



Greenhouse Gas & Climate Science Measurements

Dates: August 1 (Friday) and August 4 (Monday), 2014

Location: NIST Gaithersburg, Building 215, Room C103

Program Areas

1. Stationary/Point GHG Emission Source Metrology
2. Distributed GHG Source Metrology
3. GHG Standards and Metrology Tools
4. Climate Science Measurements - Advanced Satellite Calibration Standards
5. Black Carbon Aerosol Measurement Science

Day 1 August 1 (Friday) Gaithersburg 215/C103

Start	Item	Speaker	Contributors
8:30 AM	Introduction and Program Overview	James Whetstone	
8:40 AM	Program Areas: Point & Distributed Source Metrology Sensor Science Division, PML Fire Research Division, EL Statistical Engineering Division, ITL	James Whetstone	
8:50 AM	Metrology for Coal-Burning Power Plant Emissions Monitoring	Mike Moldover	Aaron Johnson, Joey Boyd, Keith Gillis, Rodney Bryant, Jacob Ricker, and Iosif Shinder
9:20 AM	Standards Test Beds for Greenhouse Gas Emissions	Rodney Bryant	Aaron Johnson, Matthew Bundy, Iosif Shinder, R. Paul Borthwick, Jiann Yang, Elizabeth Moore, Joey Boyd, John Wright, Jacob Ricker, Michael Moldover, Kieth Gillis, Dan Sawyer
10:10 AM	Urban Greenhouse Gas Measurements Testbeds: Indy, LA, and NE Corridor	James Whetstone	
10:40 AM	A Bayesian Gaussian Process Model for Estimating Greenhouse Gas Surface Fluxes Adaptive Smoothing Methods for Greenhouse Gas Analysis Statistical Methods for Change-Point Detection in Surface Temperature Records	Lo-Hua Yuan Daniel Samarov Adam Pintar	Adrian Sandu, Blaza Toman, Israel Lopez-Coto, Kuldeep Prasad
11:10 AM	Greenhouse Gas Emissions and Transport	Kuldeep Prasad	Israel Lopez-Coto, Heming Hu
1:00 PM	Program Area: GHG Standards & Metrology Tools Chemical Sciences Division, MML Statistical Engineering Division, ITL	Roger van Zee	
1:10 PM	Reference Data for GHG Sensing	Joe Hodges	David Long, Zach Reed, Adam Fleisher
1:40 PM	Sensor Development: Metrology Tools for Climate Science	David Long	Zach Reed, Adam Fleisher, Joe Hodges
2:30 PM	Standard Reference Materials and Gas Metrology	Jerry Rhoderick	Frank Guenther, Bob Miller, Mike E. Kelley, Gerald Mitchell
3:10 PM	End of the Day Summary	James Whetstone	
3:30 PM			



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Day 2 August 4 (Monday) Gaithersburg 215/C103

Start	Item	Speaker	Contributors
8:30 AM	Introduction and Overview	James Whetstone	
9:00 AM	Program Area: Black Carbon Aerosol Measurement Science Materials Measurement Science Division, MML Chemical Sciences Division, MML	Pam Chu	
9:10 AM	Carbonaceous Aerosols Measurements	Chris Zangmeister	Sean McGivern, James Radney, Joseph Conny, Keith Gillis, Joseph Hodges (Univ of MD) Michael Zachariah, Mingdong Li, Russell Dickerson, Xiaofei Ma
9:40 AM	Heterogeneous Atmospheric Dust: Individual Particle Microanalysis, Optical Property Modeling, and Lab-Generated Particle Analogs	Joe Conny	Sean Collins, Reid Gunn, Andrew Herzing, Xiaofei Ma Diana Ortiz-Montalvo, Robert D. Willis (U.S. EPA)
10:10 AM	Secondary Organic Aerosols	Sean McGivern	Christopher Zangmeister, James Radney, Alicia Pettibone, Joseph Klems, Donald Burgess, Thomas Allison
10:40 AM	Sea Water pH	Jason Waters	Ken Pratt, Regina Easley
11:20 AM	Program Area: Intro Climate Science Measurements Sensor Science Division, PML Quantum Electronics and Photonics Div, PML Statistical Engineering Division, ITL	Gerald Fraser	
11:30 AM	Surface Temperature Measurement Validated Uncertainties, New Meas. Methods, and 3D Microclimate Measurement	Antonio Possolo	Greg Strouse, Wyatt Miller, Hung-kung Liu, Adam Pintar, Nien-fan Zhang
1:00 PM	Calibration of Earth-Viewing Satellite Sensors	Joseph Rice	Steve Brown, Leonard Hanssen, Carol Johnson, Steve Maxwell, Keith Lykke, Ping-Shine Shaw, John Woodward, Yuqin Zong
1:30 PM	Advanced Reflectance/BRDF Standards for Surface and Atmospheric Albedo Measurements	Heather Patrick	David Allen, Catherine Cooksey, Thom Germer, Joseph Rice, Benjamin Tsai
2:00 PM	Surface and Exo-Atmospheric Solar Measurements	Howard Yoon	Tom Lucatorto, Eric Shirley, Alex Farrell, Mitch Furst, Ed Hagley, Leonard Hanssen, Carol Johnson, Toni Litorja, Joseph Rice
3:00 PM	Exo-atmospheric Standards for Satellite Sensor Calibration and Nighttime Aerosol Quantification	Claire Cramer	Steve Brown, Keith Lykke, John Woodward
3:30 PM	Ocean Color Measurement	Carol Johnson	Steve Brown
4:30 PM	End of the Day Summary	James Whetstone	