

2016 ARM/ASR Joint User Facility and PI Meeting

May 2-6, 2016

Sheraton Tysons Hotel, Leesburg, VA

FINAL AGENDA

Monday, May 2:

- 9:00 am – 12:00 pm DOE laboratory projects & Science Focus Areas [Invitation only] [Great Falls]
ARM Infrastructure Management Board (IMB) [Invitation only] [Potomac]
- 12:00 pm – 1:00 pm Lunch Break

----- **Formal Start of 2016 ARM/ASR Joint User Facility/PI Meeting** -----

1:00 pm – 3:00 pm **Breakout Session 1**

Eastern North Atlantic: combining modeling and observations (Wood) [Fairfax]

Cloud phase group (de Boer) [Great Falls]

New particle formation (Smith) [Ash Grove]

3:00 pm – 3:30 pm Break

3:30 pm – 5:30 pm **Breakout Session 2**

Simulating radar observables from model microphysics: progress and applications (Collis) [Fairfax]

ARM data and compute capabilities for PIs and users (Palanisamy) [Ash Grove]

Secondary organic aerosol (Shilling) [Great Falls]

Advances in aerosol and cloud retrievals from spectral radiometers (Riihimaki) [Potomac]

7:00 pm – 9:00 pm **Evening Breakout 1**

Entrainment (Krueger) [McLean]

AOS harmonization (Flynn) [Potomac]

ARM Data Quality: what you need to know (Kehoe) [Great Falls]

GoAmazon2014/5 – Clouds, precipitation, and organized convection (Machado/Feng) [Ash Grove]

Tuesday, May 3:

8:30 am – 10:00 am **Plenary Session**

8:30 Welcome & introductory remarks

Gary Geernaert, Climate and Environmental Sciences Division Director, DOE

8:45 DOE ARM Updates

Sally McFarlane & Rick Petty, ARM Program Managers, DOE

9:15 DOE ASR Updates

Ashley Williamson & Shaima Nasiri, ASR Program Managers, DOE

10:00 am – 10:30 am Break

10:30 am – 12:30 pm **Plenary Session**

10:30 – 10:50 ARM Technical Director Update

Jim Mather, PNNL

10:50 – 11:05 ARM User Executive Committee (UEC)

Dave Turner, NOAA NSSL

11:05 – 11:20 Aerosol Measurement Group

Allison McComiskey, NOAA

11:20 – 11:40 GoAmazon 2014/15

Scot Martin, Harvard

11:40 – 12:00 Airborne observations of greenhouse gases in the North Slope of Alaska during ACME-V campaign

Sebastian Biraud, LBNL

12:00 – 12:30 ARM LES Pilot Project - LASSO modeling & measurements update

Bill Gustafson, PNNL

12:30 pm – 1:30 pm **Working Lunch**

1:30 pm – 3:45 pm **Plenary Session**

1:30 Introduction & comments on DOE Early Career Award program

Sharlene Weatherwax, Associate Director, Office Biological and Environmental Research

1:40 – 2:00 DOE Early Career Award Talk - Effects of cloud superparameterization at the land-atmosphere interface

Michael Pritchard, University of California, Irvine

2:00 – 2:20 MAGICal Results on Marine Clouds

Ernie Lewis, BNL

2:20 – 2:35 Radar Updates

Nitin Bharadwaj, PNNL

2:35 – 2:55 Vertical Velocity

Adam Varble, University of Utah

2:55 – 3:10 Aerosol Life Cycle Working Group Updates

Jian Wang, BNL

3:10 – 3:25 Cloud-Aerosol-Precipitation Interactions Working Group Updates

Steve Ghan, PNNL & Rob Wood, University of Washington

3:25 – 3:40 Cloud Lifecycle Working Group Updates

Tony Del Genio, NASA GISS

3:40 pm Coffee break available

3:45 pm – 5:15 pm **Poster Session 1**

Absorbing aerosol

Convective organization and regime transitions

Deep convective clouds, including aerosol interactions

Secondary organic aerosol

Warm low clouds, including aerosol interactions

5:15 pm – 6:30 pm **Poster Session 2**

GoAmazon – clouds and aerosol in Amazonia

High latitude clouds and aerosols

Radiation

7:30 pm – 9:00 pm **Evening Breakout 2**

The Cloud, Aerosol, and Complex Terrain Interactions (CACTI) ARM field campaign (Varble) [Great Falls]

MARCUS: Measurements of Aerosols, Radiation and Clouds over the Southern oceans (McFarquhar) [Potomac]

CAUSES: Clouds Above the United States and Errors at the Surface (Morcrette) [Vienna]

GoAmazon2014/5 - Aerosol & atmospheric chemistry (Martin) [Ash Grove]

UAS & tethered balloons (Schmid/Ivey) [McLean]

Wednesday, May 4:

8:30 am – 10:30 am Plenary Session – PI Poster Talks

- 8:30 A radar network approach to characterize shallow convection at the SGP megasite to support the LASSO activity
Pavlos Kollias, Brookhaven National Laboratory & Stony Brook University
- 8:45 Characterizing the Turbulent Structure of the Convective Boundary Layer over the SGP Using ARM/ASR Observations and LES Model Output
Thijs Heus, Cleveland State
- 9:00 Latent Heating, Microphysical and Aerosol Processes of MC3E Mesoscale Convective Systems
Susan van den Heever, Colorado State University
- 9:15 Characterizing the Vertical Distribution of Aerosols Using Multiwavelength Lidar Data: Initial Results from the CHARMS Study at SGP
Tyler Thorsen & Rich Ferrare, NASA Langley
- 9:30 The Aerosol Observing System Inlet Characterization Experiment
Chongai Kuang, Brookhaven National Laboratory
- 9:45 Arctic Ocean and Prudhoe Bay Influences on Atmospheric Particle Chemical Mixing States on the North Slope of Alaska
Kerri Pratt, University of Michigan
- 10:00 Tethered Balloon System Operations at ARM AMF3 Site at Oliktok Point, AK
Darielle Dexheimer, Sandia National Laboratories
- 10:15 Direct Comparisons of Ice Microphysical Properties Simulated by the Community Atmosphere Model CAM5.4 with ARM SPartICus Observations
Xiaohong Liu, University of Wyoming

10:30 am – 11:00 am Break

11:00 am – 12:30 pm Plenary Session – PI Poster Talks

- 11:00 Determination of Water Vapor Continuum Coefficients in the Far-infrared from the RHUBC-II Campaign
Eli Mlawer, AER Inc.
- 11:15 Evaluating Drizzle Formation Parameterization Using Ensemble Cloud Retrievals from the MAGIC Campaign
Christine Chiu, University of Reading
- 11:30 Condensate Variability in Ice Clouds – a Life Cycle Effect?
Maike Ahlgrimm, ECMWF

11:45 Why a GCM May Overestimate the Aerosol Cloud Lifetime Effect: a Comparison of CAM5 and CRM Using ARM Observations
Cheng Zhou, University of Michigan

12:00 The Surprising Role of Semivolatile Organics in the Growth of Ultrafine Particles
Rahul Zaveri, Pacific Northwest National Laboratory

12:15 New optical experiments to clarify the role of particle morphology and chemical composition in the absorption enhancement of coated soot particles
Lindsay Wolff, Boston College and Tim Onasch, Aerodyne Research

12:30 pm – 1:30 pm **Working Lunch**

1:30 pm – 3:30 pm **Breakout Session 3**

Radar data products for process studies and modeling applications (Jensen) [Ash Grove]

Ice nucleation (Liu) [McLean]

Aerosol mixing state focus group (Riemer) [Great Falls]

MAGIC (Lewis) [Potomac]

Instrument and measurement focus group for broadband radiometric measurements (Long) [Vienna]

3:30 pm Coffee break available

3:30 pm – 5:00 pm **Poster Session 1**

ARM infrastructure

General topics

General topics – aerosol

General topics - clouds

5:00 pm – 6:30 pm **Poster Session 2**

ARM next generation – megasite and LES activities

Boundary layer structure, land-atmosphere interactions, & turbulence

Microphysics (cloud and aerosol)

Precipitation processes

7:30 pm – 9:00 pm **Evening Breakout 3**

Aerosol and Cloud Experiments in Eastern North Atlantic (ACE-ENA) (Wang) [Great Falls]

MOSAIC (Shupe) [Potomac]

Update on the LES ARM Symbiotic Simulation and Observation (LASSO) project (Gustafson) [Ash Grove]

Lidar applications (Newsom) [Vienna]

Thursday, May 5:

8:30 am – 10:30 am **Breakout Session 4**

Aerosol measurements: progress, issues, and needs (Mather) [Great Falls]

Organization of convection (Hagos) [Fairfax]

New tools to bridge the gap between models and observations (Xie) [Potomac]

Aerosol effects on warm clouds (Ghan) [Ash Grove]

10:30 am – 10:45 am Break

10:45 am – 12:45 pm **Breakout Session 5**

Radar Doppler spectra: Recent progress in retrievals and model-observation intercomparison (Luke) [Fairfax]

Land-Atmosphere-Cloud-Interactions (Berg) [Ash Grove]

Biomass burning aerosols: variability in absorption efficiency and radiative effects (Y. Feng) [Potomac]

12:45 pm – 1:45 pm **Working Lunch**

1:45 pm – 4:00 pm **Breakout Session 6**

Radar science & operations (Bharadwaj/Kollias) [Fairfax]

AMSG [Invitation only] (McComiskey/Sisterson) [Ash Grove]

Friday, May 6:

8:30 am – 12:30 pm **Science and Infrastructure Steering Committee (SISC)** [Invitation only]