### Poster Titles/Authors

#### Poster Session I
1:45-3:15pm

### Education Outreach Program

**R1**: **Highlights from the CIRES Education and Outreach Group**
Susan Buhr, Tina Arthur, Jessica Feld, Anne Gold, Susan Lynds, Mark McCaffrey, Emily Morton, Lesley Smith

**R2**: **Project EXTREMES- EXploration, Teaching and Research for Excellence in Middle and Elementary Science**
Lesley Smith, Bill Bowman, Shivakant Mishra, Jessica Feld

**R3**: **The Climate Literacy and Energy Awareness (CLEAN) collection of peer-reviewed high-quality digital teaching materials**
Anne U. Gold (1), Mark S. McCaffrey (2), Susan M. Buhr (3), Susan Lynds (4)

### CIRES at Large Contributions

**R4**: **The CIRES Communication Group**

**R5**: **CIRES Financial Services**

### Solid Earth Sciences Division

**R6**: **The Volcanic-Plutonic Connection at The Never Summer Igneous Complex, North-Central Colorado**
Kristin Jacob (1), Lang Farmer (2)

**R7**: **Predicting event-scale floodplain change with a coupled hydrodynamic (ANUGA) and sediment transport model: a case study of the Rio Puerco Arroyo, NM**
Mariela C. Perignon (1), Gregory E. Tucker (1), Eleanor R. Griffin (2), Jonathan M. Friedman (2), Kirk R. Vincent (2)

**R8**: **Implementing Dense Arrays of Single-Channel Seismic Recorders to Detect Global Teleseism Events**
Colin T. O’Rourke¹, Anne F. Sheehan¹, Zhaohui Yang¹, Joshua Stachnik¹, and BASE Seismic Team¹

**R9**: **Mantle Seismic Anisotropy at a Plate Boundary: South Island, New Zealand**
Dan Zietlow¹, Anne Sheehan¹, Zhaohui Yang¹, Josh Stachnik¹, Peter Molnar², John Collins²

**R10**: **Using a Natural Experiment to Understand Gully Erosion Rates and Mechanisms**
RENGERS, Francis K. (1), TUCKER, Gregory E. (1), PHILLIPS, David A. (2), BRASWELL, John J. (3)

**R11**: **Glacial Isostatic Adjustment as a Source of Noise for the Interpretation of GRACE Data**
Geruo A(1)(2), John Wahr(1)(2), Shijie Zhong(2)
R12: Noise Analysis of Ocean-Bottom Seismic Experiment offshore of New Zealand
Zhaohui Yang (1), Anne Sheehan (2), John Collins (3), Peter Molnar (4)

Ecosystem Science Division
R13: Disturbance interactions and their impact on forest resilience mechanisms
Brian Buma, Carol Wessman

R14: Effects of Lodgepole Pine mortality due to Mountain Pine Beetle infestation on stream chemistry
Leigh A. Cooper, James H. McCutchan, Jr., Thomas M. Detmer, William M. Lewis, Jr.

R15: Species distribution modeling under Climate Change: Case Studies from India
John Kineman

R16: Ecological responses to nutrients in streams and rivers of the Colorado mountains and foothills
William M. Lewis, Jr. (1) and James H. McCutchan, Jr. (1)

Center for Science and Technology Policy
R17: When is geoengineering research “just research”? The role of research framing in light of the use of technology
Lisa Dilling

R18: Equatorial-PRIMO (Problems Related to Ionospheric Models and Observations)
Tzu-Wei Fang(1), David Anderson(1), Tim Fuller-Rowell(1), Rashid Akmaev(2), Mihail Codrescu(2), George Millward(1), Jan Sojka(3), Ludger Scherliess(3), Vince Eccles(4), John Retterer(5), Joe Huba(6), G. Joyce(7), Art Richmond(8), Astrid Maute(8), Geoff Crowley(9), Aaron Ridley(10), Geeta Vichare(10)

R19: Dryness and Desperate Measures: A Political Ecology of Drought and Ranching in the Rocky Mountain West
Kristin Gangwer (1), William R. Travis (2)

R20: The Center for Science and Technology Policy Research
William Travis (1), Bobbie Klein (2), Ami Nacu-Schmidt (3)
**Poster Titles/Authors**

**Poster Session I**
1:45-3:15p

**Cryospheric and Polar Processes Division**

**B1:** Recent Changes in Tropospheric Water Vapour of the Arctic  
Andrew P. Barrett, Mark C. Serreze, Julienne Stroeve

G. Garrett Campbell

**B3:** A comparison of Ground-Based LiDAR, contact spectroscopy, FMCW radar, and manual snow pit profiles of a mountain snowpack  
Jeffrey Deems (1), Dave Finnegan (2), Elias Deeb (3), H.P. Marshall (4), Annie Bryant (5), McKenzie Skiles (6), Chris Landry (7), Tom Painter (8)

**B4:** The Data Conservancy: An NSF DataNet Program Partnership  
Ruth Duerr (1), Siri Jodha Singh Khalsa (1), Sayeed Choudhury (2)

**B5:** Operational Products Archived at the National Snow and Ice Data Center  
Florence Fetterer (1), Ann Windnagel (2), Jonathan Kovarik (3), Kara Gergely (4)

**B6:** Recovering 1960_S sea ice extent from Nimbus II Infrared and visible imagery data  
David Gallaher, Walt Meier, John Moses

**B7:** Using Surface Roughness Derived From ICESat, IceBridge and CASIE Data to Map Geophysical and Ice-Dynamic Provinces in Glaciers and Sea Ice  
Ute Herzfeld (1,2), Bruce Wallin (1,3), Brian McDonald (1,2), Phil Chen (1,2), William Krabill (4), Serdar Manizade (4), James Maslanik (5), R. Ian Crocker (5), Matthew Fladeland (6)

**B8:** Managing IceBridge airborne mission data at the National Snow and Ice Data Center  
Marilyn Kaminski (1), Mary J. Brodzik (1), Ted Scambos (1), Jeff Deems (1)

**B9:** Arctic Ocean Tides from GRACE Satellite Accelerations  
Bryan Killett (1), John Wahr (1), Shailen Desai (2), Dah-Ning Yuan (2), Mike Watkins (2)

**B10:** Antarctic Data at the National Snow and Ice Data Center  
Rob Bauer, Jennifer Bohlander, Betsy Sheffield, Katherine Leitzell, Ted Scambos

**B11:** Studying surface dynamics of permafrost and active layer thickness from space using InSAR  
Lin Liu (1), Tingjun Zhang (2), Kevin Schaefer (2), and John Wahr (1)
**B12:** ELOKA - Archiving Local and Traditional Knowledge of the Arctic _ Managing Data and Information in Partnership with Indigenous Communities and Earth Scientists  
Chris McNeave (1), Mark A. Parsons (1), Shari Gearheard (1), Henry Huntington (2), Peter Pulsifer (1), Heidi McCann (1)

**B13:** Strength and Timing of the Permafrost Carbon Feedback  
Tingjun Zhang (1), Kevin Schaefer (1), Lori Bruhwiler (2), Andrew P. Barrett (1)

**B14:** Parameter Transfer in a Conceptual Snow Model  
A.G. Slater (1), M.P. Clark (2), B. Rajagopalan (3), A.P. Barrett (1), J.L. McCreight (4)

**B15:** Stable water isotopes on time scales from hours to decades at the new deep drilling site in NW Greenland – NEEM  

**B16:** Sea ice response to an extreme negative phase of the Arctic Oscillation during winter 2009/2010  
Julienne Stroeve, James Maslanik, Mark Serreze, Ignatius Rigor, Walter Meier

**B17:** ROCS @ NSIDC: A Growing Collection  
Allaina M. Wallace, Gloria J. Hicks

**Environmental Observations, Modeling and Forecasting Division**

**B18:** Quantifying digital elevation model (DEM) uncertainty introduced by various interpolation methods  
Christopher J. Amante (1,2), Matthew R. Love (1,2), Barry W. Eakins (1,2)

**B19:** CU Airborne MAX-DOAS measurements over California during the CalNex and CARES field campaigns  
Sunil Baidar(1, 2), Hilke Oetjen(1), Sean Coburn(1), Ivan Ortega(1), Barbara Dix(1), Roman Sinreich(1) and Rainer Volkamer(1, 2)

**B20:** Trends of long-lived halocarbons, nitrous oxide and sulfur hexafluoride  
Geoff Dutton (1), Brad Hall (2), David Nance (1), Debbie Mondeel (1), James Elkins (2)
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<tr>
<td><strong>B21:</strong> Mixing, Eddies, and all that: Ocean Parameterization Developments from 4m to 400km</td>
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<td>Baylor Fox-Kemper</td>
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<td><strong>B22:</strong> Classification of Sea Ice Video Imagery during AMISA 2008</td>
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<td>Pierce Martin (1), Albin J. Gasiewski (1), Ola P.G. Persson (2)</td>
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<td><strong>B23:</strong> First Results from UCATS during the GloPac 2010 Mission</td>
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<tr>
<td>Eric J. Hintsa(1,2), Fred L. Moore(1,2), Geoff S. Dutton(1,2), Brad D. Hall(2), James W. Elkins(2), Ru-Shan Gao(3), Eric A. Ray(1,3), Karen H. Rosenlof(3), and Robert L. Herman(4)</td>
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<tr>
<td><strong>B24:</strong> The Effect of Measured Ozone Profiles and Tropospheric Ozone on UV Photolysis Rate Coefficients in the Troposphere in Houston, TX</td>
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<td>K. Lantz (1,2), C. Long (3), I. Petropavlovskikh (1,2), S. Stierle (1,2), and P. Disterhoft (1,2)</td>
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<td><strong>B25:</strong> Companion structured and unstructured digital elevation model (DEM) development</td>
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<td>Matthew R. Love(1)(2) Barry W. Eakins(1)(2) Jason Caldwell(3)</td>
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<td><strong>B26:</strong> The Scale Problem in Quantifying Aerosol Indirect Effects</td>
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<td>Allison McComiskey(1), Graham Feingold (2)</td>
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<td><strong>B27:</strong> Deep-ocean Assessment and Reporting of Tsunami (DART) Data available from the 27 February 2010 Chilean Earthquake</td>
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<tr>
<td>George Mungov(1), Kelly Stroker(2)</td>
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<td><strong>B28:</strong> The magnetic fields generated by the tsunami of February 27, 2010</td>
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<td>Manoj Nair(1), Stefan Maus(1), Arnaud Chulliat(2), S_bastien Allgeyer(3) and Alexei Kuvshinov (4)</td>
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<td><strong>B29:</strong> Ozone profile trends from ground-based and satellite data</td>
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<td><strong>B30:</strong> Doppler-lidar-based wind-profile measurement system for offshore wind-energy and other marine-boundary-layer applications</td>
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<td>YELENA L. PICHUGINA, ROBERT M. BANTA, W. ALAN BREWER, SCOTT P. SANDBERG, AND R. MICHAEL HARDESTY</td>
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B31: **Quantitative Statistical Estimates of ENSO Response to Climate Change in the CCSM3.5**
Samantha Stevenson (1), Baylor Fox-Kemper (1), Markus Jochum (2)

B32: **Isotopic studies of fog, rain, and ecosystem waters on Santa Cruz Island, California**
Christopher Still, Douglas Fischer, Park Williams, Colin Ebert, and Sara Baguskas

B33: **Modern Data Center Services Supporting Science**
Jesse Varner (1), John Cartwright (2), Susan McLean (2), Jordan Boucher (1), David Neufeld (1), John Larocque (2), David Fischman (2), Evan McQuinn (1), Clint Fugett (3)

B34: **Gravity Wave Source and Propagation during the 2009 Stratospheric Sudden Warming**
Chihoko Yamashita (1,2), Hanli Liu (2), Xinzhaou Chu (1)

Nikolay Zabotin (1,2), Oleg Godin (1,3), Terence Bullett (1,4)
Environmental Chemistry Division

Y1: **Measurements of weak absorptions by O3 and O3-H2O clusters using cavity enhanced spectroscopy**
Jessica L. Axson1, V. Vaida1, C. Young1,2, R. Washenfelder1,2, S.S. Brown2

Y2: **Atmospheric Chemistry of (E) and (Z)-CF3CH=CHCF3: OH Reaction Rate Coefficients and Global Warming Potentials**
Munkhbayar Baasandorj(1,2), A.R. Ravishankara (2) and James B. Burkholder(2)

Y3: **Sources and characteristics of sub-micron aerosols in the San Joaquin Valley, CA**
R. Bahreini (1,2), A.M. Middlebrook (2), J. Brioude (1,2), C.A. Brock (2), J. de Gouw (1,2), J.S. Holloway (1,2), A.J. Neuman (1,2), J.B. Nowak (1,2), I. Pollack (1,2), T.B. Ryerson (2), C. Warneke (1,2), D.D. Parrish (2), J. Langridge (1,2), and D.M. Murphy (2)

Y4: **Top-down estimate of anthropogenic emission inventories in Houston using a 4D-VAR mesoscale inverse modeling technique**
J Brioude(1,2), S-W Kim(1,2), GJ Frost(1,2), W Angevine(1,2), R Ahmadov(1,2), S-H Lee(1,2), S McKeen(1,2), M Trainer(2), J Holloway(1,2), T Ryerson(2), J Peischl(1,2), D Parrish(2), F Fehsenfeld(1,2), K Gurney(3)

Y5: **Evaluating Emissions and Chemistry of Organic Carbon at Urban and Regional Scales**
Agnes Borbon

Y6: **Development of stable, immunogenic, and protective measles vaccines for needle-free administration**
Stephen P. Cape1, David H. McAdams1, J_aime R. Manion1, Nisha Shah1, David Chen1, Hana Richter1, Ravindra G. Muley2, Vivek B. Vaidya2, Rajeev M. Dhere2, Pradnya A. Bhagwat3, Pankaj Pathak3, Jim A. Searles3, David M. Krank3, Sarah Evans3, Scott E. Winston3, Brian P. Quinn3, Diane E. Griffin4, W-H Lin4, Paul A. Rota5, C. Steven Godin6, and Robert E. Sievers1

Y7: **IAGOS in the USA: An opportunity for commercial airlines to monitor air quality and greenhouse gases above the United States**
Owen R. Cooper (1,2), Colm Sweeney (1,2), Andreas Volz-Thomas (3), Jean-Pierre Cammas (4)

Y8: **Profiling Instrument Shelter with Amenities (PISA). An Instrument Platform for Vertical Profile Boundary Layer Measurements**
William P. Dube(1), Nick Wagner (1), Gerhard H_bler (1), Bruce Bartrum (2), Daniel Wolfe (2), Steven S. Brown (3)

Y9: **On the Role of Ice Formation Mechanisms and Habit Growth in the Maintenance of Mixed Phase Arctic Stratus**
Barbara Ervens (1,2), Graham Feingold (2), Kara Sulia (3), Jerry Y. Harrington (3)
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<td><strong>Y10:</strong> The Community Initiative for Emissions Research and Applications</td>
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<td>Gregory Frost (1,2), Claire Granier (1,2,3), Stefan Falke (4,5), Terry Keating (6), Jean-François Lamarque (7), Megan Melamed (8), Paulette Middleton (9), Gabrielle P’tron (1,2), Steven Smith (10)</td>
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<tr>
<td><strong>Y11:</strong> Photochemistry of Nitryl Chloride (ClNO2): Temperature Dependent UV-VIS Absorption Spectra and Photolysis Quantum Yields of O(3P) at 193nm and 248nm</td>
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<td>Buddhadeb Ghosh (1)(2), Dimitrios K. Papaianastasiou (1)(2), Ranajit K. Talukdar (1)(2), James Roberts (2) and James B. Burkholder(2)</td>
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<td><strong>Y12:</strong> VOC Emissions from Biofuel Crops</td>
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<td>Martin Graus (1,2), Allyson Eller (1,3), Ray Fall (1,4), Joost de Gouw (1,2), Carsten Warneke (1,2)</td>
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<td><strong>Y13:</strong> Morphology and Chemistry of Organics at the Water-Air Interface</td>
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<td>Elizabeth Griffith, Veronica Vaida</td>
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<td><strong>Y14:</strong> Aerosol Composition in Los Angeles During the 2010 CalNex Campaign Studied by High Resolution Aerosol Mass Spectrometry</td>
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<td>Patrick L. Hayes (1,2), Amber M. Ortega (1,3), Michael J. Cubison (1,2), Weiwei Hu (1,4), Darin W. Toohey (3), James H. Flynn (5), Nicole Grossberg (5), Barry L. Lefer (5), Sergio Alvarez (5), Bernhard Rappenglück (5), James D. Allan (6), John S. Holloway (1,7), Paola Massoli (8), Karl D. Froyd (1,7), Shane M. Murphy (7), Jiumenyi Liu (9), Rodney J. Weber (9), Jose L. Jimenez (1,2)</td>
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<td><strong>Y15:</strong> Airborne Measurements of Aerosol Extinction Relative Humidity Enhancement</td>
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<td>Justin M. Langridge(1,2), Daniel A. Lack (1,2), Mathews S. Richardson (1,2), Daniel C. Law(2), Roya Bahreini(1,2), Ann M. Middlebrook(2), Charles A. Brock(2) and Daniel M. Murphy(2)</td>
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<td><strong>Y16:</strong> Precipitating Cloud-System Response to Aerosol Perturbations</td>
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<td>Seoung-Soo Lee (1,2) and Graham Feingold (1)</td>
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<td><strong>Y17:</strong> Latitudinal Trends of Chlorophyll Concentration in the Mid-Pacific Ocean.</td>
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<td>Brandi McCarty(1,2), James Churnside(2)</td>
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<td><strong>Y18:</strong> Temperature Dependent Rate Coefficients for OH + Butanol Reactions in the Gas Phase</td>
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<td>Max R. McGillen (1), Munkhbayar Baasanderj (2), James B. Burkholder (3)</td>
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<td><strong>Y19:</strong> Ozone Transport from the Free Troposphere into the Los Angeles Basin</td>
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<td>J. A. Neuman (1,2), M. Trainer (2), K. C. Aikin (1,2), W. M. Angevine (1,2), J. Brioude (1,2), S. S. Brown (2), W. P. Dube (1,2), J. S. Holloway (1,2), J. B. Nowak (1,2), D. D. Parrish (2), I. B. Pollack (1,2), J. M. Roberts (2), T. B. Ryerson (2), and N. L. Wagner (1,2)</td>
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<td><strong>Y20</strong>: Airborne Chemical Ionization Mass Spectrometry Measurements of Ammonia and Implications for Ammonium Nitrate Formation in California</td>
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<td><strong>Y21</strong>: Variability of Organic Aerosol Enhancement and Oxidation from Intense Photochemical Processing of Biomass Burning Smokes during FLAME-3</td>
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<td><strong>Y22</strong>: Heterogeneous Interaction of N2O5 with HCl Doped H2SO4 under Stratospheric Conditions: ClNO2 and Cl2 Yields</td>
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<td><strong>Y23</strong>: Marine Boundary Layer Observations and Source Studies on Glyoxal and Halogen Oxides</td>
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<td><strong>Y24</strong>: Vertical Profiles of N2O5 and ClNO2 from the BAO tower in Erie, CO</td>
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<td><strong>Y25</strong>: Measurement of Atmospheric Ozone by Cavity Ring-Down Spectroscopy</td>
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<td><strong>Y26</strong>: A Case Study for SOA Formation by Glyoxal Processing in Aqueous Aerosol in Mexico City</td>
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<tr>
<td><strong>Y27</strong>: Evaluation of the Industrial Point Source Emission Inventory for the Houston Ship Channel Area Using Ship-Based, High Time Resolution Measurements of Volatile Organic Compounds</td>
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Y28: Deliquescence, efflorescence and ice nucleating ability of NaCl / hydrated NaCl particles under upper tropospheric conditions
Matthew E. Wise (1,2), Kelly J. Baustian (2,3), Thomas Koop (4), Miriam Freedman (5), Eric J. Jensen (6) and Margaret A. Tolbert (1,2)

Y29: Cooling of entrained parcels in a large-eddy simulation
Takanobu Yamaguchi (1)(2), David A. Randall (3), Graham Feingold (2)

Y30: Nitrous acid measurements in urban Los Angeles using novel techniques
C. J. Young (1,2), R.A. Washenfelder (1,2), S.S. Brown (2), P. Veres (1,2), A.K. Cochran (3), J.M. Roberts (2), O. Pikelnaya (4), C. Tsai (4), J. Stutz (4), C. Afif (5,6), V. Michoud (5), A. Borbon (5)

Y31: Photochemistry of Pyruvic Acid in Aqueous Solution
Molly C. Larsen and Veronica Vaida
**Poster Titles/Aauthors**

**Poster Session II**
3:15-4:45pm

**WEATHER AND CLIMATE DYNAMICS DIVISION**

**G1: RECENT ENHANCEMENTS TO REAL-TIME PROBABILITY THUNDERSTORM GUIDANCE PRODUCTS FROM A TIME-LAGGED ENSEMBLE OF HIGH RESOLUTION RAPID REFRESH (HRRR) FORECASTS**

Curtis Alexander (1), Doug Koch (2), Steve Weygandt (3), Tanya Smirnova (1), Stan Benjamin (3), and Eric James (1)

**G2: COMPARATIVE STUDY OF THE IONOSPHERIC BEHAVIOR AND IRI PERFORMANCE FOR THE LAST TWO SOLAR MINIMA**

Eduardo A. Araujo-Pradere (1) and Dominic J. Fuller-Rowell (2)

**G3: ANNUAL VARIABILITY OF BOUNDARY LAYER HEIGHT AND ITS CORRELATION TO OTHER METEOROLOGICAL VARIABLES IN CALIFORNIA's CENTRAL VALLEY**

Laura Bianco (1), Irina V. Djalalova (1), Clark W. King (2), and James M. Wilczak (2)

**G4: CLIMATE CHANGE IN UPPER-OCEAN STRATIFICATION AS INFERRED FROM THE IPCC-AR4 MODELS**

Antonietta Capotondi

**G5: REMOVING ENSO-RELATED VARIATIONS FROM THE CLIMATE RECORD**

Gilbert P. Compo (1,2), Prashant D. Sardeshmukh (1,2)

**G6: A MULTI-DIAGNOSTIC INTERCOMPARISON OF TROPICAL WIDTH AND JET TIMESERIES USING METEOROLOGICAL REANALYSES AND SATELLITE OBSERVATIONS**

Sean M. Davis (1,2), Karen H. Rosenlof (1)

**G7: MODULATIONS OF THE PHASE SPEED OF CONVECTIVELY COUPLED KELVIN WAVES BY THE ITCZ**

Juliana Dias (1), Olivier Pauluis (2)

**G8: PHYSICAL MODELING OF ATMOSPHERIC NEUTRAL DENSITY CLIMATOLOGY, VARIABILITY AND WEATHER**

Mariangel Fedrizzi (1), Timothy J. Fuller-Rowell (1), Mihail Codrescu (2)

**G9: FORECASTING COHERENT THERMOSPHERIC DYNAMIC AND ELECTRODYNAMIC RESPONSE TO SUDDEN STRATOSPHERIC WARMINGS**

Tim Fuller-Rowell (1,2), Rashid Akmaev (2), Houjun Wang (1,2), Fei Wu (1,2), Tzu-Wei Fang (1,2), Mihail Codrescu (2)
G10: **Heavy Rains and Historic Flooding over Pakistan in Late July 2010: Synoptic Conditions and Physical Mechanisms**  
Thomas J. Galarneau, Jr. (1), Thomas M. Hamill (2), and Jeffrey S. Whitaker (2)

Eric Gordon (1), Roberta Klein (2)

G12: **Estimating the height of the stratocumulus-topped marine boundary layer using wind profilers**  
Aaron Pi_a(1,2), Leslie M. Hartten(3,4), and Laura Bianco(3,4)

G13: **Verification of Convection Forecasts from the Hourly Updated 3KM High-Resolution Rapid Refresh (HRRR) Model, the 13KM Rapid Refresh (RR) Model, and the Rapid Update Cycle (RUC) Model**  
Patrick Hofmann (1), C. R. Alexander (1), S. S. Weygandt (2), and S. G. Benjamin (2)

G14: **High Resolution Spatial Modeling of Daily Precipitation in California - An Exploration of Applying a Stochastic Method to Link Physiographically Sensitive Mapping of Climatology to Atmospheric Rivers and Surface Air Temperature**  
Chengmin Hsu (1), Lynn Johnson (2), Timothy Schneider (3)

G15: **Evolution of Sierra Barrier Jets that occur simultaneously with atmospheric river events in a high resolution dynamical downscaling of the North American Regional Reanalysis**  
Mimi Hughes(1,2), Paul Neiman (2), Ellen Sukovich (1,2)

G16: **Assessment of gas transfer velocities derived using satellite inputs to the COARE gas transfer model**  
Darren L. Jackson (1), Gary A. Wick (2)

G17: **High-Resolution Rapid Refresh (HRRR) case study testing and analysis to improve forecast performance**  
Eric James (1), Curtis Alexander (2), Steve Weygandt (3), Stan Benjamin (4), and John Brown (5)

G18: **Relativistic electron loss due to ultralow frequency waves and enhanced outward radial diffusion**  
G19: **Response of the coupled IT system to storm time ionospheric electrodynamics**  

G20: **W-band spaceborne radar observations of atmospheric river events**  
Sergey Matrosov

G21: **Radiation measurements in Arctic**  
N. Matsui (1,2), David Halliwell (3), C. N. Long (4), John Augustine (2) and Taneil Uttal (2)

G22: **Assimilative Modeling of Thermospheric Neutral Density**  
Tomoko Matsuo (1), Mariangel Fedrizzi (1), Tim Fuller-Rowell (1), and Mihail Codrescu (2)

G23: **Data archived at the World Data Center for Paleoclimatology**  
David M. Anderson (1), Bruce Bauer(1), Rodney Buckner (1), Ed Gille (2), Wendy Gross (1), Michael Hartman (2), Carrie Morrill (2), Anju Shah (2), Eugene Wahl (1)

G24: **Case study of a high wind event off the coast of the Prince Olav Mountains, Antarctica**  
Melissa A. Nigro (1), John J. Cassano (2)

G25: **Testing of a wind farm parameterization in the WRF-ARW as verified against tower and surface data**  
Joseph Olson (1,2), Anna Fitch (3), John Brown (2)

G26: **GOES-R Moments and Spacecraft Charging Algorithm and Application to Anomaly Studies**  
Juan Rodriguez (1), Janet Green (2,3), Terry Onsager (2), Paul Loto’aniu (1), Howard Singer (2), Mary Shouldis (1), Steven Hill (2) and Bill Denig (3)

G27: **Using Science On a Sphere to Extend Climate Change Education from the Scientific Community to Society**  
Dr. William B. Bendel1 (1), Elizabeth Russell(1,2) and Dr. Carrie McDougall (3)

G28: **Maintenance of springtime Arctic mixed-phase stratocumulus in nested LES simulations**  
Amy Solomon (1), M. Shupe (1), P. O. G. Persson (1), and H. Morrison (2)
G29: **Progress toward a NOAA-ESRL earth system model: coupling an atmosphere to an ocean**
Shan Sun (1) and Rainer Bleck (2)

G30: **Whole Atmosphere Data Assimilation and Forecast Experiments**
Houjun Wang (1), Tim Fuller-Rowell (1), Rashid Akmaev (2)