

## **U.S. Environmental Protection Agency EPA STAR Progress Review Meeting:**

# **Anthropogenic Influences on Organic Aerosol Formation** and Regional Climate Implications

## EPA at Research Triangle Park, Auditorium C111

#### Monday, March 14, 2016

9 a.m. **Tim Watkins,** Acting Deputy Director, National Exposure Research Laboratory

EPA Office of Research and Development

Welcome and Introduction

9:15 a.m. Background on the campaigns and new measurements of polar aerosols and water in the Southeast

Barbara Turpin, University of North Carolina - Chapel Hill

Annmarie Carlton, Rutgers University

<u>Organic Aerosol Formation in the Humid, Photochemically-active Southeastern US: SOAS</u> Experiments and Simulations

10:15 a.m. **Break** 

10:35 a.m. The role of nitrogen compounds and nighttime chemistry

Nga Lee Ng, Georgia Institute of Technology

The Role of Nitrate Radicals (NO<sub>3</sub>) in Aerosol Life Cycle: Secondary Organic Aerosol Formation and Aging of Atmospheric Organic Aerosols

Juliane Fry, Reed College

Anthropogenic Influence on Biogenic VOC Oxidation: The Role of NOx Pollution in Secondary Organic Aerosol Production in the Southeast U.S.

11:35 a.m. **Joost de Gouw,** NOAA Earth System Research Laboratory

Anthropogenic and Biogenic Emissions, and their Contributions to Summertime Haze in the Southeast U.S.: Results from the NOAA SENEX Study in 2013

12 p.m. Lunch

12:30 p.m. Optional brownbag session with **Athanasios Nenes** (Georgia Institute of Technology) regarding the recent *Nature Geoscience* paper "<u>High Aerosol Acidity Despite Declining Atmospheric Sulfate</u> Concentrations Over the Past 15 Years"

1 p.m. **Poster Session** 

2 p.m. Break

#### 2:20 p.m. SOA from isoprene-derived epoxides, organosulfates, and particle functional groups at Look Rook, TN

Jason Surratt, University of North Carolina - Chapel Hill

<u>Impacts of Anthropogenic Emissions in the Southeastern U.S. on Heterogeneous Chemistry of Isoprene-Derived Epoxides Leading to Secondary Organic Aerosol Formation</u>

**Lynn Russell,** University of California - San Diego, **Paul Ziemann,** University of Colorado - Boulder

<u>Using Particle Functional Group Composition to Identify and Quantify the Effects of Anthropogenic Emissions on Biogenic Secondary Organic Aerosol</u>

- 3:20 p.m. Break
- 3:40 p.m. **Elizabeth Stone,** University of Iowa

Sources and Radiative Properties of Organosulfates in the Atmosphere

4:20 p.m. **Brent Williams**, Washington University

Novel Measurements of Volatility- and Polarity-Separated Organic Aerosol Composition and Associated Hygroscopicity to Investigate the Influence of Mixed Anthropogenic-Biogenic Emissions on Atmospheric Aging Processes

- 5 p.m. **Conclude Day 1**
- 7 p.m. Optional group dinner at Carmen's Cuban Café, 108 Factory Shops Rd., Morrisville, NC 27560 Shuttle from the Hyatt Place RDU will be available

#### Tuesday, March 15, 2016

- 9 a.m. **Sherri Hunt,** EPA Office of Research and Development, National Center for Environmental Research *Welcome Back*
- 9:15 a.m. **Spyros Pandis**, Carnegie Mellon University **Neil Donahue**, Carnegie Mellon University

  Sensitivity of Organic Aerosol Concentrations and Forcing to Anthropogenic Emissions
- 10 a.m. **Havala Pye,** EPA Office of Research and Development, National Exposure Research Laboratory **Kirk Baker,** EPA Office of Air and Radiation, Office of Air Quality Planning and Standards *Using SOAS & related field study data for scientific and regulatory modeling*

10:40 a.m. Break

11 a.m. Oxidative capacity of the pollution mixture

Saewung Kim, University of California - Irvine

Unaccountably High OH Concentration and Short OH Lifetime - An Attempt for a Reconciliation

Frank Keutsch, Harvard University

Assessing anthropogenic impact on secondary pollutant formation in the South Eastern US via airborne formaldehyde measurements

12 p.m. **Lunch** 

### 1 p.m. <u>Measurements aloft and at ground level – what can we learn from vertical distributions?</u>

**John Mak,** Stony Brook University **Allen Goldstein,** University of California – Berkeley

Alex Guenther, National Center for Atmospheric Research

Emission, Fate, and Contribution of Biogenic Volatile Organic Compounds to Organic Aerosol Formation in the Presence of Anthropogenic Pollution: Measurements and Modeling during SOAS

Steve Bertman, Western Michigan University
Kerri Pratt, University of Michigan
John Seeley, Oakland University
Paul Shepson, Purdue University
Tim Starn, West Chester University of Pennsylvania
Processing of Biogenic Organics at and near the Ground

#### 2 p.m. **Break**

## 2:20 p.m. Measurements of climatic properties of SOA

Athanasios Nenes, Georgia Institute of Technology

<u>Cloud Condensation Nuclei Measurements During the SENEX 2013 Campaign: Observations, Analysis and Impacts</u>

**Andre Khlystov,** Desert Research Institute **R. Subramanian,** Carnegie Mellon University

<u>Aerosol Optical Properties and Biogenic SOA: Effect on Hygroscopic Properties and Light Absorption</u>

3:20 p.m. **Stefanie Sarnat,** Emory University

Health Effects of Organic Aerosols: Results from the Southeastern Center for Air Pollution and Epidemiology

3:50 p.m. Closing

4 p.m. **Adjourn**