# 2007 ESRL Global Monitoring Annual Conference

**Boulder, Colorado**  
May 2 and May 3, 2007  
David Skaggs Research Center, Room GC402  
325 Broadway, Boulder, CO 80305

**AGENDA**  
(Presenter's name only is given; see abstract for complete author listing.)

## Wednesday, May 2, 2007

### Session 1

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<td>0830-0840</td>
<td>Welcome and Introduction – D.J. Hofmann (ESRL/GMD)</td>
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<td>0840-0900</td>
<td>Some Recent Scientific Results from the AGAGE Network – R.G. Prinn (MIT, Boston, MA)</td>
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<td>0900-0920</td>
<td>What Can the Mauna Loa CO(_2) Record Tell Us? – P.P. Tans (ESRL/GMD)</td>
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<td>0920-1000</td>
<td>The Atmospheric Perspective of Carbon Dioxide Exchange Across North America: CarbonTracker</td>
<td>– W. Peters (CIRES/GMD)</td>
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<td>0940-1000</td>
<td>Quantifying Canada’s Methane Budget Using Atmospheric Methane Measurements and Modeling</td>
<td>– D. Worthy (Environment Canada, Toronto, Ontario, Canada)</td>
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<td>1000-1020</td>
<td>Do We Understand Recent Trends in Atmospheric CH(_4)? – E.J. Dlugokencky (ESRL/GMD)</td>
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<td>1020-1040</td>
<td>Break</td>
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<td>Trace Gas Measurements from the Unmanned Aerial System (UAS) Altair – D.F. Hurst (CIRES/GMD)</td>
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<td>1100-1120</td>
<td>Long-Term Records of Dust Transport over the North Atlantic Ocean Based on Measurements Made at Island Stations – J.M. Prospero (University of Miami, Miami, FL)</td>
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<td>1120-1140</td>
<td>A Web-Based Interactive Atmospheric Data Visualization Tool: Near Real-Time Access to Data from the NOAA ESRL Carbon Cycle Observing Network – K.A. Masarie (ESRL/GMD)</td>
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<td>1140-1200</td>
<td>A Consistent Picture of Inter-Annual Variations in Tropospheric OH during 1998-2006 as Inferred from Observations of Methyl Chloroform, Methane, and Other Trace Gases – S.A. Montzka (ESRL/GMD)</td>
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<td>Recent Results from the NOAA/ESRL Tall Tower Network – A.E. Andrews (ESRL/GMD)</td>
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<td>1320-1340</td>
<td>The Footprint of CO(_2) Fluxes from a Joint Ocean Atmosphere Inversion on Atmospheric CO(_2) and (^{13})C/(^{12})C Ratios in CO(_2) – S.E. Mikaloff-Fletcher (Princeton University, Princeton, NJ)</td>
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<td>1340-1400</td>
<td>Increasing Wetland Emissions of Methane from a Warmer Arctic: Do We See it Yet?</td>
<td>– L.M. Bruhwiler (ESRL/GMD)</td>
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<td>1400-1420</td>
<td>First Results of Non-Methane Hydrocarbon Monitoring in Flask Samples from the NOAA Cooperative Air Sampling Network – D. Helming (INSTAAR, University of Colorado, Boulder)</td>
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### Poster Session

**Poster Session** (Room GB-124 and G-Level Atrium)
Thursday, May 3, 2007

**Session 5**  
**International Monitoring Programs 1 - R.C. Schnell**

0830-0850  
Climate Altering Trace Gases at Mt. Cimone, Northern Apennines, Italy  
- M. Maione (University of Urbino, Urbino, Italy)
- E.G. Dutton (Swiss Meteorological Agency, Dubendorf, Switzerland)
- E. Maddy (QSS Group, Lanham, MD)
- J.W. Elkins (ESRL/GMD)

0850-0910  
GEOSummit Baseline Measurement Results and Long-Term Plans – R. Banta (DRI, Reno, NV)

0910-0930  
Cooperative China-U.S. Greenhouse Gases and Related Tracers Measurements Program  
- L.X. Zhou (Chinese Academy of Meteorological Sciences, Beijing, PRC)
- J.A. Ogren (South African Weather Service, Stellenbosch, South Africa)
- A.M. Michalak (University of Michigan, Ann Arbor, MI)

0930-0950  
Climate Altering Trace Gases at the ABC-Pyramid Laboratory, Himalayan-Karakorum Range, Nepal  
- P. Cristofanelli (National Research Council, Bologna, Italy)
- A. McComiskey (CIRES/GMD)

0950-1010  
Evaluating the Influence of Terrestrial Emissions on Offshore Air Composition Using Radon-222  
Observations at Cape Grim, Tasmania – W. Zahorowski (ANSTO, Australia)

1010-1030  
Break

**Session 6**  
**International Monitoring Programs 2 - J.A. Ogren**

1030-1050  
The WMO-GAW World Calibration Centre for Surface Ozone, Carbon Monoxide and Methane:  
Activities during the Last 10 Years with a Focus on Carbon Monoxide – C. Zellweger (Swiss Meteorological Agency, Dubendorf, Switzerland)
- J.A. Ogren (South African Weather Service, Stellenbosch, South Africa)

1050-1110  
Aerosol Optical Variability as Measured at Cape Point (34°S, 18°E), South Africa  
- C. Labuschagne (South African Weather Service, Stellenbosch, South Africa)

1110-1130  
Monitoring of UV-B Radiation and Ozone Column in the Republic of Panama  
- A. Pino (University of Panama, El Cangrejo, Republic of Panama)

1130-1150  
Lulin Atmospheric Background Station (LABS) in Taiwan  
- N.H. Lin (National Central University, Chung-Li, Taiwan)

1150-1210  
Overview of the SOWER Campaigns 2006 and 2007: Dehydration and Transport in the Tropical Tropopause Layer and Lower Stratosphere During the Boreal Winter – H. Vömel (CIRES/GMD)

1210.1310  
Lunch

**Session 7**  
**New Directions 1 - E.G. Dutton**

1310-1330  
Increased Atmospheric Growth Rates of the CFC Substitutes, the HCFCs, and Their Implications on International Protocols – J.W. Elkins (ESRL/GMD)

1330-1350  
The Annual Climatology of the CO₂ Profiles over North America Derived from the NOAA/ESRL Aircraft Network – C. Sweeney (CIRES/GMD)

1350-1410  
Changes in Concentration and Isotopic Composition of CO₂ in Air in Pasadena, CA, Between 1972 and 2003 – S. Newman (California Institute of Technology, Pasadena, CA)

1410-1430  
Estimated Monthly Global Emissions of Anthropogenic CO₂ and Their Impact on Calculated Atmospheric CO₂ – T.J. Blasing (Oak Ridge National Laboratory, Oak Ridge, TN)

1430-1450  
The Spatial Sampling Approach for Orbiting Carbon Observatory Measurements: Strategies of Validation of OCO Measurements Against Surface Networks – D. Crisp (Caltech, Pasadena, CA)

1450-1510  
Break

**Session 8**  
**New Directions 2 - S. J. Oltmans**

1510-1530  
Intercomparison of ESRL/GMD In Situ Aircraft and Matched CO₂ Retrievals from the Atmospheric Infrared Sounder (AIRS) – E. Maddy (QSS Group, Lanham, MD)

1530-1550  
Anions, Cations and Carbonaceous Aerosols at MLO – B.J. Huebert (University of Hawaii, Honolulu, HI)

1550-1610  
A Free Tropospheric Observatory on the West Coast of the United States: The Mt. Bachelor, Oregon, Observatory – D. Jaffe (University of Hawaii, Honolulu, HI)

1610-1630  
Fine Spatial Resolution Global CO₂ Flux Estimates from Remote Sensing Derived Environmental Data  
Within a Geostatistical Inverse Model – A. M. Michalak (University of Michigan, Ann Arbor, MI)

1630-1650  
Radiative Forcing of the First Aerosol Indirect Effect – A. McComiskey (CIRES/GMD)
Wednesday, May 2: 1600-1800

**Solar Radiation**

- P-1 The NOAA Annual Greenhouse Gas Index (AGGI) - Update 2006 – D.J. Hofmann (ESRL/GMD)
- P-2 Factors Affecting UV Radiation at Barrow, Alaska – G. Bernhard (Biospherical Instruments, San Diego, CA)
- P-3 Long-Term Stability of Rev Q, UV Multifilter Rotating Shadowband Radiometers, Part 4: Lamp Calibrations Versus the Langley Method – G.T. Janson (Colorado State University, Fort Collins, CO)
- P-4 The Information Available on Short-Term and Long-Term Tropospheric Ozone Variability from Zenith Sky UV Measurements – I. Petropavlovskikh (CIRES/GMD)
- P-6 An Aerosol Optical Depth Climatology for the SURFRAD Network – J.A. Augustine (ESRL/GMD)
- P-7 A Network of Spectral Radiometers for the Study of Polar Aerosols – R.S. Stone (CIRES/GMD)

**Aerosols**

- P-8 Aerosol Optical Depth from Passive and Active Measurements during the 2005 Aerosol Lidar Validation Experiment at the ARM Site in Oklahoma – P. Kiedron (CIRES/GMD)
- P-9 Ultra-Fine and Fine Aerosol Number Concentrations at Zugspitze Station, Germany – L. Ries (UBA, Federal Environment Agency)
- P-10 Aerosol Optical Properties at a Polluted Continental Site – E. Andrews (CIRES/GMD)
- P-11 The NOAA/ESRL Airborne Aerosol Observatory: an Overview of the First Year of Operations – P.J. Sheridan (ESRL/GMD)

**Halocarbons and Hydrocarbons**

- P-12 In Situ Measurements of Methyl Chloride at the NOAA Baseline Observatories – G.S. Dutton (CIRES/GMD)
- P-13 Convection of Long and Very Short Lived Trace Gases into the UT/LS and TTL – F.L. Moore (CIRES/GMD)
- P-14 On Reconciling Competing Atmospheric Concentration Estimates from an In Situ ECD GC – J.D. Nance (CIRES/GMD)
- P-15 Exploring the Use of Compressed Gas Mixtures as Water Vapor Transfer Standards – B. Hall (ESRL/GMD)

**Ozone, Water Vapor and Radon**

- P-16 High Resolution Simulation, and Aura-MLS and Lidar Observations of an Unprecedented Polar Ozone Filament Event over Mauna Loa Observatory, Hawaii – O.P. Tripathi (Table Mountain Facility, JPL, CA)
- P-17 Requirements for New Measurements of the Absorption Cross-Section of Ozone for Accurate Determination of Ozone Concentration – J. Viallon (Bureau International des Poids et Mesures, France)
- P-18 Using Radon-222 to Test a Chemical Transport Model and Calculate Greenhouse Gas Fluxes – A.I. Hirsch (CIRES/GMD)
- P-19 Continental Outflow Events at Mauna Loa Observatory: a Review 1997-2006 – W. Zahorowski (ANSTO, Australia)
- P-20 Characterization of Mixing and Venting Processes in the Cloud-Topped Boundary Layer Using Airborne Radon Measurements – W. Zahorowski (ANSTO, Australia)
- P-21 Hourly Observations of the Near-Surface Radon Gradient at Lucas Heights, Sydney – W. Zahorowski (ANSTO, Australia)
Wednesday, May 2: 1600–1800

**Carbon Cycle**

P-23  Observations of Trace Gas Correlation in the Free Troposphere Derived from the Atmospheric Infrared Sounder (AIRS)
  – C. Barnet (NESDIS, MD)

P-24  Status of NIST Methane SRMs and Primary Standards – J. Rhoderick (NIST, MD)

P-25  CO₂ Concentration, Flux and Net Ecosystem Carbon Exchange over a Corn Surface on the North China Plain
  – B. Lingen (Chinese Academy of Meteorological Sciences, Beijing, China)

P-26  Monitoring Trace Gases by Shipboard Sampling – M. Heller (CIRES/GMD)

P-27  Update on the GMD/WMO CO Reference Scale – P. Novelli (ESRL/GMD)

P-28  Long-Term Primary Study on the Characteristics of Trace Gases in a Clean Area of North China
  – B. Jianhui (Chinese Academy of Science, Beijing, China)

P-29  Regional Transport Analysis for Carbon Cycle Inversions Using RUC-LPDM System
  – M. Uliasz (Colorado State University, Fort Collins, CO)