

# ACCESS XIV

Fourteenth Atmospheric Chemistry Colloquium for Emerging Senior Scientists

July 27-30, 2017

BROOKHAVEN NATIONAL LABORATORY

All Sessions are in Room Berkner B

## Thursday, July 27

Light dinner (*Hampton Inn, 2000 N. Ocean Ave., Farmingdale, NY*)..... 6:00-10:00 pm

## Friday, July 28

Pick up at Hampton Inn for BNL..... 7:30 am

Registration and check-in at BNL ..... 8:00-8:30 am

**SESSION I: INTRODUCTORY REMARKS AND WELCOME .....8:30-9:00 am**

*chaired by Ernie Lewis, BNL*

**Ernie Lewis**, ACCESS Chair, Brookhaven National Laboratory

**Martin Schoonen**, Associate Laboratory Director for the Environment, Biology,  
Nuclear Science, & Nonproliferation Directorate, BNL

**Doon Gibbs**, Laboratory Director, Brookhaven National Laboratory

**Shaima Nasiri**, Atmospheric System Research Program Director,  
US Department of Energy

**SESSION II: ACCESS PRESENTATIONS (laboratory studies) .....9:00-10:40 am**

*chaired by Sylvia Edgerton, NSF*

**Kelvin H. Bates**, Isoprene Oxidation Mechanisms and Secondary Organic Aerosol  
Formation Under HO<sub>2</sub>-Dominated Conditions

**Thomas Berkemeier**, The Role of Phase State and Reactive Intermediates in the  
Multiphase Chemistry of Atmospheric Aerosols

**Hallie C. Boyer**, Surface Tension Modeling of Atmospheric Aqueous Aerosols Using  
Adsorption Isotherms and Statistical Mechanics

**Jennifer A. Faust**, Influence of Aerosol Liquid Water on the Formation and Composition  
of Secondary Organic Aerosol

**Pengfei Liu**, Highly Viscous States Affect the Browning of Organic Particulate Matter

Break..... 10:40-11:00 am

**SESSION III: ACCESS PRESENTATIONS (laboratory studies) .... 11:00 am-12:20 pm**

*chaired by Ken Mooney, NOAA*

**Sarah Suda Petters**, Temperature- and Humidity-Dependent Phase States of Secondary Organic Aerosols

**Wendell Walters**, Constraining Ammonia Emission Sources in Urban Areas Utilizing Nitrogen Stable Isotopes

**Chen Wang**, The Effect of Different Atmospherically Relevant Salts on Aqueous Phase Partitioning of Organic Compounds

**Yue Zhang**, The Effects of Aerosol Phase State on Secondary Organic Aerosol Formation from the Acid-Catalyzed Reactive Uptake of Isoprene-Derived Epoxydiols

*Lunch (Berkner Room A)..... 12:20-1:00 pm*

*Group Photograph (Berkner Room B) ..... 1:00-1:15 pm*

**TOUR OF BROOKHAVEN NATIONAL LABORATORY ..... 1:15-2:45 pm**

**SESSION IV: ACCESS PRESENTATIONS (field studies) ..... 3:00-5:00 pm**

*chaired by Ken Jucks, NASA*

**Yvonne Boose**, Using Cellular Network Backhaul Links for Rain Measurements in Africa

**Ewan Crosbie**, Design and Testing of a New Aircraft Cloud Water Sampling Inlet

**Lauren Garofalo**, Measurements of <sup>14</sup>CO<sub>2</sub> in the Stratosphere and Free Troposphere: Vertical Profiles and Empirical Radiocarbon Production Rates

**Louise Jane Kristensen**, Investigating the Aerosols Seeding California's Clouds: Insights from CalWater2015

**Christina McCluskey**, Abundance and Characteristics of Marine Ice Nucleating Particles: Implications for High Latitude Aerosol-Cloud Interactions

**Brett B. Palm**, Development and Application of an Oxidation Flow Reactor to Study Secondary Organic Aerosol Formation from Ambient Air

*Pick up at Berkner for banquet ..... 5:15 pm*

**BANQUET (Jason's Vineyard, 1785 Main Rd., Jamesport, NY)..... 6:00-9:00 pm**

*Pick up, return to Hampton Inn..... 9:00 pm*

**Saturday, July 29**

*Pick up at Hampton Inn for BNL..... 7:30 am*

**SESSION V: ACCESS PRESENTATIONS (field studies) ..... 8:00-9:40 am**

*chaired by Shaima Nasiri, DOE*

**Paul Romer**, Effects of Organic Nitrate Chemistry and Temperature-Dependent NO<sub>x</sub> Emissions on Continental Ozone Production

**Provat K. Saha**, Secondary Organic Aerosol Formation From In-Situ Oxidation of Near-highway Air

**Kang Sun**, Constraining Atmospheric Ammonia Emissions through Novel Observations

**Megan D. Willis**, Evidence for Marine Biogenic Influence on the Composition and Growth of Summertime Arctic Aerosol

**Lu Xu**, Large Contributions from Biogenic Carbon to Organic Aerosol in the Southeastern United States

*Break..... 9:40-10:00 am*

**SESSION VI: ACCESS PRESENTATIONS (modeling studies) ..... 10:00 am-11:40 am**

*chaired by Sherri Hunt, EPA*

**Meng Gao**, Improving Understanding of Haze Pollution in the North China Plain via Atmospheric Modeling and Data Assimilation

**John K. Kodros**, Climate and Health Impacts of Aerosol Emissions from Residential Combustion Sources in Developing Countries

**Emily Saunders**, Modeling Regional & Global Atmospheric Chemistry Mechanisms - Observing Adverse Respiratory Health Effects due to Tropospheric Ozone Air Pollution from Modeling Output

**Ryan Sullivan**, New Particle Formation Leads to Cloud Dimming

**Alexander J. Turner**, Ambiguity in the Causes for Decadal Trends in Atmospheric Methane and Hydroxyl

**Final comments (Ernie Lewis) ..... 11:40 am**

**ADJOURN..... 12:00 pm**

*Pick up box lunches, take bus to Hampton Inn ..... 12:00 pm*

*Pick up at Hampton Inn for NYC ..... 12:45 pm*

**New York City ..... 2:00-10:00 pm**

*Pick up in NYC, return to Hampton Inn ..... 10:00 pm*

**Sunday, July 30**

*Pick up at Hampton Inn for GRC ..... 7:30 am*

*Ferry from Pt. Jefferson, NY to Bridgeport, CT..... 9:00 am*

**Lunch (CT) ..... 12:00 noon – 1:00 pm**

**Arrive at Grand Summit Hotel at Sunday River, Newry, ME..... 5:30 pm**