

Final Program

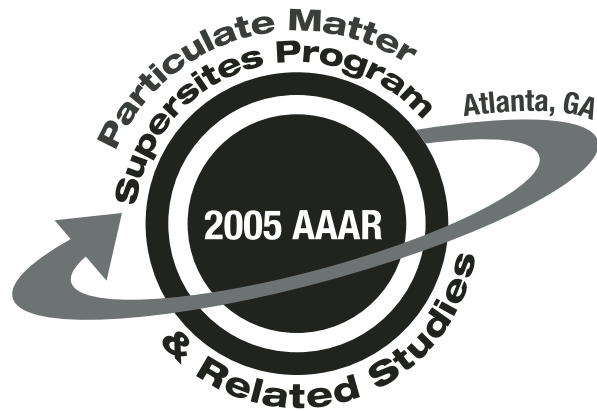


**An International Specialty Conference
Sponsored by the American Association
for Aerosol Research**

**February 7-11, 2005
Sheraton Atlanta Hotel
Atlanta, GA**



American Association for Aerosol Research



Final Program

February 7-11, 2005
Sheraton Atlanta Hotel
Atlanta, GA

Paul A. Solomon, US EPA
Conference Chair

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American Association for Aerosol Research

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TABLE OF CONTENTS

Welcome	3
Purpose and Scope	4
Target Audience	4
Important Conference Information	5
Executive Steering Committee	8
Executive Technical Program Committee	9
General Technical Program Committee	10
Exhibit Committee	11
Student Assistant Committee	11
Publications Committee	11
Publications Policy	11
Conference Sponsors	12
Exhibitors	13
Acknowledgements	15
Schedule at a Glance	16
Technical Program	22
Author Index	102
Session Chair Index	107
Future Meetings	108

WELCOME

On behalf of the Executive Steering Committee, the Technical Program Committee, and others who have helped organize and plan this conference, I welcome you to the second international specialty conference sponsored by the American Association for Aerosol Research (AAAR) entitled, "Particulate Matter Supersites Program and Related Studies." The purpose and scope are given below. This conference brings together a diverse group of air quality managers and scientists at the state, local, regional, and federal levels, private industry and industrial agencies, academic scientists, policy makers, and others interested in reducing uncertainties in our understanding of atmospheric particulate matter (PM) burdens in urban and regional environments.

Five Plenary sessions are included, one each morning. The opening plenary session speaker is Jeff Holmstead, Assistant Administrator for the Office of Air and Radiation, who provides a broad perspective from EPA's viewpoint. The other Plenary sessions expand beyond PM implementation needs to include talks on Regulations (Tuesday, John D. Bachmann, U.S. Environmental Protection Agency, OAQPS), Health Effects (Wednesday, Daniel Greenbaum, Health Effects Institute), Global Climate Change (Thursday, Jeffrey Gaffney, Argonne National Laboratory), and a single, extended plenary on Friday by Supersites Program Principal Investigators addressing important science/policy-relevant questions of great interest to states and regional organizations planning State Implementation Plans for PM_{2.5}. The conference also includes three poster sessions, a vendor's exhibition as is customary at AAAR meetings, two evening receptions coordinated with additional poster viewing and the exhibition, and a conference dinner on Thursday evening. I hope you plan to attend many of the exceptional technical presentations and other events at this exciting meeting.

I strongly encourage you to submit the papers that derive from your conference presentations to the special journal issues associated with this conference. These publications will provide the definitive documentation for the conference. The Publications Policy is posted on the Web at www.AAAR.org. Papers for the special issues will be due in April 2005. Currently, five journals are under consideration for special issues to provide you with maximum flexibility for reaching your desired audience.

I am very excited about this conference and am certain you will find this to be a landmark conference designed to enhance the dissemination and communication of scientific and policy relevant findings from the Supersites Program and Related Studies to AAAR members and the general scientific and regulatory communities. AAAR and I thank the sponsors, exhibitors, authors, all of the attendees, and the AAAR staff for making this conference a success.

Paul A. Solomon
Conference Chair

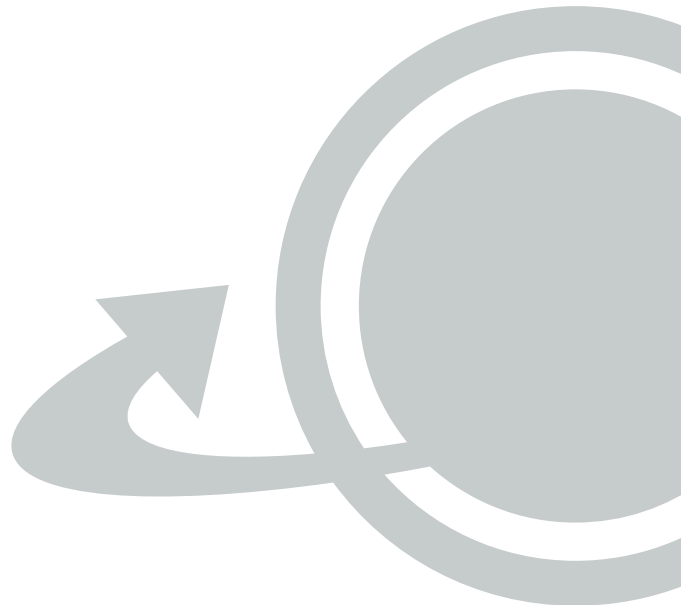
PURPOSE AND SCOPE

The primary purpose of the conference is to disseminate results from the Particulate Matter (PM) Supersites Program and other air quality methods, measurements, data analysis, and modeling programs that have taken place over the last half decade or so to key stakeholders in the public and private sectors. This conference will also provide information to reduce uncertainties in our understanding of urban and regional scale PM - transport and accumulation, allow for the development of effective emissions management programs, and ultimately reduce the impact of PM-related pollution on humans and ecosystems.

This is an international conference and while the major focus will be PM Supersites Program & Related Studies in the US and Canada, abstracts from other parts of the world, such as Europe, Asia and South America were encouraged and many were submitted.

TARGET AUDIENCE

Air quality managers and scientists at the state, local, regional, and federal levels, private industry and industrial agencies, academic scientists, and others interested in reducing uncertainties in our understanding of atmospheric PM accumulation in urban and regional environments.



IMPORTANT CONFERENCE INFORMATION

REGISTRATION HOURS

Sunday, February 6	5:00 PM - 9:00 PM
Monday, February 7	8:00 AM - 6:00 PM
Tuesday, February 8	7:00 AM - 6:00 PM
Wednesday, February 9	7:00 AM - 6:00 PM
Thursday, February 10	7:00 AM - 6:00 PM
Friday, February 11	8:00 AM - 10:00 AM

EXHIBIT HALL HOURS

Monday, February 7	6:00 PM - 8:00 PM
Tuesday, February 8	8:00 AM - 5:00 PM
Wednesday, February 9	8:00 AM - 5:30 PM
	6:30 PM - 8:30 PM
Thursday, February 10	8:00 AM - 5:00 PM

PLATFORM SESSIONS

A platform session is based on a submitted and approved abstract. Each oral presentation has been assigned a chronological program number. This number corresponds with the number in the official AAAR abstract book, and this final program book. Each oral presentation is limited to 20 minutes, including five minutes for questions.

POSTERS and POSTER SESSIONS

All posters are based on a submitted and approved abstract. All posters have been assigned a chronological program number for reference when locating your printed abstract. Board numbers for poster presentations are identified with a P included in the number. Please refer to the program for the appropriate board number when locating a poster for viewing. The posters are located in Georgia Hall, located on Level One of the Sheraton Atlanta Hotel. The posters are available for viewing at all times during their corresponding poster session and during exhibit hall hours.

Poster viewing are the same as the exhibit hours.

Additionally, authors have been assigned specific days to present their posters and be available for discussions in the Georgia Hall as follows:

Poster Session #7P:

Tuesday, February 8 from 3:00 PM – 4:40 PM

Poster Session #12P:

Wednesday, February 9 from 3:40 PM – 5:20 PM

Poster Session #17P:

Thursday, February 10 from 2:40 PM – 4:20 PM

WELCOME RECEPTION

Monday, February 7
6:00 PM – 8:00 PM

Join fellow colleagues for a special networking experience. This is your opportunity to meet and greet the exhibitors. Representatives from well-known and respected vendors will be happy to tell you about their product and talk with you about the latest in technology and advances in the field.

EXHIBITOR RECEPTION

Wednesday, February 9
6:00 PM – 8:00 PM

The exhibitor’s reception, the AAAR tradition, is a time to visit with the exhibitors and all conference attendees in an informal, relaxed atmosphere. This will also allow attendees additional time to view the posters to discuss the information with the presenting authors.

ADA CLAUSE

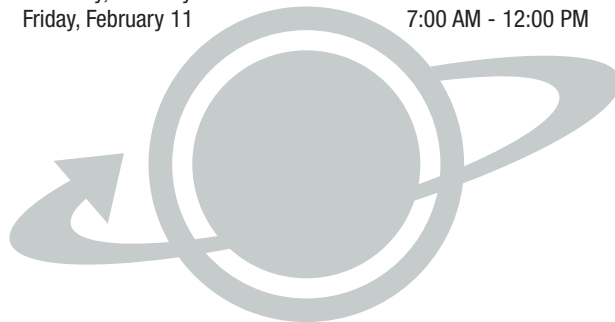
The AAAR will use its best efforts to provide reasonable accommodations for attendees with disabilities.

SPEAKER READY ROOM

There will be a slide preview/speaker ready room for presenters located at the Sheraton Atlanta Hotel. It is required that all speakers visit the speaker ready room the day prior to your presentation. There will be student assistants available to assist with your presentation preparation. Please note: LDC projectors are the only form of visual equipment that will be provided this year. Overhead and slide projectors will not be available. You will be asked to transform any slides or transparencies to a powerpoint presentation.

SPEAKER READY ROOM HOURS:

Sunday, February 6	5:00 PM - 9:00 PM
Monday, February 7	7:00 AM - 6:00 PM
Tuesday, February 8	7:00 AM - 6:00 PM
Wednesday, February 9	7:00 AM - 6:00 PM
Thursday, February 10	7:00 AM - 6:00 PM
Friday, February 11	7:00 AM - 12:00 PM



HOTEL INFORMATION

Centrally located in the heart of downtown, the Sheraton Atlanta Hotel boasts an award-winning design and is conveniently located near Atlanta's popular restaurants and a wide array of shopping venues. Many area attractions are only blocks away, including the Georgia World Congress Center, Peachtree Center, Philips Arena, and the Jimmy Carter Library Museum. All guest rooms feature a host of modern amenities in addition to wireless high-speed Internet access that is available for a daily fee. Other hotel amenities include three restaurants, including a lobby lounge, a 24-hour fitness facility, indoor/outdoor pool, and a full-service business center and 24-hour room service. For assistance with shopping, sightseeing, babysitting services or finding a spa, the concierge will be happy to assist you.



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Charles McDade	

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Student Assistant Committee

Antonio (Tony) Miguel, UCLA (chair)

Publications Committee

(P. Solomon + one guest editor per issue)

- Aerosol Science and Technology: Guest editor TBD
- Atmospheric Environment: Guest editor TBD
- JGR-Atmospheres: Guest editor TBD
- Journal of Applied Meteorology: Guest editor TBD
- Journal of the Air and Waste Management Association:
Judith C. Chow (Desert Research Institute)

Publications Policy

Submit tentative titles and authors with corresponding author's full contact information via e-mail by Monday, March 7, 2005 to Paul Solomon (Solomon.paul@epa.gov).

The submission deadline for papers to these special issues will be Wednesday, April 27, 2005.

All submissions will adhere to the publication guidelines specified by each individual journal.

We suggest you visit the Web site(s) of the journal(s) you wish to submit papers to and review those guidelines. Web sites are listed below. Copy complete link into your browser to link to journal pages. JGR, AS&T, and JAWMA require electronic submission via the Web directly to the journal. JAM and AE require submission via e-mail. JAM submissions should go directly to the chief editor of the journal (Dr. Robert M. Rauber); AE to Paul Solomon, where papers will be batched and submitted in one group shortly after the due date. Please note in all cases that your paper is being submitted to the 2005 AAAR PM Supersites Conference Special Issue. Late papers will be included in the special issue if they are able to catch up with those submitted on time.

In all cases, submit an electronic copy by e-mail to Paul Solomon in addition to normal journal submission (AE is the initial submission). Electronic copies to Paul Solomon can be sent in standard word processing formats (Word or WordPerfect) or PDF (preferred). Electronic copies to the journals must follow the individual journal's protocols.

In the e-mail to Paul Solomon, include the full contact information for the author to which correspondence should be made as well as the first author in the body of your e-mail. Please also include in the body of the e-mail a list of five potential reviewers and their complete contact information.

Disclaimer

Special issues in many journals are costly to the Organizing Committee. If insufficient conference funds are available for one or more special issues, the submitted papers will simply move into the journals normal submission and review process and be published, if accepted, as individual papers.

AAAR PM Supersites Conference Sponsors

The AAAR gratefully acknowledges the generous support of the sponsors for the 2005 AAAR Supersites Program and Related Studies International Specialty Conference.

- Air Quality Processes Research Division, Meteorological Service of Canada
- American Petroleum Institute
- California Air Resources Board (CARB)
- Department of Energy, National Energy Technology Laboratory (NETL)
- Electric Power Research Institute (EPRI)
- Mid-Atlantic Regional Air Management Association (MARAMA)
- NARSTO
- National Oceanic and Atmospheric Administration (NOAA)
- National Science Foundation, Atmospheric Chemistry Program (NSF)
- New York State Energy Research and Development Authority (NYSERDA)
- Oak Ridge Associated Universities (ORAU)
- Pacific Northwest National Laboratory (PNNL)
- Southern Company
- U.S. Environmental Protection Agency (EPA), OAQPS and ORD

Exhibitors

AAAR gratefully acknowledges the following companies for their participation this year!

Exhibitor	Booth Number
BGI Incorporated	19
Magee Scientific Co.	20
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Rupprecht & Patashnick Co., Inc.	15
TSI Incorporated	13 & 14
Thermo Electron Corp.	1
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Acknowledgments

Organizing and chairing an international conference is considerable fun, but an amazing amount of work. The AAAR PM Supersites and Related Studies International Specialty Conference could not be accomplished by one individual, but rather through a team of dedicated people working toward the goal of a successful meeting. It is my pleasure to have such a team and to acknowledge their efforts, for this conference would not be taking place if not for them.

Organizing the meeting came from support of the Executive Steering and Executive Technical Program Committees as listed above. The members of these committees helped to outline the purpose and scope of the meeting, solicit and review abstracts, review the preliminary program, final program, and abstract book, and help chair sessions at the meeting. The remainder of the Technical Program Committee consists of session chairs who helped solicit abstracts and chair the sessions. Of special note are AAAR Conference Liaison Tony Wexler, last year's president, Philip Hopke, and current AAAR president, Sonia Kreidenweis, all of whom have provided valuable guidance and suggestions to help make this a meeting for the members. Also of special note are Donald Dabdub and Susanne Hering who managed the submitted abstracts and prepared the program and abstract book. Antonio (Tony) Miguel and Tom Merrifield are chairs of the Student Assistant Committee and the Exhibits Committee, respectively, both working to bring special groups to the meeting and increase attendance to help grow the association. The nuts and bolts of the meeting are being managed by Association Headquarters, AAAR's management group. The staff has been both pro-active and responsive in pulling together the many details needed to make this meeting take place. Their assistance is invaluable!

I also want to make a special note about the sponsors of the meeting listed and thank them for their support to AAAR and the meeting that will allow this conference to have many special touches and special journal issues that provide the final documentation for the meeting.

Finally, I thank all of those presenting papers at the meeting and other attendees. This conference is for you and your presence makes it all worthwhile.

3C Organic Speciation: Gas-Particle Partitioning
Capital Ballroom North

6:00 PM - 8:00 PM

**Welcome Reception &
Exhibits/Poster Viewing**

Georgia Hall

Tuesday, February 8th

7:30 AM – 8:00 AM

Morning Coffee Service

Georgia Prefunction
Foyer

8:00 AM – 9:00 AM

Plenary Session

Capital Ballroom

9:00 AM – 9:20 AM

Refreshment Break

Georgia Hall

9:20 AM – 10:40 AM

Platform Session 4

4A Source Apportionment - I
Capital Ballroom Center

*4B PM Composition / Precursor Gases: PM
Cation and Anion Field Measurements*
Capital Ballroom South

4C OC Speciation Methods
Capital Ballroom North

10:40 AM – 11:00 AM

Refreshment Break

Georgia Hall

11:00 AM – 12:20 PM

Platform Session 5

5A Source Apportionment – II
Capital Ballroom Center

*5B PM Composition / Precursor Gases:
PM Composition Methods & QA*
Capital Ballroom South

*5C Carbonaceous Aerosols: Organic and
Elemental Carbon*
Capital Ballroom North

12:20 PM – 1:40 PM

Box Lunch & Poster Viewing

Georgia Hall

1:40 PM – 3:00 PM

Platform Session 6

6A Source Apportionment – III
Capital Ballroom Center

*6B PM Composition / Precursor Gases : Gas and
Gas/Particle Species Methods and Measurements*
Capital Ballroom South

6C PM and Visibility: Regional Haze
Capital Ballroom North

3:00 PM - 4:40 PM

Poster and Exhibit Session 7 Georgia Hall

4:40 PM - 6:20 PM

Platform Session 8

*8A Policy-Relevant Findings at Global,
National, and Local Scales*
Capital Ballroom Center

*8B Local and Regional Aerosols and Their Influence on
Rural and Urban PM Levels – I*
Capital Ballroom South

8C Ultrafine PM Methods
Capital Ballroom North

7:00 PM – 10:00 PM

PM2.5 Organic Working Group Capital Ballroom
South

Wednesday, February 9th

7:30 AM – 8:00 AM

Morning Coffee Service Georgia Prefunction
Foyer

8:00 AM – 9:00 AM

Plenary Session Capital Ballroom

9:00 AM – 9:20 AM

Refreshment Break Georgia Hall

9:20 AM – 11:00 AM

Platform Session 9

9A Particle Mass Spectrometer Methods
Capital Ballroom Center

*9B Local and Regional Aerosols and Their Influence
on Rural and Urban PM Levels - II*
Capital Ballroom South

9C Ultrafine PM - Spatial and Temporal Variability
Capital Ballroom North

11:00 AM – 11:20 AM

Refreshment Break Georgia Hall

11:20 AM – 1:00 PM

Platform Session 10

10A Particle Mass Spectrometer Methods - Organic Carbon
Capital Ballroom Center

10B Estimating Uncertainties in Measurements and Modeling
Capital Ballroom South

10C Model Performance Evaluation – I
Capital Ballroom North

1:00 PM – 2:20 PM

Lunch on Own

2:20 PM – 3:40 PM

Platform Session 11

11A Identifying the Impact of Fires - I
Capital Ballroom Center

11B Emissions Inventory Verification
Capital Ballroom South

11C Model Performance Evaluation – II
Capital Ballroom North

3:40 PM – 5:20 PM

Poster and Exhibit Session 12 Georgia Hall

5:20 PM – 6:30 PM

Platform Session 13

13A Identifying the Impact of Fires – II
Capital Ballroom Center

13B Ammonia Emissions Estimates
Capital Ballroom South

13C Model Performance Evaluation - III
Capital Ballroom North

6:30 PM – 8:30 PM

Exhibitor's Reception & Posters Viewing Georgia Hall

Thursday, February 10th

7:30 AM – 8:00 AM

Morning Coffee Service Georgia Prefunction
Foyer

8:00 AM – 9:00 AM
Plenary Session Capital Ballroom

9:00 AM – 9:20 AM
Refreshment Break Georgia Hall

9:20 AM – 10:20 AM
Platform Session 14

14A Size Distribution Measurements and Assumptions
Capital Ballroom Center

14B Source Apportionment – IV
Capital Ballroom South

14C Deposition
Capital Ballroom North

10:20 AM – 10:40 AM
Refreshment Break Georgia Hall

10:40 AM – 12:00 PM
Platform Session 15

15A Influence of Fogs and Clouds on PM Concentrations
Capital Ballroom Center

15B Source Apportionment - V
Capital Ballroom South

15C PM Mass Closure and Assumptions
Capital Ballroom North

12:00 PM – 1:20 PM
Box Lunch & Poster Viewing Georgia Hall

1:20 PM – 2:40 PM
Platform Session 16

16A PM Mass Measurements: PM Mass Methods
Capital Ballroom Center

16B Source Apportionment – VI
Capital Ballroom South

16C Optical and Remote Sensing Methods and Measurements
Capital Ballroom North

2:40 PM – 4:40 PM
Poster and Exhibit Session 17

4:40 PM – 6:20 PM
Platform Session 18

18A Atmospheric Processes and Aerosol Formation
Capital Ballroom Center

18B Measurement of Toxic Particulate Pollutants
Capital Ballroom South

18C Organic Aerosol Chemistry
Capital Ballroom North

6:30 PM – 8:30 PM
Conference Dinner Savannah

Friday, February 11th

8:00 AM – 8:15 AM
Morning Coffee Service Rotunda Lobby

8:15 AM – 9:40 AM
Plenary Session Capital Ballroom

9:40 AM – 10:00 AM
Refreshment Break Rotunda Lobby

10:00 AM – 11:00 AM

Platform Session 19

*19A Comparison of Data Among National
Networks and Measurement Representativeness – I*
Capital Ballroom Center

19B Role of Acidity in Organic Aerosol Formation
Capital Ballroom South

19C Aerosol Water Measurements
Capital Ballroom North

11:00 AM – 11:20 AM
Refreshment Break Rotunda Lobby

11:20 AM – 1:00 PM

Platform Session 20

*20A Comparison of Data Among National
Networks and Measurement Representativeness – II*
Capital Ballroom Center

20B Observational Based Modeling Methods and Results
Capital Ballroom South

*20C PM Mass Measurements: Semivolatiles &
Intercomparisons*
Capital Ballroom North

2005 AAAR Technical Program

Monday

10:00 AM - 11:00 AM

Plenary Session

Capital Ballroom

- 10:00 **OPENING COMMENTS**, *Paul A. Solomon, Conference Chair, Office of Research and Development, U.S. Environmental Protection Agency*
- 10:10 **THE REDUCTION OF FINE PARTICLE POLLUTION: A CRITICAL ELEMENT OF THE UNITED STATES CLEAN AIR STRATEGY**, *JEFFREY R. HOLMSTEAD, Assistant Administrator for Air & Radiation, U.S. Environmental Protection Agency, Washington, DC*

11:20 AM - 1:00 PM

Session #1, Platform

1A Fine and Coarse Particle Mass and Composition: Spatial and Temporal Variability - I

Chairs: Yanbo Pang, R.K.M. Jayanty

Capital Ballroom Center

- 11:20 1A-1 **SEASONAL PATTERNS IN AEROSOL COMPOSITION AT LOOK ROCK: IMPLICATIONS FOR HAZE CONTROL**, *ROGER L. TANNER, Myra L. Valente, Solomon T. Bairai, Kenneth J. Olszyna, and Ralph J. Valente, Tennessee Valley Authority, Environmental Technologies, Muscle Shoals, AL; Jim Renfro, National Park Service, Gatlinburg, TN*
- 11:40 1A-2 **COMPARISON OF TWO WINTER AIR QUALITY EPISODES DURING THE CALIFORNIA REGIONAL PARTICULATE AIR QUALITY STUDY**, *KAREN MAGLIANO, Kasia Turkiewicz, Theresa Najita, California Air Resources Board, Sacramento, CA*

- 12:00 1A-3 **CONTINUOUS ANALYSIS OF FRESNO AEROSOLS BY SIZE, TIME, AND ELEMENTAL COMPOSITION, MARCH - DECEMBER, 2001**, THOMAS A. CAHILL, Steven S. Cliff, Michael Jimenez-Cruz, DELTA Group, University of California, Davis, CA; Kevin D. Perry, Meteorology Department, University of Utah, UH
- 12:20 1A-4 **AEROSOL CLIMATOLOGY AT THE ST. LOUIS – MIDWEST SUPERSITE**, JAY TURNER, Washington University, St. Louis, MO; George Allen, NESCAUM, Boston, MA; Tina Bahadori, American Chemistry Council, Washington D.C.; Judith Chow, John Watson, Desert Research Institute, Reno, NV; D. Alan Hansen, EPRI, Palo Alto, CA; Petros Koutrakis, Harvard School of Public Health; Peter McMurry, University of Minnesota, Minneapolis, MN; John Ondov, University of Maryland, College Park, MD; James Schauer, University of Wisconsin, Madison, WI; Rodney Weber, Georgia Institute of Technology, Atlanta, GA; Warren White, University of California, Davis, CA
- 12:40 1A-5 **ATOFMS MEASUREMENTS AT URBAN AND RURAL LOCATIONS: COMPARISON OF SINGLE PARTICLE SIZE AND COMPOSITION**, XUEYING QIN, Kimberly A. Prather, University of California, San Diego, La Jolla, CA; Prakash V. Bhave, U.S. EPA, Research Triangle Park, NC

1B Application of Continuous Methods

Chairs: John Ondov, Greg Beachley
Capital Ballroom South

- 11:20 1B-1 **AMBIENT ELEMENTAL SIGNATURES OF DIESEL AND AUTOMOTIVE PARTICULATE MATTER BY SIZE, TIME, AND CONCENTRATION**, THOMAS A. CAHILL, Steven S. Cliff, Michael Jimenez-Cruz, Lee Portnoff, DELTA Group, UC Davis, CA, Kevin D.

- Perry, Meteorology Department, University of Utah, UH; Earl Withycombe, Health Effects Task Force, American Lung Association Sacramento Emigrant Trails, CA*
- 11:40 1B-2 **SEARCHING FOR SECONDARY CARBON IN SEMI-CONTINUOUS OBSERVATIONS: PART II**, *GEORGE HIDY, Aerochem, Placitas, NM; Charles Blanchard, Envair, Albany, CA*
- 12:00 1B-3 **SOURCES OF VOLATILE ORGANIC COMPOUNDS IN BALTIMORE, MD**, *Joseph Patrick Pancras, GREGORY BEACHLEY, Melissa Rury, John M, Ondov, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD; Walter Cooney, Maryland Department of Environment, Baltimore, MD*
- 12:20 1B-4 **RESOLUTION OF DISTANT AND AGED PM SOURCES USING HIGHLY-TIME RESOLVED PM CONSTITUENT AND SIZE-SPECTRAL DATA**, *MELISSA RURY, Joseph Patrick Pancras, Gregory Beachley, Narayanan Nair, and John M. Ondov, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD*
- 12:40 1B-5 **EVALUATIONS OF SOURCES TO NANOPARTICLES IN THE AMBIENT ATMOSPHERE**, *YEE-LIN WU, Department of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan*

1C Organic Speciation: Ambient I

Chairs: Stephen McDow, Wolfgang Rogge
Capital Ballroom North

- 11:20 1C-1 **REFERENCE MATERIALS AND QUALITY ASSURANCE FOR THE CHARACTERIZATION OF ORGANIC COMPOUNDS IN PARTICULATE MATTER**, *MICHELE M. SCHANTZ and Stephen A. Wise, NIST, Analytical Chemistry Division, Gaithersburg, MD; Stephen McDow, U.S. Environmental Protection Agency, Human Exposure and*

*Atmospheric Sciences Division,
National Exposure Research
Laboratory, Research Triangle Park,
NC; Joellen Lewtas, University of
Washington, Department of
Environmental and Occupational
Health, Seattle, WA*

11:40 1C-2 **ORGANIC PM_{2.5} AT THE
BALTIMORE PM SUPERSITE:
DIURNAL VARIATIONS DURING
SUMMER AND WINTER WITH A
TIME-RESOLUTION OF THREE
HOURS**, *WOLFGANG F. ROGGE,
Anna Bernardo-Bricker, Orhan
Sevimoglu, Florida International
University, Miami, FL; Yu Chen
Chang, John Ondov, University of
Maryland, College Park, MD*

12:00 1C-3 **SEMI-VOLATILE ORGANIC
COMPOUND CHARACTERIZATION
AT THE FRESNO SUPERSITE
DURING WINTERTIME
STAGNATION EPISODES**, *BARBARA
ZIELINSKA and Lynn Rinehart,
Desert Research Institute, Reno, NV*

12:20 1C-4 **MOLECULAR COMPOSITION OF
ORGANICS IN PM-2.5 AT THE
NEW YORK CITY SUPERSITE
DURING WINTER 2004**, *Min Li,
MONICA A. MAZUREK, Department
of Civil and Environmental
Engineering, Center for Advanced
Infrastructure and Transportation,
Rutgers, The State University of
New Jersey, Piscataway, NJ (CAIT);
Stephen R. McDow, Human
Exposure and Atmospheric
Sciences Division, National
Exposure Research Laboratory, U.S.
Environmental Protection Agency,
Research Triangle Park, NC; James
Schwab, Kenneth Demerjian,
Atmospheric Sciences Research
Center and Department of Earth
and Atmospheric Science,
University of New York at Albany;
Dirk Felton, New York State
Department of Environmental
Conservation*

12:40 1C-5 **SIZE-SEGREGATED CHARACTERIZATION OF PARTICULATE MATTER - OC/EC AND SEMIVOLATILE NONPOLAR ORGANICS IN SAXONY, KONRAD MUELLER, Erika Brueggemann, Thomas Gnauk, Antje Plewka, Gerald Spindler, Hartmut Herrmann, Leibniz-Institut fuer Troposphaerenforschung, Leipzig, Germany; Holger Gerwig, Landesamt fuer Umwelt und Geologie, Dresden, Germany**

**2:20 PM - 4:00 PM
Session #2, Platform**

2A Fine and Coarse Particle Mass and Composition: Spatial and Temporal Variability - II

Chairs: Paul Roberts, Sherri Hunt
Capital Ballroom Center

2:20 2A-1 **DECONVOLUTING HIGH TIME RESOLUTION DATA TO OBTAIN INSIGHTS INTO SPATIAL SCALES OF REPRESENTATION, JASON HILL, Jay Turner, Washington University, St. Louis, MO**

2:40 2A-2 **CHARACTERIZATION AND SOURCE APPORTIONMENT OF ATMOSPHERIC ORGANIC AND ELEMENTAL CARBON IN 2003 AUTUMN AND WINTER OVER XI'AN, CHINA, J. J. Cao, SKLLQG, Institute of Earth Environment, Chinese Academy of Sciences; Xi Ran, China, S. C. Lee, Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, Hong Kong; Judith C. Chow, Desert Research Institute, Reno, NV**

3:00 2A-3 **THE RELATIONSHIP BETWEEN REAL-TIME AND TIME-INTEGRATED COARSE, INTERMODAL, AND FINE PARTICULATE MATTER IN THE LOS ANGELES BASIN, MICHAEL D. GELLER, Philip M. Fine, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA**

- 3:20 2A-4 **COMPARISON OF CONTINUOUS AND FILTER-BASED MEASUREMENTS OF SPECIATED PM2.5 IN THE SOUTHEASTERN US**, *PATRICIA BREWER, VISTAS, NC; Scott Reynolds, South Carolina Department of Health and Environmental Control, SC; Ben Hartsell, Atmospheric Research and Analysis, TX; Roger Tanner, Tennessee Valley Authority, AL; Joe Adlhoch, Air Resources Specialists*
- 3:40 2A-5 **MEASUREMENT AND ANALYSIS OF FINE PARTICULATE MATTER (PM2.5) IN NORTH CAROLINA**, *Viney Aneja, STEPHEN GOETZ, North Carolina State University, Raleigh, NC; Hoke Kimball, Joette Steger, North Carolina Division of Air Quality, Raleigh, NC*

2B Emissions Estimates: Methods and Measurements - I

Chairs: Andy Miller, Tom Pace
Capital Ballroom South

- 2:20 2B-1 **ESTIMATING OF THE IMPACT OF PRIMARY COAL FIRED BOILER EMISSIONS TO PM2.5 AND PM10 USING COMPUTER CONTROLLED SCANNING ELECTRON MICROSCOPY DATA**, *GARY CASUCCIO, Traci Lersch, RJ Lee Group, Inc., Monroeville, PA; Alan Robinson, Emily Weitkamp, Carnegie Mellon University, Pittsburgh, PA; Donald Martello, U.S. Department of Energy, National Energy Technology Laboratory, Pittsburgh, PA*
- 2:40 2B-2 **SOURCE SAMPLING AND CHARACTERIZATION USING A SINGLE PARTICLE MASS SPECTROMETER DURING THE PITTSBURGH SUPERSITE EXPERIMENT**, *KEITH J. BEIN, Department of Land, Air and Water Resources, Yongjing Zhao, Department of Mechanical and Aeronautical Engineering, Anthony S. Wexler, Departments of Mechanical and Aeronautical*

Engineering, Civil and Environmental Engineering, and Land, Air and Water Resources, University of California, Davis, CA; Eric Lipsky, Allen L. Robinson, Department of Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA; Murray V. Johnston, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE

- 3:00 2B-3 **EMISSIONS OF TRACE GASES AND PARTICLES FROM MARINE VESSELS**, *ERIC WILLIAMS and Brian Lerner, CIRES, University of Colorado, Boulder, CO; Aeronomy Laboratory/NOAA, Boulder, CO; Ann Middlebrook, Aeronomy Laboratory/NOAA, Boulder, CO; and Patricia Quinn and Tim Bates, Pacific Marine Environmental Laboratory/NOAA, Seattle, WA*
- 3:20 2B-4 **ALTERNATIVE SOURCE TESTING METHOD FOR FILTERABLE AND CONDENSABLE PARTICULATE**, *MARK DISTLER, O'Brien & Gere, East Syracuse, NY*
- 3:40 2B-5 **MODELING THE IMPACTS OF LAND-USE CHANGE ON REGIONAL EMISSIONS OF AIR POLLUTANTS**, *YUN WANG*

2C Organic Speciation: Ambient II

Chairs: Jamie Schauer, John Offenberg
Capital Ballroom North

- 2:20 2C-1 **CONTRIBUTION OF ATMOSPHERIC POLYMERS TO OC AT A RURAL AND AN URBAN SITE IN THE AREA OF VIENNA**, *Heidi Bauer, HANS PUXBAUM, Anne Kasper, Bernhard Neuberger, Vienna University of Technology, Vienna, Austria*
- 2:40 2C-2 **PRIMARY BIOPOLYMER ASSOCIATIONS WITH FINE PARTICULATE MATTER**, *MARK HERNANDEZ and Lisa Clarke, University of Colorado at Boulder; Lars Angenent, Washington University in St. Louis; Allen*

Robinson, Carnegie Mellon University

- 3:00 2C-3 **LEVOGLUCOSAN IN URBAN PARTICULATE MATTER STANDARD REFERENCE MATERIALS 1649A, 1648, AND PM 2.5 INTERIM REFERENCE MATERIALS**, *RANDOLPH LARSEN, St. Mary's College of Maryland, St. Mary's City, MD; Michele Schantz, National Institute of Standards and Technology, Gaithersburg, MD*
- 3:20 2C-4 **ESTIMATES OF SECONDARY ORGANIC AEROSOL FROM THE SOUTHEASTERN AEROSOL RESEARCH AND CHARACTERIZATION STUDY (SEARCH)**, *RICK D. SAYLOR, Atmospheric Research and Analysis, Inc., Snellville, GA; Eric S. Edgerton, Atmospheric Research and Analysis, Inc., Cary, NC; Benjamin E. Hartsell, Atmospheric Research and Analysis, Inc., Plano, TX*
- 3:40 2C-5 **MEASUREMENT AND SPECIATION OF CARBONACEOUS PARTICLES USING ELECTRON MICROSCOPY TECHNIQUES**, *GARY CASUCCIO, Traci Lersch, RJ Lee Group, Inc., Monroeville, PA; Eric Edgerton, Atmospheric Research & Analysis, Inc., Cary, NC*

**4:20 PM - 6:00 PM
Session #3, Platform**

**3A Fine and Coarse Particle Mass and Composition:
Spatial and Temporal Variability - III**

Chairs: James Schwab, Tom Merrifield
Capital Ballroom Center

- 4:20 3A-1 **THE IMPORTANCE OF COARSE MODE AEROSOL NITRATE AT SEVERAL IMPROVE MONITORING SITES**, *Taehyoung Lee, Xiao-Ying Yu, Benjamin Ayres, Sonia M. Kreidenweis and JEFFREY L. COLLETT, JR., Atmospheric Science Department, Colorado State University, Fort Collins, CO; William Malm, National Park Service/CIRA, Fort Collins, CO*

4:40	3A-2	CONTINUOUS OBSERVATIONS OF PM2.5 AND GAS SPECIATION AT A RURAL ILLINOIS SITE , <i>Allen L. Williams, Michael Caughey, David Gay, Clyde Sweet; Illinois State Water Survey; Rahmat Ulla and Purnendu K Dasgupta, Texas Tech University</i>
5:00	3A-3	GLOBAL BACKGROUND AEROSOL CONCENTRATION LEVELS OF WATER-SOLUBLE DICARBOXYLIC ACIDS , <i>HAOBO WANG, Kimitaka Kawamura, Institute of Low Temperature Science, Hokkaido University, Sapporo, Japan</i>
5:20	3A-4	COMPARISON OF THE PM2.5 MAIN COMPONENT CONCENTRATIONS , <i>DIETRICH VON BAER, Universidad de Concepción; Departamento de Análisis Instrumental; Casilla 160-C; Concepción; VIII th Region 3; Chile</i>
5:40	3A-5	SPATIAL AND TEMPORAL VARIABILITY OF PARTICULATE MATTER IN TWO NEIGHBORHOODS NEAR A MAJOR INTERNATIONAL TRADE BRIDGE AT BUFFALO, N.Y. AND FORT ERIE CANADA , <i>PETER JAQUES, Kambiz Nazridoust, Goodarz Ahmadi, Phillip Hopke, Andrea Ferro and Timothy McAuley, Clarkson University, Potsdam, NY</i>

3B Emissions Estimates: Methods and Measurements - II

Chairs: David Allen, James Meagher
Capital Ballroom South

4:20	3B-1	CHARACTERISTICS OF DIESEL- AND GASOLINE ENGINE EMISSIONS FROM VEHICLE CLUSTERS , <i>Shaohua Hu, Rafael McDonald, Pratim Biswas, Environmental Engineering Science, Washington University in St. Louis, St. Louis, MO; Dainius Martuzevicius, Sergey A. Grinshpun, Grace LeMasters, Department of Environmental Health, University of Cincinnati, Cincinnati, OH</i>
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- 4:40 3B-2 **ON-ROAD MEASUREMENTS OF PARTICLE NUMBER AND MASS CONCENTRATIONS AND SIZE DISTRIBUTIONS IN FREEWAY AND TUNNEL ENVIRONMENTS,**
MICHAEL D. GELLER, Satya Sardar, Philip M. Fine, Harish Phuleria, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA
- 5:00 3B-3 **ON-ROAD SIZE-RESOLVED PARTICULATE EMISSION FACTORS,** *K. MAX ZHANG, Anthony S. Wexler, Debbie A. Niemeier, University of California, Davis, CA; Yifang Zhu, William C. Hinds, University of California, Los Angeles, CA; Constantinos Sioutas, University of Southern California, Los Angeles, CA*
- 5:20 3B-4 **PARAMETRIC EVALUATION OF SECONDARY PM10 EMISSION BY PRECURSORS INVENTORY DATA: POTENTIAL AND LIMITATIONS OF THE APPROACH,** *GIOVANNI LONATI, Stefano Caserini, Michele Giugliano, Cinzia Pastorello, DIAR Politecnico di Milano, Italia*
- 5:40 3B-5 **ASSESSMENT OF CO2, SO2, AND NOX EMISSIONS FROM ELECTRIC UTILITY POWER PLANTS USING AIRBORNE MEASUREMENTS,**
TARA J. FORTIN, John S. Holloway, Gregory J. Frost, Fred C. Fehsenfeld, NOAA Aeronomy Laboratory, Boulder, CO and CIRES, University of Colorado, Boulder, CO; Thomas B. Ryerson, David D. Parrish, NOAA Aeronomy Laboratory, Boulder, CO; Dennis K. Nicks Jr., Richard W. Dissly, Ball Aerospace, Boulder, CO

3C Organic Speciation: Gas-Particle Partitioning

Chairs: Antonio (Tony) Miguel, Douglas Lane
Capital Ballroom North

- 4:20 3C-1 **GAS/PARTICLE PARTITIONING OF PAH IN THE VICINITY OF A BUS DEPOT AND THE IDENTIFICATION**

		<p>OF SUBSTANTIAL PAH MASS IN NANO-PARTICLES, DOUGLAS LANE, Cristian Mihele, Margaret Baroi, Environment Canada, Toronto, ON, Canada; Antonio Miguel, Arantza Eiguren-Fernandez, University of California at Los Angeles, CA; Lara Gundel, Lawrence Berkeley National Laboratory, CA</p>
4:40	3C-2	<p>PARTICULATE CARBON AND GAS/PARTICLE PARTITIONING OF AROMATIC HYDROCARBONS IN SEATTLE, LARA GUNDEL, Yanbo Pang, Lawrence Berkeley National Laboratory, Berkeley, CA; Rachelle Majeske, Crafton Hills Community College, Yucaipa, CA; Cole Dovey, Middlebury College, Middlebury, VT; L.J.S. Liu, University of Washington, Seattle, WA; Candis Claiborn, Washington State University, Pullman, WA</p>
5:00	3C-3	<p>BUDGET OF GAS AND PARTICLE-PHASE ORGANIC CARBON IN A POLLUTED ATMOSPHERE: RESULTS FROM THE NEW ENGLAND AIR QUALITY STUDY IN 2002, JOOST DE GOUW, Ann Middlebrook, Carsten Warneke, Paul Goldan, William Kuster, James Roberts, Fred Fehsenfeld, NOAA Aeronomy Laboratory, Boulder, CO; Douglas Worsnop, Manjula Canagaratna, Aerodyne Research, Billerica, MA; Alex Pszenny, University of New Hampshire, Durham, NH; William Keene, University of Virginia, Charlottesville, VA; Matt Marchewka, Stephen Bertman, Western Michigan University, Kalamazoo, MI; Timothy Bates, NOAA Pacific Marine Environment Laboratory, Seattle, WA</p>
5:20	3C-4	<p>EVALUATION AND MINIMIZATION OF ORGANIC AEROSOL SAMPLING ARTIFACTS USING IMPACTORS AND QUARTZ FIBER FILTER DENUDEERS, DENNIS R. FITZ, College of Engineering-Center for</p>

*Environmental Research and
Technology, University of California,
Riverside, Riverside, CA*

5:40 3C-5 **CHARACTERIZATION OF TOBACCO
TAR VAPOR PRESSURE USING A
NON-ISOTHERMAL KNUDSEN
EFFUSION TECHNIQUE, XU CHEN,**
*Philip Morris USA Postgraduate
Research Program, Richmond, VA;
W. Geoffrey Chan and Mohammad
R. Hajaligol, Philip Morris USA
Research Center, Richmond, VA*

Tuesday, February 8, 2005

6:00 PM - 8:00 PM
Welcome Reception, Exhibition and Poster Viewing
Georgia Hall

Tuesday

8:00 AM - 5:00 PM
Exhibits Open
Georgia Hall

8:00 AM - 9:00 AM
Plenary Session
Capital Ballroom

8:00 **PARTICULATE MATTER: A BRIEF
HISTORY OF NEARLY
EVERYTHING, Mr. John Bachmann,**
*US Environmental Protection
Agency, Office of Air Quality
Planning and Standards, Research
Triangle Park, NC*

9:20 AM - 10:40 AM
Session #4, Platform

4A Source Apportionment - I
Chairs: Cliff Davidson, Phil Johnson
Capital Ballroom Center

9:20 4A-1 **A HYBRID RECEPTOR MODEL
INTEGRATING AIR QUALITY DATA
AND EULERIAN MODELING
RESULTS TO APPORTION BIG
BEND TEXAS' SULFATE TO
UNITED STATES AND MEXICAN
SOURCE REGIONS, Bret Schichtel,**
*Kristi Gebhart, Michael Barna,
William Malm, National Park
Service, Fort Collins, CO*

- 9:40 4A-2 **CHEMICAL CHARACTERIZATIONS OF MOBILE SOURCE EMISSIONS – RELATION TO AMBIENT MEASUREMENTS IN VEHICLE DOMINATED AND URBAN BACKGROUND LOCATIONS**, *ERIC FUJITA, Barbara Zielinska, William P. Arnott and David E. Campbell; Desert Research Institute, Reno, NV*
- 10:00 4A-3 **AN APPROACH TO ESTIMATING TRAFFIC SOURCE CONTRIBUTIONS (TSCE) FOR AN EPIDEMIOLOGICAL STUDY: SPATIAL DISTRIBUTION OF TSCE IN THE GREATER CINCINNATI REGION**, *Shaohua Hu, Stefan Falke, Pratim Biswas,* Environmental Engineering Science, Washington University in St. Louis, St. Louis, MO; Dainius Martuzevicius, Sergey A. Grinshpun, Patrick Ryan, Grace LeMasters, Department of Environmental Health, University of Cincinnati, Cincinnati, OH*
- 10:20 4A-4 **COMBINING SIZE DISTRIBUTION AND CHEMICAL SPECIES MEASUREMENTS INTO A MULTIVARIATE RECEPTOR MODEL OF PM_{2.5}**, *TIMOTHY LARSON, David Covert, Astrid Schreuder, Thomas Lumley, University of Washington, Seattle, WA*

4B PM Composition / Precursor Gases: PM Cation and Anion Field Measurements

Chairs: George Allen, Purnendu (Sandy) Dasgupta
Capital Ballroom South

- 9:20 4B-1 **SEMI-CONTINUOUS PM_{2.5} SULFATE AND NITRATE MEASUREMENTS IN NEW YORK: ROUTINE FIELD MEASUREMENTS AND INTENSIVE FIELD CAMPAIGNS**, *OLGA HOGREFE, James Schwab, Silke Weimer, Kenneth Demerjian, Atmospheric Sciences Research Center, U-Albany, Albany, NY; Oliver Rattigan, Division of Air Resources, New York State Department of Environmental Conservation, Albany, NY; Frank Drewnick, Cloud Physics and*

Chemistry Department, Max-Planck-Institute for Chemistry, Mainz, Germany; Kevin Rhoads, Chemistry Department, Siena College, Loudonville, NY

- 9:40 4B-2 **SEMI-CONTINUOUS PM_{2.5} NITRATE AND SULFATE MEASUREMENTS AT THE PITTSBURGH AIR QUALITY STUDY SUPERSITE**, ANN WITTIG, *CUNY at City College of New York, New York, NY*; Andrey Khlystov, *Duke University, Durham NC*; Satoshi Takahama, *Spyros Pandis, Cliff Davidson, Carnegie Mellon University, Pittsburgh PA*; Susanne Hering, *Aerosol Dynamics Inc., Berkeley CA*
- 10:00 4B-3 **CONTINUOUS MEASUREMENT OF AMMONIA AND ACID GASES, PARTICULATE AMMONIUM AND ANIONS**, PURNENDU DASGUPTA, *Masaki Takeuchi, SM. Rahmat Ullah, Department of Chemistry, Texas Tech University, Lubbock, TX*
- 10:20 4B-4 **FINE PARTICULATE MATTER ION MEASUREMENTS AT THE ST. LOUIS – MIDWEST SUPERSITE BY THE PARTICLE-INTO-LIQUID SAMPLER (PILS)**, Megan Yu, *JAY TURNER, Washington University, St. Louis, MO*; Andrea Clements, *California Institute of Technology, Pasadena, CA*; Rodney Weber, *Georgia Institute of Technology, Atlanta, GA*

4C OC Speciation Methods

Chairs: Barbara Zielinska, Lara Gundel
Capital Ballroom North

- 9:20 4C-1 **HIGH VOLUME INJECTION FOR GCMS ANALYSIS OF PARTICULATE ORGANIC SPECIES IN AMBIENT AIR**, John Turlington, *ManTech Environmental Technology, Inc., Research Triangle Park, NC*; David Olson, *John Volckens, Leonard Stockburger, and STEPHEN R. MCDOW, Human Exposure and Atmospheric Sciences Division, National*

*Exposure Research Laboratory, U.S.
EPA, Research Triangle Park, NC*

- 9:40 4C-2 **TRENDS IN REGIONAL ORGANIC ACIDS AND ALCOHOLS AS MEASURED BY THERMAL DESORPTION-GAS CHROMATOGRAPHY MASS SPECTROMETRY**, *REBECCA J. SHEESLEY, James J. Schauer, University of Wisconsin-Madison, Environmental Chemistry and Technology Program, Madison, WI; Mark Meiritz, Jeff DeMinter, University of Wisconsin-Madison, State Lab of Hygiene, Madison, WI*
- 10:00 4C-3 **ANALYTICAL METHOD FOR SEMI-VOLATILE POLAR ORGANIC COMPOUND CHARACTERIZATION**, *LYNN R. RINEHART, Barbara Zielinska, Desert Research Institute, Reno, NV*
- 10:20 4C-4 **THRESHOLDS OF STIMULATED RAMAN SCATTERING IN POLYMER AEROSOL PARTICLES AND RESONATORS WITH INCLUSIONS**, *MIKHAIL JOURAVLEV and Gershon Kurizki; Department of Chemical Physics, Weizmann Institute of Science*

**11:00 AM - 12:20 PM
Session #5, Platform**

5A Source Apportionment - II

Chairs: Karen Magliano, Eladio Knipping
Capital Ballroom Center

- 11:00 5A-1 **THE DEVELOPMENT OF A MULTIVARIATE RECEPTOR MODEL FOR VERTICAL PROFILE DATA BASED ON NONPARAMETRIC REGRESSION TECHNIQUES**, *B. F. TAUBMAN, J.C. Hains, L.T. Marufu, J.B. Stone, and A.M. Thompson, Pennsylvania State University, University Park, PA*
- 11:20 5A-2 **SOURCE APPORTIONMENT OF PM 2.5 USING A THREE-DIMENSIONAL AIR QUALITY MODEL AND A RECEPTOR MODEL**, *SUN-KYOUNG PARK,*

Armistead G. Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta GA; Lin Ke, Bo Yan, Mei Zheng, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, GA

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| 11:40 | 5A-3 | <p>APPLICATION OF THE UM MULTIVARIATE PSEUDO-DETERMINISTIC RECEPTOR MODEL TO RESOLVE POWER PLANT INFLUENCES ON AIR QUALITY AT THE CMU SUPERSITE, SUENG SHIK PARK,
 <i>Joseph Patrick Pancras, John M. Ondov, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD; Allen Robinson, Clifford Davidson, Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA</i></p> |
| 12:00 | 5A-4 | <p>PM2.5 SOURCE APPORTIONMENT USING RECEPTOR AND SOURCE-ORIENTED MODELS: CONCEPTUAL DIFFERENCES AND IMPLICATIONS FOR HEALTH STUDIES, AMIT MARMUR,
 <i>Sun-Kyoung Park, James A. Mulholland and Armistead G. Russell, Georgia Institute of Technology, Atlanta, GA</i></p> |

5B PM Composition / Precursor Gases: PM Composition Methods & QA

Chairs: Dennis Fitz, Rodney Weber
Capital Ballroom South

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| 11:00 | 5B-1 | <p>EVALUATION AND QUALITY ASSURANCE OF CONTINUOUS AND SEMI-CONTINUOUS PM INSTRUMENTATION, JAMES SCHWAB,
 <i>Olga Hogrefe, Volker Mohnen, and Kenneth Demerjian, Atmospheric Sciences Research Center, University at Albany - SUNY, Albany, NY</i></p> |
| 11:20 | 5B-2 | <p>A NEW COMPACT AEROSOL CONCENTRATOR FOR USE IN CONJUNCTION WITH LOW FLOW-RATE CONTINUOUS AEROSOL INSTRUMENTATION, MICHAEL D. GELLER,
 <i>Subhasis Biswas, Philip M. Fine, Constantinos Sioutas,</i></p> |

*Department of Civil and
Environmental Engineering,
University of Southern California,
Los Angeles, CA*

- 11:40 5B-3 **FIELD VALIDATION OF THE THERMO MODEL 5020 CONTINUOUS SULFATE ANALYZER**, *GEORGE A. ALLEN, NESCAUM, Boston MA; Bradley P. Goodwin, Jay R. Turner, Washington University, St. Louis MO*
- 12:00 5B-4 **INTERPRETING AEROSOL BLACK CARBON MEASUREMENTS FROM A MAGEE SCIENTIFIC AETHALOMETER**, *BRADLEY GOODWIN, Neil Deardorff, Jason Hill, Jay Turner, Washington University, St. Louis, MO; James Schauer, Min-Suk Bae, University of Wisconsin, Madison, WI*

5C Carbonaceous Aerosols: Organic and Elemental Carbon

Chairs: Judith Chow, Gary Norris
Capital Ballroom North

- 11:00 5C-1 **OC/EC ANALYSIS WITH THERMAL-OPTICAL METHODS: EFFECTS OF TEMPERATURE PROTOCOL AND NON-CARBONACEOUS COMPOUNDS**, *R. SUBRAMANIAN, Allen Robinson, Carnegie Mellon University, Pittsburgh, PA; Andrey Khlystov, Duke University, Durham, NC*
- 11:20 5C-2 **FUNCTION AND PERFORMANCE OF A NEW REAL-TIME BLACK CARBON MONITOR DURING THE 2003-2004 WINTER IN FRESNO, CA**, *KEVIN J. GOOHS, Thermo Electron Corporation, Franklin, MA*
- 11:40 5C-3 **OPTICAL TRANSITIONS OF CARBONACEOUS PARTICLES UNDER HEATING**, *TAMI BOND and Jongmin Lee. University of Illinois at Urbana-Champaign; Department of Civil and Environmental Engineering; Urbana, IL*
- 12:00 5C-4 **SPATIAL VARIABILITY OF PM2.5 SPECIES IN THE CALIFORNIA CENTRAL VALLEY**, *JOHN G.*

WATSON, Judith C. Chow, L.-W.
Antony Chen, Lynn R. Rinehart,
Barbara Zielinska, Desert Research
Institute, Reno, NV

1:40 PM - 3:00 PM
Session #6, Platform

6A Source Apportionment - III

Chairs: Philip Hopke, Joe Paisie
Capital Ballroom Center

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| 1:40 | 6A-1 | SOURCE APPORTIONMENT OF MIDWEST PM2.5 USING ADVANCED RECEPTOR MODEL,
<i>JONG HOON LEE, Philip K. Hopke, Department of Chemical Engineering, Clarkson University, Potsdam, NY; Donna M. Kenski, Michael Koerber, Lake Michigan Air Directors Consortium, Des Plaines, IL</i> |
| 2:00 | 6A-2 | ENHANCED SOURCE IDENTIFICATION OF SOUTHEAST AEROSOLS USING TEMPERATURE RESOLVED CARBON FRACTIONS AND GAS PHASE COMPONENTS,
<i>Wei Liu, Yuhang Wang, Armistead Russell and Eric S. Edgerton</i> |
| 2:20 | 6A-3 | USE OF ADVANCED RECEPTOR MODELLING FOR ANALYSIS OF AN INTENSIVE FIVE-WEEK AEROSOL SAMPLING CAMPAIGN,
<i>K.C. BUSEY, G.J. Evans, Department of Chemical Engineering and Applied Chemistry, University of Toronto, Toronto ON, Canada; R. Leitch, J.R. Brook, Environment Canada, Air Quality Research Branch, Meteorological Service of Canada, Toronto ON, Canada</i> |
| 2:40 | 6A-4 | POSITIVE MATRIX FACTORIZATION (PMF) AND CHEMICAL MASS BALANCE (CMB) RECEPTOR MODELING APPLIED TO IMPROVE DATA SETS FROM THE NORTHEASTERN USA,
<i>JOHANN ENGELBRECHT, Richard Tropp, Hampden Kuhns, Mark Green, John Watson, Desert Research Institute, Reno, NV</i> |

Tuesday, February 8, 2005

6B PM Composition / Precursor Gases : Gas and Gas/Particle Species Methods and Measurements

Chairs: Shao-Hang Chu, Bruce Doddridge

Capital Ballroom South

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| 1:40 | 6B-1 | A SMALL FOOTPRINT GAS PARTICLE ION CHROMATOGRAPHY SYSTEM,
<i>S.M. Rahmat Ullah, Masaki Takeuchi, PURNENDU K DASGUPTA</i> |
| 2:00 | 6B-2 | CONTINUOUS AMMONIA MEASUREMENTS AT 2 SEARCH SITES,
<i>ERIC S. EDGERTON, Atmospheric Research & Analysis, Inc., Cary, NC; Benjamin E. Hartsell Atmospheric Research & Analysis, Inc, Plano, TX; John J. Jansen Southern Co., Birmingham, AL; Callie J. Waid Atmospheric Research & Analysis, Inc., Plano, TX</i> |
| 2:20 | 6B-3 | AMBIENT NITROGEN DIOXIDE DETECTION BY CAVITY ATTENUATED PHASE SHIFT SPECTROSCOPY (CAPS),
<i>Paul L. Keababian, Scott C. Herndon, ANDREW FREEDMAN, Center for Sensor Systems and Technology, Aerodyne Research, Inc., Billerica, MA</i> |
| 2:40 | 6B-4 | MEASUREMENT OF NITRIC ACID AND AMMONIA WITH FABRIC DENUDERS,
<i>DENNIS R. FITZ, College of Engineering-Center for Environmental Research and Technology, University of California, Riverside, Riverside, CA</i> |

6C PM and Visibility: Regional Haze

Chairs: Ellis Cowling, William Malm

Capital Ballroom North

- | | | |
|------|------|---|
| 1:40 | 6C-1 | NATURAL AND TRANSBOUNDARY POLLUTION INFLUENCES ON VISIBILITY DEGRADATION IN THE UNITED STATES,
<i>Rokjin J. Park, Colette L. Heald, Daniel J. Jacob, Harvard University, Cambridge, MA; NARESH KUMAR, EPRI, Palo Alto, CA</i> |
| 2:00 | 6C-2 | IMPLICATION OF THE BRAVO SOURCE ATTRIBUTION RESULTS FOR REGIONAL HAZE CONTROL STRATEGIES,
<i>BRET SCHICHEL, William Malm, Michael Barna, Kristi</i> |
-

Gebhart, National Park Service, Fort Collins, CO

2:20 6C-3 **CARBON-14 ANALYSIS OF PM 2.5 AEROSOLS AT 5 IMPROVE SITES**, *Graham Bench, Stewart Fallon, Center for Accelerator Mass Spectrometry, Lawrence Livermore National Laboratory, Livermore, CA; WILLIAM MALM, National Park Service, Atmospheric Science (CIRA), Colorado State University, Fort Collins CO; Charles McDade, Crocker Nuclear Laboratory, University of California, Davis, CA*

2:40 6C-4 **CHARACTERISTICS OF FINE PARTICULATE MATTER AND ITS IMPACT ON VISIBILITY IMPAIRMENT AT TWO URBAN SITES IN SEOUL AND INCHEON, KOREA**, *YOUNG J. KIM, Hyun R. Jung, Min J. Kim, Byung U. Lee, ADvanced Environmental Monitoring Research Center (ADEMRC), Department of Environmental Science and Engineering, Gwangju Institute of Science and Technology (GIST), Gwangju, Korea; Shin D. Kim, Jin S. Park, Department of Environmental Engineering, University of Seoul, Seoul, Korea; Dong S. Lee, Bo K. Lee, Air Quality Research Division, National Institute of Environmental Research, Seoul, Korea; Kyung W. Kim, Department of Environmental Engineering, Gyeongju University, Gyeongju, Korea*

3:00 PM - 4:40 PM
Session #7, Posters and Exhibits

7PA Measurements and Methods - I

3:00-3:50 Posters with even numbers.

3:50-4:40 Posters with odd numbers.

Georgia Hall

7PA-1 **FIELD EVALUATION OF A HIGH-VOLUME DICHOTOMOUS SAMPLER**, *SATYA B. SARDAR, Bhabesh Chakrabarti, Michael D. Geller, Philip M. Fine and Constantinos Sioutas, Department*

of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA; Paul Solomon, U.S. Environmental Protection Agency, ORD, Las Vegas, NV

- 7PA-2 **MULTIYEAR EVALUATIONS OF PMCOARSE BY DIFFERENCE UTILIZING LOW AND HIGH VOLUME SAMPLERS AND COLLOCATED 50 DEGC TEOMS,**
Robert Baker, HENRY D. FELTON, Oliver Rattigan, Paul Sierzenga, Department of Environmental Conservation, Division of Air Resources, Albany, NY
- 7PA-3 **FINE PARTICULATE MATTER MASS MEASUREMENTS AT THE ST. LOUIS – MIDWEST SUPERSITE,**
JASON HILL, Jay Turner, Washington University, St. Louis, MO; Kevin Goohs, Thermo Electron, Franklin, MA
- 7PA-4 **CONTINUOUS PM2.5 MASS MEASUREMENTS AT THE PITTSBURGH AIR QUALITY STUDY SUPERSITE,**
ANN WITTIG, CUNY at City College of New York, New York NY; Allen Robinson, Spyros Pandis, Carnegie Mellon University, Pittsburgh PA
- 7PA-5 **COMPARISONS OF MEASUREMENTS FOR SULFATE AND NITRATE IN THE AMBIENT ATMOSPHERE,**
YEE-LIN WU, Der-Lun Lee, Chi-Wen Chang, Department of Environmental Engineering, National Cheng Kung University, Tainan, Taiwan
- 7PA-6 **MEASUREMENTS OF WATER-SOLUBLE AEROSOL AND GASES DURING PITTSBURGH AIR QUALITY STUDY,**
ANDREY Y. KHLYSTOV, Duke University, Department of Civil and Environmental Engineering, Durham, NC; Bhavesh V. Shah, Satoshi Takahama, Spyros N. Pandis; Carnegie Mellon University, Department of Chemical Engineering, Pittsburgh, PA

- 7PA-7 **IN-SITU CONCENTRATION OF SEMI-VOLATILE AEROSOL USING WATER-CONDENSATION TECHNOLOGY**, *ANDREY KHLYSTOV, Duke University, Durham, NC; Qi Zhang, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Charlie Stanier, University of Iowa, Iowa City, IA; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA; Manjula R. Canagaratna, Aerodyne Research Inc., Billerica, MA; Philip Fine, Chandan Misra, Constantinos Sioutas, University of Southern California, Los Angeles, CA*
- 7PA-8 **CONTINUOUS PM2.5 SULFATE AND CARBON AT ADDISON IN RURAL NEW YORK STATE: MEASUREMENTS FROM AND EVALUATIONS OF THE THERMO 5020 SULFATE AND THE SUNSET LABS OCEC INSTRUMENTS**, *JAMES SCHWAB, Olga Hogrefe, Kenneth Demerjian, Atmospheric Sciences Research Center, University at Albany - SUNY, Albany, NY; Oliver Rattigan, Dirk Felton, New York State Department of Environmental Conservation, Division of Air Resources, Albany, NY; Vicent Dutkiewicz, Liaquat Husain, Wadsworth Center, New York State Department of Health, Albany, NY*
- 7PA-9 **ANALYTICAL ADVANCES IN ANALYSIS OF SIZE AND TIME RESOLVED CONTINUOUS SAMPLES FROM ROTATING DRUM IMPACTORS**, *THOMAS A. CAHILL, Steven S. Cliff, Michael Jimenez-Cruz, Lee Portnoff, DELTA Group, University of California, Davis, CA; Kevin D. Perry, Meteorology Dept, University of Utah, UT; Graham Bench, Center for Accelerator Mass Spectrometry, Lawrence Livermore NL, CA; Roger Miller, Physics Department, State University of New York, Potsdam, NY*

- 7PA-10 **MEASURING LIGHT ELEMENTS BY RUTHERFORD BACK SCATTERING TECHNIQUE**, *OMAR F. CARVACHO, Carlos M. Castaneda, Lowell L. Ashbaugh, Robert G. Flocchini and Jaspinder P. Singh, Janice C.S. Lam. University of California, Crocker Nuclear Laboratory, Air Quality Group, Davis, CA*
- 7PA-11 **MEASUREMENTS OF AMBIENT AMMONIA USING A TUNABLE DIODE LASER ABSORPTION SPECTROMETER AND AN AQUEOUS SCRUBBING-CHEMICAL DERIVATIVE TECHNIQUE AT URBAN AND RURAL NEW YORK LOCATIONS**, *YONGQUAN LI, Kenneth Demerjian, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; Jian Hou¹, Xianliang Zhou^{1,2}. (1) Department of Environmental Health and Toxicology, School of Public Health, State University of New York at Albany, NY; (2) Wadsworth Center, New York State Department of Health, Albany, NY*
- 7PA-12 **ANALYSIS OF GAS-PHASE AMMONIA MEASUREMENTS MADE DURING THE 2002 ATLANTA AEROSOL NUCLEATION AND REAL-TIME CHARACTERIZATION EXPERIMENT (ANARCHE) AT THE 1999 ATLANTA SUPERSITE**, *JOHN B. NOWAK, CIRES-University of Colorado, NOAA-Aeronomy Laboratory, Boulder, CO; L. Gregory Huey, Georgia Institute of Technology, Atlanta, GA; Eric Edgerton, ARA, Inc., Cary, NC; Fred Fehsenfeld, NOAA-Aeronomy Laboratory, Boulder, CO; J. Andrew Neuman, CIRES-University of Colorado, NOAA-Aeronomy Laboratory, Boulder, CO; Douglas Orsini, Steve J. Sjostedt, Amy P. Sullivan, David J. Tanner, Rodney J. Weber, Georgia Institute of Technology, Atlanta, GA*

Tuesday, February 8, 2005

- 7PA-13 **AN APPROACH TO MONITOR ULTRAFINE EC WITH A MODIFIED ACPM**, *HARRY TEN BRINK, Energy Research Center of the Netherlands (ECN), Petten, NL; Andrey Khlystov, Duke University, Department of Civil and Environmental Engineering, Durham, NC*
- 7PA-14 **EVALUATION OF COARSE, FINE AND ULTRAFINE PARTICLES AS PART OF AN AIR POLLUTION EXPOSURE STUDY**, *GARY CASUCCIO, Traci Lersch, Steve Schlaegle, RJ Lee Group, Inc., Monroeville, PA; Robert Devlin, Michael Ray, U.S. Environmental Protection Agency, Research Triangle Park, NC*
- 7PA-15 **ULTRAFINE PARTICLE SIZING RESULTS AND PERFORMANCE OF AN ELECTRICAL AEROSOL DETECTOR AND PORTABLE CONDENSATION PARTICLE COUNTER DURING THE PMTACS-NY 2004 WINTER INTENSIVE**, *Brian P. Frank, Thomas Lanni, Aaron Pulaski, Jillian Grygas, New York State Department of Environmental Conservation, Division of Air Resources, Albany, NY; OLGA HOGREFE, G. Garland Lala, Atmospheric Sciences Research Center, State University of New York at Albany, Albany, NY*
- 7PA-16 **FIELD EVALUATION OF A TSI MODEL 3034 SCANNING MOBILITY PARTICLE SIZER IN NEW YORK CITY: WINTER 2004 INTENSIVE CAMPAIGN**, *OLGA HOGREFE, G. Garland Lala, Kenneth Demerjian, Atmospheric Sciences Research Center, U-Albany, Albany, NY; Wei Liu, Ed Johnson, TSI Incorporated, Shoreview, MN*
- 7PA-17 **REAL-TIME MEASUREMENT OF PARTICLE SIZE DISTRIBUTION AND CONCENTRATION IN DIFFERENT ENVIRONMENTS-THE EFFECT OF HUMIDITY ON AMBIENT AIR PARTICLES**, *HENNA TUOMENOJA, Johanna Ojanen,*

*Pirita Mikkanen, Erkki Lamminen,
Dekati Ltd, Tampere, Finland*

7PF Source Apportionment - I

3:00-3:50 Posters with even numbers.

3:50-4:40 Posters with odd numbers.

Georgia Hall

- 7PF-18 **SOURCE APPORTIONMENT OF BALTIMORE AEROSOL FROM COMBINED SIZE DISTRIBUTION AND CHEMICAL COMPOSITION DATA**, *DAVID OGULEI, Philip K. Hopke, Liming Zhou, Clarkson University, Potsdam, NY; J. Patrick Pancras, Narayanan Nair, John M. Ondov, University of Maryland at College Park, MD*
- 7PF-19 **ATMOSPHERIC AEROSOL OVER TWO URBAN-RURAL PAIRS IN ALABAMA AND GEORGIA: CHEMICAL COMPOSITION AND POSSIBLE SOURCES**, *Wei Liu, Yuhang Wang, Armistead Russell, Eric S. Edgerton*
- 7PF-20 **PSEUDO-DETERMINISTIC MULTIVARIATE RECEPTOR MODEL FOR USE WITH HIGHLY-TIME RESOLVED DATA**, *JOHN M. ONDOV, Joseph Patrick Pancras, Seung Shik Park, Gregory Beachley, Melissa Rury, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD*
- 7PF-21 **PM10 AND PM2.5 SOURCE APPORTIONMENT AT THREE URBAN BACK GROUND SITES IN THE WESTERN RUHR-AREA, GERMANY**, *H. FISSAN Process and Aerosol Measurement Technology, University Duisburg-Essen, Duisburg, Germany; T.A.J. Kuhlbusch, U. Quass, K.G. Schmidt IUTA e.V., Department Airborne Particles, Bliersheimerstr, Duisburg, Germany; M. Koch ECOFYS, Cologne, Germany; P. Bruckmann, U. Pfeffer North Rhine-Westphalia State Environmental Protection Agency, Essen, Germany*

- 7PF-22 **COMPARISON BETWEEN MEASURED AND ESTIMATED UNCERTAINTIES FOR SOURCE APPORTIONMENT OF THE SPECIATION TRENDS NETWORK DATA**, *EUGENE KIM, Philip K. Hopke, Clarkson University, Potsdam, NY; Shelly Eberly, U.S. Environmental Protection Agency, Research Triangle Park, NC*
- 7PF-23 **SOURCE IDENTIFICATION OF PM2.5 MEASURED AT THE SPECIATION TRENDS NETWORK SITES IN NORTHERN NEW YORK AREA**, *EUGENE KIM, Philip K. Hopke, Clarkson University, Potsdam, NY*
- 7PF-24 **DETECTION AND CHARACTERIZATION OF A SMOKE PLUME FROM CANADIAN FOREST FIRES DURING THE PITTSBURGH SUPERSITE EXPERIMENT**, *KEITH J. BEIN, Department of Land, Air and Water Resources, Yongjing Zhao, Department of Mechanical and Aeronautical Engineering, Anthony S. Wexler, Departments of Mechanical and Aeronautical Engineering, Civil and Environmental Engineering, and Land, Air and Water Resources, University of California, Davis, CA; Natalie J. Pekney, Department of Civil and Environmental Engineering, Cliff I. Davidson, Departments of Civil and Environmental Engineering and Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA; Murray V. Johnston, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE*
- 7PF-25 **IDENTIFICATION OF SOURCES OF ATMOSPHERIC PM AT THE PITTSBURGH SUPERSITE: RSMS III AND FILTER-BASED POSITIVE MATRIX FACTORIZATION**, *NATALIE PEKNEY, U.S. Department of Energy National Energy Technology*

Laboratory, Pittsburgh, PA; Cliff Davidson, Carnegie Mellon University, Pittsburgh, PA; Keith Bein and Anthony Wexler, University of California, Davis, CA; Murray Johnston, University of Delaware, Newark, DE

7PF-26 **IDENTIFYING SOURCES OF PM_{2.5} IN PITTSBURGH USING PMF AND PSCF**, NATALIE PEKNEY, U.S. Department of Energy National Energy Technology Laboratory, Pittsburgh, PA; Cliff Davidson, Carnegie Mellon University, Pittsburgh, PA; Liming Zhou and Philip Hopke, Clarkson University, Potsdam, NY

7PF-27 **SOURCE IDENTIFICATION FOR FINE AEROSOLS IN THE MAMMOTH CAVE NATIONAL PARK**, WEIXIANG ZHAO, Philip K. Hopke, Department of Chemical Engineering, and Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY

7PF-28 **INVESTIGATION OF SOURCES FOR AMBIENT AEROSOLS IN INDIANAPOLIS, IN**, WEIXIANG ZHAO, Philip K. Hopke, Department of Chemical Engineering, and Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY

7PG Models and Modeling

3:00-3:50 Posters with even numbers.

3:50-4:40 Posters with odd numbers.

Georgia Hall

7PG-29 **MODELING THE FORMATION OF PHOTOCHEMICAL AIR POLLUTION IN SÃO PAULO, BRAZIL: A CASE STUDY**, Odón R. Sánchez-Ccoyllo, Maria de Fátima Andrade, Leila D. Martins, RitaYuri Ynoue, Department of Atmospheric Sciences, Institute of Astronomy Geophysics and Atmospheric Sciences, University of Sao Paulo - Brazil

- 7PG-30 **A PARTICULATE MATTER AIR QUALITY FORECAST MODELING SYSTEM FOR THE NORTHEAST U.S. – COMPARISONS WITH PMTACS-NY FIELD MEASUREMENT CAMPAIGNS AND PM NETWORK DATA**, *C. CAI, C. Hogrefe and K. L. Demerjian. Atmospheric Sciences Research Center, University at Albany, Albany, NY*
- 7PG-31 **THE DYNAMICS OF MULTICOMPONENT ATMOSPHERIC NANOPARTICLES**, *JAEGUN JUNG, Peter Adams, Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA*
- 7PG-32 **COMPARISON OF OBSERVED AND CMAQ SIMULATED ATMOSPHERIC CONSTITUENTS IN THE SOUTHEAST IN THE PROJECTED FACTOR SPACE**, *Wei Liu, Yuhang Wang, Amit Murmur, Armistead Russell and Eric S. Edgerton*
- 7PG-33 **PROTECTION OF BUILDINGS AGAINST ACCIDENTAL OR DELIBERATE RELEASES OF HAZARDOUS BIOLOGICAL AND RADIOLOGICAL PARTICULATES**, *D. NORRIS, S.M. Ghiaasiaan, S.M. Jeter, Georgia Institute of Technology, Atlanta, GA*
- 7PG-34 **TRANSPORT DISPERSION AND DEPOSITION OF ONE MINUTE PARTICLE SIZE DISTRIBUTIONS BETWEEN 5 AND 560 NANOMETERS NEAR A MAJOR INTERNATIONAL TRADE BRIDGE CONNECTING THE U.S. AND CANADA: A MODEL COMPARISON WITH EXPERIMENTAL RESULTS**, *PETER JAQUES, Kambiz Nazridoust, Goodarz Ahmadi, Philip Hopke, Andrea Ferro and Timothy McAuley, Clarkson University, Potsdam, NY*
- 7PG-35 **A SECOND-GENERATION MODEL OF THE FORMATION OF SECONDARY ORGANIC AEROSOL IN THE ATMOSPHERE**, *TIMOTHY LANE, Spyros Pandis, Neil*

Donahue, Carnegie Mellon University, Pittsburgh, PA

7PG-36

SIMULATION OF THE ATMOSPHERIC AEROSOL SIZE/COMPOSITION DISTRIBUTION IN A THREE-DIMENSIONAL CHEMICAL TRANSPORT MODEL, JOHN P.

DAWSON, Timothy M. Gaydos, Kathleen M. Fahey, Bonyoung Koo, Spyros N. Pandis, Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA

7PG-37

HOX BEHAVIOR IN THE WINTER URBAN ATMOSPHERE IN NEW YORK CITY, XINRONG REN, Jingqiu

Mao, Michael Mitchell, Robert Leshner, James Simpas, Andrew Metcalf, William Brune, Department of Meteorology, Pennsylvania State University, University Park, PA; James Schwab, Kenneth Demerjian, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; Yi He, Xianliang Zhou, and Jian Hou Department of Environmental Health and Toxicology, University at Albany, State University of New York, Albany, NY; *Also at Wadsworth Center, New York State Department of Health, Albany, NY*

**4:40 PM - 6:20 PM
Session #8, Platform**

8A Policy-Relevant Findings at Global, National, and Local Scales

Chairs: John Jansen, Susan Wierman
Capital Ballroom Center

4:40

8A-1

TOWARDS A GLOBAL AEROSOL PHENOMENOLOGY: CONTRASTING THE PHYSICAL AND CHEMICAL CHARACTERISTICS OF AEROSOLS GLOBALLY, Jean-Philippe Putaud, JULIAN WILSON, Institute for Environment and Sustainability, Joint Research Centre, Ispra, Italy; Urs Baltensperger, Paul Scherrer Institute, Villigen, Switzerland;

Wolfram Birmili, Institute for Tropospheric Research, Leipzig, Germany; Mario Cerquiera, University of Aviero, Portugal; Byoung-Cheol Choi, Korean Meterological Agency, Chung-Nam, Korea; Sarah Guibert, Michael Schultz, Laboratoire des Sciences du Climat et de l'Environnement, Gif-sur-Yvette, France; S. Gerard Jennings, National University of Ireland, Galway, Ireland; Anne Kasper-Geibl, Technical University of Vienna, Austria; Carrie Lillyman, Atmospheric Environment Service, Ontario, Canada; Willy Maenhaut, University of Ghent, Belgium; Bill Malm, Colorado State University, Fort Collins, CO; Noer Nurhyati, Meteorological and Geophysical Agency, Jakarta, Indonesia; Xavier Querol, University of Barcelona, Spain; Patricia Quinn, NOAA Pacific Marine Environmental Laboratory, Seattle, WA; Sjaak Slanina, Peking University, Peking, China; Kjetil Toreseth, Norwegian Institute for Air Research, Kjeller, Norway

5:00	8A-2	<p>INCORPORATING HEALTH AND ENVIRONMENTAL BENEFITS INTO SELECTION OF COMPLIANCE STRATEGIES, LAURAIN CHESTNUT, David Mills, Stratus Consulting Inc., Boulder, CO</p>
5:20	8A-3	<p>HIGHLIGHTS AND LESSONS LEARNED: PM2.5 TECHNOLOGY ASSESSMENT AND CHARACTERIZATION STUDY IN NEW YORK – PMTACS-NY SUPERSITE PROGRAM, KENNETH L. DEMERJIAN, J. Schwab, G. Lala, O. Hogrefe, Y. Li, S. Weimer, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; D. Felton, G. Boynton, T. Lanni, B. Frank Division of Air Resources, NYS Department of Environmental Conservation, Albany, NY; F. Drewnick, Cloud Physics and Chemistry Department, Max-Planck-Institute for Chemistry,</p>

Mainz, Germany; D. Orsini, K. Rhoads, Chemistry Department, Siena College, Loudonville, NY; L. Husain, X. Zhou, V. Dutkiewicz, Department of Environmental Health and Toxicology, University at Albany/SUNY, Albany, NY; W. Brune, X. Ren, R. Leshner, Pennsylvania State University, College Station, PA; D. Worsnop, C. Kolb, M. Zahniser, J.T. Jayne, Aerodyne Research, Inc., Billerica, MA; P. Hopke, P. Venkatachari, Clarkson University, Potsdam, NY; H. Patashnick, J. Ambs, Rupprecht & Patashnick Co., Inc., East Greenbush, NY; J. Jimenez, Z.Qi, University of Colorado, Boulder, CO

- 5:40 8A-4 **CONCEPTUAL MODEL OF FINE PARTICULATE MATTER SOURCES, FORMATION AND ACCUMULATION IN SOUTHEAST TEXAS**, GARY McGAUGHEY, Matthew Russell, David Allen, University of Texas, Austin, TX; Donald Collins, Texas A&M University, College Station, TX; Matthew Fraser, Rice University, Houston, TX
- 6:00 8A-5 **RELATIONSHIPS BETWEEN OZONE AND PM DURING CRPAQS**, BETTY PUN, Christian Seigneur, Atmospheric and Environmental Research, Inc., San Ramon, CA

8B Local and Regional Aerosols and Their Influence on Rural and Urban PM Levels - I

Chairs: Karsten Baumann, Ann Marie Carlton
Capital Ballroom South

- 4:40 8B-1 **COMPARISON OF PM2.5 LEVELS AND CHEMICAL SPECIATION AT URBAN AND RURAL AREAS**, KAREN MAGLIANO, Kasia Turkiewicz, Theresa Najita, California Air Resources Board, Sacramento, CA
- 5:00 8B-2 **ELEMENTAL COMPOSITION OF PM2.5 AEROSOLS MEASURED DURING THE PM2.5 TECHNOLOGY ASSESSMENT AND CHARACTERIZATION STUDY-NEW YORK (PMTACS-NY)**, VINCENT A.

DUTKIEWICZ(1,2), Sumizah Qureshi (2), Kamal Swami(1), Karl X. Yang(1), Liaquat Husain(1,2), James J. Schwab(3), and Kenneth J. Demerjian (3); (1) Wadsworth Center, New York State Department of Health, Albany, NY (2) Department of Environmental Health and Toxicology, State University of New York at Albany, Albany, NY and (3) Atmospheric Sciences Research Center, State University of New York, Albany, NY

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| 5:20 | 8B-3 | <p>SPATIAL VARIATIONS OF PM2.5 IN THE PITTSBURGH REGION, <i>Wei Tang, U.S. Environmental Protection Agency, Research Triangle Park, NC; Timothy Raymond, Bucknell University, Lewistown, PA; Beth Wittig, City College of New York, New York, NY; CLIFF DAVIDSON, Spyros Pandis, Allen Robinson, Carnegie Mellon University, Pittsburgh, PA; Kevin Crist, Ohio University, Athens, OH</i></p> |
| 5:40 | 8B-4 | <p>SEASONAL VARIABILITY OF ORGANIC MASS CONTRIBUTION TO PM2.5 WITHIN METRO ATLANTA AND FURTHER DOWNWIND, <i>KARSTEN BAUMANN, Michael Chang, Ted Russell, Georgia Institute of Technology, Atlanta, GA; Eric S. Edgerton, Atmospheric Research & Analysis, Inc., Cary, NC</i></p> |
| 6:00 | 8B-5 | <p>SOURCE APPORTIONMENT OF PM2.5 IN THE SOUTHEASTERN UNITED STATES, <i>SANGIL LEE, Michael Chang, Karsten Baumann, Armistead Russell, Georgia Institute of Technology, Atlanta, GA</i></p> |

8C Ultrafine PM Methods

Chairs: Ann Dillner, Gilmore Sem
Capital Ballroom North

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| 4:40 | 8C-1 | <p>WATER-BASED CONDENSATION PARTICLE COUNTERS FOR ENVIRONMENTAL MONITORING OF ULTRAFINE PARTICLES, <i>WEI LIU, Brian L. Osmondson, Gilmore J. Sem, TSI Incorporated,</i></p> |
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- Shoreview, MN; Frederick R. Quant,
Quant Technologies LLC, Blaine, MN*
- 5:00 8C-2 **A FAST-RESPONSE,
NANOPARTICLE WATER-BASED
CONDENSATION COUNTER,**
*SUSANNE V. HERING and Mark R.
Stolzenburg, Aerosol Dynamics Inc.;
Frederick R. Quant, Patricia B.
Keady and Derek Oberreit, Quant
Technologies, LLC*
- 5:20 8C-3 **PERFORMANCE EVALUATION OF A
RECENTLY DEVELOPED WATER-
BASED CONDENSATION PARTICLE
COUNTER,** *SUBHASIS BISWAS,
Philip M. Fine, Michael D. Geller,
and Constantinos Sioutas,*
University of Southern California,
LA, CA; Susanne V. Hering, Aerosol
Dynamics, Inc., Berkley, CA*
- 5:40 8C-4 **THE SJAC-MOI FOR MEASURING
THE COMPOSITION OF UF-
AEROSOL,** *HARRY TEN BRINK, Rene
Otjes, Energy Research Centre of
the Netherlands (ECN), Petten, NL*
- 6:00 8C-5 **USE OF SPECIATION SAMPLERS
TO PROVIDE INFORMATION ON
INDIVIDUAL PARTICLE
CHARACTERISTICS,** *DONALD
MARTELLO, U.S. Department of
Energy, National Energy Technology
Laboratory, Pittsburgh, PA; Gary
Casuccio, Traci Lersch, Steve
Schlaegle, RJ Lee Group, Inc.,
Monroeville, PA*

7:00 PM - 10:00 PM
PM2.5 ORGANIC WORKING GROUP
Capital Ballroom South

Wednesday

8:00 AM - 5:30 PM
Exhibits Open
Georgia Hall

8:00 AM - 9:00 AM
Plenary Session
Capital Ballroom

8:00

**UNDERSTANDING THE
HEALTH EFFECTS OF PM: ARE
WE THERE YET?**, DANIEL
GREENBAUM, Health Effects
Institute, MA

**9:20 AM - 11:00 AM
Session #9, Platform**

9A Particle Mass Spectrometer Methods

Chairs: Murray Johnston, Douglas Worsnop
Capital Ballroom Center

9:20

9A-1

**AEROSOL MASS SPECTROMETRY:
AEROSOL CHEMICAL AND
MICROPHYSICAL PROPERTIES**,
DOUGLAS WORSNOP, John Jayne,
Manjula Canagaratna, Tim Onasch,
Megan Northway and Hacene
Boudries, Aerodyne Research,
Billerica, MA; J. Slowik, E. Spencer,
P. Davidovits, Department of
Chemistry, Boston College,
Chestnut Hill, MA; Q. Zhang, P.
DeCarlo and J.L. Jimenez,
Department of Chemistry and
Biochemistry, Boulder, CO; R.
Alfarra, J. Allan and H. Coe,
University of Manchester, UK

9:40

9A-2

**DEVELOPMENT OF A SONIC
VIRTUAL IMPACTOR**, PRACHI
MIDDHA, Department of
Mechanical Engineering, University
of Delaware, Newark, DE; Anthony
S. Wexler, Departments of
Mechanical and Aeronautical
Engineering, Civil and
Environmental Engineering, and
Land, Air and Water Resources,
University of California, Davis, CA

10:00

9A-3

**FIELD EVALUATION OF THE VACES
PARTICLE CONCENTRATOR
COUPLED TO THE RSMS-3
SINGLE PARTICLE MASS
SPECTROMETER**, YONGJING ZHAO,
Keith J. Bein, Anthony S. Wexler,
University of California, Davis, CA;
Chandan Misra, Philip M. Fine,
Costas Sioutas, University of
Southern California, Los Angeles, CA

Wednesday, February 9, 2005

- 10:20 9A-4 **SIZE-RESOLVED CHEMICAL CLASSIFICATION OF DUAL POLARITY SINGLE-ULTRAFINE-PARTICLE MASS SPECTROMETRY DATA COLLECTED DURING THE PITTSBURGH SUPERSITE EXPERIMENT**, *KEITH J. BEIN, Department of Land, Air and Water Resources, Yongjing Zhao, Department of Mechanical and Aeronautical Engineering, Anthony S. Wexler, Departments of Mechanical and Aeronautical Engineering, Civil and Environmental Engineering, and Land, Air and Water Resources, University of California, Davis, CA; Murray V. Johnston, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE*
- 10:40 9A-5 **SIZE AND TIME RESOLVED FINE AND ULTRAFINE SINGLE PARTICLE COMPOSITION IN BALTIMORE, MARYLAND**, *MURRAY JOHNSTON, Michael Tolocka, Derek Lake, University of Delaware, Newark, DE; Anthony Wexler, University of California, Davis*

9B Local and Regional Aerosols and Their Influence on Rural and Urban PM Levels - II

Chairs: Eric Edgerton, Kevin Black
Capital Ballroom South

- 9:20 9B-1 **LOCAL AND REGIONAL SECONDARY ORGANIC AEROSOL FORMATION: INSIGHTS FROM A YEAR AT PITTSBURGH AND COMPARISON WITH LOS ANGELES AND ATLANTA**, *ANDREA POLIDORI, Barabara Turpin, Ho Jin Lim, Rutgers University, New Brunswick, NJ; Ramachandran Subramanian, Allen Robinson, Spyros Pandis, and Juan C. Cabada, Carnegie Mellon University, Pittsburgh, PA*
- 9:40 9B-2 **CHARACTERIZATION AND COMPARISON OF URBAN AND RURAL PARTICULATE MATTER ON A MEDITERRANEAN ISLAND,**

AYNUL BARI, Guenter Baumbach, Leire Sarachaga-Ruiz, Silke Drautz, Department of Air Quality Control, Institute of Process Engineering and Power Plant Technology, University of Stuttgart, Germany; Savvas Kleanthous, Ministry of Labour and Social Insurance, Nicosia, Cyprus

- 10:00 9B-3 **PM2.5 EPISODES USING SEMI-CONTINUOUS INSTRUMENTS AT THE BALTIMORE SUPERSITE AT PONCA STREET**, *Seung Shik Park, David Harrison, Narayanan P. Nair, JOHN M. ONDOV, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD; Jan Kleissl, Vijayant Kumar, Department of Geography and Environmental Engineering, The Johns Hopkins University, Baltimore, MD*
- 10:20 9B-4 **INFLUENCE OF URBAN EMISSIONS ON RURAL GAS AND PM CONCENTRATIONS**, *ERIC S. EDGERTON, Atmospheric Research & Analysis, Inc., Cary, NC; Benjamin E. Hartzell Atmospheric Research & Analysis, Inc., Plano, TX; John J. Jansen Southern Co., Birmingham, AL; Callie J. Waid Atmospheric Research & Analysis, Inc., Plano, TX*
- 10:40 9B-5 **AIR QUALITY MONITORING STRATEGY IN DENMARK**, *FINN PALMGREN & Peter Wåhlin, National Environmental Research Institute, DK-4000 Roskilde, Denmark*

Wednesday, February 9, 2005

9C Ultrafine PM - Spatial and Temporal Variability

Chairs: Constantinos Sioutas, Tony Wexler
Capital Ballroom North

- 9:20 9C-1 **SEASONAL AND SPATIAL TRENDS IN PARTICLE NUMBER CONCENTRATIONS AND SIZE DISTRIBUTIONS AT THE CHILDREN'S HEALTH STUDY SITES IN SOUTHERN CALIFORNIA**, *MANISHA SINGH, Harish C. Phuleria, Constantinos Sioutas, University of Southern California,*

*Los Angeles, CA; Kenneth Bowers,
California Air Resources Board,
Sacramento, CA*

9:40	9C-2	IN-CABIN COMMUTER EXPOSURE TO ULTRAFINE AND NANOPARTICLES IN LOS ANGELES ROADS AND FREEWAYS: MEASUREMENTS WITH A NEW WATER-BASED CONDENSATION PARTICLE COUNTER, ANTONIO H. MIGUEL, Arantazu Eiguren-Fernandez, Yifang Zhu, Southern California Environmental Health Sciences Center and Southern California Particle Center and Supersite, Institute of the Environment, University of California, Los Angeles, CA
10:00	9C-3	VOLATILITY AND CHEMICAL CHARACTERISTICS OF PM IN THE PROXIMITY OF A LIGHT-DUTY VEHICLE FREEWAY, THOMAS KUHN, Southern California Particle Center & Supersite, University of California, Los Angeles, CA; Subhasis Biswas, Philip M. Fine, Michael Geller, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA
10:20	9C-4	DIURNAL VARIATION OF SUBMICRON PM SIZE DISTRIBUTIONS AND GASEOUS POLLUTANT CONCENTRATIONS DURING A YEAR 2004 IN PRAGUE, POLLUTION SOURCE ESTIMATION, JAN HOVORKA, Martin Branis, Institute for Environmental Studies, Charles University in Prague, Benatska 2, 128 01 Prague 2, Czech Republic; Jaroslav Schwarz, Institute of Chemical Process Fundamentals, Academy of Sciences of the Czech Republic, Rozvojova 135, 165 02 Prague 6 - Suchdol, Czech Republic
10:40	9C-5	INSIGHTS INTO THE CHEMISTRY OF NEW PARTICLE FORMATION AND GROWTH EVENTS IN

**PITTSBURGH BASED ON
AEROSOL MASS SPECTROMETRY,**
*QI ZHANG, Jose-Luis Jimenez,
CIRES, University of Colorado,
Boulder, CO; Charles Stanier,
University of Iowa, IA; Manjula
Canagaratna, John Jayne, Douglas
Worsnop, Aerodyne Research Inc.,
MA; Spyros Pandis, Carnegie
Mellon University, Pittsburgh, PA*

**11:20 AM - 1:00 PM
Session #10, Platform**

**10A Particle Mass Spectrometer Methods - Organic
Carbon**

Chairs: Qi Zhang, Michael Tolocka
Capital Ballroom Center

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| 11:20 | 10A-1 | TIME RESOLVED ORGANIC
MOLECULAR ANALYSIS BY
PHOTOIONIZATION AEROSOL
MASS SPECTROMETRY (PIAMS),
<i>MURRAY JOHNSTON, Michael
Tolocka, Matthew Dreyfus, Berk
Oktem, University of Delaware,
Newark, DE</i> |
| 11:40 | 10A-2 | PARTICLE SAMPLER FOR ON-LINE
CHEMICAL AND PHYSICAL
CHARACTERIZATION OF
INDIVIDUAL ORGANICS, <i>HACENE
BOUDRIES, Kenneth A. Smith,
Massachusetts Institute of
Technology, Cambridge, MA; John
T. Jayne, Douglas R. Worsnop,
Aerodyne Research, Inc., Billerica, MA</i> |
| 12:00 | 10A-3 | USING AEROSOL CIMS TO
INVESTIGATE THE ROLE OF
PARTICLE SUBSTRATE EFFECTS
IN DETERMINING THE
REACTIVITY OF ORGANIC
AEROSOLS, <i>John D. Hearn,
Amanda J. Lovett, GEOFFREY D.
SMITH, University of Georgia,
Athens, GA</i> |
| 12:20 | 10A-4 | CHARACTERISTICS OF PRIMARY
AND OXYGENATED ORGANIC
AEROSOLS IN MULTIPLE URBAN,
RURAL, AND REMOTE
ATMOSPHERES, <i>QI ZHANG, Jose-
Luis Jimenez, Katja Dzepina,
Edward Dunlea, Alex Huffman,</i> |

Wednesday, February 9, 2005

CIRES, University of Colorado, Boulder, CO; M. Rami Alfarra, James Allan, Paul Williams, Hugh Coe, Keith Bower, The University of Manchester, Manchester, UK; Douglas Worsnop, Manjula Canagaratna, Aerodyne Research Inc., MA; Frank Drewnick, Max Planck Institute, Mainz, Germany; Silke Weimer, Ken Demerjian, SUNY-Albany, NY; Alice Delia, Scripps Institution of Oceanography, CA

12:40 10A-5 **DEVELOPMENT AND APPLICATION OF A MASS SPECTRA-VOLATILITY DATABASE OF COMBUSTION AND SECONDARY ORGANIC AEROSOL SOURCES FOR THE AERODYNE AEROSOL MASS SPECTROMETER,**
Brenda Klingbeil, Sulekha Chattopadhyay, PAUL ZIEMANN, University of California, Riverside, CA; Alex Huffmann, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Douglas Worsnop, John Jayne, Aerodyne Research, Billerica, MA

10B Estimating Uncertainties in Measurements and Modeling

Chairs: Armistead (Ted) Russell, Christopher Rabideau
Capital Ballroom South

11:20 10B-1 **ESTIMATION OF UNCERTAINTIES IN AEROSOL SIMULATIONS DUE TO EMISSION INVENTORY UNCERTAINTY USING CMAQ-DDM,**
Di Tian, Yongtao Hu and Armistead G. Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA

11:40 10B-2 **IMPLEMENTATION OF THE DIRECT DECOUPLED METHOD (DDM) INTO THE CMAQ MODEL FOR AEROSOL SPECIES,**
SERGEY NAPELENOK, Dan Cohan, Ted Russell, Yongtao Hu, Georgia Institute of Technology, Atlanta, GA

12:00 10B-3 **PREDICTED RESPONSES OF INORGANIC PM TO EMISSION**

CHANGES FOR A CHEMICAL TRANSPORT AND AN OBSERVATION-BASED MODEL, SATOSHI TAKAHAMA, Robert W. Pinder, Cliff I. Davidson, Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA

12:20 10B-4 **UNCERTAINTY ANALYSIS OF CHEMICAL MASS BALANCE RECEPTOR MODEL,** SANGIL LEE, Armistead Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA

12:40 10B-5 **UNCERTAINTY IN THE HEALTH DAMAGES FROM SO₂,** VLADIMIR HLASNY

10C Model Performance Evaluation - I

Chairs: Betty Pun
Capital Ballroom North

11:20 10C-1 **INVESTIGATING THE RELATIVE VALUE OF SPATIAL AND TEMPORAL DATA COLLECTION FOR EVALUATING AIR QUALITY MODELS USING THE GAS RATIO AS AN INDICATOR OF THE INORGANIC SYSTEM,** ROBIN L. DENNIS and Prakash V. Bhave, Atmospheric Sciences Modeling Division, Air Resources Laboratory, National Oceanic and Atmospheric Administration, Research Triangle Park, NC

11:40 10C-2 **SPATIAL INHOMOGENEITIES IN PM 2.5 CONCENTRATIONS AND THEIR EFFECT ON THE PERFORMANCE OF THE AIR QUALITY MODEL,** SUN-KYOUNG PARK, Charles Evan Cobb, Armistead G. Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA

12:00 10C-3 **EVALUATION OF A MODEL FOR PREDICTING FINE PARTICLE CONCENTRATIONS,** ARI KARPPINEN, Mari Kauhaniemi, Jari Härkönen, Jaakko Kukkonen, Finnish Meteorological Institute,

Wednesday, February 9, 2005

Helsinki, Finland; Anu Kousa, Tarja Koskentalo, Helsinki Metropolitan Area Council, Helsinki, Finland

12:20 10C-4 **ANNUAL MODELING OF INTERCONTINENTAL TRANSPORT OF PARTICULATE MATTER AND OZONE**, CAREY JANG, U.S. Environmental Protection Agency

12:40 10C-5 **UNCERTAINTIES IN POLLUTANT TRANSPORT AND THEIR INFLUENCES ON AIR QUALITY MODEL PERFORMANCE**, Shao-Hang Chu, U.S. Environmental Protection Agency, Research Triangle Park, NC

**2:20 PM - 3:40 PM
Session #11, Platform**

11A Identifying the Impact of Fires - I

Chairs: Michael Hays, William Vizuete
Capital Ballroom Center

2:20 11A-1 **USE OF FIELD DATA TO ESTIMATE EMISSION RATIOS OF PARTICULATE AND GASEOUS SULFUR, NITROGEN AND CARBON FROM BIOMASS BURNING IN THE SOUTHEASTERN U.S.**, ERIC S. EDGERTON Atmospheric Research & Analysis, Inc., Cary, NC; Benjamin E. Hartsell Atmospheric Research & Analysis, Inc., Plano, TX; John J. Jansen Southern Co., Birmingham, AL

2:40 11A-2 **CASE STUDY OF LOCAL ACCUMULATION OF PM_{2.5} FROM PRESCRIBED BURNING WITH CONSEQUENCES FOR ATTAINMENT**, KARSTEN BAUMANN, Alper Unal, Sangil Lee, Mei Zheng, Georgia Institute of Technology, Atlanta, GA

3:00 11A-3 **ORGANIC COMPOUND CHARACTERIZATION OF EMISSIONS FROM PRESCRIBED BURNS, WILDLAND FUELS, AND RESIDENTIAL WOOD COMBUSTION**, LYNN R. RINEHART, Barbara Zielinska, Desert Research Institute, Reno, NV

11B Emissions Inventory Verification

Chairs: Tami Bond, David Parrish

Capital Ballroom South

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| 2:20 | 11B-1 | INVERSE MODEL ESTIMATION OF SEASONAL NH₃ EMISSIONS , ALICE GILLILAND, Robin Dennis, Shawn Roselle, National Oceanic and Atmospheric Administration, Air Resources Laboratory, Atmospheric Sciences Modeling Division (on assignment to National Exposure Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC); Rob Pinder Department of Engineering and Public Policy, Department of Civil and Environmental Engineering, Carnegie Mellon University, Pittsburgh, PA |
| 2:40 | 11B-2 | IMPROVEMENTS TO REGIONAL AIR QUALITY MODELING FROM RECENT ADVANCES IN AMMONIA EMISSION INVENTORY DEVELOPMENT , ROBERT W. PINDER, Peter J. Adams, Carnegie Mellon University, Pittsburgh, PA; Alice B. Gilliland, Atmospheric Sciences Modeling Division, Air Resources Laboratory, NOAA, Research Triangle Park, NC |
| 3:00 | 11B-3 | EVALUATION OF THE PRIMARY ORGANIC CARBON EMISSION INVENTORY FOR THE EASTERN UNITED STATES , Timothy Lane, Robert Pinder, Manish Shrivastava, Spyros N. Pandis, ALLEN L. ROBINSON, Carnegie Mellon University, Pittsburgh, PA |
| 3:20 | 11B-4 | STATIONARY SOURCES OF AIRBORNE LEAD: A COMPARISON OF EMISSIONS DATA FOR SOUTHERN CALIFORNIA , Allison Harris, Brian Fifarek, CLIFF DAVIDSON, Carnegie Mellon University, Pittsburgh, PA; Rebecca Lankey, TSWG, Alexandria, VA |

Wednesday, February 9, 2005

11C Model Performance Evaluation - II

Chairs: Mei Zheng, Robin Dennis

Capital Ballroom North

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| 2:20 | 11C-1 | PREDICTING SECONDARY ORGANIC AEROSOL FORMATIONS RATES IN SOUTHEAST TEXAS,
<i>Matthew Russell and DAVID ALLEN, University of Texas, Austin, TX</i> |
| 2:40 | 11C-2 | THE NEXT GENERATION SECONDARY ORGANIC AEROSOL MODELS: DYNAMICS OF SOA IN SOUTHERN CALIFORNIA, <i>SATISH VUTUKURU, Donald Dabdub, Department of Mechanical Engineering, University of California, Irvine, Irvine, CA; Robert Griffin CCRC – EOS, University of New Hampshire, Durham, NH</i> |
| 3:00 | 11C-3 | SENSITIVITY ASSESSMENT OF PARTICULATE MATTER (PM 2.5) MODEL FOR THE EASTERN UNITED STATES, <i>JIA-YEONG KU, Christian Hogrefe, Gopal Sistla, Kevin Civerolo, Winston Hao, New York State Department of Environmental Conservation, Albany, NY</i> |
| 3:20 | 11C-4 | USING SULFUR PREDICTIONS FROM A GLOBAL-SCALE TRANSPORT MODEL TO SPECIFY BOUNDARY CONDITIONS IN A REGIONAL-SCALE AIR QUALITY MODEL, <i>MICHAEL G. BARNA, National Park Service, Fort Collins, CO; Eladio M. Knipping, Electrical Power Research Institute, Palo Alto, CA</i> |

3:40 PM - 5:20 PM

Session #12, Posters and Exhibits

12PA Measurements and Methods - II

3:40-4:25 Posters with even numbers.

4:25-5:20 Posters with odd numbers.

Georgia Hall

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| 12PA-1 | THE INFLUENCE OF MINERAL DUST COMPONENTS ON THERMAL/OPTICAL ANALYSIS FOR CARBONACEOUS MATERIAL,
<i>GUADALUPE PAREDES-MIRANDA,</i> |
|--------|---|

L.-W Antony Chen, John G. Watson, Judith C. Chow, Desert Research Institute, DRI/DAS, Reno, NV; K. Fung, AtmAA, Inc., Calabasas, CA

12PA-2 **PARTICULATE CARBON MEASUREMENTS IN CALIFORNIA'S SAN JOAQUIN VALLEY**, *JUDITH C. CHOW, John G. Watson, Douglas H. Lowenthal, Desert Research Institute, Reno, NV; Karen Magliano, California Air Resources Board, Sacramento, CA*

12PA-3 **COMPARISON OF REAL TIME METHODS FOR MEASUREMENT OF BLACK CARBON**, *W. Patrick Arnott, Judith Chow, Dana Trimble, John Watson, Desert Research Institute, Reno NV*

12PA-4 **SEASONAL CORRELATIONS BETWEEN OF NIOSH AND IMPROVE CARBON MEASUREMENTS**, *MIN-SUK BAE, James J. Schauer, Civil and Environmental Engineering, University of Wisconsin-Madison, Madison, WI; Jay R. Turner, Chemical Engineering, Washington University, St. Louis, MO; Judith C. Chow, Desert Research Institute, Reno, NV; Philip K. Hopke, Chemical Engineering, Clarkson University, Potsdam, NY*

12PA-5 **ANALYSIS OF ATMOSPHERIC RELEVANT SUBSTITUTED PHENOLS IN AQUEOUS SOLUTION USING HPLC-APCI-MS**, *DIRK HOFFMANN, Paolo Barzaghi, Hartmut Herrmann, Leibniz-Institut für Troposphärenforschung, Leipzig, Germany*

12PA-6 **A NEW INSTRUMENT FOR THE HOURLY ORGANIC SPECIATION OF ATMOSPHERIC AEROSOLS**, *Brent J. Williams, Allen H. Goldstein, University of California, Berkeley, CA; Nathan M. Kreisberg and SUSANNE V. HERING, Aerosol Dynamics Inc., Berkeley, CA*

12PA-7 **CHARACTERIZATION OF PCBS IN GAS AND PARTICULATE PHASE IN**

Wednesday, February 9, 2005

- AIR SAMPLES AT THE METROPOLITAN AREA OF SANTIAGO, CHILE, FRANCISCO**
CERCEDA Universidad Santa María; Avenida España 1680; Valparaíso; V Región; Chile
- 12PA-8 **AN ION CHROMATOGRAPHIC METHOD FOR ANALYSIS OF WATER-SOLUBLE SHORT-CHAIN ORGANIC ACIDS IN AMBIENT PARTICULATE MATTER, RAMYA SUNDER RAMAN and Philip K. Hopke, Department of Chemical Engineering and Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY**
- 12PA-9 **LIGHT SCATTERING BY FINE PARTICLES DURING PAQS: MEASUREMENTS AND MODELING, Juan C. Cabada, Andrey Khlystov, Ann B. Wittig, SPYROS N. PANDIS, Carnegie Mellon University, Pittsburgh, PA; Christodoulos Pilinis, University of Aegean, Greece**
- 12PA-10 **TOWARDS AN INTEGRATED SINGLE SCATTERING ALBEDO INSTRUMENT: DEVELOPMENT OF THE PHOTO-ACOUSTIC ABSORPTION COMPONENT, Daniel Lack, Anders Pettersson, NOAA Aeronomy Laboratory, Boulder, CO; Cooperative Institute for Research in the Environmental Sciences, University of Colorado, Boulder, CO; Edward Lovejoy, A.R. Ravishankara, NOAA Aeronomy Laboratory, Boulder, CO**
- 12PA-11 **DECONVOLUTION AND QUANTIFICATION OF PRIMARY AND OXYGENATED ORGANIC AEROSOLS BASED ON AEROSOL MASS SPECTROMETRY, QI ZHANG, Jose-Luis Jimenez, CIRES, University of Colorado, Boulder, CO; M. Rami Alfarra, James Allan, Hugh Coe, School of Earth, Atmospheric and Environmental Science, The University of Manchester,**

Manchester, UK; Douglas R. Worsnop, Manjula Canagaratna, Aerodyne Research Inc, Billerica, MA

- 12PA-12 **THE USE OF DATA MINING TOOLS FOR THE ANALYSIS OF SINGLE PARTICLE MASS SPEC DATA,**
JAMES SCHAUER, University of Wisconsin, Madison, WI

12PD Measurements and Characterization - I

3:40-4:30 Posters with even numbers.

4:30-5:20 Posters with odd numbers.

Georgia Hall

- 12PD-13 **AMBIENT AEROSOL SIZE DISTRIBUTIONS AND NUMBER CONCENTRATIONS MEASURED DURING THE PITTSBURGH AIR QUALITY STUDY,** *CHARLES STANIER, University of Iowa, Iowa City, IA; Andrey Khlystov, Duke University, Durham, NC; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA and University of Patras, Patra, Greece*
- 12PD-14 **A METHOD FOR THE IN SITU MEASUREMENT OF FINE AEROSOL WATER CONTENT OF AMBIENT AEROSOLS: THE DRY-AMBIENT AEROSOL SIZE SPECTROMETER (DAASS),** *CHARLES STANIER, University of Iowa, Iowa City, IA; Andrey Khlystov, Duke University, Durham, NC; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA and University of Patras, Patra, Greece*
- 12PD-15 **PENETRATION OF THE AMBIENT ULTRAFINE AEROSOL INTO A CARDIAC REHABILITATION FACILITY IN ROCHESTER, NY,** *DAVID OGULEI, Philip Hopke, Clarkson University, Potsdam, NY; David Chalupa, Mark Utell, University of Rochester Medical Center*
- 12PD-16 **PARTICLE DENSITY AND SHAPE FACTORS ESTIMATED FROM MERGING AERODYNAMIC AND MOBILITY SIZE DISTRIBUTIONS,** *ANDREY KHLYSTOV, Duke*

Wednesday, February 9, 2005

University, Durham, NC; Charles Stanier, University of Iowa, Iowa City, IA; Peter DeCarlo, Qi Zhang, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Manjula Caragaratna, Doug Worsnop, Aerodyne Research, Billerica, MA; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA and University of Patras, Patra, Greece

12PD-17 **ACCESSING EPA PM SUPERSITES DATA IN THE NARSTO DATA ARCHIVE**, LES A. HOOK, Sigurd W. Christensen, Tammy W. Beaty, Oak Ridge National Laboratory, Oak Ridge, TN; Kathleen L. Morris, NASA Langley Research Center, Hampton, VA

12PD-18 **SPATIAL ANALYSIS USING HIGH TIME RESOLUTION BC (AETHALOMETER) AND PM2.5 (THERMO ELECTRON SHARP MONITOR) MEASUREMENTS AT STILES STREET IN NEW HAVEN, CT.**, PETER BABICH, Randall Semagin, Michael Geigert, CT Department of Environmental Conservation; Kevin Goohs, Thermo Electron

12PD-19 **SYNOPTIC SCALE WEATHER PATTERNS IMPACTING THE ST. LOUIS AEROSOL**, DAVID HEINZERLING, University of Texas, Austin, TX; Neil Deardorff, Jay Turner, Washington University, St. Louis, MO

12PD-20 **CHARACTERIZATION OF POSITIONAL ISOMERS OF NITRO-PAHS AND OTHER SELECTED SPECIATED ORGANIC COMPOUNDS ASSOCIATED WITH PARTICULATE MATTER. THEIR RELATIONSHIP WITH REGULATED POLLUTANTS**, PATRIZIA DI FILIPPO, Federica Incoronato, Donatella Pomata, Carmela Riccardi, Sergio Spicaglia, National Institute of Occupational Safety and Prevention, Rome, Italy. Angelo Cecinato IIA-CNR, Monterotondo Scalo, Rome, Italy

- 12PD-21 **AMBIENT MERCURY MONITORING IN THE GREATER PITTSBURGH REGION**, DONALD MARTELLO, Natalie J. Pekney, Paul C. Rohar, U.S. Department of Energy National Energy Technology Laboratory, Pittsburgh, PA; Andrea Pavlick, Thiel College, Greenville, PA
- 12PD-22 **FOURIER TRANSFORM INFRARED (FTIR) SPECTROSCOPY OF SECONDARY ORGANIC AEROSOLS WITHIN AND ABOVE A FOREST CANOPY**, WILLIAM VIZUETE
- 12PD-23 **CHARACTERIZATION OF PAHS IN GAS AND PARTICULATE PHASE IN AIR SAMPLES AT THE METROPOLITAN AREA OF SANTIAGO, CHILE 2002**, FRANCISCO CERECEDA, Universidad Técnica Federico Santa María; Avenida España 1680; Valparaíso; V Región; Chile
- 12PD-24 **BLACK CARBON MEASUREMENTS IN CHICAGO, ILLINOIS**, NANCY A. MARLEY, Jeffrey S. Gaffney, Robert White, Bradley Grams, and John E. Frederick, The University of Chicago-Argonne National Laboratory Center for Environmental Science
- 12PD-25 **PARTICULATE ORGANIC MATTER IN THE ATMOSPHERE OF ROME, ITALY: ITS COMPOSITION AT THE REFERENCE BACKGROUND URBAN SITE**, Catia Balducci, Alessandro Brachetti, ANGELO CECINATO, Donatella Pomata, Italian National Research Council, IIA, Monterotondo Stazione, Rome, Italy; Patrizia Di Filippo, National Institute of Occupational Safety and Prevention, DIPIA, Monteporzio Catone, Rome, Italy
- 12PD-26 **FINE PARTICULATE ABRASION PRODUCTS FROM LEAF SURFACES OF URBAN PLANTS: COMPARISON BETWEEN LOS ANGELES AND PITTSBURGH**, ORHAN SEVIMOGLU, Wolfgang F. Rogge, Anna Bernardo-Bricker,

Wednesday, February 9, 2005

*Florida International University,
Miami, FL; Allen Robinson, R.
Subramanian, Carnegie Mellon
University, Pittsburgh, PA*

- 12PD-27 **SOURCE PROFILES FOR ORGANIC
PM_{2.5} FOR DIESEL TRUCKS AND
GASOLINE VEHICLES
DETERMINED FOR THE SQUIRREL
HILL TUNNEL IN PITTSBURGH, PA,**
*ANNA BERNARDO-BRICKER,
Wolfgang F. Rogge, Orhan
Sevimoglu, Florida International
University, Miami, FL; Allen
Robinson, Eric Lipsky, Andrew
Grieshop, Carnegie Mellon
University, Pittsburgh, PA*

12PF Source Apportionment - II

3:40-4:30 Posters with even numbers.

4:30-5:20 Posters with odd numbers.

Georgia Hall

- 12PF-28 **IDENTIFICATION OF GASOLINE
AND DIESEL EMISSIONS IN THE
PM_{2.5} OF A MIDWESTERN U.S.
AREA,** *EUGENE KIM, Philip Hopke,
Clarkson University, Potsdam, NY*
- 12PF-29 **LABORATORY EXPERIMENTS
EXAMINING ULTRAFINE PARTICLE
PRODUCTION BY RE-BREATHING
OF ROAD DUST THROUGH A
DIESEL ENGINE,** *KEITH J. BEIN,
Department of Land, Air and Water
Resources, Yongjing Zhao,
Department of Mechanical and
Aeronautical Engineering, Anthony
S. Wexler, Departments of
Mechanical and Aeronautical
Engineering, Civil and
Environmental Engineering, and
Land, Air and Water Resources,
University of California, Davis, CA;
Eric Lipsky, Allen L. Robinson,
Department of Mechanical
Engineering, Carnegie Mellon
University, Pittsburgh, PA*
- 12PF-30 **ESTIMATING AND
UNDERSTANDING THE IMPACTS
OF FIRE ON REGIONAL
PARTICULATE MATTER
CONCENTRATIONS,** *CHRISTINE
WIEDINMYER, Angie Belote, Alex*

Guenther, National Center for Atmospheric Research, Boulder, CO; Brad Quayle, Remote Sensing Applications Center, U.S. Forest Service, Salt Lake City, NV; Chris Geron and Carol Shay, U.S. Environmental Protection Agency, Research Triangle Park, NC; Tanarit Sakulyanontvittaya, Kristina Wynne, and Jana Milford, University of Colorado, Boulder, CO

- 12PF-31 **AEROSOL COMPOSITION DISPARITY BETWEEN NORTHERN AND SOUTHERN STATES IN THE SOUTHEAST**, *Wei Liu, Yuhang Wang, Armistead Russell and Eric S. Edgerton*
- 12PF-32 **SOURCE APPORTIONMENT OF PM10 IN THE SAN JOAQUIN VALLEY THROUGH INDIVIDUAL PARTICLE ANALYSIS USING SCANNING ELECTRON MICROSCOPY TECHNIQUES**, *GARY CASUCCIO, Traci Lersch, RJ Lee Group, Inc.; Judith Chow, John Watson, Desert Research Institute, Reno, NV; Karen Magliano, California Air Resources Board, Sacramento, CA*
- 12PF-33 **CHARACTERIZATION OF SHORT-TERM PARTICLE EVENTS BY REAL-TIME SINGLE PARTICLE MASS SPECTROMETRY**, *MICHAEL TOLOCKA, Derek Lake, Murray Johnston, University of Delaware; John Ondov, University of Maryland; Anthony Wexler, University of California at Davis, Davis, CA*
- 12PF-34 **DETECTION OF A CONTAMINATING PLUME DURING A ROADWAY TUNNEL SOURCE SAMPLING EXPERIMENT USING A SINGLE PARTICLE MASS SPECTROMETER**, *KEITH J. BEIN, Department of Land, Air and Water Resources, Yongjing Zhao, Department of Mechanical and Aeronautical Engineering, Anthony S. Wexler, Departments of Mechanical and Aeronautical*

Wednesday, February 9, 2005

Engineering, Civil and Environmental Engineering, and Land, Air and Water Resources, University of California, Davis, CA; Eric Lipsky, Allen L. Robinson, Department of Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA; Murray V. Johnston, Department of Chemistry and Biochemistry, University of Delaware, Newark, DE

5:20 PM - 6:30 PM
Session #13, Platform

13A Identifying the Impact of Fires - II

Chairs: Allen Robinson, Thomas Cahill
Capital Ballroom Center

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| 5:20 | 13A-1 | WILDFIRES IN EASTERN TEXAS IN AUGUST AND SEPTEMBER 2000: EMISSIONS, AIRCRAFT MEASUREMENTS AND IMPACT ON CHEMICAL AND PHYSICAL PROCESSES , <i>Victoria Junquera, Yosuke Kimura, WILLIAM VIZUETE, David Allen, University of Texas, Austin, TX</i> |
| 5:40 | 13A-2 | THE EFFECT OF A WOOD SMOKE EPISODE IN TEXAS ON FINE PARTICULATE MATTER CONCENTRATIONS AND COMPOSITION , <i>BIRNUR BUZCU, Matthew P. Fraser, Zhiwei Yue, Rice University, Houston, TX</i> |
| 6:00 | 13A-3 | AIR QUALITY IMPACTS OF PRESCRIBED BURNING IN GEORGIA , <i>SANGIL LEE, Karsten Baumann, Mei Zheng, Armistead Russell, Georgia Institute of Technology, Atlanta, GA; James Schauer, Rebecca Sheesley, University of Wisconsin, Madison, WI; Luke Naeher, University of Georgia, Athens, GA; Mark Clements, Southeast Regional Office, Installation Management Agency, U.S. Army, Fort McPherson, GA</i> |

13B Ammonia Emissions Estimates

Chairs: Natalie Pekney, Richard Scheffe
Capital Ballroom South

- 5:20 13B-1 **AGRICULTURAL AMMONIA EMISSIONS AND AMMONIUM DEPOSITION ASSOCIATED WITH PRECIPITATION IN THE SOUTHEAST UNITED STATES**, *VINEY P. ANEJA, Dena R. Nelson, Paul A. Roelle, Department of Marine, Earth, and Atmospheric Sciences, North Carolina State University, Raleigh, NC; John T. Walker (now at U.S. Environmental Protection Agency, Research Triangle Park, NC); William Battye EC/R Inc., Chapel Hill, NC*
- 5:40 13B-2 **AMMONIA EMISSIONS FROM NORTH CAROLINA HOG FARMS: LAGOON AND SPRAY TECHNOLOGY AND POTENTIAL ENVIRONMENTALLY SUPERIOR TECHNOLOGIES**, *IAN C. RUMSEY, Viney P. Aneja and S. Pal Arya, Department of Marine, Earth, and Atmospheric Sciences, North Carolina State University, Raleigh, NC*
- 6:00 13B-3 **A PASSIVE FLUX DENUDER FOR EVALUATING FUGITIVE AMMONIA EMISSIONS**, *DENNIS R. FITZ, John T. Pisano, College of Engineering-Center for Environmental Research and Technology, University of California, Riverside, Riverside, CA*
- 6:20 13B-4 **ESTIMATING AMMONIA EMISSIONS FROM LAGOON-ATMOSPHERE INTERFACE BY COUPLED MASS TRANSFER AND CHEMICAL REACTION MODEL AND WATER9 MODEL**, *KANWARDEEP S. BAJWA, Viney P. Aneja, North Carolina State University, Raleigh, NC; Clark Allen, Research Triangle Institute International, Research Triangle Park, NC*

Wednesday, February 9, 2005

13C Model Performance Evaluation - III

Chairs: Spyros Pandis, Brooke Hemming

Capital Ballroom North

5:20	13C-1	A QUANTITATIVE COMPARISON STUDY OF THERMODYNAMIC EQUILIBRIUM MODELS FOR MULTIPHASE MULTICOMPONENT INORGANIC AEROSOLS: EQUOLV II AND ISORROPIA , <i>Bok Haeng Baek, Texas Agricultural Experiment Station, Amarillo, TX; Viney P. Aneja, North Carolina State University, Raleigh, NC</i>
5:40	13C-2	EVALUATION OF THE CMAQ-AIM MODEL AGAINST SIZE- AND CHEMICALLY-RESOLVED IMPACTOR DATA AT A COASTAL URBAN SITE , <i>CHRISTOPHER NOLTE, Prakash Bhawe, Robin Dennis, U.S. Environmental Protection Agency, Research Triangle Park, NC; K. Max Zhang, Anthony Wexler, University of California, Davis, CA; Melissa Evans, Marine Desalination Systems, L.L.C., St. Petersburg, FL; Noreen Poor, University of South Florida, Tampa, FL</i>
6:00	13C-3	INVESTIGATION OF THE UNCERTAINTY IN THE INORGANIC SYSTEM RESPONSE TO CHANGES IN EMISSIONS USING THE GAS RATIO AS AN INDICATOR , <i>ROBIN L. DENNIS and Prakash V. Bhawe, Atmospheric Sciences Modeling Division, Air Resources Laboratory, National Oceanic and Atmospheric Administration, Research Triangle Park, NC</i>
6:20	13C-4	AN EVALUATION OF A DETERMINISTIC MODELLING SYSTEM AND A NEURAL NETWORK MODEL FOR FORECASTING THE CONCENTRATIONS OF PM2.5 IN AN URBAN AREA , <i>MINNA RANTAMÄKI, Mari Kauhaniemi, Jaakko Kukkonen, Ari Karppinen, Finnish Meteorological Institute, Helsinki, Finland; Harri Niska, Mikko Kolehmainen, Department of</i>

*Environmental Informatics,
University of Kuopio, Kuopio,
Finland*

6:30 PM - 8:30 PM
Exhibitors' Reception and Poster Viewing
Georgia Hall

Thursday

8:00 AM - 5:00 PM
Exhibits Open
Georgia Hall

8:00 AM - 9:00 AM
Plenary Session
Capital Ballroom

8:00 **GLOBAL CLIMATE CHANGE:
AEROSOLS AND THEIR LINKAGES,**
*JEFFREY S. GAFFNEY, Argonne
National Laboratory, Argonne, IL*

9:20 AM - 10:20 AM
Session #14, Platform

14A Size Distribution Measurements and Assumptions

Chairs: Charlie Stanier, Dane Westerdahl
Capital Ballroom Center

9:20	14A-1	AEROSOL SIZE DISTRIBUTIONS: A COMPARISON OF MEASUREMENTS FROM SUMMER AND WINTER FIELD CAMPAIGNS IN QUEENS, NY, <i>G. Garland Lala, Olga Hogrefe, Kenneth Demerjian, Atmospheric Sciences Research Center, Albany, NY</i>
9:40	14A-2	SIZE DISTRIBUTION OF FINE PARTICULATE IN THE URBAN AREA OF MILAN (ITALY), <i>GIOVANNI LONATI, Michele Giugliano, Ruggero Tardivo, DIIAR Politecnico di Milano, Italia</i>
10:00	14A-3	SIZE DISTRIBUTION OF ATMOSPHERIC AEROSOLS IN KOLKATA, INDIA AND THE ASSESSMENT OF PULMONARY DEPOSITION OF PARTICLE MASS,

Thursday, February 10, 2005

*SUBHANKAR NAG, A. K. Gupta,
Indian Institute of Technology,
Kharagpur, Kharagpur-721302, WB,
India; U. K. Mukhopadhyay, West
Bengal Pollution Control Board, Salt
Lake City, Kolkata, WB, India*

14B Source Apportionment - IV

Chairs: Kenneth Demerjian, Kim Prather
Capital Ballroom South

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| 9:20 | 14B-1 | SOURCE APPORTIONMENT OF DETROIT FINE PARTICULATE MATTER USING POSITIVE MATRIX FACTORIZATION, AMY E. GILDEMEISTER, Philip K. Hopke
<i>Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY</i> |
| 9:40 | 14B-2 | APPORTIONMENT OF AMBIENT PRIMARY AND SECONDARY PM_{2.5} DURING A 2001 SUMMER INTENSIVE STUDY AT THE CMU SUPERSITE AND NETL PITTSBURGH SITE USING PMF₂, DELBERT J. EATOUGH, Nolan F. Mangelson, Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT; Richard R. Anderson, Donald V. Martello, National Energy Technology Laboratory, U.S. Department of Energy, Pittsburgh, PA; William K. Modey, Argonne National Laboratory, Argonne, IL |
| 10:00 | 14B-3 | SOURCE APPORTIONMENT OF FINE PARTICLES IN POTSDAM AND STOCKTON, NY, UTILIZING THE COMPOSITION OF WATER-SOLUBLE SHORT-CHAIN ORGANIC ACIDS, RAMYA SUNDER RAMAN, Philip K. Hopke, Department of Chemical Engineering and Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY |

14C Deposition

Chairs: Viney Aneja, Dev S. Niyogi
Capital Ballroom North

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| 9:20 | 14C-1 | ESTIMATING AMMONIA FLUX AND DRY DEPOSITION VELOCITY |
|------|-------|--|

OVER NATURAL SURFACES FROM AN INTENSIVELY MANAGED ANIMAL AGRICULTURAL FACILITY IN NORTH CAROLINA, Sharon B.

Phillips, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC; S. Pal Arya, VINEY P. ANEJA, North Carolina State University, Raleigh, NC

9:40 14C-2

AN ECOLOGICAL SCHEME FOR DEPOSITION VELOCITY ESTIMATES FOR REGIONAL AIR QUALITY MODELING, DEV NIYOGI, *North Carolina State University; Kiran Alapaty, University of North Carolina at Chapel Hill (currently with National Science Foundation); Sharon B. Phillips, OAQPS, US EPA; Viney P. Aneja, North Carolina State University*

10:00 14C-3

EFFECT OF VENTILATION SYSTEMS AND AIR CLEANERS ON DECAY RATES OF PARTICLES PRODUCED BY INDOOR SOURCES IN INDIAN URBAN HOUSEHOLD, *Suresh K. Varghese, Centre for Environmental Science and Engineering, IIT Bombay, Mumbai, India; Gangamma S., Chemical Engineering Department, NITK, Surathkal, India*

**10:40 AM - 12:00 PM
Session #15, Platform**

15A Influence of Fogs and Clouds on PM Concentrations

*Chairs: Pierre Herckes, Keith Bein
Capital Ballroom Center*

10:40 15A-1

POLLUTION PROCESSING BY RADIATION FOGS DURING THE CALIFORNIA REGIONAL PM10/PM2.5 AIR QUALITY STUDY (CRPAQS), JEFFREY L. COLLETT, *JR., Taehyoung Lee, Hui Chang, Colorado State University, Department of Atmospheric Science, Fort Collins CO; Pierre Herckes, Department of Chemistry, Arizona State University, Tempe, AZ*

Thursday, February 10, 2005

- 11:00 15A-2 **LINK BETWEEN ISOPRENE AND SOA: FATE OF PYRUVIC ACID IN DILUTE AQUEOUS SOLUTION,**
ANNMARIE CARLTON, Ho-Jin Lim, Barbara J. Turpin, Department of Environmental Sciences; Katye Altieri, Ronald Lauck, Sybil Seitzinger, Institute for Marine and Coastal Sciences, Rutgers University, New Brunswick, NJ
- 11:20 15A-3 **FOG PROCESSING OF ATMOSPHERIC ORGANIC MATTER,**
PIERRE HERCKES, Arizona State University, Tempe, AZ; Sarah Youngster, Taehyoung Lee, Jeffrey L. Collett, Jr., Colorado State University, Fort Collins, CO

15B Source Apportionment - V

Chairs: Shelly Eberly, Eugene Kim
Capital Ballroom South

- 10:40 15B-1 **ESTIMATING UNCERTAINTIES IN FACTOR ANALYTIC MODELS,**
SHELLY EBERLY, U.S. Environmental Protection Agency, Research Triangle Park, NC; Pentti Paatero, University of Helsinki, Finland; Philip K. Hopke, Clarkson University, Potsdam, NY
- 11:00 15B-2 **EXAMINING ROTATIONS FOR THE POSITIVE MATRIX FACTORIZATION MODEL USING EDGES AND TARGET SHAPES,**
MICHAEL RIZZO, U.S. Environmental Protection Agency Region 5; Peter Scheff, University of Illinois - Chicago, School of Public Health
- 11:20 15B-3 **QUANTITATIVE STUDY OF SENSITIVITIES AND UNCERTAINTIES OF MOLECULAR MARKER-BASED CMB MODELING,**
BO YAN, Mei Zheng, Armistead Russell, Georgia Institute of Technology, Atlanta, GA
- 11:40 15B-4 **UNDERSTANDING THE IMPACT OF "UNKNOWN" POINT SOURCES ON MOLECULAR MARKER CHEMICAL MASS BALANCE MODELS, MIN-**

SUK BAE, James J. Schauer, Civil and Environmental Engineering, University of Wisconsin-Madison, Madison, Wisconsin, Jay R. Turner, Chemical Engineering, Washington University, St. Louis, MO

15C PM Mass Closure and Assumptions

Chairs: Harry ten Brink, Olga Hogrefe
Capital Ballroom North

10:40	15C-1	<p>SEMI-VOLATILE SECONDARY AEROSOL IN URBAN ATMOSPHERES: MEETING A MEASUREMENT CHALLENGE, <i>William E. Wilson, Russell W. Long, U.S. Environmental Protection Agency, Research Triangle Park, NC; BRETT GROVER, Norman L. Eatough, Delbert J. Eatough, Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT; William K. Modey, Argonne National Laboratory, Argonne, IL</i></p>
11:00	15C-2	<p>MASS BALANCE CLOSURE AND THE FEDERAL REFERENCE METHOD FOR PM2.5 IN PITTSBURGH, PENNSYLVANIA, <i>ALLEN L. ROBINSON; Carnegie Mellon University, Pittsburgh, PA; Sarah L. Rees, Washington State Department of Ecology, Olympia, WA; Andrey Khlystov, Duke University, Durham, NC; Charles O. Stanier, University of Iowa, Iowa City, IA; Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA</i></p>
11:20	15C-3	<p>SHORT-TERM VARIABILITY OF FINE PARTICULATE-NO3-, NH4+ AND SO42- AT 2 SEARCH SITES, <i>ERIC S. EDGERTON Atmospheric Research & Analysis, Inc., Cary, NC; Benjamin E. Hartsell Atmospheric Research & Analysis, Inc., Plano, TX; John J. Jansen Southern Co, Birmingham, AL, Callie J. Waid, Atmospheric Research & Analysis, Inc., Plano, TX</i></p>
11:40	15C-4	<p>COMPARISON OF CONTINUOUS AND INTEGRATED AEROSOL COMPOSITION AT A</p>

Thursday, February 10, 2005

BACKGROUND SITE: IS HOURLY RECONSTRUCTION OF AEROSOL MASS NOW POSSIBLE?, *ROGER L. TANNER, Solomon T. Bairai, Myra L. Valente, Tennessee Valley Authority, Environmental Technologies, Muscle Shoals, AL*

1:20 PM - 2:40 PM
Session #16, Platform

16A PM Mass Measurements: PM Mass Methods

Chairs: Roger Tanner, James Homolya
Capital Ballroom Center

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|------|-------|---|
| 1:20 | 16A-1 | USE OF THE AERODYNAMIC PARTICLE SIZER TO MEASURE PM-COARSE , <i>THOMAS PETERS, The University of Iowa, Iowa City, IA; Robert Vanderpool, U.S. Environmental Protection Agency, Research Triangle Park, NC</i> |
| 1:40 | 16A-2 | A NEW HYBRID REAL-TIME PARTICULATE MASS MONITOR , <i>KEVIN J. GOOHS, Pedro Lilienfeld, Wayne Harmon, Thermo Electron Corporation, Franklin, MA; Juergen Wilbertz, Thermo Electron Corporation, Erlangen, Germany</i> |
| 2:00 | 16A-3 | A NEW METHOD FOR PARTICLE MASS CLASSIFICATION – THE REVERSE ELECTROSTATIC FIELD AEROSOL PARTICLE MASS (REFAPM) ANALYZER , <i>JASON S. OLFERT, Cambridge University Engineering Department, Cambridge, UK</i> |
| 2:20 | 16A-4 | A COMPREHENSIVE PARTICULATE MATTER MONITORING SYSTEM , <i>YouSheng Zeng</i> |

16B Source Apportionment - VI

Chairs: William Aljoe, Darrell Winner
Capital Ballroom South

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| 1:20 | 16B-1 | SOURCE CONTRIBUTIONS TO ORGANIC CARBON IN PM_{2.5} IN URBAN AND RURAL AREAS IN THE SOUTHEASTERN UNITED STATES , <i>MEI ZHENG, Bo Wang, Lin Ke, Georgia Institute of Technology, Atlanta, GA; James J. Schauer, University of Wisconsin-Madison,</i> |
|------|-------|--|
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*Madison, WI; Eric Edgerton,
Atmospheric Research & Analysis,
Inc., Cary, NC*

1:40 16B-2 **SOURCE CONTRIBUTIONS TO SOA CONCENTRATIONS DURING A SEVERE PHOTOCHEMICAL SMOG EVENT**, MICHAEL J. KLEEMAN, Qi Ying, Department of Civil and Environmental Engineering, University of California, Davis, Davis, CA; Robert J. Griffin, University of New Hampshire, Durham, NH

2:00 16B-3 **ORGANIC CARBON MASS BALANCE AND SOURCE APPORTIONMENT OF PRIMARY ORGANIC CARBON IN THE PITTSBURGH REGION USING MOLECULAR MARKERS**, R SUBRAMANIAN, Allen Robinson, Carnegie Mellon University, Pittsburgh, PA; Anna Bernardo-Bricker, Wolfgang F. Rogge, Florida International University, Miami, FL

2:20 16B-4 **APPORTIONMENT OF THE ELEMENTAL CARBON COMPONENT OF SOUTHERN CALIFORNIA AEROSOL TO LIGHT-DUTY VEHICLES USING SELECTED POLYCYCLIC AROMATIC HYDROCARBON TRACERS**, ARANTZAZU EIGUREN-FERNANDEZ and Antonio H. Miguel, Southern California Environmental Health Sciences Center and Southern California Particle Center and Supersite, Institute of the Environment, University of California, Los Angeles, CA

Thursday, February 10, 2005

16C Optical and Remote Sensing Methods and Measurements

Chairs: Sonia Kreidenweis, Ed Novitsky
Capital Ballroom North

1:20 16C-1 **OPTICAL LIGHT SCATTERING VERSUS CHEMICAL SCATTERING AND PM-2.5 CONCENTRATIONS AT URBAN AND RURAL LOCATIONS IN THE SOUTHEAST**, IVAR TOMBACH, Consultant, Camarillo, CA; Benjamin Hartsell,

*Atmospheric Research & Analysis,
Inc., Plano, TX*

- 1:40 16C-2 **OPTICAL REMOTE SENSING TECHNOLOGIES FOR PM STUDIES AND MONITORING**, Gary Gimmestad, DAVID ROBERTS, Georgia Institute of Technology
- 2:00 16C-3 **VERTICAL PROFILES OF AEROSOL AND PARTICULATE MATTER OBTAINED FROM A MULTISTATIC LIDAR**, EDWARD NOVITSKY, C. Russell Philbrick, The Pennsylvania State University, Department of Electrical Engineering, University Park, PA
- 2:20 16C-4 **CHARACTERISTICS OF AEROSOLS AND THEIR VERTICAL DISTRIBUTIONS USING RAMAN LIDAR**, C. RUSSELL PHILBRICK, Sachin J. Verghese, Penn State University, Department of Electrical Engineering, University Park, PA

2:40 PM - 4:40 PM

Session #17, Posters and Exhibits

17PB Emissions

2:40-3:40 Posters with even numbers.

3:40-4:40 Posters with odd numbers.

Georgia Hall

- 17PB-1 **FINE PARTICLE EMISSION PROFILE FOR ROAD DUST IN PITTSBURGH, PENNSYLVANIA**, ALLEN L. ROBINSON, Eric M. Lipsky, Natalie Pekney, Carnegie Mellon University, Pittsburgh, PA; Wolfgang F. Rogge, Anna Bernado-Bricker Orhan Sevimoglu, Florida International University, Miami, FL
- 17PB-2 **FINE PARTICLE EMISSION PROFILE FOR A LARGE COKE PRODUCTION**, Emily Weitkamp, Eric Lipsky, ALLEN ROBINSON, Carnegie Mellon University, Pittsburgh, PA; Andrea Polidori, Barbara Turpin, Rutgers University, New Brunswick, NJ; Patrick Pancras, John Ondov, University of Maryland, College Park, MD; Anna Bernado-Bricker, Oskar R. Vasquez,

Wolfgang F. Rogge, Florida
International University, Miami, FL

- 17PB-3 **FUEL-BASED PARTICULATE
MATTER AND GASEOUS
EMISSION FACTORS DETERMINED
FROM VEHICLES IN PITTSBURGH,
PA'S SQUIRREL HILL TUNNEL,**
*Andrew Grieshop, Eric Lipsky,
ALLEN ROBINSON, Carnegie Mellon
University, Pittsburgh, PA*

17PD Measurements and Methods - II

2:40-3:40 Posters with even numbers.

3:40-4:40 Posters with odd numbers.

Georgia Hall

- 17PD-4 **EUROPEAN CONTRASTS IN
PARTICULATE MATTER
COMPOSITIONS RELATED TO
HEALTH (PAMCHAR),** *MARKUS
SILLANPÄÄ, Risto Hillamo, Sanna
Saarikoski, Anna Frey, Ulla
Makkonen, Finnish Meteorological
Institute, Helsinki, Finland; Zoya
Spolnik, Rene van Grieken,
University of Antwerp, Antwerp,
Belgium; Erik Sandell, Technical
Research Centre of Finland, Espoo,
Finland; Arto S. Pennanen, Raimo
O. Salonen, National Public Health
Institute, Kuopio, Finland*
- 17PD-5 **NITRATE CONCENTRATIONS
RETAINED BY THE PM2.5
FEDERAL REFERENCE METHOD IN
THE EASTERN US,** *NEIL FRANK,
U.S. Environmental Protection
Agency*
- 17PD-6 **CARBONACEOUS PM2.5
ESTIMATED BY FRM MASS
BALANCE,** *NEIL FRANK, U.S.
Environmental Protection Agency*
- 17PD-7 **URBAN AEROSOL STUDY FOR
CAMPINAS-SAO PAULO, BRAZIL,**
*REGINA MAURA DE MIRANDA,
Edson Tomaz, University of
Campinas, SP, Brazil; Maria de
Fátima Andrade, University of São
Paulo, Brazil*
- 17PD-8 **SIZE DISTRIBUTIONS OF THE
ATMOSPHERIC AEROSOL IN THE
METROPOLITAN AREA OF SÃO**

Thursday, February 10, 2005

- PAULO: A CASE STUDY FOR THE WINTER OF 2003**, *TACIANA T. A. ALBUQUERQUE, Maria de Fátima Andrade, Institute of Astronomy, Geophysics and Atmospheric Sciences, São Paulo-SP, Brazil*
- 17PD-9 **TIME AND SIZE-RESOLVED CHEMICAL COMPOSITION OF SUBMICRON PARTICLES IN PITTSBURGH – IMPLICATIONS FOR AEROSOL SOURCES AND PROCESSES**, *QI ZHANG, Jose-Luis Jimenez, CIRES, University of Colorado, Boulder, CO; Manjula Canagaratna, John Jayne, Douglas Worsnop, Aerodyne Research Inc., MA*
- 17PD-10 **RELATIONSHIP BETWEEN NOY, PM₁₀ NITRATE AND PM_{2.5} AT A MOUNTAIN SITE IN UPSTATE NEW YORK DURING THE PMTACS-NY PROGRAM**, *U. K. ROYCHOWDHURY, R. A. Lamica, J. Schwab and K. L. Demerjian, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; O. Rattigan, H.D. Felton, Department of Environmental Conservation, Division of Air Resources, Albany, NY*
- 17PD-11 **ELEMENTAL COMPOSITION OF PM_{2.5} IN URBAN AND BACKGROUND AIR MONITORING SITES IN EPA REGION V**, *MICHAEL COMPTON, U.S. Environmental Protection Agency Region V, Chicago IL; Serap Erdal, University of Illinois at Chicago School of Public Health / EOHS, Chicago, IL*
- 17PD-12 **ESTIMATION OF THE SIZE OF A HIGHLY POLLUTED AREA OF SANTIAGO USING THE LIGHT ABSORPTION COEFFICIENT**, *ERNESTO GRAMSCH, Universidad de Santiago; Avenida Ecuador 3493; Santiago; Región Metropolitana; Chile*
- 17PD-13 **PILS-IC (PARTICLE INTO LIQUID SAMPLING ANALYZED BY ION CHROMATOGRAPHY) OVERVIEW OF RESULTS FOR THE PM_{2.5}**

TECHNOLOGY ASSESSMENT AND CHARACTERIZATION STUDY IN NEW YORK (PMTACS-NY), KEVIN RHOADS, Douglas Orsini, Chemistry Department, Siena College, Loudonville, NY; Sarah Peters, Olga Hogrefe, James J. Schwab, Yongquan Li, Silke Weimer, G. Garland Lala, Kenneth L. Demerjian, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY

17PD-14

REGIONAL TRENDS IN FINE PARTICLE ELEMENTAL AND ORGANIC CARBON CONCENTRATIONS IN THE MIDWEST, REBECCA J. SHEESLEY, James J. Schauer, University of Wisconsin-Madison, Environmental Chemistry and Technology Program, Madison, WI; Donna Kenski, Lake Michigan Air Directors Consortium, Des Plaines, IL; Hilary R. Hafner, Sonoma Technology, Inc., Petaluma, CA; Jeff DeMinter, University of Wisconsin-Madison, State Lab of Hygiene, Madison, WI

17PD-15

URBAN AND RURAL MEASUREMENTS OF AMBIENT AEROSOL COMPOSITION IN NEW YORK STATE USING AN AERODYNE AEROSOL MASS SPECTROMETER, KENNETH L. DEMERJIAN, Silke Weimer, James J. Schwab, Atmospheric Sciences Research Center, U-Albany, NY; Frank Drewnick, Department Cloud Physics and Chemistry, Max Planck Institute of Chemistry, Germany; Douglas R. Worsnop, Aerodyne Research Inc., Billerica, MA

17PD-16

ESTIMATES OF PM_{2.5} AEROSOL ACIDITY FROM INORGANIC ION BALANCE MEASUREMENTS AT URBAN AND RURAL NEW YORK STATE LOCATIONS FROM STN INTEGRATED FILTERS, JAMES SCHWAB, Rachelle Jenkins, Kenneth Demerjian, Atmospheric Sciences Research Center,

Thursday, February 10, 2005

University at Albany - SUNY, Albany, NY; Dirk Felton, New York State Department of Environmental Conservation, Division of Air Resources, Albany, NY

- 17PD-17 **INFLUENCE OF REGIONAL PARTICULATE MATTER ON SELECTED URBAN AREAS ACROSS THE US**, TRACY KLAMSER_WILLIAMS, Paul A. Solomon (EPA, ORD), Las Vegas, NV; Peter Egeghy (ORD), Research Triangle Park, NC; Dennis Crumpler (OAQPS), Joann Rice, (OAQPS), OAR; James Homolya (OAQPS), Research Triangle Park, NC; Chuck McDade, Crocker Nuclear Laboratory, University of California, Davis, CA
- 17PD-18 **ELECTRICAL AEROSOL DETECTOR (EAD) MEASUREMENTS AT THE ST. LOUIS SUPERSITE**, HEE-SIEW HAN, Stanley Kaufman, TSI Inc., Shoreview, MN; Jay Turner, Washington University, St. Louis, MO; William Wilson, U.S. Environmental Protection Agency, Research Triangle Park, NC; David Y. H. Pui, University of Minnesota, Minneapolis, MN
- 17PD-19 **INFLUENCE OF ATMOSPHERIC STABILITY ON PARTICLE NUMBER CONCENTRATION IN TORONTO, CANADA AND ROCHESTER, USA**, CHEOL-HEON JEONG, Greg Evans, Mike Fila, University of Toronto, ON, Canada; Philip K. Hopke, Clarkson University, Potsdam, NY; David Chalupa, Mark Utell, University of Rochester Medical Center, Rochester, NY; Henry Felton, New York State Department of Environmental Conservation, Albany, NY
- 17PD-20 **UTRAFINE PM IN NEAR GROUND LAYER OF URBAN ATMOSPHERE, PRAGUE 2002/2003**, JAN HOVORKA

17PE Atmospheric Processes and Chemistry
2:40-3:40 Posters with even numbers.

3:40-4:40 Posters with odd numbers.

Georgia Hall

- 17PE-21 **CHARACTERIZATION OF NH₃, NO₃, NO₂ AND SO₂ AT AGRICULTURAL AND URBAN SITE OF NORTH INDIA**, PUJA KHARE, 4 Dhaulpur House, Central Pollution Control Board, Agra, India; M. Vaseem, J.R. Behari, Analytical Chemistry Division, Industrial Toxicology Research Centre, Lucknow-12, India
- 17PE-22 **AN ANALYSIS OF SO₂ ABSORPTION BY A STATIONARY ATMOSPHERIC WATER AEROSOL**, WEI-HSIN CHEN, Department of Environmental Engineering and Science; Fooyin University, Taliao, Kaohsiung Hsien 831, Taiwan, ROC
- 17PE-23 **THE CHEMICAL COMPOSITION AND QUANTITATIVE RELATIONSHIP BETWEEN METEOROLOGICAL CONDITION AND FINE PARTICLES IN BEIJING**, Jingli Wang, Institute of Urban Meteorology, CMA, Beijing; Yuanhang Zhang, State Joint Key Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences, Peking University, Beijing; Min Shao, State Joint Key Laboratory of Environmental Simulation and Pollution Control, College of Environmental Sciences, Peking University, Beijing
- 17PE-24 **INFLUENCE OF METEOROLOGICAL PROCESSES ON AEROSOL IN AN URBAN ENVIRONMENT**, N. SHANTIKUMAR SINGH, IIA Observatory, Skara, Leh-Kadakh(J&K) 194101; G.R.Aher, Department of Physics, Nowrosjee Wadia College, Pune-411001; Sanjay D. More, V.V.Agashe, Department of Environmental Sciences, University of Pune-411007 – WITHDRAWN
- 17PE-25 **CHARACTERIZATION OF**

Thursday, February 10, 2005

**REACTIVE OXYGEN SPECIES
TRENDS IN FLUSHING, NEW
YORK, PRASANNA VENKATACHARI,**
*Philip K. Hopke, Clarkson
University, Potsdam, NY; William H.
Brune, Xinrong Ren, Robert Lesher,
Jingqiu Mao, Michael Mitchell,
Penn State University, University
Park, PA*

17PE-26 **HCL UPTAKE BY A CONVECTIVE
AEROSOL DROPLET WITH DRAG
FORCE, WEI-HSIN CHEN,**
*Department of Environmental
Engineering and Science, Fooyin
University, Taliao, Kaohsiung Hsien
831, Taiwan, ROC*

17PH Policy Implications

2:40-3:40 Posters with even numbers.

3:40-4:40 Posters with odd numbers.

Georgia Hall

17PH-27 **CORRELATING PARTICULATE
MATTER AMBIENT
CONCENTRATIONS WITH VEHICLE
TRAFFIC VOLUMES, KEVIN BLACK,**
*Federal Highway Administration,
Frank Divita, E.H. Pechan and Co.,
Richard Margiotta, Cambridge
Systematics, Inc, Randall Guensler,
Trans AQ, Inc.*

17PH-28 **MODIFYING 50 DEG C TEOM DATA
TO BE MORE "FRM LIKE" FOR AQI
REPORTING USING A NON-LINEAR
CORRECTION BASED ON THE
JULIAN DAY, HENRY D. FELTON,**
*Department of Environmental
Conservation, Division of Air
Resources, Albany, NY*

17PH-29 **ANALYSIS OF ALTERNATIVE
PM2.5 NATIONAL AMBIENT AIR
QUALITY STANDARD LEVELS AND
FORMS, PHILIP R.S. JOHNSON,**
*John J. Graham, Jr., Northeast
States for Coordinated Air Use
Management*

17PH-30 **IMPROVING EMISSION
INVENTORIES FOR EFFECTIVE
AIR-QUALITY MANAGEMENT
ACROSS NORTH AMERICA — A
NARSTO ASSESSMENT, J. David**

Mobley, U.S. Environmental Protection Agency; Marc Deslauriers, Environment Canada; Howard Feldman, American Petroleum Institute; Chris Frey, North Carolina State University; Leonora Rojas-Bracho, National Institute of Ecology of Mexico; Susan Wierman, Mid-Atlantic Regional Air Management Association; Arthur S. Werner, MACTEC

17PI Health and Exposure

2:40-3:40 Posters with even numbers.

3:40-4:40 Posters with odd numbers.

Georgia Hall

17PI-31

EVALUATION OF IN VITRO BIOLOGICAL EFFECTS INDUCED BY PARTICULATE MATTER FROM MEXICO CITY COLLECTED WITH THE VERSATILE AEROSOL CONCENTRATOR (VACES)

SYSTEM. ANDREA DE VIZCAYA-RUIZ, Ma. Eugenia Gutiérrez-Castillo, M Uribe-Ramírez, Mariano E. Cebrián, Toxicology Section, CINVESTAV-IPN, D.F., MX; Violeta Mugica-Alvarez, UAM-A, D.F., MX; Irma Rosas, Eva Salinas, Centro de Ciencias de la Atmósfera, UNAM, D.F., MX; Flor Martínez, Claudia García-Cuéllar, Ernesto Alfaro-Moreno, Alvaro Osornio-Vargas, INCan, D.F., MX; Victor Torres-Flores, Fac. de Medicina, UNAM, D.F., MX; (Mexican Consortium for Particle Matter Studies, D.F., MX); Constantinos Sioutas, Dept. of Civil and Environmental Engineering, USC, Los Angeles, CA; Arthur Cho, Department of Molecular and Medical Pharmacology, UCLA, CA; John Froines, Center for Occupational and Environmental Health, UCLA, CA; (The Southern California Particle Center and Supersite, Los Angeles, CA)

17PI-32

INCORPORATING BIOMARKERS AS FORENSIC EVIDENCE IN ASSESSING CHEMICAL

Thursday, February 10, 2005

- EXPOSURE IN ENVIRONMENTAL JUSTICE AREAS**, *Janine M. Legg, MBA, HHC Services, Inc., University of Phoenix, AZ*
- 17PI-33 **NEW PROBLEMS OF AIR POLLUTION IN ARMENIA WITHIN POST-SOVIET PERIOD**, *LUIZA GHARIBYAN, Yerevan State Medical University, Department Hygiene and Ecology, Armenia*
- 17PI-34 **HEART RATE CHANGES IN 24-MONTH OLD FISHER 344 RATS EXPOSED TO CONCENTRATED PARTICULATE MATTER (PM2.5) CLOSE TO A FREEWAY IN DIAMOND BAR, CA**, *Ali K. Hamade, Tack Lam, Michael T Kleinman, University of California Irvine, Department of Community and Environmental Medicine, Irvine, CA*

17PJ Late Breaking Results

2:40-3:40 Posters with even numbers.

3:40-4:40 Posters with odd numbers.

Georgia Hall

- 17PJ-35 **SAMPLING AND ANALYSIS OF PAHS IN URBAN, SUBURBAN AND RURAL ATMOSPHERE. TEMPORAL VARIATIONS OF CONCENTRATIONS AND GAS-PARTICLE PARTITIONING**, *Stéphane Morville, Anne Scheyer, Philippe Mirabel, MAURICE MILLET, Centre de Géochimie de la Surface (UMR 7517 CNRS-ULP), Laboratoire de Physico-Chimie de l'Atmosphère, 1, rue Blessig, F-67084 Strasbourg Cedex*
- 17PJ-36 **IDENTIFICATION OF POLYMERS IN PM2.5 AIR SAMPLES BY LIQUID CHROMATOGRAPHY/MASS SPECTROMETRY**, *KAISHENG JIAO, Prasanna Venkatachari, Pavithra Rao, Xiaoyan Xia, and Philip K. Hopke, Center for Air Resources Engineering and Science, Clarkson University, Potsdam, NY*
- 17PJ-37 **SOURCE APPORTIONMENT OF PM2.5 IN PHOENIX, ARIZONA USING POSITIVE MATRIX**

- FACTORIZATION**, HILARY HAFNER, Steven G. Brown, Anna Frankel, Sonoma Technology, Inc.; Darcy J. Anderson, Matrix Consulting Group
- 17PJ-38 **CHEMICAL MASS BALANCE MODEL: EPA-CMB8.2**, C. THOMAS COULTER, U.S. Environmental Protection Agency
- 17PJ-39 **METHANOL REACTION WITH SULFURIC ACID AND SULFATE SALTS: A SFG AND RAMAN SPECTROSCOPIC STUDY**, LISA L VAN LOON, Angela M DeLuca, Heather C Allen, Department of Chemistry, The Ohio State University, Columbus, OH
- 17PJ-40 **VIBRATIONAL SPECTROSCOPY OF AQUEOUS SODIUM HALIDE AND HYDROGEN HALIDE SOLUTIONS**, Lori M. Levering, Dingfang Liu, M.ROXANA SIERRA-HERNANDEZ, Heather C. Allen, Ohio State University, Columbus, OH

4:40 PM - 6:20 PM
Session #18, Platform

18A Atmospheric Processes and Aerosol Formation

Chairs: George Hidy, John Watson
 Capital Ballroom Center

- 4:40 18A-1 **THE ROLE OF NIGHTTIME CHEMISTRY IN WINTER AMMONIUM NITRATE FORMATION IN THE SAN JOAQUIN VALLEY**, Michael C. McCarthy, Steven G. Brown, FREDERICK W. LURMANN, Paul T. Roberts, Sonoma Technology, Inc., Petaluma, CA
- 5:00 18A-2 **COMPARISON OF PARTICULATE NITRATE FORMATION IN DIFFERENT CHEMICAL REGIMES**, CHARLES BLANCHARD, Envair, Albany, CA; George Hidy, Aerochem, Placitas, NM
- 5:20 18A-3 **SYNTHESIS OF RESEARCH ON NEW PARTICLE FORMATION AND GROWTH AT THE PITTSBURGH AIR QUALITY STUDY**, CHARLES STANIER, University of Iowa, Iowa City, IA; Timothy Gaydos, Carnegie

Thursday, February 10, 2005

Mellon University, Pittsburgh, PA; Andrey Khlystov, Duke University, Durham, NC; Qi Zhang, Jose-Luis Jimenez, University of Colorado, Boulder, CO; Manjula Caragaratna, John T. Jayne, Doug Worsnop, Aerodyne Research, Billerica, MA; Spyros Pandis, Carnegie Mellon University, Pittsburgh, PA and University of Patras, Patra, Greece

5:40 18A-4 **FORMATION MECHANISMS OF ULTRAFINE PARTICLES IN THE BOUNDARY LAYER, FANGQUN YU, State University of New York at Albany, NY**

6:00 18A-5 **ASSOCIATIONS BETWEEN PARTICLE NUMBER AND GASEOUS CO-POLLUTANT CONCENTRATIONS IN THE LOS ANGELES BASIN, SATYA B. SARDAR, Philip M. Fine, Heesong Yoon, Constantinos Sioutas, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, CA**

18B Measurement of Toxic Particulate Pollutants

Chairs: Subramanian (Subu) Ramachandran, Steven Buckley
Capital Ballroom South

4:40 18B-1 **ATMOSPHERIC MERCURY MEASUREMENTS AT THE ST. LOUIS MIDWEST SUPERSITE, BRITT D. HALL, Helen Manolopoulos, James J. Schauer, University of Wisconsin-Madison, Madison, WI; David P. Krabbenhoft, Mark L. Olson, USGS, Madison, WI; Jay R. Turner, Washington Univeristy, St. Louis, MO**

5:00 18B-2 **SELENIUM IN FINE PARTICLES (PM2.5) OVER METROPOLITAN LISBON (PORTUGAL) — CANONICAL LEVELS AND RELEVANT EPISODES, Carmo Freitas, Technological and Nuclear Institute (Reactor-ITN), Sacavém, Portugal; ADRIANO PACHECO, Technical University of Lisbon (CVRM-IST), Lisboa, Portugal**

5:20 18B-3 **SUMMERTIME AMBIENT**

FORMALDEHYDE IN FIVE US METROPOLITAN AREAS: NASHVILLE, ATLANTA, HOUSTON, PHILADELPHIA AND TAMPA: WHAT HAVE WE LEARNED?,
PURNENDU DASGUPTA, Jianzhong Li, Genfa Zhang, William McClenny, Winston Luke, Jochen Stutz, Alan Fried

5:40 18B-4 **INDOOR/OUTDOOR RELATIONSHIP OF PARTICULATE POLYAROMATIC HYDROCARBONS (PAHS) IN CENTRAL PART OF INDIA, ALFRED J. LAWRENCE and Ajay Taneja,**
School of Chemical Sciences, Department of Chemistry, St. John's College, AGRA

6:00 18B-5 **ASSESSMENT OF FREE RADICAL PRODUCTION BY RESIDUAL OIL FLY ASH AND NICKEL SUBSULFIDE USING DNA DAMAGE ASSAY, NICHOLAS RALSTON,**
John Gallagher, Kevin Galbreath, Energy and Environmental Research Center, University of North Dakota, Grand Forks, ND; Edward Zillioux, Florida Power and Light, Juno Beach, FL

18C Organic Aerosol Chemistry

Chairs: Jay Turner, Michael Kleeman
Capital Ballroom North

4:40 18C-1 **QUANTIFICATION OF PRIMARY AND PARTIALLY OXIDIZED ORGANIC PM EMISSION AND THE FORMATION OF SECONDARY ORGANIC AEROSOL QUEENS, NY IN SUMMER AND WINTER,**
KENNETH L. DEMERJIAN, J. Schwab, G. Lala, O. Hogrefe, S. Weimer, M. Tang, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; D. Felton, G. Boynton, Division of Air Resources, NYS Department of Environmental Conservation, Albany, NY; F. Drewnick, Cloud Physics and Chemistry Department, Max-Planck-Institute for Chemistry, Mainz, Germany; W. Brune, X. Ren, R. Leshner, Pennsylvania State

Thursday, February 10, 2005

University, College Station, PA; D. Worsnop, Aerodyne Research, Inc., Billerica, MA; J. Jimenez, Z.Qi, University of Colorado, Boulder, CO

- 5:00 18C-2 **SECONDARY ORGANIC AEROSOLS FROM BIOGENIC HYDROCARBON OXIDATION**, JANA MILFORD, Tiffany Duhl, Detlev Helmig, John Ortega, Jan Pollmann, Tanarit Sakulyanontvittaya, University of Colorado, Boulder, CO; Alex Guenther, Peter Harley, Christine Wiedinmyer, National Center for Atmospheric Research, Boulder, CO; Jeffrey Herrick, U.S. Environmental Protection Agency, Research Triangle Park, NC
- 5:20 18C-3 **EFFECT OF TEMPERATURE AND NOX ON SOA YIELDS FROM TERPENES**, NEIL DONAHUE, Spyros Pandis, Kara Huff-Hartz, Albert Presto, Carnegie Mellon University, Pittsburgh, PA
- 5:40 18C-4 **SECONDARY AEROSOL FORMATION FROM GAS AND PARTICLE PHASE REACTIONS OF AROMATIC HYDROCARBONS**, Di Hu and Richard M. Kamens University of North Carolina-Chapel Hill, NC
- 6:00 18C-5 **FIELD AND LABORATORY EXPERIMENTS EXAMINING THE STABILITY OF ORGANIC MOLECULAR MARKERS USED FOR SOURCE APPORTIONMENT**, ALLEN L. ROBINSON, Neil M. Donahue, Kara Huff Hartz, Amy Sage, Emily Weitkamp, Carnegie Mellon University, Pittsburgh, PA

6:30 PM - 8:30 PM
Conference Dinner
Savannah

Friday

8:15 AM - 9:40 AM

Plenary Session

Capital Ballroom

- 8:20 **THE US-EPA SUPERSITES PROGRAM: ELUCIDATING SPATIAL VARIABILITY IN PARTICULATE MATTER SIZE AND COMPOSITION,**
JAY TURNER, Washington University, St. Louis, MO
- 8:40 **ATMOSPHERIC PROCESSES AND REDUCTION OF PM2.5 CONCENTRATIONS,** *SPYROS PANDIS, Carnegie Mellon University, Pittsburgh, PA*
- 9:00 **COMPARISON OF PM MASS AND CHEMICAL SPECIES MEASUREMENT TECHNOLOGIES: IMPLICATIONS FOR NETWORK MONITORING,** *KENNETH L. DEMERJIAN, J. Schwab, O. Hogrefe, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY; D. Felton, Division of Air Resources, New York State Department of Environmental Conservation; S. Pandis, Carnegie Mellon University, Pittsburgh, PA; J. Turner, Washington University, St. Louis, MO; J. Froines, University of California at Los Angeles, Los Angeles, CA; J. Ondov, University of Maryland, College Park, MD; J. Watson, Desert Research Institute, Reno, NV; D. Allen, University of Texas at Austin, Austin, TX*
- 9:20 **NEW POSSIBILITIES FOR AEROSOL MEASUREMENTS AND SOURCE APPORTIONMENT,** *Dr. John Watson, Desert Research Institute, Reno, NV*

**10:00 AM - 11:00 AM
Session #19, Platform**

19A Comparison of Data Among National Networks and Measurement Representativeness - I

Chairs: Charles Blanchard, Russell Philbrick
Capital Ballroom Center

- 10:00 19A-1 **USING IN-NETWORK PRECISION DATA AS A BASIS FOR CROSS-**

Friday, February 11, 2005

NETWORK COMPARISONS,
WARREN H. WHITE, Nicole P. Hyslop, Charles E. McDade, Crocker Nuclear Laboratory, University of California, Davis, CA

10:20 19A-2 **RESULTS OF FIELD AND TRIP BLANK FILTERS IN THE PM_{2.5} SPECIATION TRENDS NETWORK,**
JESSIE A. DEAL, James B. Flanagan, R.K.M. Jayanty and James A. O'Rourke, Research Triangle Institute International, Research Triangle Park, NC

10:40 19A-3 **SPECIATION TRENDS NETWORK: EVALUATION OF WHOLE-SYSTEM UNCERTAINTIES USING COLLOCATED DATA,** *JAMES B. FLANAGAN, Edward E. Rickman, Max R. Peterson, Eva D. Hardison, Lisa C. Greene, Andrea C. McWilliams, William F. Gutknecht, R.K.M. Jayanty, Research Triangle Institute International, Research Triangle Park, NC*

19B Role of Acidity in Organic Aerosol Formation

Chairs: Max Zhang, Myoseon Jang
Capital Ballroom South

10:00 19B-1 **DIFFERENT PRE-EXISTING AEROSOL EFFECTS ON SECONDARY ORGANIC AEROSOL YIELDS IN HETEROGENEOUS ACID CATALYZED REACTIONS,**
MYOSEON JANG, Nadine Czoschke, Amenda Northcross, Gang Cao, The University of North Carolina at Chapel Hill, NC

10:20 19B-2 **INFLUENCE OF PARTICLE ACIDITY AND OH SCAVENGERS TO SOA YIELDS AND PRODUCTS: RESULTS FROM AEROSOL CHAMBER STUDY OF THE ALPHA-PINENE OZONOLYSIS,** *YOSHITERU IINUMA, Olaf Böge, Thomas Gnauk, Yun Kun Miao, Hartmut Herrmann, Leibniz-Institut für Troposphärenforschung, Permoserstr, 15, D-04318 Leipzig,*

Germany

10:40 19B-3 **ACIDITY AND ORGANIC AEROSOL CONCENTRATIONS: AN ANALYSIS OF SEMI-CONTINUOUS OC AND ACIDITY FIELD MEASUREMENTS,** SATOSHI TAKAHAMA, Cliff I. Davidson, Spyros N. Pandis, Carnegie Mellon University, Pittsburgh, PA

19C Aerosol Water Measurements

Chairs: Andrey Khlystov, Josephe (Joe) Pinto
Capital Ballroom North

10:00 19C-1 **HYGROSCOPICITY AND CLOUD CONDENSATION NUCLEUS ACTIVITY OF SECONDARY ORGANIC AEROSOLS,** Varuntida Varutbangkul, Timothy VanReken, Nga Ng, Roya Bahreini, Song Gao, Jason Surratt, Richard C. Flagan, JOHN H. SEINFELD, California Institute of Technology, Pasadena, CA

10:20 19C-2 **AEROSOL WATER CONTENT DURING PITTSBURGH AIR QUALITY STUDY: OBSERVATIONS AND MODEL COMPARISON,** ANDREY Y. KHLYSTOV, Duke University, Department of Civil and Environmental Engineering, Durham, NC; Charles Stanier, University of Iowa, Iowa City, IA; Satoshi Takahama, Spyros Pandis, Carnegie Mellon University, Department of Chemical Engineering, Pittsburgh, PA

10:40 19C-3 **GROWTH OF ATMOSPHERIC AEROSOL PARTICLES IN WATER AND ETHANOL VAPOURS: EFFECT OF SO₂ OXIDATION,** KAARLE HÄMERI, T. Petäjä and M. Kulmala, Division of Atmospheric Sciences, Department of Physical Sciences, University of Helsinki, Finland; V.-M. Kerminen, Air Quality Research, Finnish Meteorological Institute, Finland; P. Vaattovaara, J. Joutsensaari, A. Laaksonen, Department of Applied Physics, University of Kuopio, Finland; W. Junkermann, Institute for Meteorology and Climate Research,

Friday, February 11, 2005

Forschungszentrum Karlsruhe,
Germany

11:20 AM - 1:00 PM
Session #20, Platform

**20A Comparison of Data Among National Networks
and Measurement Representativeness - II**

Chairs: Charles McDade, Neil Frank
Capital Ballroom Center

- | | | |
|-------|-------|---|
| 11:20 | 20A-1 | COMPARISON OF AEROSOL DATA FROM THE STN AND IMPROVE NETWORKS , CHARLES E. McDADE, Warren H. White, and Nicole P. Hyslop, Crocker Nuclear Laboratory, University of California, Davis, CA; Paul A. Solomon (ORD), Tracy Klamser-Williams (ORIA), U.S. EPA, Las Vegas, NV; Dennis Crumpler (OAQPS), Peter Egeghy (ORD), U.S. Environmental Protection Agency, Research Triangle Park, NC |
| 11:40 | 20A-2 | IMPROVE XRF ANALYSIS OF STN FILTERS USED IN STN'S ROUND ROBIN EPA ACCEPTANCE TESTS , Charles E. McDade, PAUL H. WAKABAYASHI, Warren H. White, University of California, Davis, CA; James B. Flanagan, William F. Gutknecht, Andrea C. McWilliams, Research Triangle Institute, Research Triangle Park, NC |
| 12:00 | 20A-3 | SPATIAL REPRESENTATIVENESS OF THE FRESNO SUPERSITE PM AND GASEOUS CO-POLLUTANT MEASUREMENTS , FREDERICK W. LURMANN, David L. Vaughn, Paul T. Roberts, Sonoma Technology, Inc., Petaluma, CA; Katharine Hammond, Charles Perrino, University of California, School of Public Health, Berkeley, CA |
| 12:20 | 20A-4 | METEOROLOGICAL ASPECTS OF PM_{2.5} EPISODES USING A MET TOWER AND LIDAR AT THE BALTIMORE SUPERSITE AT PONCA ST. , VIJAYANT KUMAR, Mariana Adam, Marc B. Parlange, Johns Hopkins University, Baltimore, MD; Jan Kleissl, |

*Michigan Technological University,
Houghton, MI; John Ondov, Seung
Shik Park, University of Maryland,
College Park, MD*

12:40 20A-5 **EVALUATION OF AMBIENT FINE
PARTICULATE MATTER (PM_{2.5}),
CO-POLLUTANTS AND MERCURY
IN SOUTHEASTERN OHIO, L.**
*YATAVELLI, K. Crist, J. Fahrni, Air
Quality Center, Ohio University,
Athens, OH; S. Winter, Consol
Energy R&D, Pittsburgh, PA*

**20B Observational Based Modeling Methods and
Results**

Chairs: Alan Hansen, Hilary R. Hafner
Capital Ballroom South

11:20 20B-1 **DEVELOPMENT OF A HYBRID
MODEL FOR PREDICTING
PARTICLE NUMBER
CONCENTRATIONS, JARI**
*HÄRKÖNEN, Ari Karppinen, Finnish
Meteorological Institute, Helsinki,
Finland; Tareq Hussein, University
of Helsinki, Finland*

11:40 20B-2 **APPLICATION OF SOURCE AND
RECEPTOR MODELS TO ANALYZE
SELECTED EPISODES FROM THE
ST. LOUIS - MIDWEST SUPERSITE,**
*BRET ANDERSON, United States
Environmental Protection Agency,
Region VII, Kansas City, KS;
Jennifer Garlock, Jay Turner,
Washington University, St. Louis, MO*

12:00 20B-3 **DEVELOPMENT OF A GIS
EMISSIONS ANALYSIS TOOL TO
ESTIMATE THE PROBABILITY OF
REGIONAL SOURCE
CONTRIBUTION TO HAZE, Steven**
*G. Brown, Sean Raffuse, Dana
Sullivan and Hilary R. Hafner,
Sonoma Technology, Inc.*

12:20 20B-4 **GENERATION OF CHARGED
AEROSOLS BY HIGH-VOLTAGE
ELECTRIC-POWER LINES, PETER**

Friday, February 11, 2005

A. VALBERG, Gradient Corporation, Cambridge, MA; Philip K. Hopke, Center for Air Resources, Clarkson University, Potsdam, NY; Seung-Muk Yi, Seoul National University, Seoul, Korea

12:40 20B-5 **NEW PARTICLE FORMATION ASSOCIATED WITH SO₂ EMISSION FROM POWER PLANTS: 3-DIMENSIONAL MODELING,**
FANGQUN YU, Chenxia Cai, Kenneth L. Demerjian, State University of New York at Albany, NY

20C PM Mass Measurements: Semivolatiles & Intercomparisons

Chairs: Dirk Felton, Beth Wittig
Capital Ballroom North

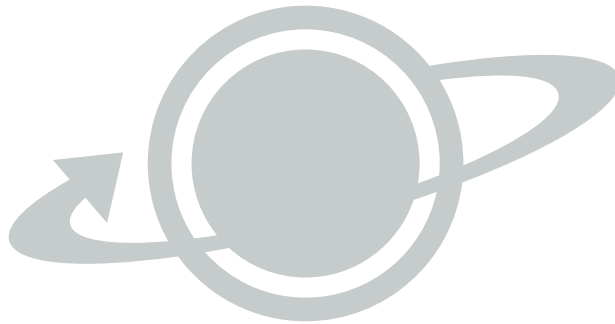
11:20 20C-1 **FIELD ASSESSMENT OF THE DYNAMICS OF PARTICULATE NITRATE VAPORIZATION USING DIFFERENTIAL TEOM® AND AUTOMATED NITRATE MONITORS,**
SUSANNE HERING, Aerosol Dynamics Inc; Philip M. Fine, Constantinos Sioutas, University of Southern California; Peter A. Jaques, University of California, Los Angeles, CA; Jeffrey L. Ambs, Rupprecht and Patashnick Company, Inc.; Olga Hogrefe and Kenneth L. Demerjian, ASRC, University at Albany, NY

11:40 20C-2 **MEASUREMENT OF FINE PARTICULATE MATTER (NONVOLATILE AND SEMI-VOLATILE FRACTIONS) IN FRESNO, CA, BRETT D. GROVER,**
Norman L. Eatough, Delbert J. Eatough. Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT ; Jeffrey L. Ambs, Michael B. Meyer, Rupprecht and Patashnick Co., Inc., Albany, NY; Philip K. Hopke, Clarkson University, Potsdam, NY; Rida Al-Horr, Douglas W. Later, Dionex Co., Sunnyvale, CA; Judy Chow, John Watson, Desert Research Institute, Reno NV; William E. Wilson,

*Environmental Protection Agency,
Research Triangle Park, NC*

12:00 20C-3 **CONTINUOUS SIZE SELECTIVE MEASUREMENT OF SEMI-VOLATILE COMPOUNDS**, THOMAS PETRY, Hans Grimm, Grimm Aerosol, Ainring, Germany; Mathias Richter, GIP Messinstrumente, Pouch, Germany

12:20 20C-4 **NEW YORK STATE URBAN AND RURAL MEASUREMENTS OF CONTINUOUS PM2.5 MASS BY FDMS TEOM AND BAM: EVALUATION AND COMPARISONS WITH THE FRM**, HENRY D. FELTON, Oliver V. Rattigan, Department of Environmental Conservation, Division of Air Resources, Albany, NY; Kenneth L. Demerjian, James J. Schwab, Atmospheric Sciences Research Center, University at Albany, State University of New York, Albany, NY



Friday, February 11, 2005

Author Index

- Adam, Mariana 20A-4
Adams, Peter 11B-2
Adlhoeh, Joseph 2A-4
Agashe, Vasant 17PE-24
Aher, Gajanan 17PE-24
Ahmadi, Goodarz 7PG-34
Alapaty, Kiran 14C-2
Albuquerque, Taciana 17PD-8
Alfarra, Rami 9A-1
Al-Horr, Rida 20C-2
Allen, David 8A-4, 11C-1, 13A-1
Allen, George 1A-4, 5B-3
Allan, James 9A-1
Ambs, Jeffrey 20C-1, 20C-2
Anderson, Bret 20B-2
Anderson, Richard 14B-2
Andrade, Maria De Fátima 17PD-7, 17PD-8
Aneja, Viney 2A-5, 13B-1, 13B-2, 13C-1, 14C-1, 14C-2
Angenent, Lars 2C-2
Arnott, William 4A-2, 12PA-3
Arya, S. Pal 13B-2, 14C-1
Ashbaugh, Lowell 7PA-10
Babich, Peter 12PD-18
Bachmann, John Plenary
Bae, Min-Suk 5B-4
Baek, Bok Haeng 13C-1
Bahadori, Tina 1A-4
Bajwa, Kanwardeep 13B-4
Bari, Aynul 9B-2
Barna, Michael 11C-4
Battye, William 13B-1
Bauer, Heidi 2C-1
Baumann, Karsten 8B-4, 8B-5, 11A-2, 13A-3
Baumbach, Guenter 9B-2
Beachley, Gregory 1B-3, 7PF-20
Bein, Keith 2B-2, 7PF-24, 7PF-25, 9A-3, 9A-4, 12PF-29, 12PF-34
Belote, Angie 12PF-30
Bench, Graham 6C-3
Bernado-Bricker, Anna 17PB-1
Bernardo-Bricker, Anna 16B-3
Betus, Lubomir 17PD-20
Bhave, Prakash 13C-2
Biswas, Pratim 3B-1, 4A-3
Biswas, Subhasis 5B-2
Black, Kevin 17PH-27
Blanchard, Charles 1B-2, 18A-2
Böge, Olaf 19B-2
Bond, Tami 5C-3
Boudries, Hacene 9A-1, 10A-2
Bowers, Kenneth 9C-1
Branis, Martin 9C-4
Brewer, Patricia 2A-4
Brown, Steven 20B-3
Brueggemann, Erika 1C-5
Buset, Kathleen 6A-3
Buzcu, Birnur 13A-2
Cabada, Juan 9B-1, 12PA-9
Cahill, Thomas 1A-3, 1B-1, 7PA-9
Cai, Chenxia 20B-5
Canagaratna, Manjula 9A-1
Cao, Gang 19B-1
Cao, Junji 2A-2
Caragaratna, Manjula 7PA-7, 12PD-16, 18A-3
Carvacho, Omar 7PA-10
Castaneda, Carlos 7PA-10
Casuccio, Gary 2B-1, 2C-5, 7PA-14, 8C-5, 12PF-32)
Caughey, Michael 3A-2
Cereceda, Francisco 12PA-7, 12PD-23
Chakrabarti, Bhabesh 7PA-1
Chalupa, David 12PD-15, 17PD-19
Chan, Geoffrey 3C-5
Chang, Michael 8B-4, 8B-5
Chattopadhyay, Sulekha 10A-5
Chen, L.-W. Antony 12PA-1
Chen, L.-W. Antony 5C-4
Chen, Wei-Hsin 17PE-22, 17PE-26
Chen, Xu 3C-5
Chestnut, Lauraine 8A-2
Chow, Judith C. 1A-4, 5C-4, 12PA-2, 12PA-1, 12PA-3, 12PF-32
Chow, Judy 20C-2
Chu, Shao-Hang 10C-5
Civerolo, Kevin 11C-3
Clarke, Lisa 2C-2
Clements, Andrea 4B-4
Clements, Mark 13A-3
Cobb, Charles Evan 10C-2
Collett, Jeffrey 3A-1, 15A-1, 15A-3
Collins, Donald 8A-4
Compber, Michael 17PD-11
Crist, Kevin 8B-3
Crumpler, Dennis 17PD-17, 20A-1
Czoschke, Nadine 19B-1
Dabdub, Donald 11C-2
Dasgupta, Purnendu 3A-2, 4B-3, 6B-1, 18B-3
Davidovits, Paul 9A-1
Davidson, Cliff 7PF-25, 7PF-24, 7PF-26, 8B-3, 10B-3, 11B-4, 19B-3
Dawson, John 7PG-36
De Gouw, Joost 3C-3
De Vizcaya-Ruiz, Andrea 17PI-31
Deal, Jessie 19A-2
Deardorff, Neil 5B-4, 12PD-19
Decarlo, Peter 9A-1, 12PD-16
Demerjian, Kenneth L. 1C-4, 4B-1, 5B-1, 7PA-8, 7PA-16, 7PG-30, 8A-3, 8B-2, 14A-1, 17PD-15, 17PD-16, 18C-1, 20C-1, 20B-5, Plenary
Deminter, Jeff 4C-2, 17PD-14
Dennis, Robin 10C-1, 13C-3, 13C-2
Devlin, Robert 7PA-14
Di Filippo, Patrizia 12PD-20, 12PD-25
Distler, Mark 2B-4
Donahue, Neil 18C-3, 18C-5
Drautz, Silke 9B-2
Drewnick, Frank 4B-1, 17PD-15
Dreyfus, Matthew 10A-1
Duhl, Tiffany 18C-2
Dutkiewicz, Vincent 7PA-8, 8B-2
Eatough, Delbert 14B-2, 15C-1, 20C-2
Eatough, Norman 15C-1, 20C-2
Eberly, Shelly 7PF-22, 15B-1
Edgerton, Eric 2C-4, 2C-5, 6A-2, 6B-2, 7PA-12, 7PF-19, 7PG-32, 8B-4, 9B-4, 11A-1, 12PF-31, 15C-3, 16B-1
Egeghy, Peter 17PD-17, 20A-1
Eiguren-Fernandez, Arantza 3C-1, 9C-2
Engelbrecht, Johann 6A-4
Erdal, Serap 17PD-11
Evans, Greg 17PD-19

Evans, Melissa 13C-2
 Falke, Stefan 4A-3
 Fallon, Stewart 6C-3
 Fehsenfeld, Fred 7PA-12
 Felton, Dirk 1C-4
 Felton, Henry 17PD-19
 Felton, Henry D. 7PA-2, 7PA-8,
 17PD-16, 17PH-28, 20C-4
 Ferro, Andrea 3A-5, 7PG-34
 Fila, Mike 17PD-19
 Fine, Philip M. 2A-3, 3B-2, 5B-2,
 7PA-1, 7PA-7, 9A-3, 18A-5, 20C-1
 Fissan, Heinz 7PF-21
 Fitz, Dennis 3C-4, 6B-4, 13B-3
 Flanagan, James 19A-2, 19A-3, 20A-2
 Flocchini, Robert 7PA-10
 Fortin, Tara 3B-5, 3B-5
 Frank, Brian P. 7PA-15
 Frank, Neil 17PD-5, 17PD-6
 Fraser, Matthew 8A-4, 13A-2
 Freedman, Andrew 6B-3
 Freitas, Carmo 18B-2
 Fried, Alan 18B-3
 Fujita, Eric 4A-2
 Fung, Kochy 12PA-1
 Gaffney, Jeffrey S. 12PD-24, Plenary
 Galbreath, Kevin 18B-5
 Gallagher, John 18B-5
 Gangamma, S 14C-3
 Garlock, Jennifer 20B-2
 Gay, David 3A-2
 Gaydos, Timothy 18A-3
 Geigert, Michael 12PD-18
 Geller, Michael 2A-3, 3B-2, 5B-2, 7PA-1
 Geron, Chris 12PF-30
 Gharibyan, Luiza 17PI-33
 Gildemeister, Amy 14B-1
 Gilliland, Alice 11B-1, 11B-2
 Gimmestad, Gary 16C-2
 Gnauk, Thomas 1C-5
 Goetz, Stephen 2A-5
 Gonzalez, Marilyn 3A-5
 Goodwin, Bradley 5B-3, 5B-4
 Goohs, Kevin 5C-2, 7PA-3, 12PD-18,
 16A-2
 Graham, Jr., John J. 17PH-29
 Gramsch, Ernesto 17PD-12
 Greenbaum, Daniel Plenary
 Greene, Lisa 19A-3
 Grieshop, Andrew 17PB-3
 Griffin, Robert 11C-2, 16B-2
 Grimm, Hans 20C-3
 Grinshpun, Sergey A. 3B-1, 4A-3
 Grover, Brett 15C-1, 20C-2
 Grygas, Jillian 7PA-15
 Guenther, Alex 12PF-30, 18C-2
 Gundel, Lara 3C-2, 3C-1
 Gupta, A. K. 14A-3
 Gutknecht, William 19A-3, 20A-2
 Hafner, Hilary 17PD-14
 Hajjaligol, Mohammad 3C-5
 Hamade, Ali 17PI-34
 Hämeri, Kaarle 19C-3
 Han, Hee-Siew 17PD-18
 Han, Jin S. 6C-4 (44)
 Hansen, D. Alan 1A-4
 Hao, Winston 11C-3
 Hardison, Eva 19A-3
 Härkönen, Jari 20B-1
 Harley, Peter 18C-2
 Harmon, Wayne 16A-2
 Harry, Ten Brink 8C-4
 Hartmut, Herrmann 19B-2
 Hartsell, Benjamin 2A-4, 2C-4, 16C-1
 Heinzerling, David 12PD-19
 Helmig, Detlev 18C-2
 Herckes, Pierre 15A-3
 Hering, Susanne 8C-2, 12PA-6, 20C-1
 Hernandez, Mark 2C-2
 Herrick, Jeffrey 18C-2
 Herrmann, Hartmut 1C-5, 12PA-5
 Hidy, George 18A-2
 Hill, Jason 2A-1, 5B-4, 7PA-3
 Hinds, William 3B-3
 Hlasny, Vladimir 10B-5
 Hoffmann, Dirk 12PA-5
 Hogrefe, Christian 11C-3
 Hogrefe, Olga 4B-1, 5B-1, 7PA-8,
 7PA-15, 7PA-16, 14A-1, 20C-1
 Holger, Gerwig 1C-5
 Homolya, James 17PD-17
 Hook, Les 12PD-17
 Hopke, Philip 6A-1, 7PF-18, 7PF-22,
 7PF-23, 7PF-27, 7PF-26, 7PF-28,
 7PG-34, 12PA-8, 12PD-15, 12PF-28,
 14B-1, 14B-3, 15B-1, 17PD-19,
 17PE-25, 20B-4, 20C-2
 Hovorka, Jan 9C-4, 17PD-20
 Hu, Di 18C-4
 Hu, Shaohua 3B-1, 4A-3
 Hu, Yongtao 10B-1
 Huey, L. Gregory 7PA-12
 Huff Hartz, Kara 18C-5
 Huff-Hartz, Kara 18C-3
 Huffman, Alex 10A-5
 Husain, Liaquat 7PA-8, 8B-2
 Hyslop, Nicole 20A-1
 Inuma, Yoshiteru 19B-2
 Jang, Carey 10C-4
 Jang, Myoseon 19B-1
 Jaques, Peter 3A-5, 7PG-34, 20C-1
 Jayanty, R.K.M. 19A-2, 19A-3
 Jayne, John 9A-1, 10A-5, 18A-3
 Jenkins, Rachele 17PD-16
 Jeong, Cheol-Heon 17PD-19
 Jimenez, Jose 9A-1
 Jimenez, Jose-Luis 7PA-7, 10A-5,
 12PD-16, 18A-3
 Johnson, Ed 7PA-16
 Johnson, Philip R.S. 17PH-29
 Johnston, Murray 2B-2, 7PF-25, 7PF-
 24, 9A-5, 9A-4, 10A-1, 12PF-33,
 12PF-34
 Jouravlev, Mikhail 4C-4
 Jung, Hyun R. 6C-4
 Jung, Jaegun 7PG-31
 Junquera, Victoria 13A-1
 K. Varghese, Suresh 14C-3
 Kamens, Richard 18C-4
 Karpinen, Ari 10C-3
 Kasper-Giebl, Anne 2C-1
 Kaufman, Stanley 17PD-18
 Kawamura, Kimitaka 3A-3
 Ke, Lin 5A-2, 16B-1
 Kenski, Donna 6A-1, 17PD-14
 Khare, Puja 17PE-21
 Khlystov, Andrey 5C-1, 7PA-6, 7PA-7,
 7PA-13, 12PA-9, 12PD-13, 12PD-14,
 12PD-16, 15C-2, 18A-3, 19C-2
 Kim, Eugene 7PF-22, 7PF-23, 12PF-28
 Kim, Min J. 6C-4
 Kim, Shin D. 6C-4

Kim, Young J. 6C-4
 Kimball, Hoke 2A-5
 Kimura, Yosuke 13A-1
 Klamser-Williams, Tracy 17PD-17,
 20A-1
 Kleanthous, Savvas 9B-2
 Kleeman, Michael 16B-2
 Kleinman, Michael 17PI-34
 Kleissl, Jan 20A-4
 Klingbeil, Brenda 10A-5
 Koerber, Michael 6A-1
 Koutrakis, Petros 1A-4
 Kreisberg, Nathan 12PA-6
 Ku, Jia-Yeong 11C-3
 Kuhn, Thomas 9C-3
 Kumar, Naresh 6C-1
 Kumar, Vijayant 20A-4
 Kurizki, Gershon 4C-4
 Lack, Daniel 12PA-10
 Lake, Derek 9A-5, 12PF-33
 Lala, G. Garland 7PA-15, 7PA-16,
 14A-1
 Lam, Janice 7PA-10
 Lam, Tack 17PI-34
 Lamminen, Erkki 7PA-17
 Lane, Douglas 3C-1
 Lane, Timothy 7PG-35, 11B-3
 Larsen, Randolph 2C-3
 Larson, Timothy 4A-4
 Later, Douglas 20C-2
 Lawrence, Alfred 18B-4
 Lee, Bo K. 6C-4
 Lee, Byung U. 6C-4
 Lee, Dong S. 6C-4
 Lee, Jong Hoon 6A-1
 Lee, Jongmin 5C-3
 Lee, Sangil 8B-5, 10B-4, 11A-2, 13A-3
 Lee, Suck J. 6C-4
 Lee, Taehyoung 15A-3
 Legg, Janine 17PI-32
 Lemasters, Grace 3B-1, 4A-3
 Lersch, Traci 2B-1, 2C-5, 7PA-14,
 8C-5, 12PF-32
 Lewtas, Joellen 1C-1
 Li, Jianzhong 18B-3
 Li, Min 1C-4
 Li, Yongquan 7PA-11
 Lilienfeld, Pedro 16A-2
 Lim, Ho Jin 9B-1
 Lipsky, Eric 2B-2, 12PF-29, 12PF-34,
 17PB-1, 17PB-3
 Liu, Wei 6A-2, 7PA-16, 7PF-19,
 7PG-32, 8C-1, 12PF-31
 Lonati, Giovanni 3B-4, 14A-2
 Long, Russell 15C-1
 Lowenthal, Douglas H. 12PA-2
 Luke, Winston 18B-3
 Lurmann, Frederick 18A-1, 20A-3
 Magliano, Karen 1A-2, 8B-1, 12PA-2,
 12PF-32
 Malm, William 6C-3
 Mangelson, Nolan 14B-2
 Marmur, Amit 5A-4
 Martello, Donald 2B-1, 8C-5,
 12PD-21, 14B-2
 Martuzevicius, Dainius 3B-1, 4A-3
 Mazurek, Monica 1C-4
 McAuley, Timothy 3A-5, 7PG-34
 McClenny, William 18B-3
 McDade, Charles 6C-3, 17PD-17,
 20A-1, 20A-2
 McDonald, Rafael 3B-1
 McDow, Stephen 1C-1, 1C-4, 4C-1
 McGaughey, Gary 8A-4
 McMurry, Peter 1A-4
 McWilliams, Andrea 19A-3, 20A-2
 Meiritz, Mark 4C-2
 Meyer, Michael 20C-2
 Middha, Prachi 9A-2
 Miguel, Antonio 3C-1, 9C-2, 16B-4
 Mihele, Cristian 3C-1
 Mikkanen, Pirita 7PA-17
 Milford, Jana 12PF-30, 18C-2
 Mills, David 8A-2
 Miranda, Regina 17PD-7
 Misra, Chandan 7PA-7, 9A-3
 Mobley, David 17PH-30
 Modey, William 14B-2, 15C-1
 Mohnen, Volker 5B-1
 More, Sanjay 17PE-24
 Mueller, Konrad 1C-5
 Mukhopadhyay, U. K. 14A-3
 Murmur, Amit 7PG-32
 Naehner, Luke 13A-3
 Nag, Subhankar 14A-3
 Nair, Narayanan 7PF-18
 Najita, Theresa 1A-2, 8B-1
 Napelenok, Sergey 10B-2
 Nazridoust, Kambiz 7PG-34
 Nelson, Dena 13B-1
 Neuberger, Bernhard 2C-1
 Neuman, J. Andrew 7PA-12
 Niemeier, Debbie 3B-3
 Niyogi, Dev 14C-2
 Nolte, Christopher 13C-2
 Norris, Diane 7PG-33
 Northcross, Amanda 19B-1
 Northway, Megan 9A-1
 Novitsky, Edward 16C-3
 Nowak, John B. 7PA-12
 Oberreit, Derek 8C-2
 Odón Román, Sánchez Ccoyllo 7PG-29
 Ogulei, David 7PF-18, 12PD-15
 Ojanen, Johanna 7PA-17
 Oktem, Berk 10A-1
 Olfert, Jason 16A-3
 Olson, David 4C-1
 Onasch, Tim 9A-1
 Ondov, John 1A-4, 1B-3, 1B-4, 5A-3,
 7PF-18, 7PF-20, 9B-3, 12PF-33,
 20A-4
 O'Rourke, James 19A-2
 Orsini, Douglas 7PA-12
 Ortega, John 18C-2
 Osmondson, Brian 8C-1
 Paatero, Pentti 15B-1
 Pacheco, Adriano 18B-2
 Palmgren, Finn 9B-5
 Pancras, J. Patrick 7PF-18
 Pancras, Joseph 1B-3, 7PF-20
 Pandis, Spyros 7PA-4, 7PA-6, 7PA-7,
 8B-3, 9B-1, 10B-3, 11B-3, 12PA-9,
 12PD-14, 12PD-13, 12PD-16,
 15C-2, 18A-3, 18C-3, 19B-3,
 19C-2, Plenary
 Paredes-Miranda, Guadalupe 12PA-1
 Park, Jin S. 6C-4
 Park, Seung 7PF-20, 9B-3
 Park, Seung Shik 20A-4
 Park, Sun-Kyoung 5A-2, 10C-2
 Parlange, Marc 20A-4
 Pavlick, Andrea 12PD-21

Pekney, Natalie 7PF-25, 7PF-24,
 7PF-26, 12PD-21, 17PB-1
 Peters, Thomas 16A-1
 Peterson, Max 19A-3
 Petry, Thomas 20C-3
 Philbrick, C. Russell 16C-3, 16C-4
 Phillips, Sharon 14C-2
 Phillips, Sharon B. 14C-1
 Phuleria, Harish 3B-2
 Phuleria, Harish C. 9C-1
 Pilinis, Christodoulos 12PA-9
 Pinder, Robert 11B-2, 11B-3
 Pinder, Robert W. 10B-3
 Plewka, Antje 1C-5
 Polidori, Andrea 9B-1
 Pollmann, Jan 18C-2
 Poor, Noreen 13C-2
 Presto, Albert 18C-3
 Pui, David 17PD-18
 Pulaski, Aaron 7PA-15
 Pun, Betty 8A-5
 Puxbaum, Hans 2C-1
 Qin, Xueying 1A-5
 Quant, Frederick 8C-2, 8C-1
 Quayle, Brad 12PF-30
 Qureshi, Sumizah 8B-2
 Raffuse, Sean 20B-3
 Ralston, Nicholas 18B-5
 Rantamäki, Minna 13C-4
 Rattigan, Oliver 4B-1, 7PA-8
 Ray, B. Michael 7PA-14
 Raymond, Timothy 8B-3
 Rees, Sarah 15C-2
 Ren, Xinrong 7PG-37
 Rene, Otjes 8C-4
 Reynolds, Scott 2A-4
 Rhoads, Kevin 4B-1, 17PD-13
 Rice, Joann 17PD-17
 Richter, Mathias 20C-3
 Rickman, Edward 19A-3
 Rinehart, Lynn 1C-3, 4C-3, 5C-4,
 11A-3
 Rizzo, Michael 15B-2
 Roberts, David 16C-2
 Robinson, Alan 2B-1
 Robinson, Allen 2B-2, 2C-2, 5C-1,
 7PA-4, 8B-3, 9B-1, 11B-3, 12PF-29,
 12PF-34, 15C-2, 16B-3, 17PB-1,
 17PB-3, 18C-5
 Roelle, Paul 13B-1
 Rogge, Wolfgang F. 1C-2, 12PD-26,
 12PD-27, 16B-3, 17PB-1
 Rohar, Paul 12PD-21
 Roychowdhury, Utpal 17PD-10
 Rumsey, Ian C. 13B-2
 Rury, Melissa 1B-4, 7PF-20
 Russell, Armistead 5A-2, 6A-2,
 7PF-19, 7PG-32, 8B-5, 10B-1,
 10B-4, 10C-2, 12PF-31, 13A-3,
 15B-3
 Russell, Matthew 8A-4, 11C-1
 Russell, Ted 8B-4
 Ryan, Patrick 4A-3
 Sage, Amy 18C-5
 Sakulyanontvittaya, Tanarit 12PF-30,
 18C-2
 Sarachaga-Ruiz, Laire 9B-2
 Sardar, Satya 3B-2, 7PA-1, 18A-5
 Saylor, Rick 2C-4
 Schantz, Michele 1C-1, 2C-3
 Schauer, James 1A-4, 4C-2, 5B-4,
 12PA-4, 12PA-12, 13A-3, 15B-4,
 16B-1, 17PD-14, 18B-1
 Scheff, Peter 15B-2
 Schichtel, Bret 4A-1, 6C-2
 Schlaegle, Steve 7PA-14, 8C-5
 Schwab, James 1C-4, 4B-1, 5B-1,
 7PA-8, 8B-2, 17PD-15, 17PD-16
 Schwarz, Jaroslav 9C-4
 Seigneur, Christian 8A-5
 Seinfeld, John 19C-1
 Sem, Gilmore 8C-1
 Semagin, Randall 12PD-18
 Sevimglu, Orhan 17PB-1
 Shah, Bhavesh 7PA-6
 Shao, Min 17PE-23
 Shay, Carol 12PF-30
 Sheesley, Rebecca 4C-2, 13A-3,
 17PD-14
 Shrivastava, Manish 11B-3
 Sillanpää, Markus 17PD-4
 Singh, Jaspinder 7PA-10
 Singh, Manisha 9C-1
 Sinhg, N. Shantikumar 17PE-24
 Sioutas, Constantinos 2A-3, 3B-2,
 5B-2, 7PA-1, 7PA-7, 8C-3, 9C-1,
 18A-5, 20C-1
 Sioutas, Constantinos 3B-3
 Sioutas, Costas 9A-3
 Sistla, Gopal 11C-3
 Sjostedt, Steve J. 7PA-12
 Slowik, Jay 9A-1
 Smith, Geoffrey 10A-3
 Solomon, Paul 7PA-1, 17PD-17, 20A-1
 Spencer, Eben 9A-1
 Spindler, Gerald 1C-5
 Stanier, Charles 7PA-7, 12PD-13,
 12PD-14, 12PD-16, 15C-2, 18A-3,
 19C-2
 Steger, Joette 2A-5
 Stockburger, Leonard 4C-1
 Stone, Jesse 5A-1
 Stutz, Jochen 18B-3
 Subramanian, R. 5C-1, 9B-1, 16B-3
 Sullivan, Amy P. 7PA-12
 Sullivan, Dana 20B-3
 Sunder Raman, Ramya 12PA-8, 14B-
 3
 Swami, Kamal 8B-2
 Sweet, Clyde 3A-2
 Takahama, Satoshi 7PA-6, 10B-3,
 19B-3, 19C-2
 Takeuchi, Masaki 4B-3, 6B-1
 Tang, Wei 8B-3
 Tanner, David J. 7PA-12
 Tanner, Roger 1A-1, 2A-4, 15C-4
 Taubman, Brett 5A-1
 Ten Brink, Harry 7PA-13
 Thomas, Lanni 7PA-15
 Thompson, Anne 5A-1
 Tian, Di 10B-1
 Tolocka, Michael 9A-5, 10A-1,
 12PF-33
 Tomaz, Edson 17PD-7
 Tombach, Ivar 16C-1
 Trimble, Dana 12PA-3
 Tuomenoja, Henna 7PA-17
 Turkiewicz, Kasia 1A-2, 8B-1
 Turlington, John 4C-1
 Turner, Jay 1A-4, 2A-1, 4B-4, 5B-3,

5B-4, 7PA-3, 12PD-19, 17PD-18,
 20B-2, Plenary
 Turpin, Barbara 9B-1, 15A-2
 Ullah, Rahmat 3A-2, 4B-3, 6B-1
 Unal, Alper 11A-2
 Utell, Mark 12PD-15, 17PD-19
 Valberg, Peter A. 20B-4
 Vanderpool, Robert 16A-1
 Venkatachari, Prasanna 17PE-25
 Verghese, Sachin J. 16C-4
 Vizuete, William 12PD-22
 Volckens, John 4C-1
 Von Baer, Dietrich 3A-4
 Vutukuru, Satish 11C-2
 Wakabayashi, Paul 20A-2
 Walker, John 13B-1
 Wang, Bo 16B-1
 Wang, Haobo 3A-3
 Wang, Jingli 17PE-23
 Wang, Yuhang 6A-2, 7PF-19, 7PG-32,
 12PF-31
 Wang, Yun 2B-5
 Watson, John G. 1A-4, 5C-4, 12PA-2,
 12PA-1, 12PA-3, 12PF-32, 20C-2,
 Plenary
 Weber, Rodney 1A-4, 4B-4
 Weber, Rodney J. 7PA-12
 Weimer, Silke 4B-1, 17PD-15
 Weitkamp, Emily 2B-1, 17PB-2,
 18C-5
 Wexler, Anthony 2B-2, 3B-3, 7PF-24,
 7PF-25, 9A-2, 9A-3, 9A-4, 9A-5,
 12PF-29, 12PF-34, 12PF-33, 13C-2
 White, Warren 1A-4, 20A-1, 20A-2
 White, Warren H. 19A-1
 Wiedinmyer, Christine 12PF-30,
 18C-2
 Wilbertz, Juergen 16A-2
 Williams, Allen 3A-2
 Williams, Eric 2B-3
 Wilson, Julian 8A-1
 Wilson, William 15C-1, 17PD-18
 Wise, Stephen 1C-1
 Wittig, Ann 4B-2, 7PA-4, 12PA-9
 Wittig, Beth 8B-3
 Woodruff, Jason 3A-5
 Worsnop, Douglas 7PA-7, 9A-1,
 10A-5, 17PD-15, 18A-3
 Wu, Yee-Lin 7PA-5
 Wu, Yee-Lin Wu 1B-5
 Wynne, Kristina 12PF-30
 Yan, Bo 5A-2, 15B-3
 Yang, Karl 8B-2
 Yatavelli, Laxminarasimha 20A-5
 Yi, Seung-Muk 20B-4
 Ying, Qi 16B-2
 Yoon, Heesong 18A-5
 Youngster, Sarah 15A-3
 Yu, Fangqun 18A-4, 20B-5
 Yu, Megan 4B-4
 Yue, Zhiwei 13A-2
 Zeng, Yousheng 16A-4
 Zhang, Genfa 18B-3
 Zhang, Ke 3B-3
 Zhang, Max 13C-2
 Zhang, Qi 7PA-7, 9A-1, 9C-5, 10A-4,
 12PA-11, 12PD-16, 17PD-9, 18A-3
 Zhang, Yuanhang 17PE-23
 Zhao, Weixiang 7PF-27, 7PF-28
 Zhao, Yongjing 2B-2, 7PF-24, 9A-3,
 9A-4, 12PF-29, 12PF-34
 Zheng, Mei 5A-2, 11A-2, 13A-3,
 15B-3, 16B-1
 Zhou, Liming 7PF-18, 7PF-26
 Zhu, Yifang 3B-3, 9C-2
 Zielinska, Barbara 1C-3, 4A-2, 4C-3,
 5C-4, 11A-3
 Ziemann, Paul 10A-5
 Zilliox, Edward 18B-5

Session Chair Index

Adams, Peter 10C
Aljoe, William 16B
Allen, David 3B
Allen, George 4B
Aneja, Viney 14C
Baumann, Karsten 8B
Beachley, Greg 1B
Bein, Keith 15A
Black, Kevin 9B
Blanchard, Charles 19A
Bond, Tami 11B
Buckley, Steven 18B
Cahill, Thomas 13A
Chow, Judith 5C
Chu, Shao-Hang 6B
Cowling, Ellis 6C
Dasgupta, Purnendu 4B
Davidson, Cliff 4A
Demerjian, Kenneth 14B
Dennis, Robin 11C
Dillner, Ann 8C
Doddridge, Bruce 6B
Eberly, Shelly 15B
Edgerton, Eric 9B
Felton, Dirk 20C
Fitz, Dennis 5B
Frank, Neil 20A
Gundel, Lara 4C
Hafner, Hilary 20B
Hansen, Alan 20B
Hays, Michael 11A
Hemming, Brooke 13C
Herckes, Pierre 15A
Hidy, George 18A
Hogrefe, Olga 15C
Homolya, James 16A
Hopke, Philip 6A
Hunt, Sherri 2A
Jang, Myoseon 19B
Jansen, John 8A
Jayanty, R.K.M. 1A
Johnson, Phil 4A
Johnston, Murry 9A
Khlystov, Andrey 19C
Kim, Eugene 15B
Kleeman, Michael 18C
Knipping, Eladio 5A
Kreidenweis, Sonia 16C
Lane, Douglas 3C
Magliano, Karen 5A
Malm, William 6C
McDade, Charles 20A
McDow, Stephen 1C
Meagher, James 3B
Merrifield, Tom 3A
Miguel, Antonio 3C
Miller, Andy 2B
Norris, Gary 5C
Novitsky, Ed 16C
Offenberg, John 2C
Ondov, John 1B
Pace, Tom 2B
Paisie, Joe 6A
Pandis, Spyros 13C
Pang, Yanbo 1A
Parrish, David 11B
Pekney, Natalie 13B
Philbrick, Russell 19A
Pinto, Josephe 19C
Prather, Kim 14B
Pun, Betty 10C
Rabideau, Christopher 10B
Ramachandran, Subramanian 18B
Roberts, Paul 2A
Robinson, Allen 13A
Rogge, Wolfgang 1C
Russell, Armistead 10B
S. Niyogi, Dev 14C
Schauer, Jamie 2C
Scheffe, Richard 13B
Schwab, James 3A
Sem, Gilmore 8C
Sioutas, Constantinos 9C
Stanier, Charlie 14A
Tanner, Roger 16A
ten Brink, Harry 15C
Tolocka, Michael 10A
Turner, Jay 18C
Turpin, Barbara 8B
Vizuete, William 11A
Watson, John 18A
Weber, Rodney 5B
Westerdahl, Dane 14A
Wexler, Tony 9C
Wierman, Susan 8A
Winner, Darrell 16B
Wittig, Beth 20C
Worsnop, Douglas 9A
Zhang, Max 19B
Zhang, Qi 10A
Zheng, Mei 11C
Zielinska, Barbara 4C

Future Meetings



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