

AGENDA

NRC Board on Assessment of NIST Programs, Physical Measurement Laboratory Time and Frequency Division (688) Quantum Physics Division (689, JILA)

These agendas describe the 688/689 subpanel meetings only, not the plenary sessions.

The six members of the NRC Subpanel for Divisions 688 and 689 will participate in all these meetings.

Wednesday, September 9, 2015

At NIST Boulder (325 Broadway)

| Focus on Time and Frequency Division (688). All members of Subpanels for 688 and 689 participate. | | | |
|--|---|---|-----------------|
| Time | Activity | NIST contact | Location |
| 10:30 am | Time and Frequency Division (688) General Overview | Tom O'Brian, Division Chief | 1-4020 |
| 11:30 am | Lunch with members of Division 688 | | 81-1A116 |
| 12:30 pm | Brief overviews of representative Division 688 activities: | | 1-4020 |
| | Optical lattice atomic clocks | Chris Oates Optical Frequency Measurements Group Leader | |
| | NIST on a Chip | John Kitching NIST Fellow and Atomic Devices and Instrumentation Group Leader | |
| | Quantum Computing | Dave Wineland NIST Fellow and Ion Storage Group Leader | |
| 1:45 pm | Break | | |

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Wednesday, September 9, 2015 (continued)

Lab visits for Time and Frequency Division

| Lab visits/discussions. All 688 and 689 Panel Members participate in all lab visits. | | | |
|---|---|---|-----------------|
| Time | Activity | NIST contact | Location |
| 2:00 pm | Lab visit: Remote measurement services | John Lowe, Mike Lombardi, Time and Frequency Services Group | 1-4032 |
| 2:30 pm | Lab visit: NIST on a Chip | John Kitching, Atomic Devices and Instrumentation Group | 1-3535 |
| 3:00 pm | Lab visit: Phase noise metrology | Archita Hati, Time and Frequency Metrology Group | 81-1F113 |
| 3:30 pm | Lab visit: Optical lattice clocks | Chris Oates, Optical Frequency Measurements Group | 81-1G104 |
| 4:00 pm | Lab visit Primary frequency standards (NIST-F1) and UTC realization | Steve Jefferts, Primary Frequency Standards Group | 81-1F125 |
| 4:30 pm | Lab visit: Laser frequency comb development and applications | Scott Papp, Optical Frequency Measurement Group | 81-1F109 |
| 5:00 pm | Lab visit: Quantum computing | Dave Wineland, Ion Storage Group | 81-1G121 |
| 5:30 pm | Adjourn | | |

Thursday Agenda for Quantum Physics begins next page...

Thursday, September 10, 2015

At JILA on University of Colorado campus

| Focus on Quantum Physics Division (689, JILA). All members of Subpanels for 688 and 689 participate. | | | |
|---|---|--------------------------------|---|
| Time | Activity | NIST contact | Location |
| 8:00 am | Quantum Physics Division (689) General Overview | Tom O'Brian, Division Chief | Flatirons Room (10 th Floor of main JILA Tower) |
| 9:00 am | Brief overviews of representative Division 689 activities: | | Flatirons Room |
| | Quantum many body physics | James Thompson, JILA Fellow | |
| | Quantum transductions | Konrad Lehnert, JILA Fellow | |
| | Precision biophysical measurements | Tom Perkins, JILA Fellow | |
| 10:15 am | Break | | |

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Thursday, September 10, 2015 (continued)

At JILA on University of Colorado campus

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|---|---|--------------------------------------|----------------|
| Lab visits/discussions Subpanel Members Divide into 3 Groups by Interest, with each Group visiting one of the following tracks | | | |
| TRACK 1 | | | |
| 10:30 am | Lab visit Cold polar molecules and cold chemistry | Jacob Covey, Jin/Ye Group | X1B20 |
| 11:15 am | Lab visit: Quantum many body theory | Ana Maria Rey | S324 |
| Noon | To lunch | | |
| TRACK 2 | | | |
| 10:30 am | Lab visit Strontium lattice optical clock and XUV frequency comb | Craig Benko and Xibo Zhang, Ye Group | S1B40 |
| 11:15 am | Lab visit: Precision measurement of electron electric dipole moment | Matt Grau, Cornell Group | B228 |
| Noon | To lunch | | |
| TRACK 3 | | | |
| 10:30 am | Lab visit Precision AFM for biophysics applications | Tom Perkins | A503 |
| 11:15 am | Lab visit: Biophotonics/biophysics | Ralph Jimenez | B119 |
| Noon | To lunch | | |
| All Subpanel members reconvene | | | |
| Noon | Lunch with Quantum Physics Division members | | Flatirons Room |
| 1:00 pm | Subpanels convene for closed meeting | | Flatirons Room |
| 2:00 pm | Subpanels adjourn | | |