

ARM Cloud Parameterization and Modeling Working Group Meeting

Steve Ghan attended an ARM Cloud Parameterization and Modeling Working Group meeting November 6-8 in Reston, Virginia. At the meeting he presented his work with Mikhail Ovtchinnikov on the simulation of a cloud system with single-column and large-eddy simulation models. Before the meeting he visited the NASA Goddard Space Flight Center and presented a seminar entitled "The Climatic Influence of Subgrid Orography in a Global Climate Model."

Ninth Annual Workshop on Weather Prediction in the Intermountain West

Jerome Fast gave an invited presentation, "Vertical Transport and Mixing (VTMX) Experiment," on November 7 at the Ninth Annual Workshop on Weather Prediction in the Intermountain West, sponsored by the University of Utah. The presentation was an overview of the 2000 VTMX field experiment in Salt Lake City sponsored by DOE's Environmental Meteorology Program.

Dr. Stephan de Wekker

On November 8 Dave Whiteman attended Stephan de Wekker's final Ph.D. examination and graduate committee meeting at the University of British Columbia (UBC) in Vancouver, Canada. Stephan began his Ph. D. studies at

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UBC in 1997 under Professor Douw Steyn after completing a 15-month fellowship working at PNNL with Dave, Jerome Fast and Shiyuan Zhong. Stephan's dissertation is on the "Structure and Morphology of the Convective Boundary Layer in Mountainous Terrain," a topic of interest to DOE's Vertical Transport and Mixing program. Stephan will receive his Ph.D. at a graduation ceremony in May, and his friends and colleagues at PNNL congratulate him on achieving this professional milestone.

MIRAGE-Mexico Workshop

Between November 13 and 15, Jerome Fast attended the MIRAGE-Mexico Workshop at NCAR in Boulder, Colorado, as a member of the MIRAGE steering committee. MIRAGE is a proposed NSF-sponsored program that will examine the effect of megacities on regional and global pollution. Previous DOE-sponsored research related to the 1997 IMADA-AVER field campaign was discussed in relation to how it could be applied to NCAR's proposed 2005 field campaign in Mexico City.

A&WMA's Symposium on Air Quality Measurement Methods and Technology--2002

Ken Cowen, Tony Wisbith and Chet Spicer attended the Air and Waste Management Association "Symposium on Air Quality Measurement Methods and Technology--2002" in San Francisco, November 13-15. They presented three papers (see Presentations/Publications).

NASA Interdisciplinary Working Group Meeting

Steve Ghan attended a NASA Interdisciplinary Working Group Meeting in Maryland from November 18-20. The focus of the meeting was on analysis and interpretation of Earth Observing System satellite measurements.

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W. Richard Barchet – Editor – (509) 372-6158 – Fax: (509) 372-6168 – e-mail: rich.barchet@pnl.gov

Pacific Northwest National Laboratory - P.O. Box 999, K9-30, Richland, WA 99352.

Ozone Science Study Workshop

Carl Berkowitz and Jerome Fast participated in the Ozone Science Study Workshop held November 20-21, 2002, at the University of Houston Clear Lake, in Houston, Texas. Carl's presentation focused on consistency in VOC and NO_x emissions relative to observations made at the Williams Tower during the Texas 2000 Air Quality Study. Jerome was invited to give a presentation entitled "Meteorological-Chemical Modeling of High Ozone Episodes during the 2000 Texas AQS." The research presented at this meeting was on coupled meteorological-chemical modeling studies using PEGASUS for the Houston area supported by DOE's Atmospheric Chemistry Program. At the end of the meeting Carl and Jerome were invited to be members of the committee charged with designing the Second Texas Air Quality Study (STAQS).

U.S. Climate Change Science Program: Planning Workshop for Scientists and Stakeholders

Ruby Leung attended the U.S. Climate Change Science Program: Planning Workshop for Scientists and Stakeholders that was held December 3-5 in Washington, D.C.

Annual SERDP Symposium

Chet Spicer, Mike Holdren, Tony Wisbith and Ken Cowen attended the Annual SERDP Symposium in Washington D.C., December 3-5. They presented a poster on "Emissions of Toxic Release Inventory Chemicals From Munitions Use" and contributed to an oral presentation by the Army's Aberdeen Test Center on "Emissions Characterization Studies."

2002 Fall American Geophysical Union Meeting

Carl Berkowitz presented two papers at the 2002 Fall American Geophysical Union Meeting held from December 6-10 in San Francisco, California. One presentation (Berkowitz et al.) focused on observations related to plume age and source region, using observations made at the Williams Tower site. The second presentation (Imre et al.) was an overview of observations related to pollution layers aloft and transport features associated with measurements made at the Williams Tower.

Presentations/Publications

- Berkowitz, C. M. and G. Jiang
"Emissions Loading at the Williams Tower."
Presented at the Ozone Science Study Workshop,
Texas Commission on Environmental Quality,
November 20-21, 2002, University of Houston Clear
Lake, Houston, Texas.
- Berkowitz, C. M., G. Jiang, P. V. Doskey, C. W. Spicer,
and R. A. Zaveri
"A Box-Model Analysis of Ozone Production Potential
as a Function of Source Region in the Houston/
Galveston Area." *Eos Trans.*, AGU, 83(47), Fall Meet.
Suppl., Abstract A12D-0183, 2002.
- Chapman, E. G.; W. J. Shaw, R. C. Easter, X. Bian, and
S. J. Ghan
"Influence of Wind Speed Averaging on Estimates of
Dimethylsulfide Emission Fluxes." *J. Geophys. Res.*,
107:10.1029/2001JD001564.
- Clements, C. B., C. D. Whiteman, and J. D. Horel
"Cold Air Pool Structure and Evolution in a Mountain
Basin: Peter Sinks, Utah." *J. Appl. Meteor.* (in press).
- Cowen, K. A., R. Mangaraj, and C. W. Spicer
"Real-Time Measurement of Phthalate Emissions from
Automobile Interiors." Presented at the Air and Waste
Management Association Symposium on Air Quality
Measurement Methods and Technology—2002,
November 13-15, 2002, San Francisco, California.
- Fast, J. D.
"Forecasts of Valley Circulations Using the Terrain-
Following and Step-Mountain Vertical Coordinates in
the Meso Eta Model." *Weather Forecasting* (in press).
- Fast, J. D.
"Meteorological-Chemical Modeling of High Ozone
Episodes during the 2000 Texas AQS." Invited
presentation at the Workshop on Ozone and Fine
Particulate Matter, sponsored by the Interim Science
Coordinating Committee, Texas Commission on
Environmental Quality, November 20, 2002, Houston,
Texas.
- Fast, J. D.
"Vertical Transport and Mixing (VTMX) Experiment."
Invited presentation at the Ninth Annual Workshop on
Weather Prediction in the Intermountain West,
sponsored by the University of Utah, November 7,
2002, Salt Lake City, Utah.
- Fast, J. D., and W. E. Heilman
"The Effect of Lake Temperatures and Emissions on
Ozone Exposure in the Western Great Lakes Region."
J. Appl. Meteor. (in press).

- Fast, J. D., and G. Jiang
 "The Effect of Ethene and Propene Emissions on Ozone Production in Houston during the TexAQS 2000 Field Campaign." In Proceedings of the Fall American Geophysical Union Meeting, December 6-10, 2002, San Francisco, California, A21F-10.
- Imre, D. F. Brechtel, A. Zelenyuk, P. Doskey, C. Spicer, D. Joseph, C. Berkowitz, M. Alexander, J. Cowin, J. Weinstein-Lloyd, and K. Baumann
 "Observations from the Williams Tower Measurement Site During TexAQS 2000: An Overview." *Eos Trans.*, AGU, 83(47), Fall Meet. Suppl., Abstract A21F-06, 2002.
- Leung, L. R., L. O. Mearns, F. Giorgi, and R. Wilby
 "Workshop on Regional Climate Research: Needs and Opportunities." *Bull. Amer. Meteorol. Soc.* (in press).
- Leung, L.R., Y. Qian, and X. Bian
 "Hydroclimate of the Western United States Based on Observations and Regional Climate Simulation of 1981-2000. Part I: Seasonal Statistics." *J. Clim.* (in press).
- Leung, L.R., Y. Qian, X. Bian, and A. Hunt
 "Hydroclimate of the Western United States Based on Observations and Regional Climate Simulation of 1981-2000. Part II: Mesoscale ENSO Anomalies." *J. Clim.* (in press).
- Leung, L. R., Y. Qian, X. Bian, W. M. Washington, J. Han, and J. O. Roads
 "Mid-Century Ensemble Regional Climate Change Scenarios for the Western United States." *Climatic Change* (in press).
- Spicer, C. W., R. Mangaraj, and K. A. Cowen
 "Measurement of Nitrosoamines, Phthalates, Nitroglycerine and Other TRI Chemicals from Munitions Using Real-Time Atmospheric Pressure Ionization MS/MS." Presented at the Air and Waste Management Association Symposium on Air Quality Measurement Methods and Technology—2002, November 13-15, 2002, San Francisco, California.
- Whiteman, C. D.
 "Weather and Climate of the Columbia Basin." Invited presentation at the Columbia Basin College, Science 110 Class, Natural History of the Columbia Basin, November 1, 2002, Pasco, Washington.
- Wigmosta, M. S., and L. R. Leung
 "Potential Impacts of Climate Change on Streamflow and Flooding in Snow Dominated Forest Basin." In *Environmental Change and Geomorphic Hazards in Forests*, R. C. Sidle, ed., CAB International, pp. 7-24.
- Wisbith, A. S., and T. D. Judy
 "Determination of Particle Size Distribution and Metals Speciation of Fumes Generated During Thermal Cutting of Steel." Presented at the Air and Waste Management Association Symposium on Air Quality Measurement Methods and Technology—2002, November 13-15, 2002, San Francisco, California.
- Zaveri, R. A., C. M. Berkowitz, L. I. Kleinman, S. R. Springston, P. V. Doskey, and C. W. Spicer
 "Evaluation of Ozone Production Efficiency in an Urban Plume Using a Lagrangian Box Model." *Eos Trans.*, AGU, 83(47), Fall Meet. Suppl., Abstract A51B-0047, 2002.