



Rendezvous 2007

2nd Annual CIRES Symposium



Wednesday, April 4, 2007
Folsom Stadium, Club Level



Rendezvous 2007 is brought to you by your CIRES Members' Council, which represents the interests of all CIRES Members with respect to CIRES governance, scientific direction, and the day-to-day workplace environment.

<http://insidecires.colorado.edu/members/>

Images at top, left to right. Anomalies in Earth's gravitational field, with warm colors showing higher gravitational pull. Model simulation of water ice clouds, with red showing greatest cloud thickness. Projected permafrost loss by end of 21st century shown in light blue. Higher ultraviolet radiation (warm colors) showing depletion of stratospheric ozone. El Niño's above-normal sea surface temperatures shown in red. All images appear with full credits in the new CIRES brochure.

AGENDA

- 7:30-8:30 Breakfast and poster setup
- 8:30-8:40 Welcome: Koni Steffen, Director of CIRES
Christoph Senff, Chair, CIRES Members' Council
- 8:40-8:50 Randy Dole, Associate Director, Weather and Climate Dynamics
- 8:50-9:10 One-minute introductions for poster session I: WCD
- 9:10-9:20 Roger Barry, Associate Director, Cryospheric and Polar Processes
- 9:20-9:30 John Wahr, Acting Associate Director, Solid Earth Sciences
- 9:30-9:50 One-minute introductions for poster session I: CPP, SES
- 9:50-10:10 Break
- 10:10-11:40 Poster session I
- 11:40-12:20 Luncheon with cash bar (continued during State of the Institute address)
- 12:20-12:50 State of the Institute address: Koni Steffen
- 12:50-13:10 Awards ceremony
- 13:10-13:20 Carol Wessman, Associate Director, Environmental Biology
- 13:20-13:30 Fred Fehsenfeld, Associate Director, Environmental Chemistry
- 13:30-13:50 One-minute introductions for poster session II: EB, EC
- 13:50-14:00 Mike Hardesty, Associate Director, Environmental Observations, Modeling, and Forecasting
- 14:00-14:10 Roger Pielke Jr., Director, Center for Science and Technology Policy Research
- 14:10-14:20 Susan Buhr, Director, Education Outreach Program
- 14:20-14:40 One-minute introductions for poster session II: EOMF, Policy, Outreach
- 14:40-15:00 Break
- 15:00-16:30 Poster session II
- 16:30-16:35 Closing remarks: Koni Steffen
- 16:35-18:00 Happy Hour with your host, Koni Steffen
Light refreshments and cash bar in the stadium. *Join us if you can!*

POSTER SESSION I

(presenters listed in *bold*)

Weather and Climate Dynamics Division

- I-1-A Mesoscale Simulations of Polar Clouds During M-PACE. **A. Solomon**, P. O. G. Persson, M. Shupe, H. Morrison, and J.-W. Bao
- I-2-A Adaptations of Gridpoint Statistical Interpolation for the Rapid Refresh System. **D. Devenyi** and T. W. Schlatter
- I-3-B Infrasonic Atmospheric Propagation Studies Using a 3-D Ray Trace Model. **M. Jones**, E. S. Gu, and A. J. Bedard
- I-4-B Statistical Climate Predictions for the Interior Southwestern U.S.: Assessment of Skill from Seven Years of Experimental Forecasts. **K. Wolter**
- I-5-C Western Water Assessment: Summary of Current Research Activities 1. B. Udall, C. Alvord, et al. Presented by **K. Wolter**.
- I-6-C Western Water Assessment: Summary of Current Research Activities 2. B. Udall, C. Alvord, et al. Presented by **K. Wolter**.
- I-7-D Effects of Surface Moisture and Boundary-Layer Parameterizations on Precipitation in Regional Climate Simulations over the Rocky Mountains and High Plains. **M. Pagowski** and G.A. Grell
- I-8-D Interannual to Decadal Predictability of Tropical and North Pacific Sea Surface Temperatures. **M. Newman**.
- I-9-E A Hybrid Ensemble/3-Dimensional Variational Data Assimilation Scheme for the Weather Research and Forecasting Model and Implications for Hurricane Predictions. **X. Wang**, D. Barker, C. Snyder, T. Hamill
- I-10-E Upper Ocean Processes Under Stratus Cloud Decks Near the Coast of South America. **T. Shinoda**
- I-11-F Integrating Assessments of User Needs with Weather Research. **J. Barsugli**, A. Ray, T. Hamill
- I-12-F The Double-ITCZ Problem in IPCC AR4 Coupled GCMs: Ocean-atmosphere Feedback Analysis. **J. Lin**
- I-13-G North American Monsoon, African Monsoon and Associated Intraseasonal Modes Simulated by IPCC AR4 Coupled GCMs. **J. Lin**
- I-14-G A State-of-the-art Fully Coupled Modeling System for the Prediction and Simulation of Weather and Atmospheric Chemistry. **G. A. Grell**, S. E. Peckham, S. A. McKeen
- I-15-H Results from the Ground-based Scanning Radiometer (GSR) Deployments at the NSA during 2004 and 2007 (RHUBC). **E. Westwater** et al.
- I-16-H The NOAA-CU Center for Environmental Technology. **A. Gasiewski**
- I-17-I Airborne Microwave Imaging for Surface Hydrology. **A. Gasiewski** et al.
- I-18-I Physical Interpretation of the Thermosphere-Ionosphere Response to the April 2002 Magnetic Storm. **M. Fedrizzi**, T.J. Fuller-Rowell, M. Codrescu, E. A. Araujo-Pradere, C. F. Minter, H. Khalsa, N. Maruyama, D. Anderson, A. Anghel
- I-19-J The Importance of Cosmic Occultation Data for Ionosphere Specification. **M.V. Codrescu**, C. F. Minter, A. Anghel, E. A. Araujo-Pradere, T. J. Fuller-Rowell, P. Spencer
- I-20-J Towards Bridging the Gap Between Terrestrial and Space Weather. **R. A. Akmaev**, T. Fuller-Rowell, F. Wu, H. Wang, N. Maruyama, M. Codrescu, M. Iredell, S. Moorthi, H. Juang, Y.-T. Hou, G. H. Millward, A. Richmond, A. Maute
- I-21-K Numerical Simulation of Heliospheric Disturbances. **D. Odstrcil**, C. N. Arge, S. Ledvina, Y. Liu, P. Riley, V. J. Pizzo, and X. P. Zhao

Cryospheric and Polar Processes

- I-22-K A First Look at Comparing Ice Thickness from Ice Charts and Submarine Data in a GIS. **L. Ballagh**
- I-23-L NSIDC's Face to the World: A Portfolio of Support for Science Data Users. **J. Beitler**, G. Hicks, D. Scott, D. Miller
- I-24-L AMSR-E Products and NASA's AMSR-E Validation Data at the NSIDC DAAC. **A. Leon**, M. Holm
- I-25-M Arctic Sea Ice Decline: Faster than Forecast? **J. Stroeve**, M. Serreze
- I-26-M Regional Trend Analysis of Satellite-Derived Snow Extent and Global Temperature Anomalies. **M. J. Brodzik**, R. L. Armstrong, E.C. Weatherhead, M. Savoie
- I-27-N The NSIDC GLIMS Glacier Database. **R. Armstrong**, B. Raup, S. J. S. Khalsa, C. Helm, R. Barry, A. Racoviteanu
- I-28-N Impact of Glaze Regions on Estimates of East Antarctic Mass Balance. **T. Scambos**, T. Haran, M. Fahnestock, C. Schuman
- I-29-O A New, MODIS-Based Mosaic of Antarctica: MOA. **J. Bohlander**, T. Haran, T. Scambos,
- I-30-O Impact of Soil Freeze/Thaw Dynamics on the North American Carbon Cycle. **T. Zhang**, L. Lu, K. Schaefer, S. Denning
- I-31-P Temperature Reemergence in Arctic soils. **K. Schaefer**, T. Zhang, P. Tans, R. Stoeckli
- I-32-P Renegotiating the Peer Review Process: Disseminating Observational Results in an Age of Instant Access. **R. Duerr**
- I-33-Q Automated Geostatistical and Neural Net Classification for Identification of Provinces in Sea Ice, Glaciers and Snow Fields. **U. Herzfeld**
- I-34-Q Physical Linkages between the East Asian Summer Monsoon and Sea Surface Temperature Anomalies in the Surrounding Oceans. **E. Lee**, T. Chase, B. Rajagopalan
- I-35-R Reliability of the IPCC AR4 Models: A 20th Century Intercomparison of the Freezing/Thawing Index. **O. Frauenfeld**, T. Zhang, A. Etringer, H. Teng
- I-36-R Precipitation of Southwestern Canada - Wavelet, Scaling, Multifractal Analysis, and Teleconnection to Climate Anomalies. **T. Y. Gan**, A. K. Gobena, and Q. Wang

Solid Earth Sciences

- I-37-S Modeling the Geometry of Bedrock River Channels. **C. Wobus**, G. Tucker, and R. Anderson
- I-38-S Development of Electrochemical Ion Source for Thermal Ionization Mass Spectrometry. **M. B. Cheversia**, L. Farmer, D. David, and C. Koval
- I-39-T Global Comparisons of GRACE with Water Storage Products. **B. Killett**, S. Swenson, J. Wahr, and M. Rodell
- I-40-T Rio Grande Rift GPS Experiment: Measuring Active Tectonics in Colorado and New Mexico. **M. Guerra**, A. Sheehan, S. Nerem, T. Lowry, and M. Roy

POSTER SESSION II

(presenters listed in *bold*)

Environmental Biology Division

- II-1-A Ecosystem Measurements of Carbon and Water Fluxes in a Subalpine Forest in the Colorado Rockies. **J. Hu**, M. Prater, S. Burns, D. Moore, R. Monson
- II-2-A Ecosystem Recovery Following Multiple Disturbances in a Subalpine Forest. **C. Wessman**, K. Kemp, M. Morliengo-Bredlau, C. Rumbaitis-del Rio
- II-3-B Simulating Realistic Benthic Boundary Conditions in Lakes: Can sediment-water exchange moderate water-column nutrient concentrations? **J. L. Anthony** and W. M. Lewis, Jr.
- II-4-B Changes in Soil Microbial Communities and Processes Across a Land-Use Gradient. **N. Fierer**, C. Lauber, H. Hamilton, M. Strickland, M. Bradford
- II-5-C Bumbling Toward a New Metabolic Pathway for Degradation of a Toxic Pesticide. **S. Copley** et al.

Environmental Chemistry Division

- II-6-C Micronization of Measles Vaccine and siRNA by CAN-BD for Aerosol Delivery by Air Expansion of Powders with a Puffhaler™. R. E. Sievers, D. J. Bennett, S. P. Cape, C. S. Braun, **J. A. Best**, A. L. Morin, C. A. Pelzmann, B. P. Quinn, P. Pathak, J. A. Searles, P. A. Bhagwat, L. G. Rebits, J. L. Burger, D. H. McAdams
- II-7-D Air Pollution and Meteorology at Night – Dependence on Low-Level Jet Properties. **Y. L. Pichugina**, R. M. Banta, N. D. Kelley, W. A. Brewer, S. P. Sandberg, and J. L. Machol
- II-8-D Lidar Measurements of Aerosol, Ozone, and Boundary Layer Winds on board the Ronald H. Brown during the Texas Air Quality Study, 2006. **B. McCarty**, S. Tucker, R. Marchbanks, J. Machol, A. Weickmann, J. George, C. Senff, R. Richter, A. Brewer, S. Sandberg, W. Eberhard, M. Hardesty
- II-9-E 3-Dimensional Distribution and Horizontal Transport of Ozone in Southeast Texas Measured with an Airborne Lidar During TexAQS 2006. **C. J. Senff**, R. M. Hardesty, R. M. Banta, L. S. Darby, R. J. Alvarez II, A. M. Weickmann, W. A. Brewer, S. P. Sandberg, D. C. Law, D. A. Merritt
- II-10-E Development of a US Carbon Dioxide Emission Inventory with High Spatial and Temporal Resolution. **G. Frost**, G. Petron, S. McKeen, S. Capps, and M. Trainer
- II-11-F Influence of Nitrate Radical on the Oxidation of Dimethyl Sulfide in a Polluted Marine Environment. **H. Stark**, S.S. Brown, P.D. Goldan, M. Aldener, W.C. Kuster, R. Jakoubek, F.C. Fehsenfeld, J. Meagher, T.S. Bates, and A.R. Ravishankara
- II-12-F Halogen Activation from the Uptake of N₂O₅ on Sea Salt. **H. D. Osthoff**, J. M. Roberts, J. Burkholder, R. Talukdar, T. S. Bates, D. Coffman, P. K. Quinn, E. J. Williams, B. M. Lerner, H. Stark, R. Sommariva, A.R. Ravishankara, and S. S. Brown
- II-13-G Organic Aerosol is Formed in Unexpectedly Large Amounts in Urban Pollution Plumes. **J. de Gouw**, C.A. Brock, C. Warneke, A.M. Middlebrook, W.C. Kuster, P.D. Goldan, B.M. Lerner, E.J. Williams, J.S. Holloway, F.C. Fehsenfeld, R.E. Peltier, A.P. Sullivan, R.J. Weber, T. Onasch, P.K. Quinn, T.S. Bates, E.L. Atlas
- II-14-G Observations of Processed Asian Pollution with a High-Resolution Aerodyne Aerosol Mass Spectrometer (HR-ToF-AMS) from the C-130 Aircraft During the INTEX-B Field Campaign. **E. Dunlea**, P. DeCarlo, J. Kimmel, A. Aiken and J.-L. Jimenez

Environmental Chemistry Division (concluded)

- II-15-H Fast Airborne Aerosol Size and Composition Measurements from the NCAR C-130 During the MIRAGE-Mex 2006 Field Campaign. E. Dunlea, **P. DeCarlo**, J. Kimmel, and J.-L. Jimenez
- II-16-H CCN Closure Studies at Urban and Background Locations. B. Ervens, G. Feingold, E. Andrews, J. A. Ogren, **M. J. Cubison**, K. Docherty, I. Ulbrich, J. L. Jimenez, A. Nenes
- II-17-I Observations of Methanesulfonic Acid in Tropical Tropospheric Aerosol. **K. Froyd**, T. Sanford, D. Thomson, J. Schreiner, and D. Murphy
- II-18-I In situ Measurements of the Mixing State and Light-scattering Properties of Black Carbon in the Troposphere and Lower Stratosphere. **J. P. Schwarz**, D. W. Fahey, R. S. Gao, J. R. Spackman, L. A. Watts, M. Schulz, and D. S. Thomson
- II-19-J Laboratory Comparison of Aerosol Optical Property Measurement Techniques (work in progress). **P. Massoli**, T. Baynard, E. Lovejoy, D. Lack and A. R. Ravishankara
- II-20-J Relative Humidity Dependence of Light Extinction by Organic/Sulfate Aerosol
R. M. Garland, A. R. Ravishankara, E. R. Lovejoy, M. A. Tolbert, and T. Baynard;
Presented by: **M. Beaver**
- II-21-K Optical Properties of Absorbing Aerosols as a Function of Relative Humidity.
M. E. Greenslade, D. Lack, T. Baynard, A. R. Ravishankara and E. Lovejoy
- II-22-K The Relative Humidity Dependence of the Absorption of Mineral Dust Aerosol after Long-Range Atmospheric Transport from the Sahara. **D. A. Lack**, T. Baynard, P. Massoli, S. Tucker, D. Covert, B. Sierau, D. Coffman, P. Quinn, A.R. Ravishankara, and E. Lovejoy

Environmental Observations, Modeling and Forecasting Division

- II-23-L Modeling the Inter-annual Variations in $\delta^{18}\text{O}$ of Atmospheric CO_2 and its Response to Humidity and Isotope Hydrology Changes. **N. Buening**
- II-24-L Tropical-Polar Linkage During ENSO Epochs and Detection of Climate Change Signals in Antarctic Ice. **S. Gregory**
- II-25-M High-Resolution Doppler-Free Polarization Spectroscopy for Novel Doppler Lidars in Environmental and Atmospheric Science Study. **X. Chu**, W. Huang, and J. Wiig
- II-26-M Gravity Wave Seasonal Variations and their Influences on Polar Mesospheric Clouds in Antarctica. **C. Yamashita**, X. Chu, G. Nott, and P. Espy
- II-27-N Time-Frequency Analysis and Filtering for Identifying Convectively Coupled Waves.
R. Schafer, S. K. Avery, K. S. Gage, and G. N. Kiladis
- II-28-N Satellite Observations of Sea Level Change. **R. S. Nerem**, J. Choe, and E. Leuliette
- II-29-O Analysis of the Simple Inner Magnetosphere Model. **J. J. Mabee**, T. Garner, E. Kihn
- II-30-O Sea Ice Feedbacks Governing Abrupt Climate Recovery after North Atlantic Freshwater forcing. **C. Morrill**, B. Otto-Bliesner, E. Brady and B. Briegleb
- II-31-P Developing Coastal Inundation Digital Elevation Models to support NOAA's Tsunami Program. **B. W. Eakins**, L. A. Taylor, K. S. Carignan, R. R. Warnken, T. Sazonova, and D. C. Schoolcraft
- II-32-P Spatio-temporal Characterization of the Equatorial Electrojet from CHAMP, Oersted, and SAC-C Satellite Magnetic Measurements. **P. Alken** and S. Maus
- II-33-Q Aerosol-Cloud Interaction Studies at Point Reyes, CA. **A. McComiskey**, G. Feingold, S. Frisch, D. Turner, Q. Min, M. Miller
- II-34-Q Convection into the UT, TTL, and LS Observed with Long and Very Short-Lived Trace Gas Measurements (PANTHER GCMS Onboard the NASA Sponsored WB-57F). **F. L. Moore**

Environmental Observations, Modeling and Forecasting Division (concluded)

- II-35-R Validation of OMPS Ozone Profile Data with Expanded Dataset from Brewer and Automated Dobson Network. **I. Petropavlovskikh**, E. Weatherhead, A. Cede, S. Oltmans, S. Kireev, E. Maillard, P.K. Bhartia, L. Flynn
- II-36-R CarbonTracker - An Annual Global Inversion Flux Product from the NOAA Earth System Research Laboratory. **A. Jacobson**

Center for Science and Technology Policy Research

- II-37-S Limits to Relevance as a Criterion for Research Funding. **M. Averill** and A. Briggie
- II-38-S Investigating the Prioritization Process for Homeland Security Projects. **S. Mohleji**
- II-39-T The Decision Process and the Research Product in Federal Mission Agencies. **N. Logar**

Education Outreach Program

- II-40-T CIRES Communication, Coordination and Community-Building for the International Polar Year. **M. S. McCaffrey**, S. Buhr, S. Lynds, F. Niepold, M. Parsons
- II-41-U Extending CIRES Expertise to the Community Through Outreach. **S. Buhr**, P. Bradley, L. Hansen, S. Laursen, S. Lynds, M. McCaffrey, L. Smith, R. Vachon
- II-42-U Communicating New(sy) Science. **A. Bailey**

OUTSTANDING PERFORMANCE AWARDS

Science and Engineering Awards

Honoring extraordinary CIRES Members involved in scientific research and engineering work

Joost de Gouw – NOAA/CSD

The research of Dr. Joost de Gouw has fundamentally changed the scientific understanding of the sources of atmospheric aerosol particles and its effect on air quality, atmospheric chemistry and climate. His thorough analysis and careful measurements of organic aerosols from the New England Air Quality Study in 2002 found that an unexpected source of organic aerosols derives from abundant amounts of hydrocarbon gas being emitted into the polluted air of the urban atmosphere. Despite results that challenged conventional wisdom on the source of these aerosols and created initial skepticism from peers in his field, he remained steadfast in his findings which were later validated in several other field programs. These results became a prime motivator in a special session at a recent American Geophysical Union conference and have led to the reevaluation of decades of aerosol yield studies conducted in smog chambers. Over the past decade he has also pioneered a new technique for the measurement of volatile organic compounds in the atmosphere and is considered by his peers a leader in this field. His major contributions in research, however, have not prevented him from teaching and training the new generation of scientists where he supervises two University of Colorado graduate students. The quality of his scientific research and his leadership in the field of atmospheric chemistry are widely recognized to have a profound impact in the atmospheric sciences.

David Stone and Kelvin Fedrick – NOAA/SEC

David Stone and Kelvin Fedrick developed a highly complex ingest, processing and analysis software system for a new series of GOES satellite and space weather instrument data. David and Kelvin were presented the complicated problem of developing software that could process new data in a new format from a new satellite that were coming in at a higher data rate through a new ground system. In the face of aggressive schedules and constant resource and integration challenges they successfully delivered an “operational” ready system for post-launch test. Their creativity, perseverance, and dedication resulted in successfully capturing the data so that scientists could analyze instrument performance during the six-month post-launch test period. During the post-launch period they continued to work hand-in-hand with the scientists to modify processing algorithms in real time, and their software helped scientists identify and correct anomalies found in the new instruments. Their efforts are considered vital to the Space Environment Center mission of providing data to customers ranging from the U.S. Air Force and NASA to commercial airlines and power companies.

Jonathan Kofler - NOAA/GMD

Jonathan Kofler successfully developed an improved system for automated *in situ* monitoring of carbon cycle greenhouse gases, leading to major improvements in NOAA’s Carbon Atmospheric Observing System. The new analyzers, which provide continuous measurements of CO₂ and CO, are the core instruments for an expanding network of tall tower greenhouse gas observatories sponsored by the Global Monitoring Division at NOAA/ESRL. Jonathan’s new design is more reliable than previous instruments and provides higher precision data, and his modular design allows for quick replacement thus minimizing downtime and data gaps. Unlike previous instruments, repairs can now be done in the laboratory which keeps costs lower and improves quality control. Jonathan has also initiated improvements to databases that track project spending and inventory, and set up intercomparison experiments to evaluate new equipment as part of the Small Business Innovation Research programs. He even oversaw and worked long hours to install ozone monitors for a field program even though it was not among his primary job responsibilities. His creativity, dedication, and expertise with the new analyzers will enhance significantly our ability to inform and engage society on the issue of carbon emissions.

OUTSTANDING PERFORMANCE AWARDS

Service Awards

Recognizing outstanding CIRES Members performing vital service through administration, information technology, project management, outreach, or other work not directly related to scientific research or engineering

Allaina Howard – CIRES/NSIDC

When Allaina Howard arrived at NSIDC as the new professional librarian and archivist, she encountered storerooms containing almost 30 years of scientific materials that completely lacked organization, preservation, access, and defined purpose. In a very short time, she brought order to the chaos of an unusable collection through developing a program using free student volunteers and securing funding sources that have now allowed a significant number of these scientific collections to be accessible to researchers. Most notably, she has expanded, promoted, and made accessible the Glacier Photograph Collection of rare and valuable images, glass plates, and field notebooks where thousands of images are downloaded through the NSIDC web site each month and images have been presented in several national media outlets. Her work with this collection has been recognized by NOAA managers as one of the most successful programs in the Climate Database Modernization Program, and her achievements have resulted in being invited to give presentations at the Geological Society of America and Polar Libraries Colloquy in Rome. Her resourcefulness enabled her to digitize a historic 1930's film of glaciers and field expeditions in the Rocky Mountains that was deteriorating from age at no cost to NSIDC. Allaina's ability to collaborate with others, her leadership role in data stewardship, and her inspiration to seek out grants and proposals to fund projects has exceeded all expectations of her service to the NSIDC.

John Maurer – CIRES/NSIDC

John Maurer's ability to understand user needs and to write efficient and effective computer code has greatly benefited both the User Services Office and Systems Engineering Group at NSIDC over the past six years. The tools developed by John have significantly reduced the time it takes for User Services to respond to and enter all incoming user requests. His ability to quickly learn new programming languages and translate user needs into software requirements has made him a key component for the smooth operations of the Systems Engineering Group. He has served as lead developer on at least four major systems that are vital to NSIDC. His willingness to take on new challenges resulted in him volunteering to complete a stagnate project which is now the popular NSIDC web site entitled "The Atlas of the Cryosphere." This web site demonstrated utilization of a Web Mapping service at NSIDC that incorporates numerous cryospheric datasets in an OGC compliant web client, as well as OGC compliant WMS, WFS, and WCS servers, serving the polar community. While maintaining a high-level of excellence in his full-time job, he was able to receive certification from a remote sensing course through PAOS and earn a Master's Degree from the University of Colorado Geography Department. His commitment to improving both his knowledge base and technical skills along with his positive attitude and enthusiasm have immeasurably improved the level of service NSIDC has with its customers.

CIRES/NOAA BRONZE MEDAL

NOAA Unmanned Aircraft Systems (UAS) Demonstration

The CIRES team for the NOAA Unmanned Aircraft Systems (UAS) Demonstration in 2005 is being recognized for the first successful flights of airborne instruments for remote sensing and in situ sampling of the atmosphere. Each of the instruments was built for the extreme environment of the NASA Altair UAS platform. Dale Hurst, Fred Moore, Geoffrey Dutton, Brian Vasel, and David Nance were responsible for the construction and operation of UAS Chromatograph for Atmospheric Trace Species (UCATS), which measured ozone, nitrous oxide, sulfur hexafluoride, chloro-fluorocarbons -11 and -12, and halon-1211. Marian Klein and Vladimir Leuski were responsible for the construction and operation of the Passive Microwave Vertical Sounder (PMVS) that measured vertical profiles of temperature and water vapor. Eric Ray was responsible for flight planning for all ten flights and developed the programs to evaluate flights for Aura satellite validation and the occurrence of nearby atmospheric rivers events in the midlatitudes, which are characterized by extreme rainfall and flooding from humid tropical systems to the southwest. NOAA ESRL and CIRES scientists provided the only NOAA instruments on the plane.

Team Members

Dale Hurst (GMD)
Fred Moore (GMD)
Geoffrey Dutton (GMD)
David Nance (GMD)
Brian Vasel (GMD)
Marian Klein (formerly PSD)
Vladimir Leuski (formerly PSD)
Eric Ray (CSD)

2006 CAREER TRACK PROMOTIONS

Senior Research Scientist

Rashid Akmaev
Joost de Gouw
Ted Scambos
Tingjun Zhang

Research Scientist III

Owen Cooper
Andrew Neuman
Shiling Peng
Robert Pincus
Julienne Stroeve

Research Scientist II

Clifton Minter
John Nowak
Andrew Slater
Troy Thornberry

Senior Associate Scientist

Jim Kastengren
Mark Parsons

Associate Scientist III

Liz Cassano
Christopher Harrop
Xiangbao Jing
John Maurer
Donna Scott
Matthew Shupe
Ken Smith
Mike Stowe

Associate Scientist II

Emrys Hall

Senior Administrative Associate

Yvonne Garcia

Administrative Associate III

Ami Nacu-Schmidt

YEARS OF SERVICE AWARDS

25 Years

Julie McKie
Paul Murphy

20 Years

Cindy Brekke
Jon Eischeid
Yvonne Garcia
Nan Regnier

15 Years

John Holloway
Sergey Matrosov
Ludmila Matrosova
Tom Mefford
Matt Newman
Mark Ohrenschall
Ola Persson
Cathy Smith
Conglong Zhao

10 Years

Susan Buhr
Chuck Eubank
Florence Fetterer
Kathleen Lantz
Vladimir Leuski
Janet Machol
Harry McColl
Jeff Smith
Julienne Stroeve
Brian Vasel
Holger Voemel
I-Pin Wang
Tingjun Zhang

5 Years

Rashid Akmaev
Lisa Ballagh
Jennie Bell
Jennifer Bohlander
Liz Cassano
Steve Clifford
Joost De Gouw
Ruth Duerr
Andrew Etringer
Oleg Godin
Jeff Groth
Lucia Harrop
Mike Hartman
Ara Howard
Paul Keith Hyder
Michael Kay
Bobbie Klein
Daryl Kohlerschmidt
Jialin Lin
John Maurer
Leslie Mayer
Mark McCaffrey
Ami Nacu-Schmidt
Dusan Odstreil
Robert Pincus
Matt Savoie
David Stone
Mike Stowe
Benjamin Tuttle
Carsten Warneke
Paul Zaffino
Kathy Zellers
Tao Zhang

YOUR CIRES MEMBERS' COUNCIL

Rendezvous 2007 is brought to you by your CIRES Members' Council. The Council represents the interests of all CIRES Members with respect to CIRES governance, scientific direction, and the day-to-day workplace environment. As a representative group made up of CIRES Members, it is tasked with:

- Representing the concerns of the CIRES Membership by bringing issues to the attention of the CIRES administration
- Working to improve the lines of communication within and between all CIRES units
- Providing a means of Member participation in CIRES governance and a voice on committees and working groups which form the core of that governance
- Contributing to the process which determines CIRES' research direction and Scientific Themes
- Fostering a positive workplace environment and Members' connection with CIRES by facilitating Members' understanding of their roles within CIRES.

For more information, see <http://insidecires.colorado.edu/members/> or contact your representatives:

- East Campus: Lisa Ballagh (CMC Secretary) and Oliver Frauenfeld (CMC Vice Chair)
- ESRL CSD: Ken Aikin and Christoph Senff (CMC Chair)
- ESRL GMD: Aaron Watson
- ESRL GSD: Dezso Devenyi
- ESRL PSD: Lucia Harrop and Darren Jackson
- Main Campus: Jennie Bell and Mike Meshek
- NGDC: John Kozimor
- SEC: Eduardo Araujo-Pradere

The CIRES Members Council provides the opportunity for service as well as career enhancement, benefiting representatives and constituents alike.

How can you as a CIRES Member get involved?

- Share your thoughts and concerns with your Members' Council representative.
- Attend a monthly Members' Council meeting at your workplace.
- Consider serving as a representative on the Members' Council.

EVALUATION OF THE 2007 CIRES SCIENCE SYMPOSIUM

To help your Members Council improve the annual science symposium, please take a few minutes to complete this brief survey. This year's symposium was improved based on feedback received last year. Please help us do even better next year.

Did you find this activity to be of value? _____
Did you stay the entire day? _____

Venue

What did you think of the venue? _____
Should this event be held here in the future? _____
Do you have another venue to suggest? _____
How would you rate the food? _____

Content

Was the event too long/too short/about right? _____
Was the distribution of posters to presentations about right? _____
Did you find the 1-minute poster presentations useful? _____
Were there too many/too few/about the right number of posters? _____

Please give us suggestions to make this a better, more valuable, and more enjoyable event in the future:

**Please detach your completed survey and leave it on the table near the entrance to the Symposium.
Or, mail your survey to Christoph Senff, CMC Chair, ESRL CSD via campus mail.**