2013 Young Scientist Symposium on Atmospheric Research
Schedule of Events

Hosted by:
CSU AAAR Student Chapter &
FORTCAST AMS Local Chapter

September 20, 2013
Department of Atmospheric Science
Colorado State University
Fort Collins, Colorado

9:00  Sign-In and Refreshments  ATS Main Room 100

9:20  Welcome and Opening Remarks  ATS Main Room 101
Christina McCluskey and Aaron Piña

Session 1  Air Quality  ATS Main Room 101
Chair: Walter Hannah

9:30  Measuring commuter exposure to multiple airborne pollutants
Nicholas Good, Colorado State University

9:45  Measurements of hydrogen sulfide from oil and natural gas production in the Uintah Basin, Utah using PTR-MS
Rui Li, University of Colorado at Boulder/ATOC/NOAA/ESRL CSD

10:00  Evaluation of an Atmospheric Tracer Method at an Airfield for Use in Quantifying Natural Gas Well Development and Completion Emissions
Brad Wells, Colorado State University

10:15  Convective transport of pollutants from eastern Colorado concentrated animal feeding operations into the Rocky Mountains
Aaron Piña, Colorado State University

10:30  Refreshment Break

Session 2  Chemistry Modeling  ATS Main Room 101
Chair: Aaron Piña

10:45  Quantifying Radiative Forcing of Aerosol and Aerosol Precursor Scenarios with the GEOS-Chem Adjoint Model
Forrest Lacey, University of Colorado at Boulder

11:00  The Contribution of Sub-Grid, Plume-Scale Nucleation to Global and Regional Aerosol and CCN Concentrations
Robin Stevens, Dalhousie University

11:15  Automated source parameter and low level wind estimation for atmospheric transport and dispersion applications
Jake Zaragoza, Colorado State University
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<tr>
<td>12:00</td>
<td>Lunch and Weather Discussion</td>
<td>ATS Main Room 100</td>
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<td>12:30</td>
<td>Poster Session</td>
<td>ATS West Room 121</td>
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<td>13:45</td>
<td>Weather Balloon Launch</td>
<td>ATS Main Outside</td>
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**Session 3**  
Large Scale Atmospheric Dynamics  
*Chair: Jeremiah Sjoberg*  
ATS Main Room 101

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<tr>
<td>14:15</td>
<td>The Moist Static Energy Budget in DYNAMO Hindcasts</td>
<td>ATS Main Room 101</td>
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<td><em>Walter Hannah, Colorado State University</em></td>
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<tr>
<td>14:30</td>
<td>The Diurnal Cycle of Moistening by Shallow Convection during DYNAMO</td>
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<td><em>James Ruppert, Colorado State University</em></td>
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<td>14:45</td>
<td>The Intraseasonal Variability of North African Energy Budgets</td>
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<td><em>Ghassan Alaka, Colorado State University</em></td>
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<td>15:00</td>
<td>Changes to the gradient flow due to shock-like structures in the tropical boundary layer</td>
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<td><em>Christopher Slocum, Colorado State University</em></td>
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<td>15:15</td>
<td>Refreshment Break</td>
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**Session 4**  
Organic Aerosol  
*Chair: Alexandra Boris*  
ATS Main Room 101

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<th>Time</th>
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<tr>
<td>15:30</td>
<td>Understanding and constraining global secondary organic aerosol amount and size-resolved condensational behavior</td>
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<td><em>Stephen D’Andrea, Colorado State University/Dalhousie University</em></td>
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<td>15:45</td>
<td>The Influence of Chemical Composition and Relative Humidity on the Optical Properties of Aerosols During the Southern Oxidant and Aerosol (SOAS)</td>
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<td><em>Alexis Attwood, NOAA</em></td>
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<td>16:00</td>
<td>Aerosol Loading in the Southeastern US</td>
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<td><em>Bonne Ford, Colorado State University</em></td>
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<td>16:15</td>
<td>Biomass burning plume evolution from prescribed burns during aircraft flights over South Carolina</td>
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<td><em>Andy May, Colorado State University</em></td>
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<td>16:45</td>
<td>The Social Event</td>
<td>ATS West Room 121</td>
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Poster Presentations

Cloud Processing of Organics: Differences between Simulated and Real Cloud Matrices
Alexandra Boris, Colorado State University

Quantification of Formic Acid and In-Field Instrument Development During the 2013 SOAS Field Campaign
Patrick Brophy, Colorado State University

Spatial and Vertical Variability of Ammonia in Northern Colorado, United States
Yi Li, Colorado State University

Aircraft measurement of glyoxal (CHOCHO) over southeast U.S. during SENEX 2013
Kyung-Eun Min, NOAA/CIRES

Cloud resolving simulation of AIE over Northern India
Chandan Sarangi, NCAR/ITT Kanpur

Improved parameterization of heterogeneous ice nucleation by natural dust and soot in the Community Atmospheric Model version 5
Yong Wang, University of Wyoming

Metal Concentrations in Fine Particulate Matter from the Light Rail System in Denver Metro
Benton Cartledge, University of Denver

Seasonal cycles of fluorescent biological aerosol particles in boreal and semi-arid forests of Finland and Colorado
Carolyn Schumacher, University of Denver

Characterization of Atmospheric Aerosols in Tropical Premontane Cloud Forest
Emily Guffin, Colorado College

Natural emissions in the Brazilian Amazon rainforest: impact on the oxidative capacity of the atmosphere
Fernando Cavalcante dos Santos, National Institute for Space Research – INPE/Brazil

Aerosol and climate sensitivity to cookstove emissions
Jack Kodros, Colorado State University

Microphysical simulation of biomass-burning aerosol size distributions from BORTAS 2011
Kimiko Sakamoto, Colorado State University

Understanding the Effects of Human-Generated Aerosols on Precipitation
Landan MacDonald, Colorado State University

Reactive Nitrogen Partitioning and its Relationship to Winter Ozone Events in Utah
Robert Wild, University of Colorado at Boulder/NOAA
Symposium Attendees and Affiliations

University of Colorado at Boulder
Ariel Morrison
Forrest Lacey
Rui Li (ATOC/NOAA/ESRL CSD)

Colorado College
Emily Guffin

Colorado State University
Aaron Pina
Alex Goodman
Alex Naegle
Alexander Boris
Andy May
Annareli Morales
Aryeh Drager
Ashleigh Kayne (ERHS)
Ashely Evanoski-Cole
Bob Tournay
Bonne Ford
Brad Wells
Brett Basarab
Brody Fuchs
Chengji Liu
Christina Mccluskey
Christopher Slocum
David Duncan
Elliott Foust
Erik Nielsen
Erin Dagg
Ezra Levin
Ghassan Alaka
Jack Kodros
Jake Zaragoza
James Ruppert
Jeremiah Sjoberg
Jianbo Liu
Kimiko Sakamoto
Landan MacDonald
Leah Grant
Leah Lindsey
Laura McHale (Mech. Eng.)
Lauren Potter
Marie McGraw
Morgan Phillips
Nicholas Good (ERHS)
Nick Geyer
Noel Hilliard
Patrick Brophy (Chemistry)
Peter Marinescu
Robert Nelson
Samantha Wills
Vandana Jha
Walter Hannah
Yi Li
Zitely Tzompa

Dalhousie University
Robin Stevens
Stephen D’Andrea (CSU)

University of Denver
Benton Cartledge
Carolyn Shumacher
Jixiao Li
Kyra Whitworth
Rachel Hottor-Raguindin

University of Wyoming
Yong Wang

NCAR
Chandan Sarangi (IIT Kanpur)

NOAA
Alexis Attwood
Kyung-Eun Min (CIRES)
Robert Wild (UC- Boulder)

National Institute for Space Research – INPE/Brazil
Fernando Cavalcante dos Santos