

Greenhouse Gas & Climate Science Measurements

Dates: September 7 (Wednesday PM ONLY), September 8 (Thursday), and September 9 (Friday) 2016

Location: NIST Gaithersburg, Building 101, Portrait Room; VTC to Boulder 1-1107

Day 1 September 7 (Wednesday-Half Day) Gaithersburg 101/Portrait Room

Start Time (ET)	End	Topic / Title	Facilitator / Speaker	Contributors / Collaborators	
12:30 PM	12:30 PM	12:50 PM	Program Overview with Introduction to Urban GHG Measurements Testbed System	James Whetstone	Communications Technology Laboratory, Engineering Laboratory, Information Technology Laboratory, Material Measurement Laboratory, Physical Measurement Laboratory
	12:50 PM	1:10 PM	Observations, Instrument Calibration & Uncertainty, and Data Quality	Anna Karion	NIST, NOAA, NASA-JPL
	1:10 PM	1:30 PM	Atm. Transport - Regional to Local scales	Israel Lopez-Coto	Collaborators with State Agencies, INFLUX, LA Megacities, Northeast Corridor
	1:30 PM	1:50 PM	Atm. Transport - Local Scales	Kuldeep Prasad	
	1:50 PM	2:10 PM	Atmospheric Inversion Analysis	Subhomoy Ghosh	
	2:10 PM	2:30 PM	Application of Inversion Methods - Aliso Canyon Natural Gas Reservoir Leak	Kim Mueller	
	2:30 PM	2:50 PM	Statistical Analyses Supporting Real Air SRMs and Comparative Evaluation of Smoothers and Interpolants for Spatial Data - Aircraft Observations	Antonio Possolo	Jerry Rhoderick, Purdue Univ. - Ana Kerlo, Kimberley Harris
	2:50 PM	3:10 PM	Quasi Tomographic methods for the detection of CO2 leaks	Zachary Levine	Adam Pintar
	3:10 PM	3:25 PM	Break		
	3:25 PM	3:40 PM	Program Area: Stationary Emission Sources	Mike Moldover	Sensor Science Division (PML) Fire Research Division (EL)
	3:40 PM	3:55 PM	Differential Pressure Probes - Airspeed Measurements	Iosif Shinder	Keith Gillis, John Wright, Joey Boyd, JohnPaul Abbott, Vladimir Khromchenko, Rodney Bryant, Aaron Johnson
	3:55 PM	4:10 PM	Metrology for Monitoring CO2 Emitted by Coal-Fired Power Plants	Aaron Johnson	Keith Gillis, Iosif Shinder, John Wright, Joey Boyd, JohnPaul Abbott, Vladimir Khromchenko, Rodney Bryant
	4:10 PM	4:25 PM	Longwave Acoustic Flowmeter	Keith Gillis	Keith Gillis, Joey Boyd, JohnPaul Abbott
	4:25 PM	4:40 PM	Standards Test Beds for Greenhouse Gas Emissions	Rodney Bryant	Aaron Johnson
4:40 PM	4:40 PM		Adjourn for the Day	James Whetstone	

Dates: September 7 (Wednesday pm only), **September 8 (Thursday)**, and September 9 (Friday) 2016

Location: NIST Gaithersburg, Building 101, Portrait Room; VTC to Boulder 1-1107

Day 2 September 8 (Thursday) Gaithersburg 101/Portrait Room

Start Time (ET)	End	Topic / Title	Facilitator / Speaker	Contributors / Collaborators	
8:30 AM	8:30 AM	8:35 AM	Day 2 Welcome & Remarks	James Whetstone	
	8:35 AM	8:45 AM	Program Area: Carbonaceous Aerosol Metrology	Pam Chu / Chris Zangmeister	Chemical Sciences Division, MML Materials Measurement Science Division, MML
	8:45 AM	9:15 AM	Methods and Standards for Measurement of Atmospheric Aerosol Radiative Properties	James Radney	Chris Zangmeister, Joseph Conny, Keith Gillis UMD: Michael Zachariah, Courtney Grimes, Russell Dickerson, Rian You
	9:15 AM	9:45 AM	Heterogeneous Atmospheric Dust: Individual Particle Analysis, Optical Modeling, and Lab-Generated Particle Analogs	Joseph M Conny	Diana Ortiz-Montalvo UMD: Courtney Grimes, Russell Dickerson
	9:45 AM	10:15 AM	Atmospheric Organic Aerosols	Sean McGivern	Iftikhar Awan
	10:15 AM	10:30 AM	Break		
	10:30 AM	10:40 AM	Program Area: Measurement Tools & Reference Data	Roger van Zee	Chemical Sciences Division, MML Statistical Engineering Division, ITL Sensor Science Division, PML
	10:40 AM	11:10 AM	Gas Metrology and Spectroscopic Techniques	Joseph Hodges	David Long, Adam Fleisher, Hongming Yi, Melanie Ghysels, Vincent Sironneau, Hong Lin
	11:10 AM	11:40 AM	Spectroscopic Reference Data for Greenhouse Gases	Joseph Hodges	David Long, Adam Fleisher, Hongming Yi, Melanie Ghysels, Vincent Sironneau, Hong Lin
Lunch	11:40 AM	1:00 PM	Metrology Tools for Climate Science	David Long	Zach Reed, Adam Fleisher, Joe Hodges
	1:00 PM	1:30 PM	Gas Standards Development for Greenhouse Gases	Jerry Rhoderick	Michael Kelly, Walter Miller, Jr., Jennifer Carney, Lyn Gameson, Christina Liaskos, Kimberly Harris, Joseph Hodges, Adam Pintar
	1:30 PM	1:50 PM	Developing Manometric Standards Capability at BIPM	Steve Maxwell	Jerry Rhoderick BIPM and NOAA
	1:50 PM	2:20 PM	Development and Characterization of Meta-Cresol Purple Reference Material for Seawater pH Measurements	Regina A. Easley	Jason F. Waters, Kenneth W. Pratt, Benjamin Place
2:20 PM	2:20 PM		Adjourn for the Day	James Whetstone	

Greenhouse Gas & Climate Science Measurements

Dates: September 7 (Wednesday), September 8 (Thursday), and **September 9 (Friday AM)** 2016
Location: NIST Gaithersburg, Building 101, Portrait Room; VTC to Boulder 1-1107

Day 3 September 9 (Friday) Gaithersburg 101/Portrait Room

Start Time (ET)	End	Topic / Title	Facilitator / Speaker	Contributors / Collaborators
8:30 AM	8:30 AM	8:35 AM	Day 3 Welcome & Remarks	James Whetstone
	8:35 AM	8:50 AM	Program Area: Satellite Calibration & Standards	Gerald Fraser
	8:50 AM	9:20 AM	Ocean Color Measurement	Carol Johnson
	9:20 AM	9:50 AM	Hyperspectral Imager	David Allen
	9:50 AM	10:20 AM	Advanced Reflectance Standards, Modeling and Instrumentation for Climate Science and Earth Albedo	Heather Patrick
	10:20 AM	10:50 AM	Surface Total Solar Irradiance	Howard Yoon
	10:50 AM	11:00 AM	Break	
	11:00 AM	11:30 AM	Calibration of Earth-Viewing Satellite Sensors	Joseph Rice
	11:30 AM	12:00 PM	Lunar Calibration	Steve Maxwell
	12:00 PM	12:30 PM	Exo-Atmospheric Solar Measurements for Space Weather	Uwe Arp
12:30 PM	12:30 PM		Adjourn	James Whetstone

Greenhouse Gas & Climate Science Measurements

Dates: September 21 (Wednesday Afternoon), 2016
Location: NIST Boulder, Room 1-1107 with VTC to Gaithersburg 101/113

September 21 (Wednesday - Half Day) Boulder Rm 1-1107

Start Time (MT)	End	Topic / Title	Facilitator / Speaker	Contributors / Collaborators
12:30 AM MT	12:30 PM	12:45 PM	Program Overview	James Whetstone
	12:45 PM	1:15 PM	Microwave Remote Sensing	David Walker
	1:15 PM	1:45 PM	Advanced Microwave Radiometer Calibration	Jolene Splett
	1:45 PM	2:15 PM	Antenna Metrology	Joshua Gordon
	2:15 PM	2:45 PM	Surrogate gas prediction model as a proxy for $\Delta 14C$ -based measurements of fossil fuel CO ₂	Kevin Coakley
	2:45 PM	3:00 PM	Break	
	3:00 PM	3:30 PM	Stochastic Convection Schemes for Atmospheric Circulation	Amanda Koepke
	3:30 PM	4:00 PM	Differential absorption LIDAR (DIAL) for greenhouse gas flux measurements	David Plusquellic
	4:00 PM	4:30 PM	Greenhouse Gas Monitoring using Fiber Frequency Combs	Nate Newbury
	4:30 PM	5:00 PM	Mid-Infrared Sources and Techniques for Green House Gas Detection	Scott Diddams
5:00 PM MT	5:00 PM		Adjourn	James Whetstone