p^5 - 4s^2 4p^4 (^3P_1) 6d$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		757
120	1121.473	3.68524 - 92.85362		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		757
80	1121.839	3.68524 - 92.82433		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
120	1124.038	3.68524 - 92.65045		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 8d$	$g^2 P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		757
200	1125.728	3.68524 - 92.51691		$4s^2 4p^5 - 4s^2 4p^4 (^1D) 4d$	$g^2 P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		757
35	1129.979	3.68524 - 92.18230		$4s^2 4p^5 - 4s^2 4p^4 (^3P_2) 9s$	$g^2 P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757
80	1131.171	3.68524 - 92.08961		$4s^2 4p^5 - 4s^2 4p^4 (^3P_0) 7s$	$g^2 P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		757

BR I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
100	1132.822		0.0 - 88.27549	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)7s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
200	1133.116		3.68524 - 91.93795	$4s^2 4p^5 - 4s^2 4p^4(^1D)5s$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		757
80	1133.251		3.68524 - 91.92688	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)7d$	$g^2P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		757
220	1134.588		3.68524 - 91.82395	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)7d$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
200	1134.888		3.68524 - 91.80015	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)7d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		757
210	1136.294		3.68524 - 91.69094	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)7d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{1}{2}$		757
100	1139.350		0.0 - 87.76996	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		757
120	1139.544		0.0 - 87.75492	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$		757
20	1140.732		3.68524 - 91.34768	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)7s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
25	1141.564		3.68524 - 91.28403	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)7s$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		757
80	1145.268		3.68524 - 91.00135	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)5d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		757
60	1145.854		0.0 - 87.27173	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		757
80	1147.689		0.0 - 87.13165	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
60	1147.943		3.68524 - 90.79755	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)8s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757
80	1150.312		0.0 - 86.93328	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		757
100	1151.381		3.68524 - 90.53752	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)5d$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757
100	1152.418		3.68524 - 90.45975	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)5d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		757
40	1152.833		3.68524 - 90.42850	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)6d$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
60	1152.989		3.68524 - 90.41644	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)6d$	$g^2P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		757
15	1154.640		3.68524 - 90.29234	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)5d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		757
80	1159.030		0.0 - 86.27941	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)6s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		757
100	1160.332		3.68524 - 89.86769	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)6d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		757
150	1168.542		0.0 - 85.57693	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)6s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		757
150	1170.479		0.0 - 85.43533	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)6s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
175	1173.827		0.0 - 85.19159	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)4d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		757
210	1177.233		0.0 - 84.94516	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)4d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$		757
240	1178.895		0.0 - 84.82560	$4s^2 4p^5 - 4s^2 4p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		757
150	1182.171		3.68524 - 88.27549	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)7s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757
150	1186.161		0.0 - 84.30576	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$		757
300	1189.279		3.68524 - 87.76996	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		757
210	1189.378		0.0 - 84.07752	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
300	1189.498		3.68524 - 87.75417	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
200	1194.413		0.0 - 83.72308	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^2F$	$\frac{3}{2} - \frac{5}{2}$		757
200	1196.370		3.68524 - 87.27173	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{1}{2}$		757
200	1196.477		0.0 - 83.57850	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
255	1198.371		3.68524 - 87.13165	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		757
200	1203.353		0.0 - 83.10109	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		757
285	1209.756		0.0 - 82.66157	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)6s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
300	1210.734		3.68524 - 86.27941	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)6s$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		757
280	1216.006		0.0 - 82.23617	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)6s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
300	1221.128		3.68524 - 85.57693	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)6s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
295	1221.870		0.0 - 81.84202	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4F$	$\frac{3}{2} - \frac{1}{2}$		757
300	1223.240		3.68524 - 85.43533	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)6s$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		757
320	1224.408		0.0 - 81.67228	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4F$	$\frac{3}{2} - \frac{5}{2}$		757
320	1226.899		3.68524 - 85.19159	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)4d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		757
280	1228.049		0.0 - 81.42997	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		757
500	1232.431		3.68524 - 84.82560	$4s^2 4p^5 - 4s^2 4p^6$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$		757
320	1243.897		3.68524 - 84.07752	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757
285	1249.589		0.0 - 80.02640	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		757
340	1251.664		3.68524 - 83.57850	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		757
300	1255.799		0.0 - 79.63067	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$		757
340	1259.199		3.68524 - 83.10109	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)4d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		757
320	1261.658		0.0 - 79.26091	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{5}{2}$		757
320	1266.200		3.68524 - 82.66157	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)6s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757

BR I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	1279.477	3.68524 - 81.84202	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$		757
	300	1286.259	3.68524 - 81.42997	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
	400	1309.908	3.68524 - 80.02640	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{1}{2}$		757
	400	1316.735	3.68524 - 79.63067	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)4d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		757
3	300	1317.372	0.0 - 75.90853	$4s^2 4p^5 - 4s^2 4p^4(^1D)5s$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$		757
3	360	1317.695	0.0 - 75.89033	$4s^2 4p^5 - 4s^2 4p^4(^1D)5s$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		757
3	580	1384.598	3.68524 - 75.90853	$4s^2 4p^5 - 4s^2 4p^4(^1D)5s$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$		757
2	400	1449.903	0.0 - 68.97021	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)5s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		757
2	850	1488.452	0.0 - 67.18358	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)5s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$		757
1	5	1495.132	0.0 - 66.88387	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)5s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		757
2	730	1531.743	3.68524 - 68.97021	$4s^2 4p^5 - 4s^2 4p^4(^3P_0)5s$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$		757
1	700	1540.654	0.0 - 64.90719	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
2	730	1574.841	3.68524 - 67.18358	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)5s$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$		757
1	660	1576.387	0.0 - 63.43645	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$		757
1	700	1582.312	3.68524 - 66.88387	$4s^2 4p^5 - 4s^2 4p^4(^3P_1)5s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$		757
1	950	1633.404	3.68524 - 64.90719	$4s^2 4p^5 - 4s^2 4p^4(^3P_2)5s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		757

BROMINE II (Br¹⁺), Z = 35
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4(^3P_2)$ (34 electrons)
Ionization Potential 175 850 cm^{-1} ; 21.80 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	710.6	12.0891 - 152.8237	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)5d$	$^1D - ^1D^\circ$	2 - 2		606
	300	711.8	0.0 - 140.4973	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)5d$	$g^3P - ^5D^\circ$	2 - 2		568
	50	713.7	0.0 - 140.1220	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)5d$	$g^3P - ^3D^\circ$	2 - 2		568
	20	718.1	0.0 - 139.2565	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)5d$	$g^3P - ^3D^\circ$	2 - 3		568
	100	726.7	0.0 - 137.6000	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)6s$	$g^3P - ^3S^\circ$	2 - 1		568
	100	728.0	3.1364 - 140.4973	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)5d$	$g^3P - ^5D^\circ$	1 - 2		568
	100	730.0	3.1364 - 140.1220	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)5d$	$g^3P - ^3D^\circ$	1 - 2		568
	150	737.4	3.8375 - 139.4498	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)5d$	$g^3P - ^3D^\circ$	0 - 1		568
	200	740.8	3.1364 - 138.1179	$4s^2 4p^4 -$	$g^3P - 1^\circ$	1 - 1		568
	0	743.7	3.1364 - 137.6000	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)6s$	$g^3P - ^3S^\circ$	1 - 1		606
	10	775.9	0.0 - 128.8861	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^1D^\circ$	2 - 2		606
	50	781.6	0.0 - 127.9390	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^3D^\circ$	2 - 3		606
	1	783.2	0.0 - 127.6842	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^3D^\circ$	2 - 2		606
	10	786.4	12.0891 - 139.2565	$4s^2 4p^4 - 4s^2 4p^3(^4S^\circ)5d$	$^1D - ^3D^\circ$	2 - 3		606
	0	788.7	0.0 - 126.7907	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^3D^\circ$	2 - 1		606
	0	795.2	3.1364 - 128.8861	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^1D^\circ$	1 - 2		606
	100	802.9	3.1364 - 127.6842	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^3D^\circ$	1 - 2		606
	1	808.7	3.1364 - 126.7907	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^3D^\circ$	1 - 1		606
	250	815.5	0.0 - 122.6257	$4s^2 4p^4 - 4s^2 4p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	2 - 2		568
	10	822.7	0.0 - 121.5547	$4s^2 4p^4 - 4s^2 4p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	2 - 1		568
	150	836.9	3.1364 - 122.6257	$4s^2 4p^4 - 4s^2 4p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	1 - 2		568
	10	843.8	0.0 - 118.5071	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$g^3P - ^3F^\circ$	2 - 3		606
	20	844.5	3.1364 - 121.5547	$4s^2 4p^4 - 4s^2 4p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	1 - 1		568
	50	847.3	3.1364 - 121.1514	$4s^2 4p^4 - 4s^2 4p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	1 - 0		568
	100	849.5	3.8375 - 121.5547	$4s^2 4p^4 - 4s^2 4p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	0 - 1		568
	350	856.2	12.0891 - 128.8861	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$^1D - ^1D^\circ$	2 - 2		568
	1	863.2	12.0891 - 127.9390	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$^1D - ^3D^\circ$	2 - 3		606
	0	865.1	12.0891 - 127.6842	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)4d$	$^1D - ^3D^\circ$	2 - 2		606
	1	885.3	12.0891 - 125.0500	$4s^2 4p^4 - 4s^2 4p^3(^2P^\circ)5s$	$^1D - ^1P^\circ$	2 - 1		606
	100	885.5	0.0 - 112.9345	$4s^2 4p^4 - 4s^2 4p^3(^2D^\circ)5s$	$g^3P - ^1D^\circ$	2 - 2		568

BR II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
1000	889.2		0.0 - 112.4586	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3		568
1	889.8		0.0 - 112.3870	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 1		606
	896.2		27.8671 - 139.4498	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5d$	$^1S - ^3D^o$	0 - 1		606
500	896.6		0.0 - 111.5272	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 2		568
1	904.7		12.0891 - 122.6257	$4s^2 4p^4 - 4s^2 4p^3(^4P^o)5s$	$^1D - ^3P^o$	2 - 2		606
500	906.0		0.0 - 110.3760	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 3		568
200	910.8		3.1364 - 112.9345	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^1D^o$	1 - 2		568
250	911.7		0.0 - 109.6810	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 2		568
10	913.5		12.0891 - 121.5547	$4s^2 4p^4 - 4s^2 4p^3(^4P^o)5s$	$^1D - ^3P^o$	2 - 1		606
200	915.3		3.1364 - 112.3870	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 1		568
250	921.2		3.8375 - 112.3870	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1		568
300	922.6		3.1364 - 111.5272	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2		568
500	938.6		3.1364 - 109.6810	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	1 - 2		400
150	940.8		3.1364 - 109.4300	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	1 - 1		568
20	947.0		3.8375 - 109.4300	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	0 - 1		606
1000	949.0							568
500	984.9							568
300	987.7		12.0891 - 113.3391	$4s^2 4p^4 - 4s4p^5$	$^1D - ^1P^o$	2 - 1	Q	400
400	1005.7		12.0891 - 111.5272	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2 - 2	Q	400
500	1012.2		0.0 - 98.79920	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^o$	2 - 1	Q	400
1000	1015.6		0.0 - 98.4686	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	2 - 1		568
20	1017.4		12.0891 - 110.3760	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$^1D - ^3D^o$	2 - 3		568
0	1024.7		12.0891 - 109.6810	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$^1D - ^3D^o$	2 - 2		606
	1027.3		12.0891 - 109.4300	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$^1D - ^3D^o$	2 - 1		606
10	1029.0		27.8671 - 125.0500	$4s^2 4p^4 - 4s^2 4p^3(^4P^o)5s$	$^1S - ^1P^o$	0 - 1		606
350	1037.0		0.0 - 96.43178	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^o$	2 - 2		606
500	1040.9							400
1000	1049.0		3.1364 - 98.4686	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	1 - 1		568
50	1053.1		3.8375 - 98.79920	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^o$	0 - 1	Q	400
250	1056.7		3.8375 - 98.4686	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	0 - 1		568
450	1064.7		0.0 - 93.9210	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$g^3P - ^5S^o$	2 - 2		568
750	1071.9		3.1364 - 96.43178	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^o$	1 - 2	Q	400
50	1101.5		3.1364 - 93.9210	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$g^3P - ^5S^o$	1 - 2		568
10	1153.3		12.0891 - 98.79920	$4s^2 4p^4 - 4s4p^5$	$^1D - ^3P^o$	2 - 1		606
10	1157.7		12.0891 - 98.4686	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$^1D - ^3S^o$	2 - 1		606
10	1170.0		27.8671 - 113.3391	$4s^2 4p^4 - 4s4p^5$	$^1S - ^1P^o$	0 - 1		606
100	1185.6		12.0891 - 96.43178	$4s^2 4p^4 - 4s4p^5$	$^1D - ^3P^o$	2 - 2		606
10	1222.0		12.0891 - 93.9210	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$^1D - ^5S^o$	2 - 2		606
10	1226.0		27.8671 - 109.4300	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$^1S - ^3D^o$	0 - 1		606
100	1409.8		27.8671 - 98.79920	$4s^2 4p^4 - 4s4p^5$	$^1S - ^3P^o$	0 - 1		606
20	1718.9		104.0777 - 162.2532	$4s^2 4p^3(^4S^o)4d - 4s^2 4p^3(^2D^o)4f$	$^5D^o - ^3F$	2 - 3	Q	400
400	1729.6		104.0777 - 161.8948	$4s^2 4p^3(^4S^o)4d - 4s^2 4p^3(^2D^o)4f$	$^5D^o - ^1D$	2 - 2	Q	400
20	1884.5		117.7589 - 170.8230	$4s^2 4p^3(^4S^o)5p - 4s^2 4p^3(^2P^o)5d$	$^3P - ^1P^o$	2 - 1	Q	400
0	1888.9		117.7589 - 170.7000	$4s^2 4p^3(^4S^o)5p - 4s^2 4p^3(^2P^o)5d$	$^3P - ^1D^o$	2 - 2	Q	400
20	1898.2		109.6810 - 162.3627	$4s^2 4p^3(^2D^o)5s - 4s^2 4p^3(^2D^o)4f$	$^3D^o - ^1F$	2 - 3	Q	400
20	1922.7		93.9210 - 145.9299	$4s^2 4p^3(^4S^o)5s - 4s^2 4p^3(^4S^o)4f$	$^5S^o - ^5F$	2 - 2	Q	400
500	1925.4		110.3760 - 162.3128	$4s^2 4p^3(^2D^o)5s - 4s^2 4p^3(^2D^o)4f$	$^3D^o - ^3F$	3 - 2	Q	400
0	1976.6		93.9210 - 144.5132	$4s^2 4p^3(^4S^o)5s - 4s^2 4p^3(^2P^o)5p$	$^5S^o - ^1P$	2 - 1	Q	400
0	1980.0		110.3760 - 160.8818	$4s^2 4p^3(^2D^o)5s - 4s^2 4p^3(^2D^o)4f$	$^3D^o - ^3G$	3 - 3	Q	400

BROMINE III (Br²⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p³(⁴S_{3/2}) (33 electrons)
Ionization Potential 289 529 cm⁻¹; 35.90 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
350	665.5		0.0 - 150.2598	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{1}{2}$		586
350	677.2		0.0 - 147.6704	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{1}{2}$		586
250	677.7		0.0 - 147.5575	4s ² 4p ³ - 4s ² 4p ² 4d	g ⁴ S° - 7	$\frac{3}{2} - \frac{1}{2}$		586
300	687.7		0.0 - 145.4169	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	g ⁴ S° - ⁴ P	$\frac{3}{2} - \frac{1}{2}$		586
50	688.8		0.0 - 145.1746	4s ² 4p ³ - 4s ² 4p ² 4d	g ⁴ S° - 6	$\frac{3}{2} - \frac{1}{2}$		586
200	697.0		15.0420 - 158.5124	4s ² 4p ³ - 4s ² 4p ² (¹ D)5s	² D° - ² D	$\frac{3}{2} - \frac{1}{2}$		586
85	707.0		16.3010 - 157.7467	4s ² 4p ³ - 4s ² 4p ² (¹ D)5s	² D° - ² D	$\frac{3}{2} - \frac{1}{2}$		586
250	736.3		16.3010 - 152.1098	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	² D° - ² P	$\frac{3}{2} - \frac{1}{2}$		586
85	745.4		15.0420 - 149.1995	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	² D° - ² P	$\frac{3}{2} - \frac{1}{2}$		586
50	759.9		26.9150 - 158.5124	4s ² 4p ³ - 4s ² 4p ² (¹ D)5s	² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		586
20	761.9		16.3010 - 147.5575	4s ² 4p ³ - 4s ² 4p ² 4d	² D° - 7	$\frac{3}{2} - \frac{1}{2}$	Q	400
120	769.6		28.5790 - 158.5124	4s ² 4p ³ - 4s ² 4p ² (¹ D)5s	² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		586
50	774.2		28.5790 - 157.7467	4s ² 4p ³ - 4s ² 4p ² (¹ D)5s	² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		586
85	798.8		26.9150 - 152.1098	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		586
50	801.6		15.0420 - 139.7920	4s ² 4p ³ - 4s ² 4p ² 4d	² D° - 3	$\frac{3}{2} - \frac{1}{2}$	Q	400
50	809.5		28.5790 - 152.1098	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		586
120	817.8		26.9150 - 149.1995	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		586
100	839.7		28.5790 - 147.6704	4s ² 4p ³ - 4s ² 4p ² (³ P)5s	² P° - ⁴ P	$\frac{3}{2} - \frac{1}{2}$	Q	400
400	918.2		28.5790 - 137.4832	4s ² 4p ³ - 4s ² 4p ² 4d	² P° - 1	$\frac{3}{2} - \frac{1}{2}$	Q	400
50	1077.3		91.35 - 184.1789	4s4p ⁴ - 4s ² 4p ² (³ P)5p	² D° - ² D°	$\frac{3}{2} - \frac{1}{2}$	Q	400
500	1173.6		91.46 - 176.6706	4s4p ⁴ - 4s ² 4p ² (³ P)5p	² D° - ⁴ P°	$\frac{3}{2} - \frac{1}{2}$	Q	400
20	1228.9		104.06 - 185.4324	4s4p ⁴ - 4s ² 4p ² (³ P)5p	² S - ² P°	$\frac{3}{2} - \frac{1}{2}$	Q	400
1000	1296.3		26.9150 - 104.06	4s ² 4p ³ - 4s4p ⁴	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	Q	400
500	1308.6		15.0420 - 91.46	4s ² 4p ³ - 4s4p ⁴	² D° - ² D	$\frac{3}{2} - \frac{1}{2}$	Q	400
100	1310.5		15.0420 - 91.35	4s ² 4p ³ - 4s4p ⁴	² D° - ² D	$\frac{3}{2} - \frac{1}{2}$	Q	400
500	1313.3							400
500	1324.8		28.5790 - 104.06	4s ² 4p ³ - 4s4p ⁴	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	Q	400
750	1328.1							400
500	1330.5		16.3010 - 91.46	4s ² 4p ³ - 4s4p ⁴	² D° - ² D	$\frac{3}{2} - \frac{1}{2}$	Q	400
400	1377.2		104.06 - 176.6706	4s4p ⁴ - 4s ² 4p ² (³ P)5p	² S - ⁴ P°	$\frac{3}{2} - \frac{1}{2}$	Q	400
25	1590.3		28.5790 - 91.46	4s ² 4p ³ - 4s4p ⁴	² P° - ² D	$\frac{3}{2} - \frac{1}{2}$	Q	400
150	1593.1		28.5790 - 91.35	4s ² 4p ³ - 4s4p ⁴	² P° - ² D	$\frac{3}{2} - \frac{1}{2}$	Q	400
150	1830.6		137.4832 - 192.1097	4s ² 4p ² 4d - 4s ² 4p ² 4p	1 - 6°	$\frac{3}{2} - \frac{1}{2}$	Q	400

BROMINE IV (Br³⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p²(³P₀) (32 electrons)
Ionization Potential [381 600] cm⁻¹; [47.3] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
30	538.3		3.247 - 189.034	4s ² 4p ² - 4s ² 4p5s	g ³ P - ¹ P°	1 - 1		574
120	545.4		3.247 - 186.588	4s ² 4p ² - 4s ² 4p5s	g ³ P - ³ P°	1 - 2		574
300	549.8		0.0 - 181.900	4s ² 4p ² - 4s ² 4p5s	g ³ P - ³ P°	0 - 1		574
250	554.5		6.237 - 186.588	4s ² 4p ² - 4s ² 4p5s	g ³ P - ³ P°	2 - 2		574
150	557.9		3.247 - 182.479	4s ² 4p ² -	g ³ P - 3°	1 - 2		574
300	559.7		3.247 - 181.900	4s ² 4p ² - 4s ² 4p5s	g ³ P - ³ P°	1 - 1		574

BR IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	300	563.8	3.247 - 180.619	$4s^2 4p^2 - 4s^2 4p 5s$	$g^3 P - ^3 P^o$	1 - 0		574
	250	563.9	3.247 - 180.578	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	1 - 1		574
	120	567.4	6.237 - 182.479	$4s^2 4p^2 -$	$g^3 P - ^3 P^o$	2 - 2		574
	350	569.1	3.247 - 178.953	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	1 - 0		574
	150	569.3	6.237 - 181.900	$4s^2 4p^2 - 4s^2 4p 5s$	$g^3 P - ^3 P^o$	2 - 1		574
	50	572.3	3.247 - 177.993	$4s^2 4p^2 -$	$g^3 P - ^2 P^o$	1 - 1		574
	250	573.6	6.237 - 180.578	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	2 - 1		574
	350	576.6	3.247 - 176.686	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	1 - 2		574
	150	582.2	6.237 - 177.993	$4s^2 4p^2 -$	$g^3 P - ^2 P^o$	2 - 1		574
	300	585.1	18.115 - 189.034	$4s^2 4p^2 - 4s^2 4p 5s$	$^1 D - ^1 P^o$	2 - 1		574
	350	586.7	6.237 - 176.686	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^o$	2 - 2		574
	300	592.0	0.0 - 168.910	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^o$	0 - 1		574
	250	599.6	3.247 - 170.025	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^o$	1 - 2		574
	250	600.1	6.237 - 172.881	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^o$	2 - 3		574
	350	601.2	6.237 - 172.558	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^o$	2 - 3		574
	120	603.6	3.247 - 168.910	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^o$	1 - 1		574
	120	605.7	3.247 - 168.335	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^o$	1 - 0		574
	150	607.0	3.247 - 167.987	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^o$	1 - 1		574
	250	608.6	3.247 - 167.568	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^o$	1 - 2		574
	30	610.5	6.237 - 170.025	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^o$	2 - 2		574
	120	618.2	6.237 - 167.987	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^o$	2 - 1		574
	200	619.8	6.237 - 167.568	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^o$	2 - 2		574
	85	625.5	18.115 - 177.993	$4s^2 4p^2 -$	$^1 D - ^2 P^o$	2 - 1		574
	350	630.1	3.247 - 161.950	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^o$	1 - 2		574
	350	642.2	6.237 - 161.950	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^o$	2 - 2		574
	10	646.1	18.115 - 172.881	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^3 D^o$	2 - 3		574
	150	649.8	0.0 - 153.897	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^o$	0 - 1		574
	10	658.3	18.115 - 170.025	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^3 D^o$	2 - 2		574
	30	663.2	18.115 - 168.910	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^3 D^o$	2 - 1		574
	350	663.8	3.247 - 153.897	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^o$	1 - 1		574
	120	677.2	6.237 - 153.897	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^o$	2 - 1		574
	350	718.5	0.0 - 139.179	$4s^2 4p^2 -$	$g^3 P - ^1 P^o$	0 - 1		574
	350	735.7	3.247 - 139.179	$4s^2 4p^2 -$	$g^3 P - ^1 P^o$	1 - 1		574

**BROMINE V (Br^{4+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p(P_{1/2})$ (31 electrons)
 Ionization Potential [481 600] cm^{-1} ; [59.7] eV**

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	120	468.4	0.0 - 213.51	$4s^2 4p - 4s^2 5s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$		577
	350	482.1	6.09 - 213.51	$4s^2 4p - 4s^2 5s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$		577
	350	532.0	0.0 - 187.97	$4s^2 4p - 4s^2 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		577
	350	547.9	6.09 - 188.592	$4s^2 4p - 4s^2 4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		577
	150	549.8	6.09 - 187.97	$4s^2 4p - 4s^2 4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		577
	350	621.1	0.0 - 161.011	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$		577
	300	632.3	0.0 - 158.158	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$		577
	350	645.5	6.09 - 161.011	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$		577
	150	657.6	6.09 - 158.158	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$		577
	150	813.4	0.0 - 122.941	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$		577
	250	850.8	6.09 - 123.628	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$		577
	10	855.8	6.09 - 122.941	$4s^2 4p - 4s 4p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$		577

BROMINE VI (Br⁵⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²(¹S₀) (30 electrons)
Ionization Potential [714 800] cm⁻¹; [88.6] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	85	499.2	104.316 - 304.648	4s4p - 4s4d	³ P° - ³ D	0 - 1		577
	250	503.7	106.431 - 304.967	4s4p - 4s4d	³ P° - ³ D	1 - 2		577
	150	504.5	106.431 - 304.648	4s4p - 4s4d	³ P° - ³ D	1 - 1		577
	250	515.2	111.336 - 305.451	4s4p - 4s4d	³ P° - ³ D	2 - 3		577
	250	516.4	111.336 - 304.967	4s4p - 4s4d	³ P° - ³ D	2 - 2		577
	10	517.3	111.336 - 304.648	4s4p - 4s4d	³ P° - ³ D	2 - 1		577
	350	661.1	0.0 - 151.274	4s ² - 4s4p	g ¹ S - ¹ P°	0 - 1		577
	120	678.1	106.431 - 253.892	4s4p - 4p ²	³ P° - ³ P	1 - 2		577
	150	698.9	104.316 - 247.406	4s4p - 4p ²	³ P° - ³ P	0 - 1		577
	250	701.5	111.336 - 253.892	4s4p - 4p ²	³ P° - ³ P	2 - 2		577
	85	709.3	106.431 - 247.406	4s4p - 4p ²	³ P° - ³ P	1 - 1		577
	150	726.2	106.431 - 244.136	4s4p - 4p ²	³ P° - ³ P	1 - 0		577
	150	734.9	111.336 - 247.406	4s4p - 4p ²	³ P° - ³ P	2 - 1		577
	250	939.6	0.0 - 106.431	4s ² - 4s4p	g ¹ S - ³ P°	0 - 1		577

BROMINE VII (Br⁶⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s(²S_{1/2}) (29 electrons)
Ionization Potential [815 000] cm⁻¹; [101] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	85	502.7	128.274 - 327.205	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		577
	85	520.3	135.854 - 328.066	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		577
	350	736.1	0.0 - 135.854	3d ¹⁰ 4s - 3d ¹⁰ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		577
	250	779.6	0.0 - 128.274	3d ¹⁰ 4s - 3d ¹⁰ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		577

BROMINE VIII (Br⁷⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰(¹S₀) (28 electrons)
Ionization Potential 1 554 700 cm⁻¹; 192.8 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	750	138.9	0.0 - 719.8	3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ D°	0 - 1		363
	750	139.8	0.0 - 715.3	3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ¹ P°	0 - 1		363
		142.5	0.0 - 701.9	3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ P°	0 - 1	P	375,487

BROMINE IX (Br⁸⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁶3d⁹(²D_{5/2}) (27 electrons)
Ionization Potential [1 871 000] cm⁻¹; [232] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		104.9	8.6 - 962.3	3p ⁶ 3d ⁹ - 3p ⁵ 3d ¹⁰	g ² D - ² P°	$\frac{3}{2} - \frac{1}{2}$	P	375,487
		109.6	0.0 - 912.5	3p ⁶ 3d ⁹ - 3p ⁵ 3d ¹⁰	g ² D - ² P°	$\frac{5}{2} - \frac{3}{2}$	P	375,487
		110.6	8.6 - 912.5	3p ⁶ 3d ⁹ - 3p ⁵ 3d ¹⁰	g ² D - ² P°	$\frac{3}{2} - \frac{3}{2}$	P	375,487

BROMINE XVI (Br¹⁶⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁶3d²(³F₂) (20 electrons)
Ionization Potential [4 299 000] cm⁻¹; [533] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	30	40.91	16.1 + D - 2460.5 + D	3p ⁶ 3d ² - 3p ⁶ 3d4f	g ³ F - ³ G°	4 - 5		878

BROMINE XIX (Br¹⁸⁺), Z = 35
Ground State 1s²2s²2p⁶3s²3p⁵(²P_{3/2}) (17 electrons)
Ionization Potential [6 146 000] cm⁻¹; [762] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	34.7	570. + D - 3452. + D	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ D - ⁴ F°	$\frac{7}{2} - \frac{5}{2}$		878
	10	35.3	620. + S - 3453. + S	3p ⁴ (³ P)3d - 3p ⁴ (³ P)4f	⁴ F° - ⁴ G°	$\frac{5}{2} - \frac{11}{2}$		878

BROMINE XXIV (Br²³⁺), Z = 35
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential [8 614 000] cm⁻¹; [1068] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
	10	20.21	1500.0 + D - 6448.0 + D	3s3d - 3s5f	³ D - ³ F°	3 - 4		878
	30	24.816	462.216 + C - 4491.9 + C	3s3p - 3s4d	³ P° - ³ D	2 - 3		878
	40	28.64	1500.0 + D - 4991.6 + D	3s3d - 3s4f	³ D - ³ F°	3 - 4		878
	20	29.355	4500.0 + R - 7906.6 + R	3p3d - 3p4f	¹ F° - ¹ G	3 - 4		878
	20	29.486	1580.0 + L - 4971.4 + L	3s3d - 3s4f	¹ D - ¹ F°	2 - 3		878
		253.6	0.0 - 394.255 + C	3s ² - 3s3p	g ¹ S - ³ P°	0 - 1	P	375,1135
		1128.2	373.577 + C - 462.216 + C	3s3p - 3s3p	³ P° - ³ P°	0 - 2	F,P	1135
		1471.4	394.255 + C - 462.216 + C	3s3p - 3s3p	³ P° - ³ P°	1 - 2	F,P	1135

BROMINE XXV (Br²⁴⁺), Z = 35
Ground State 1s²2s²2p⁶3s²(S_{1/2}) (11 electrons)
Ionization Potential 9 026 400 cm⁻¹; 1119.1 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		7.188	527.370 - 14439.	2p ⁶ 3p - 2p ⁵ (² P _{1/2})3p(3d(² D _{3/2}))	² P° - (0, $\frac{3}{2}$)°	$\frac{3}{2} - \frac{3}{2}$		1094
		7.200	0. - 13889.	2p ⁶ 3s - 2p ⁵ (² P _{1/2})3s(3d(² D _{3/2}))	² S° - (1, $\frac{3}{2}$)°	$\frac{1}{2} - \frac{3}{2}$		1094
		7.232	1126.99 - 14954.	2p ⁶ 3d - 2p ⁵ (² P _{1/2})(3d(² G ₄))	² D° - ($\frac{3}{2}$, 4)°	$\frac{3}{2} - \frac{7}{2}$		1094
		7.246	1126.99 - 14928.	2p ⁶ 3d - 2p ⁵ (² P _{1/2})(3d(² F ₃))	² D° - ($\frac{3}{2}$, 3)°	$\frac{3}{2} - \frac{5}{2}$		1094
		7.254	436.262 - 14222.	2p ⁶ 3p - 2p ⁵ (² P _{1/2})3p(3d(² D _{3/2}))	² P° - (1, $\frac{3}{2}$)°	$\frac{1}{2} - \frac{3}{2}$		1094
		7.285	1110.09 - 14837.	2p ⁶ 3d - 2p ⁵ (² P _{1/2})(3d(² F ₃))	² D° - ($\frac{3}{2}$, 3)°	$\frac{3}{2} - \frac{5}{2}$		1094
		7.391	1126.99 - 14657.	2p ⁶ 3d - 2p ⁵ (² P _{3/2})(3d(² S ₀))	² D° - ($\frac{3}{2}$, 0)°	$\frac{5}{2} - \frac{3}{2}$		1094
		7.413	1126.99 - 14617.	2p ⁶ 3d - 2p ⁵ (² P _{3/2})(3d(² F ₄))	² D° - ($\frac{3}{2}$, 4)°	$\frac{3}{2} - \frac{5}{2}$		1094
		7.436	1126.99 - 14575.	2p ⁶ 3d - 2p ⁵ (² P _{3/2})(3d(² G ₄))	² D° - ($\frac{3}{2}$, 4)°	$\frac{3}{2} - \frac{7}{2}$		1094
60	22.739	0. - 4397.7	0. - 4397.7	2p ⁶ 3s - 2p ⁶ 4p	² S° - ² P°	$\frac{1}{2} - \frac{3}{2}$		878
50	22.959	0. - 4355.6	0. - 4355.6	2p ⁶ 3s - 2p ⁶ 4p	² S° - ² P°	$\frac{1}{2} - \frac{1}{2}$		878
70	23.910	436.262 - 4618.6	436.262 - 4618.6	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		878
80	24.465	527.370 - 4614.8	527.370 - 4614.8	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		878
750	27.669	1110.09 - 4724.14	1110.09 - 4724.14	2p ⁶ 3d - 2p ⁶ 4f	² D° - ² F°	$\frac{3}{2} - \frac{5}{2}$		630
1000	27.779	1126.99 - 4726.96	1126.99 - 4726.96	2p ⁶ 3d - 2p ⁶ 4f	² D° - ² F°	$\frac{5}{2} - \frac{7}{2}$		630
120	64.242	4724.14 - 6280.60	4724.14 - 6280.60	2p ⁶ 4f - 2p ⁶ 5g	² F° - ² G	$\frac{5}{2} - \frac{7}{2}$		630
120	64.331	4726.96 - 6281.51	4726.96 - 6281.51	2p ⁶ 4f - 2p ⁶ 5g	² F° - ² G	$\frac{7}{2} - \frac{9}{2}$		630
600	148.406	436.262 - 1110.09	436.262 - 1110.09	2p ⁶ 3p - 2p ⁶ 3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		630
450	166.772	527.370 - 1126.99	527.370 - 1126.99	2p ⁶ 3p - 2p ⁶ 3d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		630
400	189.620	0. - 527.370	0. - 527.370	2p ⁶ 3s - 2p ⁶ 3p	² S° - ² P°	$\frac{1}{2} - \frac{3}{2}$		630
50	229.22	0. - 436.262	0. - 436.262	2p ⁶ 3s - 2p ⁶ 3p	² S° - ² P°	$\frac{1}{2} - \frac{1}{2}$		630

BROMINE XXVI (Br²⁵⁺), Z = 35
Ground State 1s²2s²2p⁶(¹S₀) (10 electrons)
Ionization Potential [22 040 000] cm⁻¹; [2733] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		5.005	0.0 - 19980.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})6d	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094
		5.148	0.0 - 19425.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})5d	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094
		5.251	0.0 - 19044.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})5d	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094
		5.292	0.0 - 18896.	2s ² 2p ⁶ - 2s2p ⁶ 4p	¹ S° - ¹ P°	0 - 1		1094
		5.305	0.0 - 18850.	2s ² 2p ⁶ - 2s2p ⁶ 4p	¹ S° - ³ P°	0 - 1		1094
		5.649	0.0 - 17702.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4d	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094
		5.771	0.0 - 17328.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4d	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094
		5.793	0.0 - 17262.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4s	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094
		5.928	0.0 - 16869.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4s	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094
		6.765	0.0 - 14782.	2s ² 2p ⁶ - 2s2p ⁶ 3p	¹ S° - ¹ P°	0 - 1		1094
		6.815	0.0 - 14674.	2s ² 2p ⁶ - 2s2p ⁶ 3p	¹ S° - ³ P°	0 - 1		1094
		7.169	0.0 - 13949.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})3d	¹ S° - ($\frac{3}{2}$, $\frac{3}{2}$)°	0 - 1		1094

BR XXVI — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.351	0.0 - 13604.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{3/2})3d$	$g^1S - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0 - 1		1094
		7.436	0.0 - 13448.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{1/2})3d$	$g^1S - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0 - 1		1094
		7.790	0.0 - 12837.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{1/2})3s$	$g^1S - \frac{1}{2}^{\circ}$	0 - 1		1094
		8.030	0.0 - 12453.	$2s^2 2p^6 - 2s^2 2p^5(^2P^{\circ}_{3/2})3s$	$g^1S - \frac{3}{2}^{\circ}$	0 - 1		1094

BROMINE XXVII (Br^{26+}), Z = 35
Ground State $1s^2 2s^2 2p^5(^2P^{\circ}_{3/2})$ (9 electrons)
Ionization Potential [23 030 000] cm^{-1} ; [2855] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		5.400	0.0 - 18519.	$2s^2 2p^5 - 2s^2 2p^4(^1S)4d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		5.412	0.0 - 18477.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4d$	$g^2P^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$		1094
		5.429	0.0 - 18420.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
		5.493	0.0 - 18205.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$		1094
		5.507	0.0 - 18159.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		5.530	0.0 - 18083.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		5.649	0.0 - 17702.	$2s^2 2p^5 - 2s^2 2p^4(^1D)4s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		5.698	0.0 - 17550.	$2s^2 2p^5 - 2s^2 2p^4(^3P)4s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.359	0.0 - 15726.	$2s^2 2p^5 - 2s^2 2p^3(^1P^{\circ})3p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.512	394.072 - 15750.	$2s^2 2p^5 - 2s^2 2p^3(^1P^{\circ})3p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.531	394.072 - 15706.	$2s^2 2p^5 - 2s^2 2p^3(^1P^{\circ})3p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.556	0.0 - 15253.	$2s^2 2p^5 - 2s^2 2p^3(^3P^{\circ})3p$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.567	394.072 - 15622.	$2s^2 2p^5 - 2s^2 2p^3(^1P^{\circ})3p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.598	0.0 - 15156.	$2s^2 2p^5 - 2s^2 2p^3(^3P^{\circ})3p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.624	394.072 - 15491.	$2s^2 2p^5 - 2s^2 2p^3(^3P^{\circ})3p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.633	0.0 - 15076.	$2s^2 2p^5 - 2s^2 2p^3(^3P^{\circ})3p$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.674	0.0 - 14984.	$2s^2 2p^5 - 2s^2 2p^3(^3P^{\circ})3p$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.877	0.0 - 14540.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.888	394.072 - 14912.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		6.905	0.0 - 14482.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.909	0.0 - 14474.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.925	0.0 - 14436.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.966	0.0 - 14355.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		6.972	0.0 - 14343.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1061
		6.983	0.0 - 14320.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.057	394.072 - 14564.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.071	394.072 - 14540.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.092	0.0 - 14100.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$		1061
		7.111	0.0 - 14063.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.118	0.0 - 14049.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$		1061
		7.140	0.0 - 14006.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.169	394.072 - 14343.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.330	394.072 - 14037.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P	1061
		7.348	394.072 - 14006.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3d$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P	1061
		7.403	394.072 - 13902.	$2s^2 2p^5 - 2s^2 2p^4(^1S)3s$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.436	0.0 - 13448.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.473	0.0 - 13378.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.488	0.0 - 13355.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.608	0.0 - 13144.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.651	394.072 - 13464.	$2s^2 2p^5 - 2s^2 2p^4(^1D)3s$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$		1094
		7.685	0.0 - 13012.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$		1094
		7.704	0.0 - 12980.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$		1094

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		7.720	394.072 - 13355.	$2s^2 2p^5 - 2s^2 2p^4(^3P)3s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P	1061
		55.6	0.0 - 1798.2 + K	$2s^2 2p^5 - 2s^2 p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P	375,122
		71.2	394.072 - 1798.2 + K	$2s^2 2p^5 - 2s^2 p^6$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P	375,122
		253.76	0.0 - 394.072	$2s^2 2p^5 - 2s^2 2p^5$	$g^2P^\circ - g^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F,P	1122

BROMINE XXVIII (Br^{27+}), Z = 35
Ground State $1s^2 2s^2 2p^4(^3P_2)$ (8 electrons)
Ionization Potential [24 170 000] cm^{-1} ; [2997] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
		5.148	0.0 - 19424.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)4d$	$g^3P - ^3P^\circ$	2 - 2		1094
		5.251	379.80 - 19424.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)4d$	$g^3P - ^3P^\circ$	1 - 2		1094
		5.292	0.0 - 18896.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3P - ^3D^\circ$	2 - 3		1094
		5.305	944.15 - 19794.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)4d$	$^1S - ^1P^\circ$	0 - 1		1094
		5.305	379.80 - 19230.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)4d$	$g^3P - ^3D^\circ$	1 - 2		1094
		5.325	218.80 - 18998.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3P - ^3D^\circ$	0 - 1		1094
		5.400	379.80 - 18898.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)4d$	$g^3P - ^3D^\circ$	1 - 2		1094
		6.624	379.80 - 15476.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$g^3P - ^3D^\circ$	1 - 2		1094
		6.675	0.0 - 14981.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3P^\circ$	2 - 2		1094
		6.675	483.04 - 15464.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^1F^\circ$	2 - 3		1094
		6.834	483.04 - 15116.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1D - ^3P^\circ$	2 - 2		1094
		6.866	944.15 - 15509.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3d$	$^1S - ^1P^\circ$	0 - 1		1094
		6.877	379.80 - 14921.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3d$	$g^3P - ^3D^\circ$	1 - 2		1094
		7.071	379.80 - 14522.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$g^3P - ^3P^\circ$	1 - 2		1094
		7.110	483.04 - 14548.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$^1D - ^1P^\circ$	2 - 1		1094
		7.123	483.04 - 14522.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$^1D - ^3P^\circ$	2 - 2		1094
		7.132	218.80 - 14236.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$g^3P - ^3P^\circ$	0 - 1	Q	1061
		7.169	0.0 - 13949.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$g^3P - ^3D^\circ$	2 - 2		1094
		7.246	379.80 - 14180.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$g^3P - ^3P^\circ$	1 - 0		1094
		7.271	483.04 - 14236.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$^1D - ^3P^\circ$	2 - 1		1094
		7.285	0.0 - 13727.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3s$	$g^3P - ^3S^\circ$	2 - 1		1094
		7.351	944.15 - 14548.	$2s^2 2p^4 - 2s^2 2p^3(^2P^\circ)3s$	$^1S - ^1P^\circ$	0 - 1		1094
		7.370	379.80 - 13949.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$g^3P - ^3D^\circ$	1 - 2		1094
		7.403	218.80 - 13727.	$2s^2 2p^4 - 2s^2 2p^3(^4S^\circ)3s$	$g^3P - ^3S^\circ$	0 - 1		1094
		7.412	483.04 - 13975.	$2s^2 2p^4 - 2s^2 2p^3(^2D^\circ)3s$	$^1D - ^3D^\circ$	2 - 3		1094
		105.9	0.0 - 944.15	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	2 - 0	F,P	375,1094
		177.2	379.80 - 944.15	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1S$	1 - 0	F,P	375,1094
		207.0	0.0 - 483.04	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	2 - 2	F,P	375,1094
		216.9	483.04 - 944.15	$2s^2 2p^4 - 2s^2 2p^4$	$^1D - ^1S$	2 - 0	F,P	375,1094
		263.3	0.0 - 379.80	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 1	F,P	375,1094
		378.4	218.80 - 483.04	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	0 - 2	F,P	375,1094
		457.0	0.0 - 218.80	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	2 - 0	F,P	375,1094
		621.1	218.80 - 379.80	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - g^3P$	0 - 1	F,P	375,1094
		968.6	379.80 - 483.04	$2s^2 2p^4 - 2s^2 2p^4$	$g^3P - ^1D$	1 - 2	F,P	375,1094

BROMINE XXXI (Br³⁰⁺), Z = 35
Ground State 1s²2s²2p(²P_{1/2}) (5 electrons)
Ionization Potential [28 150 000] cm⁻¹; [3490] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		229.1	0.0 - 436.40	2s ² 2p - 2s ² 2p	g ² P° - g ² P°	$\frac{1}{2} - \frac{3}{2}$	F,P	1122

BROMINE XXXII (Br³¹⁺), Z = 35
Ground State 1s²2s²(¹S₀) (4 electrons)
Ionization Potential [29 710 000] cm⁻¹; [3684] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		174.	0.0 - 573.7 + K	1s ² 2s ² - 1s ² 2s2p	g ¹ S - ³ P°	0 - 1	P	375

BROMINE XXXIII (Br³²⁺), Z = 35
Ground State 1s²2s(²S_{1/2}) (3 electrons)
Ionization Potential [31 170 000] cm⁻¹; [3865] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		98.0	0.0 - 1020.4 + D	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	375,977
		179.7	0.0 - 556.40 + E	1s ² 2s - 1s ² 2p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	375,977

BROMINE XXXIV (Br³³⁺), Z = 35
Ground State 1s²(¹S₀) (2 electrons)
Ionization Potential 131 600 000 cm⁻¹; 16317 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		0.853	0.0 - 117253.2	1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	P	728
		1.002	0.0 - 99781.21	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	P	728
		1.009	0.0 - 99155.41	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	P	728
		1.012	0.0 - 98785.12	1s ² - 1s2s	g ¹ S - ³ S	0 - 1	F,P	375,918

BROMINE XXXV (Br³⁴⁺), Z = 35
Ground State 1s(²S_{1/2}) (1 electron)
Ionization Potential 136 604 000 cm⁻¹; 16937 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		0.822	0.0 - 121585.9700	1s - 3p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	728
		0.972	0.0 - 102859.8000	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	728
		0.978	0.0 - 102287.3000	1s - 2p	² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	728

KRYPTON , Z = 36
Unclassified Lines

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	363.56						707
	20	374.54						707
	10	391.04						707
	10	411.65						707
	10	415.28						707
	20	418.22						707
	10	421.85						707
	10	425.28						707
	10	428.75						707
	40	432.51						707
	10	438.61						707
	80	440.27						707
	40	440.88						707
	40	441.52						707
	50	442.33						707
	60	443.88						707
	20	447.77						707
	120	448.61						707
	80	453.06						707
	20	455.15						707
	60	458.61						707
	100	461.91						707
	120	462.35						707
	80	468.20						707
	100	469.26						707
	40	470.23						707
	100	474.09						707
	100	475.68						707
	80	477.93						707
	120	479.34						707
	30	480.90						707
	120	481.43						707
	30	482.32						707
	20	483.13						707
	100	484.39						707
	60	487.35						707
	30	488.29						707
	80	489.59						707
	150	490.67						707
	40	492.03						707
	50	492.56						707
	250	496.25						707
	150	498.01						707
	40	505.93						707
	30	513.28						707
	30	522.98						707
	30	523.45						707
	150	525.33						707
	30	526.58						707
	20	530.17						707
	20	533.51						707
	10	534.51						707
	60	535.71						707
	80	536.14						707

KR UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	120	539.59						707
	20	542.09						707
	60	547.37						707
	60	548.04						707
	40	550.29						707
	30	556.66						707
	30	557.69						707
	30	559.24						707
	30	560.00						707
	30	565.26						707
	40	566.46						707
	30	567.54						707
	30	576.23						707
	30	577.35						707
	60	578.47						707
	80	582.42						707
	80	586.23						707
	60	604.89						707
	30	606.02						707
	120	606.79						707
	80	610.89						707
	300	612.38						707
	600	617.27						707
	200	622.89						707
	80	624.44						707
	150	626.06						707
	300	626.49						707
	20	632.48						707
	30	634.51						707
	120	637.87						707
	20	638.60						707
	10	639.12						707
	50	641.86						707
	30	650.20						707
	400	652.90						707
	150	656.97						707
	20	666.15						707
	10	666.98						707
	60	670.40						707
	30	671.61						707
	20	672.17						707
	30	685.51						707
	200	690.01						707
	80	700.58						707
	50	733.17						707
	30	735.14						707
	20	737.19						707
	400	738.90						707
	150	744.28						707
	80	750.25						707
	30	770.22						707
	400	771.19						707
	20	777.92						707
	20	778.88						707

KR UNCLASSIFIED LINES — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	794.11						707
	10	799.43						707
	40	818.33						707
	10	819.17						707
	100	822.53						707
	40	823.42						707
	10	824.97						707
	10	848.07						707
	10	856.99						707
	10	860.12						707
	20	864.06						707
	20	864.70						707
	20	865.50						707
	20	871.54						707
	10	872.71						707
	20	874.41						707
	60	883.00						707
	50	884.06						707
	20	888.35						707
	20	889.80						707
	200	898.39						707
	10	901.61						707
	10	906.02						707
	30	909.55						707
	400	918.34						707
	120	927.37						707
	250	931.47						707
	10	932.88						707
	60	944.28						707
	10	947.52						707

**KRYPTON I (Kr^{0+}), $Z = 36$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 (^1S_0)$ (36 electrons)
 Ionization Potential $112\,914.6 \text{ cm}^{-1}$; 14.000 eV**

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	10	850.154	0.0 - 117.6258	$4p^6 - 4p^5(^2P_{1/2})16s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
	13	850.988	0.0 - 117.5105	$4p^6 - 4p^5(^2P_{1/2})15s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
	18	852.064	0.0 - 117.3621	$4p^6 - 4p^5(^2P_{1/2})14s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
	20	853.486	0.0 - 117.1666	$4p^6 - 4p^5(^2P_{1/2})13s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
	24	855.424	0.0 - 116.9011	$4p^6 - 4p^5(^2P_{1/2})12s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
		855.687	0.0 - 116.8651	$4p^6 - 4p^5(^2P_{1/2})10d$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
	27	858.157	0.0 - 116.5288	$4p^6 - 4p^5(^2P_{1/2})11s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
		858.534	0.0 - 116.4776	$4p^6 - 4p^5(^2P_{1/2})9d$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
	35	862.198	0.0 - 115.9826	$4p^6 - 4p^5(^2P_{1/2})10s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
		862.77	0.0 - 115.906	$4p^6 - 4p^5(^2P_{1/2})8d$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
	44	868.543	0.0 - 115.1354	$4p^6 - 4p^5(^2P_{1/2})9s$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962
		869.42	0.0 - 115.019	$4p^6 - 4p^5(^2P_{1/2})7d$	$g^1S - \frac{1}{2}g^1D$	0 - 1	A	962

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	46	879.388	0.0 - 113.7154	$4p^6 - 4p^5(^2P_{3/2})8s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
		880.82	0.0 - 113.530	$4p^6 - 4p^5(^2P_{3/2})6d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	886.377	0.0 - 112.8188	$4p^6 - 4p^5(^2P_{3/2})35d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	886.423	0.0 - 112.8130	$4p^6 - 4p^5(^2P_{3/2})34d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	11	886.474	0.0 - 112.8064	$4p^6 - 4p^5(^2P_{3/2})33d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	12	886.530	0.0 - 112.7993	$4p^6 - 4p^5(^2P_{3/2})32d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	11	886.592	0.0 - 112.7915	$4p^6 - 4p^5(^2P_{3/2})31d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	13	886.660	0.0 - 112.7827	$4p^6 - 4p^5(^2P_{3/2})30d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	12	886.737	0.0 - 112.7731	$4p^6 - 4p^5(^2P_{3/2})29d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	11	886.822	0.0 - 112.7622	$4p^6 - 4p^5(^2P_{3/2})28d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	11	886.909	0.0 - 112.7511	$4p^6 - 4p^5(^2P_{3/2})29s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	12	886.917	0.0 - 112.7501	$4p^6 - 4p^5(^2P_{3/2})27d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	887.014	0.0 - 112.7378	$4p^6 - 4p^5(^2P_{3/2})28s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	12	887.024	0.0 - 112.7366	$4p^6 - 4p^5(^2P_{3/2})26d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	9	887.133	0.0 - 112.7227	$4p^6 - 4p^5(^2P_{3/2})27s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	887.143	0.0 - 112.7214	$4p^6 - 4p^5(^2P_{3/2})25d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	887.266	0.0 - 112.7057	$4p^6 - 4p^5(^2P_{3/2})26s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	13	887.280	0.0 - 112.7040	$4p^6 - 4p^5(^2P_{3/2})24d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	887.421	0.0 - 112.6861	$4p^6 - 4p^5(^2P_{3/2})25s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	12	887.435	0.0 - 112.6843	$4p^6 - 4p^5(^2P_{3/2})23d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	887.596	0.0 - 112.6638	$4p^6 - 4p^5(^2P_{3/2})24s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	14	887.612	0.0 - 112.6618	$4p^6 - 4p^5(^2P_{3/2})22d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	887.800	0.0 - 112.6379	$4p^6 - 4p^5(^2P_{3/2})23s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	15	887.819	0.0 - 112.6356	$4p^6 - 4p^5(^2P_{3/2})21d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	11	888.036	0.0 - 112.6080	$4p^6 - 4p^5(^2P_{3/2})22s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	14	888.058	0.0 - 112.6052	$4p^6 - 4p^5(^2P_{3/2})20d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	888.314	0.0 - 112.5728	$4p^6 - 4p^5(^2P_{3/2})21s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	15	888.339	0.0 - 112.5697	$4p^6 - 4p^5(^2P_{3/2})19d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	10	888.642	0.0 - 112.5312	$4p^6 - 4p^5(^2P_{3/2})20s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	15	888.672	0.0 - 112.5275	$4p^6 - 4p^5(^2P_{3/2})18d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	13	889.034	0.0 - 112.4816	$4p^6 - 4p^5(^2P_{3/2})19s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	15	889.069	0.0 - 112.4772	$4p^6 - 4p^5(^2P_{3/2})17d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	12	889.508	0.0 - 112.4217	$4p^6 - 4p^5(^2P_{3/2})18s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	16	889.550	0.0 - 112.4164	$4p^6 - 4p^5(^2P_{3/2})16d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	14	890.089	0.0 - 112.3483	$4p^6 - 4p^5(^2P_{3/2})17s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	16	890.139	0.0 - 112.3420	$4p^6 - 4p^5(^2P_{3/2})15d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	4	890.333	0.0 - 112.3175	$4p^6 - 4p^5(^2P_{3/2})15d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	14	890.811	0.0 - 112.2573	$4p^6 - 4p^5(^2P_{3/2})16s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	18	890.871	0.0 - 112.2497	$4p^6 - 4p^5(^2P_{3/2})14d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	7	891.115	0.0 - 112.2190	$4p^6 - 4p^5(^2P_{3/2})14d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	16	891.723	0.0 - 112.1424	$4p^6 - 4p^5(^2P_{3/2})15s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	18	891.797	0.0 - 112.1332	$4p^6 - 4p^5(^2P_{3/2})13d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	6	892.108	0.0 - 112.0940	$4p^6 - 4p^5(^2P_{3/2})13d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	17	892.901	0.0 - 111.9945	$4p^6 - 4p^5(^2P_{3/2})14s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	18	892.990	0.0 - 111.9833	$4p^6 - 4p^5(^2P_{3/2})12d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	6	893.397	0.0 - 111.9324	$4p^6 - 4p^5(^2P_{3/2})12d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	21	894.455	0.0 - 111.7999	$4p^6 - 4p^5(^2P_{3/2})13s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	20	894.565	0.0 - 111.7861	$4p^6 - 4p^5(^2P_{3/2})11d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	11	895.108	0.0 - 111.71821	$4p^6 - 4p^5(^2P_{3/2})11d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	21	896.568	0.0 - 111.53668	$4p^6 - 4p^5(^2P_{3/2})12s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	21	896.698	0.0 - 111.5202	$4p^6 - 4p^5(^2P_{3/2})10d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	13	897.435	0.0 - 111.42862	$4p^6 - 4p^5(^2P_{3/2})10d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	24	899.515	0.0 - 111.17088	$4p^6 - 4p^5(^2P_{3/2})11s$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962
	24	899.651	0.0 - 111.1543	$4p^6 - 4p^5(^2P_{3/2})9d$	$g^1S - \frac{3}{2}^1P^{\circ}$	0 - 1	A	962

KR I — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	20	900.313	0.0 - 111.0725	$4p^6 - 4p^5(^2P_{3/2})9d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	22	900.876	0.0 - 111.00305	$4p^6 - 4p^5(^2P_{1/2})7s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	28	903.071	0.0 - 110.73333	$4p^6 - 4p^5(^2P_{1/2})5d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	14	904.004	0.0 - 110.619138	$4p^6 - 4p^5(^2P_{3/2})10s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	7	904.862	0.0 - 110.514158	$4p^6 - 4p^5(^2P_{3/2})8d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	20	906.697	0.0 - 110.290380	$4p^6 - 4p^5(^2P_{3/2})8d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	25	910.918	0.0 - 109.779376	$4p^6 - 4p^5(^2P_{3/2})9s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	24	911.670	0.0 - 109.688819	$4p^6 - 4p^5(^2P_{3/2})7d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	0	914.554	0.0 - 109.343001	$4p^6 - 4p^5(^2P_{3/2})7d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	23	922.738	0.0 - 108.373105	$4p^6 - 4p^5(^2P_{3/2})8s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	25	923.712	0.0 - 108.258819	$4p^6 - 4p^5(^2P_{3/2})6d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
	13	928.710	0.0 - 107.676212	$4p^6 - 4p^5(^2P_{3/2})6d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
10	37	945.441	0.0 - 105.770763	$4p^6 - 4p^5(^2P_{3/2})7s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
9	34	946.536	0.0 - 105.648497	$4p^6 - 4p^5(^2P_{3/2})5d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
7	21	951.055	0.0 - 105.14639	$4p^6 - 4p^5(^2P_{1/2})6s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
5	25	953.403	0.0 - 104.887378	$4p^6 - 4p^5(^2P_{1/2})4d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
8	19	963.374	0.0 - 103.801856	$4p^6 - 4p^5(^2P_{3/2})5d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
6	44	1001.060	0.0 - 99.894108	$4p^6 - 4p^5(^2P_{3/2})6s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
4	31	1003.550	0.0 - 99.646275	$4p^6 - 4p^5(^2P_{3/2})4d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
3	12	1030.022	0.0 - 97.085256	$4p^6 - 4p^5(^2P_{3/2})4d$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
2	71	1164.867	0.0 - 85.846762	$4p^6 - 4p^5(^2P_{1/2})5s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962
1	100	1235.838	0.0 - 80.916825	$4p^6 - 4p^5(^2P_{3/2})5s$	$g^1S - \frac{3}{2}^1D$	0 - 1	A	962

**KRYPTON II (Kr^{1+}), $Z = 36$
 Ground State $1s^22s^22p^63s^23p^63d^{10}4s^24p^5(^2P_{3/2})$ (35 electrons)
 Ionization Potential $196\,474.8 \text{ cm}^{-1}$; 24.359 eV**

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	3	551.328	0.0 - 181.37863	$4s^24p^5 - 4s^24p^4(^3P)8s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		509
	15	559.315	0.0 - 178.78588	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		509
	3	560.792	0.0 - 178.31869	$4s^24p^5 - 4s^24p^4(^1D)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		509
	3	561.932	0.0 - 177.95508	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		509
	3	562.792	0.0 - 177.68211	$4s^24p^5 - 4s^24p^4(^1D)5d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$		509
	60	570.013	0.0 - 175.43463	$4s^24p^5 - 4s^24p^4(^3P)6d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$		509
	7	575.907	0.0 - 173.63828	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		509
	3	576.653	5.37010 - 178.78588	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$		509
	1	576.998	0.0 - 173.30795	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$		509
	1	579.101	5.37010 - 178.05305	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$		509
	3	579.414	5.37010 - 177.95508	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		509
	1	580.345	5.37010 - 177.68211	$4s^24p^5 - 4s^24p^4(^1D)5d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$		509
	3	581.219	0.0 - 172.05011	$4s^24p^5 - 4s^24p^4(^1D)6s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		509
	15	581.500	0.0 - 171.96885	$4s^24p^5 - 4s^24p^4(^1D)6s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		509
	7	585.688	5.37010 - 176.10924	$4s^24p^5 - 4s^24p^4(^1D)5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$		509
	3	586.269	0.0 - 170.56938	$4s^24p^5 - 4s^24p^4(^3P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		509
	40	589.265	0.0 - 169.70313	$4s^24p^5 - 4s^24p^4(^3P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$		509
	3	594.286	5.37010 - 173.63828	$4s^24p^5 - 4s^24p^4(^3P)7s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$		509
100	595.539	0.0 - 167.91134	$4s^24p^5 - 4s^24p^4(^3P)5d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$			509
25	596.956	0.0 - 167.51716	$4s^24p^5 - 4s^24p^4(^3P)5d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$			509
3	598.643	0.0 - 167.04538	$4s^24p^5 - 4s^24p^4(^3P)5d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$			509
40	598.805	0.0 - 166.99969	$4s^24p^5 - 4s^24p^4(^3P)5d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$			509
25	598.978	0.0 - 166.95156	$4s^24p^5 - 4s^24p^4(^3P)5d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$			509
40	599.954	5.37010 - 172.05011	$4s^24p^5 - 4s^24p^4(^1D)6s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$			509

KR II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	605.331	5.37010 - 170.56938	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
	40	605.547	0.0 - 165.14018	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4F$	1-1-2-3		509
	15	605.782	0.0 - 165.07560	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4F$	1-1-2-3		509
	60	608.134	0.0 - 164.43745	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	40	613.374	0.0 - 163.03191	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	40	615.138	0.0 - 162.56441	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4D$	1-1-2-3		509
	40	615.227	5.37010 - 167.91134	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	100	617.065	0.0 - 162.05731	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4D$	1-1-2-3		509
	60	617.758	0.0 - 161.87562	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	60	618.048	0.0 - 161.80017	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	60	618.511	5.37010 - 167.04538	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	60	618.882	5.37010 - 166.95156	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	60	619.385	0.0 - 161.45010	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4D$	1-1-2-3		509
	40	619.548	0.0 - 161.40757	$4s^2 4p^5 - 4s^2 4p^4(^1S)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
	100	621.074	0.0 - 161.01183	$4s^2 4p^5 - 4s^2 4p^4(^1S)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
	80	621.911	0.0 - 160.79493	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2S$	1-1-2-3		509
	40	625.901	5.37010 - 165.14018	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4F$	1-1-2-3		509
	80	633.380	0.0 - 157.88365	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	60	634.272	5.37010 - 163.03191	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	80	636.152	5.37010 - 162.56441	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4D$	1-1-2-3		509
	80	636.630	0.0 - 157.07734	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	80	638.215	5.37010 - 162.05731	$4s^2 4p^5 - 4s^2 4p^4(^3P)5d$	$g^2 P^\circ - ^4D$	1-1-2-3		509
	60	638.960	5.37010 - 161.87562	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	80	639.263	5.37010 - 161.80017	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	80	640.871	5.37010 - 161.40757	$4s^2 4p^5 - 4s^2 4p^4(^1S)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
	40	643.399	5.37010 - 160.79493	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2S$	1-1-2-3		509
	80	655.681	5.37010 - 157.88365	$4s^2 4p^5 - 4s^2 4p^4(^3P)6s$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	130	657.095	0.0 - 152.18502	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	100	658.649	0.0 - 151.82636	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	80	665.879	0.0 - 150.17813	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
	100	668.835	0.0 - 149.51406	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
	80	681.133	5.37010 - 152.18502	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	100	682.800	5.37010 - 151.82636	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	60	685.820	0.0 - 145.81190	$4s^2 4p^5 - 4s^2 4p^4(^1S)5s$	$g^2 P^\circ - ^2S$	1-1-2-3		509
	40	690.572	5.37010 - 150.17813	$4s^2 4p^5 - 4s^2 4p^4(^1D)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
	130	712.042	5.37010 - 145.81190	$4s^2 4p^5 - 4s^2 4p^4(^1S)5s$	$g^2 P^\circ - ^2S$	1-1-2-3		509
8	230	729.404	0.0 - 137.09816	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
8	80	742.825	0.0 - 134.62141	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
7	80	743.125	0.0 - 134.56695	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	160	752.045	0.0 - 132.97049	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2F$	1-1-2-3		509
7	40	752.078	0.0 - 132.96552	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	360	761.175	0.0 - 131.37545	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	230	763.977	0.0 - 130.89345	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
5	230	766.205	0.0 - 130.51273	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4F$	1-1-2-3		509
5	360	771.027	0.0 - 129.69719	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4F$	1-1-2-3		509
7	60	772.112	0.0 - 129.51508	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4P$	1-1-2-3		509
8	230	773.688	5.37010 - 134.62141	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2D$	1-1-2-3		509
6	360	782.096	0.0 - 127.86151	$4s^2 4p^5 - 4s^2 4p^4(^1D)5s$	$g^2 P^\circ - ^2D$	1-1-2-3		509
7	230	783.724	5.37010 - 132.96552	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4P$	1-1-2-3		509
	80	793.617	5.37010 - 131.37545	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
	60	796.668	5.37010 - 130.89345	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^2P$	1-1-2-3		509
5	130	799.087	5.37010 - 130.51273	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4F$	1-1-2-3		509
7	60	805.507	5.37010 - 129.51508	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2 P^\circ - ^4P$	1-1-2-3		509
6	230	818.149	5.37010 - 127.59749	$4s^2 4p^5 - 4s^2 4p^4(^1D)5s$	$g^2 P^\circ - ^2D$	1-1-2-3		509

KR II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
4	130	821.154	0.0 - 121.77954	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		509
3	160	826.434	0.0 - 121.00214	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		509
	230	830.375	0.0 - 120.42693	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$		509
3	230	844.064	0.0 - 118.47434	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		509
	160	850.319	0.0 - 117.60300	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		509
4	160	859.037	5.37010 - 121.77954	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		509
4	230	864.821	5.37010 - 121.00037	$4s^2 4p^5 - 4s^2 4p^4(^3P)4d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$		509
2	230	868.871	0.0 - 115.09198	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		509
3	360	884.141	5.37010 - 118.47434	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$		509
2	640	886.300	0.0 - 112.82827	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		509
2	520	891.006	5.37010 - 117.60300	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$		509
2	360	911.394	5.37010 - 115.09198	$4s^2 4p^5 - 4s^2 4p^4(^3P)5s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$		509
1	1000	917.427	0.0 - 109.00036	$4s^2 4p^5 - 4s4p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$		509
1	1000	964.971	5.37010 - 109.00036	$4s^2 4p^5 - 4s4p^6$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{3}{2}$		509
	1	1330.948	109.00036 - 184.13464	$4s4p^6 - 4s^2 4p^4(^3P_2)6f$	$^2S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$		509
	1	1331.402	109.00036 - 184.10922	$4s4p^6 - 4s^2 4p^4(^3P_2)6f$	$^2S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$		509
	1	1413.894	120.20987 - 190.93653	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)9f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	4	1422.512	112.82827 - 183.12690	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)5f$	$^4P - 1[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	25	1435.085	109.00036 - 178.68244	$4s4p^6 - 4s^2 4p^4(^3P_2)5f$	$^2S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$		509
	4	1435.676	109.00036 - 178.65380	$4s4p^6 - 4s^2 4p^4(^3P_2)5f$	$^2S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$		509
	25	1444.343	120.20987 - 189.44550	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)8f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	4	1464.072	120.20987 - 188.51246	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1466.460	120.42693 - 188.61825	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1468.039	120.42693 - 188.54500	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	509
	4	1490.928	120.20987 - 187.28219	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)7f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	60	1491.104	120.20987 - 187.27416	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)7f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	25	1495.769	120.42693 - 187.28219	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)7f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1514.585	126.00082 - 192.02551	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)10f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1525.486	118.47434 - 184.02739	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)6f$	$^2P - 2[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1539.075	126.00082 - 190.97491	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)9f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1568.050	120.20987 - 183.98337	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	90	1569.135	120.20987 - 183.93895	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1571.876	120.42693 - 184.04518	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	4	1572.316	120.42693 - 184.02739	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$	P	509
	10	1573.404	120.42693 - 183.98337	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1574.103	120.20987 - 183.73740	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1574.340	120.20987 - 183.72860	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	25	1574.733	126.00082 - 189.50365	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)8f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1575.375	115.09198 - 178.56956	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)5f$	$^4P - 2[2]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1576.155	126.00082 - 189.44550	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)8f$	$^4F - 2[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	4	1579.513	115.09198 - 178.40242	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)5f$	$^4P - 2[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	90	1579.731	120.42693 - 183.72860	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1584.563	121.00037 - 184.10922	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[1]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1586.093	127.92952 - 190.97753	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)9f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	25	1586.170	121.00037 - 184.04518	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	10	1586.621	121.00037 - 184.02739	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1589.384	120.20987 - 183.12690	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1592.565	120.20987 - 183.00189	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	90	1593.946	120.20987 - 182.94734	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[2]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	25	1594.895	120.42693 - 183.12690	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	40	1598.082	120.42693 - 183.00189	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1599.492	120.42693 - 182.94734	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[2]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	1	1603.721	121.77954 - 184.13464	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[1]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509
	4	1606.026	121.77954 - 184.04518	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{1}{2}$		509

KR II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	4	1608.902	121.00037 - 183.15458	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1613.853	121.00037 - 182.96385	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[2]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	10	1613.898	121.00214 - 182.96385	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)5f$	$^2P - 1[2]^*$	$\frac{1}{2} - \frac{1}{2}$		509
	60	1614.274	121.00037 - 182.94734	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[2]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	25	1623.948	127.92952 - 189.50785	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)8f$	$^4F - 2[5]^*$	$\frac{7}{2} - \frac{9}{2}$		509
	120	1629.867	126.00082 - 187.35552	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)7f$	$^4F - 2[5]^*$	$\frac{9}{2} - \frac{11}{2}$		509
	4	1632.037	126.00082 - 187.27416	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)7f$	$^4F - 2[4]^*$	$\frac{9}{2} - \frac{9}{2}$		509
	40	1634.396	121.77954 - 182.96385	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 1[2]^*$	$\frac{1}{2} - \frac{1}{2}$		509
	4	1637.981	117.60300 - 178.65380	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)5f$	$^4P - 2[1]^*$	$\frac{1}{2} - \frac{1}{2}$		509
	60	1638.786	127.59749 - 188.61825	$4s^2 4p^4(^1D)5s - 4s^2 4p^4(^3P_1)6f$	$^2D - 1[3]^*$	$\frac{3}{2} - \frac{5}{2}$	P	509
	25	1650.630	127.92952 - 188.51246	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 1[4]^*$	$\frac{7}{2} - \frac{9}{2}$		509
	4	1658.358	112.82827 - 173.12892	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)4f$	$^4P - 1[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	1	1668.416	109.00036 - 168.93754	$4s4p^6 - 4s^2 4p^4(^1S)5p$	$^2S - ^2P^*$	$\frac{1}{2} - \frac{1}{2}$		509
	10	1674.577	109.00036 - 168.71710	$4s4p^6 - 4s^2 4p^4(^3P_1)4f$	$^2S - 2[1]^*$	$\frac{1}{2} - \frac{1}{2}$		509
	40	1677.058	109.00036 - 168.62847	$4s4p^6 - 4s^2 4p^4(^3P_1)4f$	$^2S - 2[1]^*$	$\frac{1}{2} - \frac{1}{2}$		509
	25	1682.622	127.92952 - 187.36053	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)7f$	$^4F - 2[5]^*$	$\frac{7}{2} - \frac{9}{2}$		509
	1	1684.845	127.92952 - 187.28219	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)7f$	$^4F - 2[4]^*$	$\frac{7}{2} - \frac{7}{2}$		509
	10	1687.456	109.00036 - 168.26127	$4s4p^6 - 4s^2 4p^4(^1S)5p$	$^2S - ^2P^*$	$\frac{1}{2} - \frac{1}{2}$		509
	1	1697.189	129.69719 - 188.61825	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 1[3]^*$	$\frac{5}{2} - \frac{5}{2}$		509
	40	1699.297	129.69719 - 188.54500	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 1[4]^*$	$\frac{5}{2} - \frac{7}{2}$		509
	4	1713.509	120.20987 - 178.56956	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[2]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1716.582	120.42693 - 178.68244	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[1]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	10	1716.657	120.20987 - 178.46250	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1718.431	120.20987 - 178.40242	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	90	1719.638	120.20987 - 178.36150	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[4]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	25	1719.908	120.42693 - 178.56956	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[2]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	200	1720.208	120.20987 - 178.34188	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[4]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	25	1721.632	120.42693 - 178.51113	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[2]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	1	1722.701	126.00082 - 184.04968	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 2[5]^*$	$\frac{9}{2} - \frac{9}{2}$		509
	60	1722.936	126.00082 - 184.04128	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 2[5]^*$	$\frac{9}{2} - \frac{11}{2}$		509
	60	1724.864	120.42693 - 178.40242	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	25	1725.982	126.00082 - 183.93895	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 2[4]^*$	$\frac{9}{2} - \frac{9}{2}$		509
	120	1726.078	120.42693 - 178.36150	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[4]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	1	1727.854	131.63211 - 189.50785	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)8f$	$^2F - 2[5]^*$	$\frac{3}{2} - \frac{9}{2}$		509
	1	1733.649	121.00037 - 178.68244	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[1]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	1	1733.681	121.00214 - 178.68244	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)5f$	$^2P - 2[1]^*$	$\frac{1}{2} - \frac{1}{2}$		509
	10	1734.507	121.00037 - 178.65380	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[1]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	40	1738.804	121.00037 - 178.51113	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[2]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1738.861	121.00214 - 178.51113	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)5f$	$^2P - 2[2]^*$	$\frac{1}{2} - \frac{1}{2}$		509
	90	1742.093	121.00037 - 178.40242	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1749.687	109.00036 - 166.15343	$4s4p^6 - 4s^2 4p^4(^3P)6p$	$^2S - ^4D^*$	$\frac{1}{2} - \frac{3}{2}$		509
	1	1754.821	131.63211 - 188.61825	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^2F - 1[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1757.384	121.77954 - 178.68244	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[1]^*$	$\frac{1}{2} - \frac{3}{2}$		509
	25	1758.077	131.63211 - 188.51246	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^2F - 1[4]^*$	$\frac{3}{2} - \frac{9}{2}$		509
	10	1758.265	121.77954 - 178.65380	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[1]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	25	1762.686	121.77954 - 178.51113	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4D - 2[2]^*$	$\frac{1}{2} - \frac{3}{2}$		509
	1	1769.546	127.59749 - 184.10922	$4s^2 4p^4(^1D)5s - 4s^2 4p^4(^3P_1)6f$	$^2D - 2[1]^*$	$\frac{3}{2} - \frac{1}{2}$		509
	60	1781.888	127.92952 - 184.04968	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 2[5]^*$	$\frac{7}{2} - \frac{9}{2}$		509
	10	1782.594	127.92952 - 184.02739	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 2[3]^*$	$\frac{7}{2} - \frac{3}{2}$		509
	10	1783.997	127.92952 - 183.98337	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 2[4]^*$	$\frac{7}{2} - \frac{9}{2}$		509
	4	1785.419	127.92952 - 183.93895	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4F - 2[4]^*$	$\frac{7}{2} - \frac{9}{2}$		509
	4	1794.421	131.63211 - 187.36053	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)7f$	$^2F - 2[5]^*$	$\frac{3}{2} - \frac{9}{2}$		509
	4	1797.020	132.97049 - 188.61825	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^2F - 1[3]^*$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1797.515	112.82827 - 168.46067	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)4f$	$^4P - 2[2]^*$	$\frac{3}{2} - \frac{3}{2}$		509

KR II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
4		1804.070	112.82827 - 168.25854	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^4P - 2[3]^*$	4-2		509
4		1808.713	112.82827 - 168.11632	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^4P - 2[4]^*$	4-2		509
1		1809.454	127.86151 - 183.12690	$4s^2 4p^4(^1D)5s - 4s^2 4p^4(^3P_1)5f$	$^2D - 1[3]^*$	1-1		509
4		1811.674	127.92952 - 183.12690	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4F - 1[3]^*$	4-1		509
60		1817.602	127.92952 - 182.94703	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4F - 1[4]^*$	4-1		509
4		1830.842	129.51508 - 184.13464	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4P - 2[1]^*$	4-2		509
4		1833.847	129.51508 - 184.04518	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4P - 2[2]^*$	4-2		509
25		1842.091	129.69719 - 183.98337	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4F - 2[4]^*$	4-1		509
10		1850.093	134.56695 - 188.61825	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4P - 1[3]^*$	4-1		509
10		1850.773	129.69719 - 183.72860	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^4F - 0[3]^*$	4-1		509
1		1852.603	134.56695 - 188.54500	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^4P - 1[4]^*$	4-1		509
4		1867.889	115.09198 - 168.62847	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^4P - 2[1]^*$	4-2		509
25		1868.647	130.51273 - 184.02739	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^4F - 2[3]^*$	4-1	P	509
10		1870.645	129.69719 - 183.15458	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4F - 1[3]^*$	4-1		509
10		1871.619	129.69719 - 183.12690	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4F - 1[3]^*$	4-1		509
10		1873.761	115.09198 - 168.46067	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^4P - 2[2]^*$	4-1		509
1		1875.296	112.82827 - 166.15343	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P)6p$	$^4P - ^4D^*$	4-1		509
60		1875.999	129.69719 - 183.00189	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4F - 1[4]^*$	4-1		509
1		1876.491	115.09198 - 168.38326	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^4P - 2[2]^*$	4-2		509
4		1877.613	120.42693 - 173.68612	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)4f$	$^4D - 0[3]^*$	4-2		509
90		1878.041	120.42693 - 173.67373	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)4f$	$^4D - 0[3]^*$	4-2		509
4		1878.256	130.89345 - 184.13464	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^2P - 2[1]^*$	4-2		509
40		1878.830	130.51273 - 183.73740	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^4F - 0[3]^*$	4-2		509
4		1879.141	130.89345 - 184.10922	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^2P - 2[1]^*$	4-2		509
1		1881.418	130.89345 - 184.04518	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^2P - 2[2]^*$	4-2		509
40		1888.756	120.20987 - 173.15478	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[3]^*$	4-1	P	509
10		1889.679	120.20987 - 173.12892	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[3]^*$	4-1		509
1		1895.408	131.37545 - 184.13464	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^2P - 2[1]^*$	4-1		509
40		1897.457	120.42693 - 173.12892	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[3]^*$	4-1		509
60		1898.048	121.00037 - 173.68612	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)4f$	$^4D - 0[3]^*$	4-1		509
4		1898.631	131.37545 - 184.04518	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^2P - 2[2]^*$	4-2		509
4		1899.501	120.20987 - 172.85540	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[4]^*$	4-1		509
40		1899.629	130.51273 - 183.15458	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4F - 1[3]^*$	4-1		509
120		1901.490	120.20987 - 172.80024	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[4]^*$	4-1		509
4		1902.778	126.00082 - 178.55606	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[5]^*$	4-1		509
1		1903.193	126.00082 - 178.54380	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[5]^*$	4-1		509
1		1906.543	130.51273 - 182.96385	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4F - 1[2]^*$	4-2		509
40		1907.356	120.42693 - 172.85540	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[4]^*$	4-1		509
25		1907.760	131.63211 - 184.04968	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^2F - 2[5]^*$	4-1		509
1		1909.788	131.37545 - 183.73740	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^2P - 0[3]^*$	4-1		509
4		1909.840	126.00082 - 178.36150	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[4]^*$	4-1		509
1		1910.421	120.42693 - 172.77165	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[2]^*$	4-1		509
60		1910.539	126.00082 - 178.34188	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[4]^*$	4-1		509
10		1911.797	131.63211 - 183.93895	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)6f$	$^2F - 2[4]^*$	4-1		509
4		1914.648	112.82827 - 165.05718	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P)6p$	$^4P - ^4D^*$	4-1	P	509
10		1917.387	121.00037 - 173.15478	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[3]^*$	4-1		509
4		1918.567	112.82827 - 164.95083	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P)6p$	$^4P - ^4D^*$	4-1		509
40		1919.199	131.63211 - 183.73740	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^2F - 0[3]^*$	4-1		509
4		1919.522	131.63211 - 183.72860	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^2F - 0[3]^*$	4-1		509
4		1920.467	130.89345 - 182.96385	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2P - 1[2]^*$	4-1		509
4		1931.277	131.37545 - 183.15458	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2P - 1[3]^*$	4-1		509
90		1931.565	121.00037 - 172.71256	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[2]^*$	4-1		509
25		1933.784	121.00037 - 172.71256	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[2]^*$	4-1		509
10		1933.852	121.00214 - 172.71256	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_1)4f$	$^2P - 1[2]^*$	4-1		509

KR II — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	1	1938.427	131.37545 - 182.96385	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2P - 1[2]^o$	$\frac{3}{2} - \frac{5}{2}$		509
	4	1939.037	131.37545 - 182.94734	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2P - 1[2]^o$	$\frac{3}{2} - \frac{5}{2}$		509
	1	1940.112	112.82827 - 164.37215	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P)6p$	$^4P - ^4P^o$	$\frac{5}{2} - \frac{5}{2}$		509
	4	1941.944	131.63211 - 183.12690	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2F - 1[3]^o$	$\frac{3}{2} - \frac{7}{2}$		509
	4	1943.765	137.09816 - 188.54500	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)6f$	$^2D - 1[4]^o$	$\frac{5}{2} - \frac{7}{2}$		509
	1	1946.677	131.63211 - 183.00189	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2F - 1[4]^o$	$\frac{7}{2} - \frac{7}{2}$		509
	90	1948.752	131.63211 - 182.94703	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2F - 1[4]^o$	$\frac{7}{2} - \frac{9}{2}$		509
	4	1956.412	117.60300 - 168.71710	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^4P - 2[1]^o$	$\frac{1}{2} - \frac{5}{2}$		509
	1	1957.542	127.59749 - 178.68244	$4s^2 4p^4(^3D)5s - 4s^2 4p^4(^3P_2)5f$	$^2D - 2[1]^o$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1958.427	115.09198 - 166.15343	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P)6p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1961.863	127.59749 - 178.56956	$4s^2 4p^4(^3D)5s - 4s^2 4p^4(^3P_2)5f$	$^2D - 2[2]^o$	$\frac{3}{2} - \frac{5}{2}$		509
	90	1963.361	121.77954 - 172.71256	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)4f$	$^4D - 1[2]^o$	$\frac{1}{2} - \frac{5}{2}$		509
	4	1969.278	117.60300 - 168.38326	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^4P - 2[2]^o$	$\frac{1}{2} - \frac{5}{2}$		509
	10	1970.125	132.97049 - 183.72860	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_0)5f$	$^2F - 0[3]^o$	$\frac{3}{2} - \frac{7}{2}$		509
	1	1974.015	117.60300 - 168.26127	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^1S)5p$	$^4P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$		509
	120	1975.251	127.92952 - 178.55606	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[5]^o$	$\frac{7}{2} - \frac{9}{2}$		509
	4	1976.252	127.86151 - 178.46250	$4s^2 4p^4(^3D)5s - 4s^2 4p^4(^3P_2)5f$	$^2D - 2[3]^o$	$\frac{3}{2} - \frac{5}{2}$		509
	10	1978.904	127.92952 - 178.46250	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[3]^o$	$\frac{7}{2} - \frac{7}{2}$		509
	4	1981.264	127.92952 - 178.40242	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[3]^o$	$\frac{7}{2} - \frac{5}{2}$		509
	4	1981.653	118.47434 - 168.93754	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^1S)5p$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$		509
	25	1982.866	127.92952 - 178.36150	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[4]^o$	$\frac{7}{2} - \frac{7}{2}$		509
	4	1983.634	127.92952 - 178.34188	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_2)5f$	$^4F - 2[4]^o$	$\frac{7}{2} - \frac{5}{2}$		509
	1	1990.341	118.47434 - 168.71710	$4s^2 4p^4(^3P)5s - 4s^2 4p^4(^3P_2)4f$	$^2P - 2[1]^o$	$\frac{3}{2} - \frac{3}{2}$		509
	4	1992.464	132.96552 - 183.15458	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^4P - 1[3]^o$	$\frac{3}{2} - \frac{5}{2}$		509
	25	1993.763	132.97049 - 183.12690	$4s^2 4p^4(^3P)4d - 4s^2 4p^4(^3P_1)5f$	$^2F - 1[3]^o$	$\frac{5}{2} - \frac{7}{2}$		509

KRYPTON III (Kr^{2+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4(^3P_2)$ (34 electrons)
Ionization Potential 298 020 cm^{-1} ; 36.95 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	150	462.79	33.0789 - 249.16798	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)6s$	$^1S - ^3P^o$	0 - 1	Q	707
	300	467.35	5.3126 - 219.29544	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	0 - 1	Q	707
	80	516.38	0.0 - 193.65280	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3P^o$	2 - 2		058
	80	525.69	0.0 - 190.22724	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3P^o$	2 - 1		058
	15	528.809	4.5485 - 193.65280	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3P^o$	1 - 2		509
	50	530.308	0.0 - 188.57030	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^1D^o$	2 - 2		509
	5	531.255	0.0 - 188.23428	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^1P^o$	2 - 1		509
	160	538.54	4.5485 - 190.22724	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3P^o$	1 - 1		058
	100	540.79	5.3126 - 190.22724	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3P^o$	0 - 1		058
	110	540.860	0.0 - 184.89285	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3D^o$	2 - 3		509
	80	543.417	4.5485 - 188.57030	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^1D^o$	1 - 2		509
	50	544.410	4.5485 - 188.23428	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^1P^o$	1 - 1		509
	80	546.549	0.0 - 182.96827	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^1F^o$	2 - 3		509
	30	546.687	5.3126 - 188.23428	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^1P^o$	0 - 1		509
	30	548.634	0.0 - 182.26600	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3D^o$	2 - 1		509
	50	551.685	0.0 - 181.26453	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$g^3P - ^1P^o$	2 - 1		509
	80	554.796	0.0 - 180.24810	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	2 - 2		509
	80	558.642	14.6440 - 193.65280	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^3P^o$	2 - 2		509

KR III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	560.984	0.0 - 178.26012	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	2 - 1		509
	100	562.69	4.5485 - 182.26600	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3D^o$	1 - 1		058
	50	565.128	5.3126 - 182.26600	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3D^o$	0 - 1		509
	110	565.645	0.0 - 176.79183	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3D^o$	2 - 2		509
	80	565.88	4.5485 - 181.26453	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$g^3P - ^1P^o$	1 - 1		058
	110	569.160	4.5485 - 180.24810	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	1 - 2		509
	5	570.735	0.0 - 175.21228	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3F^o$	2 - 2		509
	300	571.98	0.0 - 174.83166	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3F^o$	2 - 3		058
	80	573.231	0.0 - 174.45205	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3D^o$	2 - 3		509
	15	574.958	14.6440 - 188.57030	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^1D^o$	2 - 2		509
	100	575.72	4.5485 - 178.24446	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	1 - 0		058
	80	576.08	14.6440 - 188.23428	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^1P^o$	2 - 1		058
	10	578.09	0.0 - 172.98433	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3S^o$	2 - 1		058
	30	578.212	5.3126 - 178.26012	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$g^3P - ^3P^o$	0 - 1		509
	110	579.831	0.0 - 172.46651	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3D^o$	2 - 2		509
	80	580.580	4.5485 - 176.79183	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3D^o$	1 - 2		509
	110	585.141	0.0 - 170.90002	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^1D^o$	2 - 2		509
	110	585.955	4.5485 - 175.21228	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$g^3P - ^3F^o$	1 - 2		509
	5	587.378	14.6440 - 184.89285	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^3D^o$	2 - 3		509
	5	587.536	0.0 - 170.20338	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3D^o$	2 - 1		509
	110	593.703	4.5485 - 172.98433	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3S^o$	1 - 1		509
	110	594.098	14.6440 - 182.96827	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^1F^o$	2 - 3		509
	140	595.53	4.5485 - 172.46651	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3D^o$	1 - 2		058
	110	596.412	5.3126 - 172.98433	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3S^o$	0 - 1		509
	50	596.584	14.6440 - 182.26600	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^3D^o$	2 - 1		509
	120	597.19	4.5485 - 171.99691	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^1P^o$	1 - 1		058
	200	600.172	14.6440 - 181.26453	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$^1D - ^1P^o$	2 - 1		509
	80	601.142	4.5485 - 170.90002	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^1D^o$	1 - 2		509
	110	603.667	4.5485 - 170.20338	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3D^o$	1 - 1		509
	50	603.856	14.6440 - 180.24810	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$^1D - ^3P^o$	2 - 2		509
	30	604.365	0.0 - 165.46445	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^1D^o$	2 - 2		509
	300	605.863	0.0 - 165.05455	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 3		509
	150	606.466	5.3126 - 170.20338	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3D^o$	0 - 1		509
	300	611.115	0.0 - 163.63683	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 2		509
	160	611.19	14.6440 - 178.26012	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)5s$	$^1D - ^3P^o$	2 - 1		058
	30	612.488	0.0 - 163.27001	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 1		509
	150	616.725	14.6440 - 176.79183	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^3D^o$	2 - 2		509
	200	621.451	4.5485 - 165.46445	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^1D^o$	1 - 2		509
	250	622.795	14.6440 - 175.21228	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^3F^o$	2 - 2		509
	60	624.27	14.6440 - 174.83166	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1D - ^3F^o$	2 - 3		058
	300	625.016	0.0 - 159.99752	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3G^o$	2 - 3		509
	110	625.760	14.6440 - 174.45205	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$^1D - ^3D^o$	2 - 3		509
	250	628.588	4.5485 - 163.63683	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	1 - 2		509
	300	630.040	4.5485 - 163.27001	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	1 - 1		509
	50	631.559	14.6440 - 172.98433	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$^1D - ^3S^o$	2 - 1		509
	150	633.090	5.3126 - 163.27001	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$g^3P - ^3D^o$	0 - 1		509
	80	633.630	14.6440 - 172.46651	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$^1D - ^3D^o$	2 - 2		509
	20	636.35	33.0789 - 190.22724	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1S - ^3P^o$	0 - 1		058
	300	639.983	14.6440 - 170.90002	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)5s$	$^1D - ^1D^o$	2 - 2		509
	20	642.84	14.6440 - 170.20338	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$^1D - ^3D^o$	2 - 1		058
	20	644.52	33.0789 - 188.23428	$4s^2 4p^4 - 4s^2 4p^3(^2P^o)4d$	$^1S - ^1P^o$	0 - 1		058
	450	646.412	0.0 - 154.70105	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3F^o$	2 - 3		509
	300	651.201	0.0 - 153.56418	$4s^2 4p^4 - 4s^2 4p^3(^2D^o)4d$	$g^3P - ^3F^o$	2 - 2		509
	300	659.718	0.0 - 151.58126	$4s^2 4p^4 - 4s^2 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	2 - 1		509

KR III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	110	664.855	14.6440 - 165.05455	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})5s$	$^1D - ^3D^{\circ}$	2 - 3		509
	30	670.301	33.0789 - 182.26600	$4s^2 4p^4 - 4s^2 4p^3(^2P^{\circ})4d$	$^1S - ^3D^{\circ}$	0 - 1		509
	30	670.820	0.0 - 149.07299	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	2 - 1		509
	140	671.06	4.5485 - 153.56418	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})4d$	$g^3P - ^3F^{\circ}$	1 - 2		058
	30	671.182	14.6440 - 163.63683	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})5s$	$^1D - ^3D^{\circ}$	2 - 2		509
	200	672.335	0.0 - 148.73644	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	2 - 3		509
	150	672.852	14.6440 - 163.27001	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})5s$	$^1D - ^3D^{\circ}$	2 - 1		509
	80	674.835	33.0789 - 181.26453	$4s^2 4p^4 - 4s^2 4p^3(^2P^{\circ})5s$	$^1S - ^1P^{\circ}$	0 - 1		509
	150	676.568	0.0 - 147.80570	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	2 - 2		509
	150	680.126	4.5485 - 151.58126	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	1 - 1		509
	150	683.683	5.3126 - 151.58126	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	0 - 1		509
	250	686.254	0.0 - 145.72000	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})5s$	$g^3P - ^5S^{\circ}$	2 - 2		509
	250	687.985	14.6440 - 159.99752	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})4d$	$^1D - ^3G^{\circ}$	2 - 3		509
	250	691.930	4.5485 - 149.07299	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	1 - 1		509
	300	695.610	5.3126 - 149.07299	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	0 - 1		509
	110	698.052	4.5485 - 147.80570	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	1 - 2		509
	80	704.843	0.0 - 141.876	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^1P^{\circ}$	2 - 1		509
	300	708.365	4.5485 - 145.72000	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})5s$	$g^3P - ^5S^{\circ}$	1 - 2		509
	300	714.003	14.6440 - 154.70105	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})4d$	$^1D - ^3F^{\circ}$	2 - 3		509
	40	714.77	33.0789 - 172.98433	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})4d$	$^1S - ^3S^{\circ}$	0 - 1		058
	15	719.843	33.0789 - 171.99691	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})4d$	$^1S - ^1P^{\circ}$	0 - 1		509
	1000	722.04	0.0 - 138.49378	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^5D^{\circ}$	2 - 3		058
	40	729.25	33.0789 - 170.20338	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})4d$	$^1S - ^3D^{\circ}$	0 - 1		707
	15	730.267	14.6440 - 151.58126	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})5s$	$^1D - ^3S^{\circ}$	2 - 1		509
	80	732.257	5.3126 - 141.876	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^1P^{\circ}$	0 - 1		509
	50	743.901	14.6440 - 149.07299	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$^1D - ^3D^{\circ}$	2 - 1		509
	30	745.765	14.6440 - 148.73644	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$^1D - ^3D^{\circ}$	2 - 3		509
	110	746.700	4.5485 - 138.47212	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	1 - 1		509
	100	746.83	4.5485 - 138.44768	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	1 - 0		058
	80	750.99	5.3126 - 138.47212	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$g^3P - ^5D^{\circ}$	0 - 1		058
	5	768.132	33.0789 - 163.27001	$4s^2 4p^4 - 4s^2 4p^3(^2D^{\circ})5s$	$^1S - ^3D^{\circ}$	0 - 1		509
	450	785.968	14.6440 - 141.876	$4s^2 4p^4 - 4s4p^5$	$^1D - ^1P^{\circ}$	2 - 1		509
	15	807.583	14.6440 - 138.47212	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$^1D - ^5D^{\circ}$	2 - 1		509
	300	837.662	0.0 - 119.381	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^{\circ}$	2 - 1		509
	500	854.73	4.5485 - 121.544	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^{\circ}$	1 - 0		058
	450	862.582	0.0 - 115.932	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^{\circ}$	2 - 2		509
	200	870.842	4.5485 - 119.381	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^{\circ}$	1 - 1		509
	300	876.676	5.3126 - 119.381	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^{\circ}$	0 - 1		509
	700	897.806	4.5485 - 115.932	$4s^2 4p^4 - 4s4p^5$	$g^3P - ^3P^{\circ}$	1 - 2		509
	30	919.146	33.0789 - 141.876	$4s^2 4p^4 - 4s4p^5$	$^1S - ^1P^{\circ}$	0 - 1		509
	5	948.843	33.0789 - 138.47212	$4s^2 4p^4 - 4s^2 4p^3(^4S^{\circ})4d$	$^1S - ^5D^{\circ}$	0 - 1		509
	80	954.775	14.6440 - 119.381	$4s^2 4p^4 - 4s4p^5$	$^1D - ^3P^{\circ}$	2 - 1		509
	300	987.289	14.6440 - 115.932	$4s^2 4p^4 - 4s4p^5$	$^1D - ^3P^{\circ}$	2 - 2		509
	110	1158.737	33.0789 - 119.381	$4s^2 4p^4 - 4s4p^5$	$^1S - ^3P^{\circ}$	0 - 1		509
	100	1206.35	115.932 - 198.82549	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3P$	2 - 1		058
	100	1216.90	115.932 - 198.10888	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3P$	2 - 2		058
	60	1258.74	119.381 - 198.82549	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3P$	1 - 1		058
	60	1259.31	119.381 - 198.79011	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3P$	1 - 0		058
	80	1265.32	115.932 - 194.96387	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3F$	2 - 3		058
	100	1270.20	119.381 - 198.10888	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3P$	1 - 2		058
	20	1278.94	115.932 - 194.12120	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^1P$	2 - 1		058
	60	1283.31	115.932 - 193.85649	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3F$	2 - 2		058
	60	1283.80	115.932 - 193.82624	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3D$	2 - 3		058
	60	1293.99	121.544 - 198.82549	$4s4p^5 - 4s^2 4p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3P$	0 - 1		058

KR III — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	40	1302.59	115.932 - 192.70293	$4s4p^5 - 4s^24p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3D$	2 - 2		058
	20	1342.68	119.381 - 193.85649	$4s4p^5 - 4s^24p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3F$	1 - 2		058
	40	1363.85	119.381 - 192.70293	$4s4p^5 - 4s^24p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^3D$	1 - 2		058
	40	1377.83	121.544 - 194.12120	$4s4p^5 - 4s^24p^3(^2D^{\circ})5p$	$^3P^{\circ} - ^1P$	0 - 1		058
	20	1400.90						058
	20	1423.55	141.876 - 212.12452	$4s4p^5 - 4s^24p^3(^2P^{\circ})5p$	$^1P^{\circ} - ^1D$	1 - 2		058
	40	1483.43	141.876 - 209.28543	$4s4p^5 - 4s^24p^3(^2P^{\circ})5p$	$^1P^{\circ} - ^1P$	1 - 1		058
	40	1558.80	115.932 - 180.08412	$4s4p^5 - 4s^24p^3(^4S^{\circ})5p$	$^3P^{\circ} - ^3P$	2 - 2		058
	40	1569.89	115.932 - 179.62983	$4s4p^5 - 4s^24p^3(^4S^{\circ})5p$	$^3P^{\circ} - ^3P$	2 - 1		058
	60	1638.82	141.876 - 202.89708	$4s4p^5 - 4s^24p^3(^2D^{\circ})5p$	$^1P^{\circ} - ^1D$	1 - 2		058
	40	1647.36	119.381 - 180.08412	$4s4p^5 - 4s^24p^3(^4S^{\circ})5p$	$^3P^{\circ} - ^3P$	1 - 2		058
	40	1659.81	119.381 - 179.62983	$4s4p^5 - 4s^24p^3(^4S^{\circ})5p$	$^3P^{\circ} - ^3P$	1 - 1		058
	20	1721.64	121.544 - 179.62983	$4s4p^5 - 4s^24p^3(^4S^{\circ})5p$	$^3P^{\circ} - ^3P$	0 - 1		058
	60	1914.05	141.876 - 194.12120	$4s4p^5 - 4s^24p^3(^2D^{\circ})5p$	$^1P^{\circ} - ^1P$	1 - 1	P	058
	10	1923.80	141.876 - 193.85649	$4s4p^5 - 4s^24p^3(^2D^{\circ})5p$	$^1P^{\circ} - ^3F$	1 - 2	P	058
		1960.02	147.80570 - 198.82549	$4s^24p^3(^4S^{\circ})4d - 4s^24p^3(^2D^{\circ})5p$	$^3D^{\circ} - ^3P$	2 - 1	P	375,487

KRYPTON IV (Kr^{3+}), Z = 36
Ground State $1s^22s^22p^63s^23p^63d^{10}4s^24p^3(^4S_{3/2}^{\circ})$ (33 electrons)
Ionization Potential [427 000] cm^{-1} ; [53] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	456.56	0.0 - 219.0435 + F	$4s^24p^3 -$	$g^4S^{\circ} - 12$	$\frac{3}{2} - \frac{3}{2}$	Q	707,1123
	10	480.61						1096
	85	488.44	0.0 - 204.73	$4s^24p^3 - 4s^24p^2(^3P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$		1096
	200	492.71	17.34 + W - 220.30 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$		1096
	250	493.86	19.00 + W - 221.49 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$		1096
	200	494.14	0.0 - 202.3707	$4s^24p^3 - 4s^24p^2(^3P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1096
	50	495.66	24.00 + T - 225.75 + T	$4s^24p^3 - 4s^24p^2(^1S)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	300	496.46	0.0 - 201.43	$4s^24p^3 - 4s^24p^2(^3P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$		1096
	50	496.79	19.00 + W - 220.30 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$		1096
	250	498.69	17.34 + W - 217.86 + W	$4s^24p^3 - 4s^24p^2(^1D)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	50	499.05	17.34 + W - 217.72 + W	$4s^24p^3 - 4s^24p^2(^1D)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	10	501.50	26.35 + T - 225.75 + T	$4s^24p^3 - 4s^24p^2(^1S)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	10	502.88	19.00 + W - 217.86 + W	$4s^24p^3 - 4s^24p^2(^1D)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	150	503.21	19.00 + W - 217.72 + W	$4s^24p^3 - 4s^24p^2(^1D)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	150	503.69	26.35 + T - 224.88 + T	$4s^24p^3 - 4s^24p^2(^1S)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	10	508.68	24.00 + T - 220.59 + T	$4s^24p^3 - 4s^24p^2(^1D)4d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1096
	50	513.16	19.00 + W - 213.87 + W	$4s^24p^3 - 4s^24p^2(^3P)5s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	Q	1096
	10	513.74	17.34 + W - 211.99 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	50	514.82	26.35 + T - 220.59 + T	$4s^24p^3 - 4s^24p^2(^1D)4d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1096
	50	517.29	17.34 + W - 210.66 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1096
	85	517.70	24.00 + T - 217.16 + T	$4s^24p^3 - 4s^24p^2(^1D)4d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1096
	50	518.17	19.00 + W - 211.99 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	85	521.15	17.34 + W - 209.22 + W	$4s^24p^3 - 4s^24p^2(^3P)5s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	Q	1096
	50	529.37	19.00 + W - 207.90 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	10	530.89	17.34 + W - 205.70 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1096
	85	535.60	19.00 + W - 205.70 + W	$4s^24p^3 - 4s^24p^2(^3P)4d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$		1096
	30	699.74	24.00 + T - 166.90 + T	$4s^24p^3 - 4s4p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{3}{2}$	Q	707
	120	711.51	26.35 + T - 166.90 + T	$4s^24p^3 - 4s4p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{3}{2}$	Q	1096
	150	776.78	17.34 + W - 146.08 + W	$4s^24p^3 - 4s4p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096
	200	781.58	19.00 + W - 146.95 + W	$4s^24p^3 - 4s4p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$		1096

KR IV — Continued

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	30	805.72	0.0 - 124.113	$4s^2 4p^3 - 4s 4p^4$	$g^4 S^\circ - ^4 P$	$\frac{3}{2} - \frac{1}{2}$		1096
	120	816.82	0.0 - 122.426	$4s^2 4p^3 - 4s 4p^4$	$g^4 S^\circ - ^4 P$	$\frac{3}{2} - \frac{3}{2}$		1096
	200	842.04	0.0 - 118.759	$4s^2 4p^3 - 4s 4p^4$	$g^4 S^\circ - ^4 P$	$\frac{3}{2} - \frac{3}{2}$		1096

KRYPTON V (Kr⁴⁺), Z = 36
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2 (^3P_0)$ (32 electrons)
Ionization Potential [524 000] cm^{-1} ; [65] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10^3 cm^{-1})	Configurations	Terms	J - J	Notes	References
	50	457.13	0.0 - 218.75	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^\circ$	0 - 1	Q	707
	50	462.79	3.744 - 219.82	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^\circ$	1 - 2		1096
	10	465.11	3.744 - 218.75	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^\circ$	1 - 1		1096
	200	466.41	19.719 - 234.12	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^1 F^\circ$	2 - 3		1096
	10	467.26	3.744 - 217.76	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^\circ$	1 - 0		1096
	30	469.18	3.744 - 216.88	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^1 D^\circ$	1 - 2		1096
	85	471.21	7.597 - 219.82	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^\circ$	2 - 2		1096
	300	472.16	7.597 - 219.39	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^\circ$	2 - 3		1096
	80	473.55	7.597 - 218.75	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 D^\circ$	2 - 1		707, 1096
	120	481.71	3.744 - 211.34	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^\circ$	1 - 2		1096
	85	490.82	7.597 - 211.34	$4s^2 4p^2 - 4s^2 4p 4d$	$g^3 P - ^3 P^\circ$	2 - 2		1096
	50	499.74	19.719 - 219.82	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^3 D^\circ$	2 - 2		1096
	10	500.83	19.719 - 219.39	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^3 D^\circ$	2 - 3		1096
	40	502.40	19.719 - 218.75	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^3 D^\circ$	2 - 1	Q	707
	120	503.71	49.67 + K - 248.20 + K	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 S - ^1 P^\circ$	0 - 1		1096
	200	507.22	19.719 - 216.88	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^1 D^\circ$	2 - 2		1096
	60	515.36	0.0 - 194.04	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^1 P^\circ$	0 - 1	Q	707
	50	521.88	19.719 - 211.34	$4s^2 4p^2 - 4s^2 4p 4d$	$^1 D - ^3 P^\circ$	2 - 2		1096
	50	540.35	0.0 - 185.07	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 S^\circ$	0 - 1		1096
	85	551.51	3.744 - 185.07	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 S^\circ$	1 - 1		1096
	120	563.46	7.597 - 185.07	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 S^\circ$	2 - 1		1096
	300	573.65	19.719 - 194.04	$4s^2 4p^2 - 4s 4p^3$	$^1 D - ^1 P^\circ$	2 - 1		707, 1096
	10	674.32	0.0 - 148.30	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^\circ$	0 - 1		1096
	10	689.96	3.744 - 148.68	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^\circ$	1 - 2		1096
	30	690.83	19.719 - 164.47	$4s^2 4p^2 - 4s 4p^3$	$^1 D - ^1 D^\circ$	2 - 2		1096
	50	691.78	3.744 - 148.30	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^\circ$	1 - 1		1096
	50	693.51	3.744 - 147.94	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^\circ$	1 - 0		1096
	250	708.79	7.597 - 148.68	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^\circ$	2 - 2		1096
	30	710.73	7.597 - 148.30	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 P^\circ$	2 - 1		1096
	85	793.40	3.744 - 129.78	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^\circ$	1 - 2		1096
	85	810.22	7.597 - 131.02	$4s^2 4p^2 - 4s 4p^3$	$g^3 P - ^3 D^\circ$	2 - 3		1096

KRYPTON VI (Kr⁵⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p(²P_{1/2}) (31 electrons)
Ionization Potential [633 300] cm⁻¹; [78.5] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
200	450.20		0. - 222.12	4s ² 4p - 4s ² 4d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		252,707
400	465.27		8.10 - 223.03	4s ² 4p - 4s ² 4d	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		252,707
600	544.03		0. - 183.81	4s ² 4p - 4s4p ²	g ² P° - ² P	$\frac{1}{2} - \frac{3}{2}$		252,707
500	554.52		0. - 180.33	4s ² 4p - 4s4p ²	g ² P° - ² P	$\frac{1}{2} - \frac{1}{2}$		252,707
	563.2		0. - 177.56	4s ² 4p - 4s4p ²	g ² P° - ² S	$\frac{1}{2} - \frac{1}{2}$		898
800	569.13		8.10 - 183.81	4s ² 4p - 4s4p ²	g ² P° - ² P	$\frac{3}{2} - \frac{3}{2}$		252,707
600	580.63		8.10 - 180.33	4s ² 4p - 4s4p ²	g ² P° - ² P	$\frac{3}{2} - \frac{1}{2}$		252,707
800	588.08		120.00 + K - 290.04 + K	4s4p ² - 4p ³	⁴ P - ⁴ S°	$\frac{3}{2} - \frac{3}{2}$	Q	707,430
300	594.84		121.93 + K - 290.04 + K	4s4p ² - 4p ³	⁴ P - ⁴ S°	$\frac{3}{2} - \frac{3}{2}$		707,430
1000	705.84		0. - 141.68	4s ² 4p - 4s4p ²	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		252,707
1000	742.83		8.10 - 142.72	4s ² 4p - 4s4p ²	g ² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		252,707
150	748.58		8.10 - 141.68	4s ² 4p - 4s4p ²	g ² P° - ² D	$\frac{3}{2} - \frac{1}{2}$		707,898

KRYPTON VII (Kr⁶⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²(¹S₀) (30 electrons)
Ionization Potential [895 500] cm⁻¹; [111.0] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
50	430.15		116.78 + K - 349.26 + K	4s4p - 4s4d	³ P° - ³ D	0 - 1		707,898
100	434.28		120.13 + K - 350.40 + K	4s4p - 4s4d	³ P° - ³ D	1 - 2		707,430
150	445.33		126.56 + K - 351.11 + K	4s4p - 4s4d	³ P° - ³ D	2 - 3		707,430
80	446.76		126.56 + K - 350.40 + K	4s4p - 4s4d	³ P° - ³ D	2 - 2		707,898
1000	585.37		0.0 - 170.83	4s ² - 4s4p	g ¹ S - ¹ P°	0 - 1		252,707
	595.0		120.13 + K - 288.20 + K	4s4p - 4p ²	³ P° - ³ P	1 - 2	P	375,898
200	614.86		116.78 + K - 279.42 + K	4s4p - 4p ²	³ P° - ³ P	0 - 1		707,898
400	618.67		126.56 + K - 288.20 + K	4s4p - 4p ²	³ P° - ³ P	2 - 2		252,707
300	627.75		120.13 + K - 279.42 + K	4s4p - 4p ²	³ P° - ³ P	1 - 1		707,898
400	645.77		120.13 + K - 274.99 + K	4s4p - 4p ²	³ P° - ³ P	1 - 0		707,430
300	654.19		126.56 + K - 279.42 + K	4s4p - 4p ²	³ P° - ³ P	2 - 1		707,898
100	852.00		170.83 - 288.20 + K	4s4p - 4p ²	¹ P° - ³ P	1 - 2	Q	707,375

KRYPTON VIII (Kr⁷⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s(²S_{1/2}) (29 electrons)
Ionization Potential [992 000] cm⁻¹; [123] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
60	435.01		143.70 - 373.58	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$		707,898
120	449.12		153.47 - 376.13	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$		707,898
	454.3		153.47 - 373.58	3d ¹⁰ 4p - 3d ¹⁰ 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	898
400	651.57		0.0 - 153.47	3d ¹⁰ 4s - 3d ¹⁰ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		252,707
800	695.91		0.0 - 143.70	3d ¹⁰ 4s - 3d ¹⁰ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		252,707

KRYPTON IX (Kr⁸⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰(¹S₀) (28 electrons)
Ionization Potential 1 862 400 cm⁻¹; 230.9 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		75.45	0.0 - 1325.38	3d ¹⁰ - 3d ⁹ (² D)4f	g ¹ S - ³ D°	0 - 1		257
		76.29	0.0 - 1310.79	3d ¹⁰ - 3d ⁹ (² D)4f	g ¹ S - ¹ P°	0 - 1		257
		76.80	0.0 - 1302.08	3d ¹⁰ - 3d ⁹ (² D)4f	g ¹ S - ³ P°	0 - 1		257
	75	114.95	0.0 - 869.958	3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ D°	0 - 1		487
	100	115.74	0.0 - 863.998	3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ¹ P°	0 - 1		487
	20	117.71	0.0 - 849.546	3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ P°	0 - 1		487

KRYPTON X (Kr⁹⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p⁶3d⁹(²D_{5/2}) (27 electrons)
Ionization Potential [2 218 000] cm⁻¹; [275] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		99.06						257
		99.57						257
		99.69						257
		99.86						257
		100.11						257
		100.30						257
		101.20						257
		101.39						257
		102.16						257
		102.24						257
		102.30						257
		102.72						257
		102.86						257
		103.27						257
		103.60						257

KRYPTON XI (Kr¹⁰⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p⁶3d⁹(³F₄) (26 electrons)
Ionization Potential [2 549 000] cm⁻¹; [316] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		53.5						1090
		89.0						1090

KRYPTON XII (Kr^{11+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 (^4F_{9/2})$ (25 electrons)
Ionization Potential [2 888 000] cm^{-1} ; [358] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		49.5 79.0						1090 1090

KRYPTON XIII (Kr^{12+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 (^6D_4)$ (24 electrons)
Ionization Potential [3 250 000] cm^{-1} ; [403] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		45.5 71.0						1090 1090

KRYPTON XIV (Kr^{13+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 (^6S_{5/2})$ (23 electrons)
Ionization Potential [3 638 000] cm^{-1} ; [451] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		63.5						1090

KRYPTON XX (Kr^{19+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 (^2P_{3/2}^o)$ (17 electrons)
Ionization Potential [6 719 000] cm^{-1} ; [833] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		1145.	0.0 - 87.34 + R	$3s^2 3p^5 - 3s^2 3p^5$	$g^2 P^o - g^2 P^o$	$\frac{1}{2} - \frac{1}{2}$	F,P	1145

KRYPTON XXI (Kr²⁰⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p⁴(³P₂) (16 electrons)
Ionization Potential [7 082 000] cm⁻¹; [878] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		680.	0.0 - 147.06	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ S	2 - 0	F,P	1145
		871.1	0.0 - 114.80	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - ¹ D	2 - 2	F,P	1145
		1271.	0.0 - 78.68	3s ² 3p ⁴ - 3s ² 3p ⁴	g ³ P - g ³ P	2 - 1	F,P	1145

KRYPTON XXIII (Kr²²⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p²(³P₀) (14 electrons)
Ionization Potential [7 977 000] cm⁻¹; [989] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		541.	68.350 - 253.20	3s ² 3p ² - 3s ² 3p ²	g ³ P - ¹ S	1 - 0	F,P	1145
		854.	68.350 - 185.50	3s ² 3p ² - 3s ² 3p ²	g ³ P - ¹ D	1 - 2	F,P	1145
		1097.	94.385 - 185.50	3s ² 3p ² - 3s ² 3p ²	g ³ P - ¹ D	2 - 2	F,P	1145
		1463.	0.0 - 68.350	3s ² 3p ² - 3s ² 3p ²	g ³ P - g ³ P	0 - 1	F,P	1145

KRYPTON XXIV (Kr²³⁺), Z = 36
Ground State 1s²2s²2p⁶3s²3p(²P_{1/2}) (13 electrons)
Ionization Potential [8 380 000] cm⁻¹; [1039] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		1027.	0.0 - 97.37	3s ² 3p - 3s ² 3p	g ² P ^o - g ² P ^o	$\frac{1}{2} - \frac{3}{2}$	F,P	1145

KRYPTON XXV (Kr²⁴⁺), Z = 36
Ground State 1s²2s²2p⁶3s²(¹S₀) (12 electrons)
Ionization Potential [9 284 000] cm⁻¹; [1151] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		159.0	0.0 - 628.9	3s ² - 3s3p	g ¹ S - ¹ P ^o	0 - 1		1135
		244.7	0.0 - 408.665 + C	3s ² - 3s3p	g ¹ S - ³ P ^o	0 - 1	P	1135
		985.1	385.762 + C - 487.280 + C	3s3p - 3s3p	³ P ^o - ³ P ^o	0 - 2	F,P	1135
		1272.0	408.665 + C - 487.280 + C	3s3p - 3s3p	³ P ^o - ³ P ^o	1 - 2	F,P	1135

KRYPTON XXVI (Kr²⁵⁺), Z = 36
Ground State 1s²2s²2p⁶3s²(²S_{1/2}) (11 electrons)
Ionization Potential 9 721 900 cm⁻¹; 1205 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		7.322	0.0 - 13657.	2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		1073
		7.350	1184.20 - 14790.	2p ⁶ 3d - 2p ⁵ 3s3d	² D - 31°	$\frac{3}{2} - \frac{3}{2}$		1073
		7.376	1184.20 - 14742.	2p ⁶ 3d - 2p ⁵ 3s3d	² D - 29°	$\frac{3}{2} - \frac{3}{2}$		1073
		7.384	1184.20 - 14727.	2p ⁶ 3d - 2p ⁵ 3s3d	² D - 28°	$\frac{3}{2} - \frac{3}{2}$		1073
		7.393	558.768 - 14085.	2p ⁶ 3p - 2p ⁵ 3s3p	² P° - 8	$\frac{3}{2} - \frac{3}{2}$		1073
		7.538				$\frac{3}{2} - \frac{3}{2}$		1073
		7.554	558.768 - 13797.	2p ⁶ 3p - 2p ⁵ 3s3p	² P° - 6	$\frac{3}{2} - \frac{3}{2}$		1073
		7.570	0.0 - 13210.	2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		1073
		7.594	1184.20 - 14352.	2p ⁶ 3d - 2p ⁵ 3s3d	² D - 25°	$\frac{3}{2} - \frac{3}{2}$		1073
		7.604	1184.20 - 14335.	2p ⁶ 3d - 2p ⁵ 3s3d	² D - 24°	$\frac{3}{2} - \frac{3}{2}$		1073
		7.614	1164.31 - 14298.	2p ⁶ 3d - 2p ⁵ 3s3d	² D - 20°	$\frac{3}{2} - \frac{3}{2}$		1073
		7.623	558.768 - 13677.	2p ⁶ 3p - 2p ⁵ 3s3p	² P° - 5	$\frac{3}{2} - \frac{3}{2}$		1073
		7.634	558.768 - 13658.	2p ⁶ 3p - 2p ⁵ 3s3p	² P° - 4	$\frac{3}{2} - \frac{3}{2}$		1073
		21.181	0.0 - 4721.21	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$		1133
		21.350	0.0 - 4683.84	2p ⁶ 3s - 2p ⁶ 4p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$		1133
		22.255	454.479 - 4947.85	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		1133
		22.735	558.768 - 4957.27	2p ⁶ 3p - 2p ⁶ 4d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$		1133
		25.605	1164.31 - 5069.80	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$		1133
		25.715	1184.20 - 5072.98	2p ⁶ 3d - 2p ⁶ 4f	² D - ² F°	$\frac{3}{2} - \frac{7}{2}$		1133
		140.878	454.479 - 1164.31	2p ⁶ 3p - 2p ⁶ 3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	P	753
		159.889	558.768 - 1184.20	2p ⁶ 3p - 2p ⁶ 3d	² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	P	753
		178.965	0.0 - 558.768	2p ⁶ 3s - 2p ⁶ 3p	g ² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	P	753,912
		220.032	0.0 - 454.479	2p ⁶ 3s - 2p ⁶ 3p	g ² S - ² P°	$\frac{1}{2} - \frac{1}{2}$	P	753,912

KRYPTON XXVII (Kr²⁶⁺), Z = 36
Ground State 1s²2s²2p⁶(¹S₀) (10 electrons)
Ionization Potential [23 640 000] cm⁻¹; [2931] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		4.598	0.0 - 21750. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})6d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1	P	643
		4.690	0.0 - 21320. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})6d	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$)°	0 - 1	P	643
		4.812	0.0 - 20780. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})5d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1	P	643
		4.911	0.0 - 20362. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})5d	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$)°	0 - 1	P	643
		5.277	0.0 - 18950. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1	P	643
		5.397	0.0 - 18530. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4d	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$)°	0 - 1	P	643
		5.494	0.0 - 18200. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})4s	g ¹ S - $\frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	P	643
		5.522	0.0 - 18110. + B	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})4s	g ¹ S - $\frac{3}{2}[\frac{1}{2}]^{\circ}$	0 - 1	P	643
	45	6.336	0.0 - 15783.	2s ² 2p ⁶ - 2s2p ⁶ 3p	g ¹ S - ¹ P°	0 - 1		1073
	35	6.385	0.0 - 15662.	2s ² 2p ⁶ - 2s2p ⁶ 3p	g ¹ S - ³ P°	0 - 1		1073
	95	6.699	0.0 - 14928.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})3d	g ¹ S - ($\frac{1}{2}, \frac{3}{2}$)°	0 - 1		1073
	100	6.881	0.0 - 14533.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3d	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$)°	0 - 1		1073
	60	6.958	0.0 - 14372.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3d	g ¹ S - ($\frac{3}{2}, \frac{3}{2}$)°	0 - 1		1073
	55	7.269	0.0 - 13757.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{1/2})3s	g ¹ S - $\frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1		1073
	80	7.507	0.0 - 13321.	2s ² 2p ⁶ - 2s ² 2p ⁵ (² P _{3/2})3s	g ¹ S - $\frac{3}{2}[\frac{1}{2}]^{\circ}$	0 - 1		1073

KRYPTON XXVIII (Kr²⁷⁺), Z = 36
Ground State 1s²2s²2p⁶(²P_{3/2}) (9 electrons)
Ionization Potential [24 650 000] cm⁻¹; [3056] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		6.129	0.0 - 16316.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ² P	$\frac{3}{2} - \frac{3}{2}$		1073
		6.145	1901.8 + K - 18175. + K	2s2p ⁶ - 2p ⁶ 3p	² S - ² P ^o	$\frac{1}{2} - \frac{3}{2}$		1073
		6.145	0.0 - 16273.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		1073
		6.166	0.0 - 16218.	2s ² 2p ⁵ - 2s2p ⁵ (¹ P ^o)3p	g ² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		1073
		6.171	446.985 - 16652.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ⁴ P	$\frac{1}{2} - \frac{3}{2}$		1073
		6.214	446.985 - 16540.	2s ² 2p ⁵ - 2s2p ⁵ (³ P ^o)3p	g ² P ^o - ⁴ D	$\frac{1}{2} - \frac{3}{2}$		1073
		6.259	0.0 - 15990.	2s ² 2p ⁵ - 2s2p ⁵ (¹ P ^o)3p	g ² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		1073
		6.418	0.0 - 15578.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² P	$\frac{3}{2} - \frac{1}{2}$		1073
		6.428	0.0 - 15548.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		1073
		6.449	446.985 - 15953.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3d	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		1073
		6.466	0.0 - 15466.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² F	$\frac{3}{2} - \frac{3}{2}$		1073
		6.479	0.0 - 15434.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		1073
		6.502	0.0 - 15380.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ² F	$\frac{3}{2} - \frac{5}{2}$		1073
		6.519	0.0 - 15340.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ⁴ F	$\frac{3}{2} - \frac{5}{2}$		1073
		6.614	446.985 - 15578.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3d	g ² P ^o - ² P	$\frac{1}{2} - \frac{1}{2}$		1073
		6.626	0.0 - 15092.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		1073
		6.639	0.0 - 15063.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ⁴ F	$\frac{3}{2} - \frac{3}{2}$		1073
		6.663	0.0 - 15008.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ² D	$\frac{3}{2} - \frac{3}{2}$		1073
		6.678	0.0 - 14977.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		1073
		6.699	446.985 - 15375.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ² P	$\frac{1}{2} - \frac{3}{2}$		1073
		6.715	0.0 - 14892.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{1}{2}$		1073
		6.727	446.985 - 15312.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ⁴ D	$\frac{1}{2} - \frac{3}{2}$		1073
		6.881	446.985 - 14977.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3d	g ² P ^o - ⁴ P	$\frac{1}{2} - \frac{3}{2}$		1073
		6.941	0.0 - 14407.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3s	g ² P ^o - ² D	$\frac{3}{2} - \frac{5}{2}$		1073
		6.975	0.0 - 14328.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P ^o - ² P	$\frac{3}{2} - \frac{1}{2}$		1073
		6.997	0.0 - 14292.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{3}{2}$		1073
		7.123	0.0 - 14039.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ S)3s	g ² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$		1073
		7.162	446.985 - 14410.	2s ² 2p ⁵ - 2s ² 2p ⁴ (¹ D)3s	g ² P ^o - ² D	$\frac{1}{2} - \frac{3}{2}$		1073
		7.193	0.0 - 13902.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P ^o - ² P	$\frac{3}{2} - \frac{1}{2}$		1073
		7.209	0.0 - 13872.	2s ² 2p ⁵ - 2s ² 2p ⁴ (³ P)3s	g ² P ^o - ⁴ P	$\frac{3}{2} - \frac{5}{2}$		1073
		52.6	0.0 - 1901.8 + K	2s ² 2p ⁵ - 2s2p ⁶	g ² P ^o - ² S	$\frac{3}{2} - \frac{1}{2}$	P	375,122
		68.7	446.985 - 1901.8 + K	2s ² 2p ⁵ - 2s2p ⁶	g ² P ^o - ² S	$\frac{1}{2} - \frac{1}{2}$	P	375,122
		223.72	0.0 - 446.985	2s ² 2p ⁵ - 2s ² 2p ⁵	g ² P ^o - g ² P ^o	$\frac{3}{2} - \frac{1}{2}$	F,P	1122

KRYPTON XXXII (Kr³¹⁺), Z = 36
Ground State 1s²2s²2p²(²P_{1/2}) (5 electrons)
Ionization Potential [29 940 000] cm⁻¹; [3712] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in 10 ³ cm ⁻¹)	Configurations	Terms	J - J	Notes	References
		202.6	0.0 - 493.57	2s ² 2p - 2s ² 2p	g ² P ^o - g ² P ^o	$\frac{1}{2} - \frac{3}{2}$	F,P	1122

KRYPTON XXXIII (Kr^{32+}), $Z = 36$
Ground State $1s^22s^2(^1S_0)$ (4 electrons)
Ionization Potential [31 550 000] cm^{-1} ; [3912] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		167.	0.0 - 597.6+K	$1s^22s^2 - 1s^22s2p$	$g^1S - ^3P^o$	0 - 1	P	375

KRYPTON XXXIV (Kr^{33+}), $Z = 36$
Ground State $1s^22s(^2S_{1/2})$ (3 electrons)
Ionization Potential [33 110 000] cm^{-1} ; [4105] eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		91.0	0.0 - 1099.4+D	$1s^22s - 1s^22p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	375,977
		173.7	0.0 - 575.81+E	$1s^22s - 1s^22p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	P	375,977

KRYPTON XXXV (Kr^{34+}), $Z = 36$
Ground State $1s^2(^1S_0)$ (2 electrons)
Ionization Potential 13 948 000 cm^{-1} ; 17296 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		0.805	0.0 - 124280.0	$1s^2 - 1s3p$	$g^1S - ^3P^o$	0 - 1	P	728
		0.946	0.0 - 105768.8	$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	P	1105
		0.952	0.0 - 105080.4	$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	P	1105
		0.955	0.0 - 104696.1	$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	F,P	1105

KRYPTON XXXVI (Kr^{35+}), $Z = 36$
Ground State $1s(^2S_{1/2})$ (1 electron)
Ionization Potential 144 661 000 cm^{-1} ; 17936 eV

Multiplet	Rel. Int.	λ_{vac} (in Å)	Levels (in $10^3 cm^{-1}$)	Configurations	Terms	J - J	Notes	References
		0.777	0.0000 - 128767.4800	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	728
		0.918	0.0000 - 108952.5000	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P	728
		0.923	0.0000 - 108310.2000	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	P	728

**Part I contains tables for hydrogen
through chromium (pp. 1–649).**

**Part II contains tables for manganese
through krypton (pp. 651–1369).**

**Part III contains the Finding List
(pp. 1371–1678).**