

**AGU Fall Meeting 2014**  
**CSD Oral and Poster Presentations**

**Monday, December 15 Talks:**

<b>Gilman: Talk Dec. 15 A11L-05 Moscone West, 3010 9:00 am - 9:15 am</b>
"Primary emissions and secondary formation of volatile organic compounds from natural gas production in five major U.S. shale plays"
J. Gilman; B. Lerner; C. Warneke; M. Graus; R. Lui; A. Koss; B. Yuan; S. Murphy; S. Alvarez; B. Lefer; K. Min; S. Brown; J. Roberts; H. Osthoff; C. Hatch; J. Peischl; T. Ryerson; J. deGouw

<b>Ahmadov: Talk Dec. 15 A12C-01 Moscone West, 3010 10:20 am- 10:35 am</b>
"Understanding High Wintertime Ozone Events over an Oil and Natural Gas Production Region from Air Quality Model Perspective"
R. Ahmadov; S. McKeen; M. Trainer; R. Banta; S. Brown; P. Edwards; G. Frost; J. Gilman; D. Helmig; B. Johnson; A. Karion; A. Koss; B. Lerner; S. Oltmans; J. Roberts; R. Schnell; P. Veres; C. Warneke; E. Williams; R. Wild; B. Yuan; R. Zamora; G. Petron; J. deGouw; J. Peischl

<b>Brown: Talk Dec. 15 A12C-02 Moscone West, 3010 10:35 am - 10:50 am</b>
"Winter Photochemistry Underlying High Ozone in an Oil and Gas Producing Region"
S. Brown; P. Edwards; J. Roberts; R. Ahmadov; R. Banta; J. deGouw; W. Dube; R. Field; J. Gilman; M. Graus; D. Helmig; A. Koss; A. Langford; B. Lefer; S. Murphy; B. Lerner; S. McKeen; S. Li; D. Parrish; S. Senff; J. Stutz; C. Thonpson; M. Trainer; P. Veres; C. Warneke; R. Wild; C. Young; B. Yuan; R. Zamora; R. Washenfelder

<b>Koss: Talk Dec. 15 A12C-03 Moscone West, 3010 10:50 am - 11:05 am</b>
"Derived Emission Rates and Photochemical Production Rates of Volatile Organic Compounds (VOCs) Associated with Oil and Natural Gas Operations in the Uintah Basin, UT During a Wintertime Ozone Formation Event"
A.Koss; J. deGouw; C. warneke; J. Gilman; B. Lerner; M. Graus; B. Yuan; P. Edwards; S. Brown; R. Wild; J. Roberts; T. Bates; P. Quinn

<b>Senff: INVITED Talk Dec. 15 A13Q-03 Moscone West, 3001 2:10 pm - 2:25 pm</b>
"Ozone Transport and Mixing Processes in the Boundary Layer Observed with Lidar during Discover-AQ"
C. Senff; A. Langford; R. Alvarez; A. Choukulkar; A. Brewer; A. Weickmann; G. Kirgis; S.Sandberg; M. Hardesty; R. Delgado; R. Long; S. Brown

<b>Langford: INVITED Talk Dec. 15 A14E-02 Moscone West, 3001 4:15 pm - 4:30 pm</b>
"Stratospheric contribution to surface ozone in the desert Southwest during the 2013 Las Vegas Ozone Study"
A.Langford; C. Senff; R. Alvarez; J. Brioude, O. Cooper; J. Holloway; M. Lin; R. Marchbanks; R. Pierce; P. Reddy; S. Sandberg; A. Weickmann; E. Williams; M. Gustin; L. Iraci; T. LeBlanc; E. Yates

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**Monday, December 15 Posters:**

<b>Pichugina: Poster Dec. 15 A11G-3084 Moscone South Poster Hall 8 am - 12:20 pm</b>
"Characterization of the Boundary Layer Wind and Turbulence in the Gulf of Mexico"
Y. Pichugina; R. Banta; A. Choukulkar; A. Brewer; R. Hardesty; B. McCarty; R. Marchbanks

<b>Dube: Poster Dec. 15 A13D-3209 Moscone South Poster Hall 1:40 pm- 6 pm</b>
"Nighttime Chemistry at a High Elevation Site above Hong Kong: Implications for Regional Air Quality"
W. Dube; S. Brown; D. Parrish; T. Wang; Q. Zha; Z. Xu; L. Xue; S. Poon; Z. Wang; Z. Wang; W. Tsui

<b>McDuffie: Poster Dec. 15 A13F-3255 Moscone South Poster Hall 1:40 pm- 6 pm</b>
"Summertime Relationships Between NO <sub>x</sub> , NO <sub>y</sub> , and O <sub>3</sub> in the Denver-Julesburg Basin"
A. McDuffie; S. Brown; W. Dube; D. Wolfe; J. Zaragoza; E. Fisher; P. Brophy; J. Kirkland; M.Link; A. Abeleira; D. Farmer; A. Tevlin

<b>Peischl: Poster Dec. 15 A13F-3247 Moscone South Poster Hall 1:40 pm- 6 pm</b>
"A quantification of methane emissions from the Bakken shale play region of North Dakota"
J. Peischl; T. Ryerson; A. Karion; K. Aikin; E. Kort; T. Newberger; M. Smith; C. Sweeney; M. Trainer; S. Wolter

<b>Veres: Poster Dec. 15 A13F-3227 Moscone South Poster Hall 1:40 pm- 6 pm</b>
"Observations of nitrous acid (HONO) and peroxyacetic acid (HO <sub>2</sub> NO <sub>2</sub> ) made during the 2013 and 2014 Uintah Basin Winter Ozone Study (UBWOS)"
P. Veres; J. Roberts; S. Alvarez; S. Brown; J. Burkholder; J. deGouw; P. Edwards; B. Lefter; J. Liggio; K. Min; J. Stutz; J. Tsai; S. Colosimo; J. Wentzell; R. Wild; B. Yuan; J. Flynn

<b>Yuan: Poster Dec. 15 A13E-3234 Moscone South Poster Hall 1:40 pm – 6 pm</b>
"Secondary formation of nitrophenols in an oil and gas production region: insights from observations during the Uintah Basin Winter Ozone Study (UBWOS) 2014"
B. Yuan; J. Liggio; J. Wentzell; S. Li; H. Stark; H. Osthoff; J. Roberts; J. Gilman; B. Lerner; R. Li; A. Leithead; P. Veres; C. Warneke; R. Wild; S. Brown; J deGouw

**Tuesday, December 16 Talks:**

<b>Liao: INVITED Talk Dec. 16 C22B-02 Moscone West, 3007 10:35 am - 10:50 am</b>
"High Levels of Molecular Chlorine found in the Arctic Atmosphere"
J. Liao; G. Huey; Z. Liu; D. Tanner; C. Cantrell; J. Orlando; F. Flocke; P. Shepson; A. Weinheimer; S. Hall; H. Beine; Y. Wang; E. Ingall; C. Thompson; R. Hornbrook; E. Apel; A. Fried; L. Maulden; J. Smith; R. Staebler; J. Neuman; J. Nowak

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<b>Min: Talk Dec. 16 A24A-06 Moscone West, 3004 10:35 am - 10:50 am</b>
"Fast in-situ measurements of glyoxal (CHOCHO) and nitrous acid (HONO) in northern Chinese plane during CAREBEIJING – NCP2014"
K. Min; W. Dube; R. Washenfelder; A. Langford; S. Brown' S. Broch; H. Fuchs; S. Gomm; A. Hofzumahaus; F. Holland; M. Hi; G. Huey; K. Kubik; X. Li; X. Liu; K. Lu; F. Rohrer; M. Shao; S. Sjostedt; Z. Tan; T. Zhu; A. Wahner; B. Wang; M. Wang; Y. Wang; L. Zeng; Y. Zhang; Y. Zhang

<b>Roberts: INVITED Talk Dec. 16 C22B-03 Moscone West, 3007 10:50 am - 11:05 am</b>
"An Overview of the Uintah Basin Winter Ozone Study Intensives: 2012, 2013, and 2014"
J. Roberts; P. Edwards; S. Brown; R. Ahmadov; T. Bates; J. deGouw; J. Gilman; M. Graus; D. Helmig; A. Koss; A. Langford; B. Lefer; B. Lerner; R. Li; S. Li; J. Liggio; S. McKeen; R. McLaren; D. Parrish; P. Quinn; C. Senff; J. Stutz; C. Thompson; J. Tsai; P. Veres; R. Washenfelder; C. Warneke; R. Wild; C. Young; B. Yuan

<b>Brock: INVITED Talk Dec. 16 A24B-04 Moscone West, 3008 4:45 pm - 5 pm</b>
"Relating Aerosol Mass and Optical Depth in the Summertime Continental boundary Layer"
C. Brock; N. Wagner; A. Middlebrook; A. Atwood; R. Washenfelder; S. brown; A. McComiskey; T. Gordon; Am. Welti; A. Carlton; D. Murphy

**Tuesday, December 16 Posters:**

<b>McComiskey: Poster Dec. 16 A21E-3077 Moscone South Poster Hall 8 am - 12:20 pm</b>
"Is There a Common Correction for Biases in Historic Filter-Based Aerosol Absorption Measurements?"
A. McComiskey; A. Jefferson; M. Dubey; A. Aiken; J. Fast; C. Flynn; E. Kassianov

<b>Burkholder: Poster Dec. 16 A23E-3300 Moscone South Poster Hall 1:40 pm - 6 pm</b>
"NASA Data Evaluation: Chemical Kinetics and Photochemical Data for Use in Atmospheric Studies"
J. Burkholder; S. Sander; J. Abbatt; J. Barker; E. Fleming; R. Friedl; R. Hule; C. Jackman; C. Kolb; M. Kurylo; V. Orkin; P. Wine

<b>Gordon: Poster Dec. 16 A23B-3224 Moscone South Poster Hall 1:40 pm - 6 pm</b>
"Design Of A Novel Open-Path Aerosol Extinction Cavity Ringdown Spectrometer And Initial Data From Deployment At NOAA's Atmospheric Observatory"
T. Gordon; N. Wagner; M. Richardson; D. Law; D. Wolfe; C. Brock; F. Erdesz; D. Murphy

<b>McGillen: Poster Dec. 16 A23D- 3270 Moscone South Poster Hall 1:40 pm – 6 pm</b>
"Assessing the Atmospheric Impact of CF3CCI2: Laboratory Measurements of OH Kinetics and UV and Infrared absorption spectra combined with model calculations"
M. McGillen; F. Bernard; E. Fleming; C. Jackman; J. Burkholder

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<b>Thornberry: Poster Dec. 16 A23L-3417 Moscone South Poster Hall 1:40 pm - 6 pm</b>
"In Situ Observations of Water Vapor and Cirrus IWC in the Pacific TTL During ATTREX"
T. Thornberry; A. Rollins; R. Gao; D. Fahey; T. Bui; S. Woods

Wednesday, December 17 Talks:

<b>Murphy: INVITED Talk Dec. 17 A31J-01 Moscone West, 3004 8 am - 8:15 am</b>
"Context of aerosol chemistry over the Southeast United States"
D. Murphy

<b>Perring: Talk Dec. 17 A31K-03 Moscone West, 3012 8:30 am - 8:45 am</b>
"Airborne Observations of regional variations in fluorescent aerosol across the US"
A. Perring; J. Schwartz; D. Baumgardner; M. Hernandez; D. Spracklen; C. Heald; R. Gao; G. Kok; G. McMeeking; J. McQuaid; D. Fahey

<b>Parrish: INVITED Talk Dec. 17 A32B-01 Moscone West, 3006 10:20 am – 10:50 am</b>
"How Complete Is Our Knowledge of Tropospheric Ozone? (at Least as it is Currently Incorporated into Chemistry-Climate Models)"
D. Parrish

<b>Washenfelder: Talk Dec. 17 A32A-03 Moscone West, 3004 10:50 am- 11:05 am</b>
"Biomass Burning Dominates Brown Carbon Absorption in the Rural Southeastern U.S."
R. Washenfelder; A. Attwood; C. Brock; S. Brown; H. Guo; R. Weber; L. Xu; N. Ng; E. Stone; E. Edgerton; K. Baumann; W. Hu; B. Palm; J. Jimenez; J. Fry; D. Draper; H. Allen

<b>Warneke: Talk Dec. 17 A32A-04 Moscone West, 3004 11:05 am - 11:20 am</b>
"Biogenic Volatile Organic Compound Emissions from Vegetation and Paper Mills in the Southeast United States during the SENEX (Southeast Nexus) Campaign in 2013"
C. Warneke; M. Trainer; M. Graus; B. Yuan; J. Holloway; J. Peischl; I. Pollack; T. Ryerson; L. Kaser; A. Guenther; J. deGouw

<b>Middlebrook: Talk Dec. 17 A33M-05 Moscone West, 3004 2:40 pm - 2:55 pm</b>
"An examination of Carbon Monoxide and Organic Aerosol Mass Sources in the Southeastern United States during the SENEX Project"
A. Middlebrook; J. Brioude; C. Brock; J. deGouw; J. Gilman; M. Graus; T. Hanisco; J. Holloway; L. Horowitz; J. Kaiser; F. Keutsch; B. Lerner; J. Liao; J. Mao; M. Trainer; C. Warneke; A. Welti; G. Wolfe

Wednesday, December 17 Posters:

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<b>Murphy: Poster Dec. 17 A31D-3062 Moscone South Poster Hall 8 am - 12:20 pm</b>
"A miniature scanning radiometer for vertical profiles"
D. Murphy

<b>Wagner: Poster Dec. 167 A31C-3049 Moscone South Poster Hall 8 am - 12:20 pm</b>
"In situ vertical profiles of aerosol extinction, mass, and composition over the SEUS during the SENEX and SEAC <sup>4</sup> RS studies"
N. Wagner; C. Brock; D. Day; G. Diskin; T. Gordon; M. Graus; J. Hollaway; G. Huey; J. Jimenez; D. Lack; J. Liao; X. Lui; M. Markovic; A. Middlebrook; A. Perring; M. Richards; J. Schwartz; C. Warneke; A. Welti; A. Wisthaler; L. Ziemba; D. Murphy; P. Campuzano Jost

<b>Angevine: Poster Dec. 17 A33H-3297 Moscone South Poster Hall 1:40 pm - 6 pm</b>
"Uncertainty In Lagrangian Pollutant Transport Simulations Due to Meteorological Uncertainty at Mesoscale"
W. Angevine; J. Brioude; S. McKeen

<b>Eilerman: Poster Dec. 17 A33G-3268 Moscone South Poster Hall 1:40 pm - 6 pm</b>
"Mobile laboratory measurements of atmospheric emissions from agriculture, oil, and natural gas activities in northeastern Colorado"
S. Eilerman; J. Peischl; J. Neumann; T. Ryerson; R. Wild; A. Perring; S. Brown; K. Aikin; M. Holloway; O. Roberts

<b>Frost: Poster Dec. 17 A33F-3251 Moscone South Poster Hall 1:40 pm - 6pm</b>
"GEIA's Vision for Improved Emissions Information"
G. Frost; C. Grainer; L. Tarrason; P. Middleton

<b>Gao: Poster Dec. 17 A33H-3302 Moscone South Poster Hall 1:40pm-6pm</b>
"The Global Ozone and Aerosol profiles and Aerosol Hygroscopic Effect and Absorption Optical Depth network Initiative"
R. Gao; J. Elkins, G. Frost, A. McComiskey; D. Murphy; J. Ogren; I. Petropavlovskikh; K. Rosenlof

<b>Liao: Poster Dec. 17 A33B-3176 Moscone South Poster Hall 1:40 pm - 6 pm</b>
"Single particles measured by a light scattering module coupled to a time-of-flight aerosol mass spectrometer onboard the NOAA P-3 aircraft during SENEX"
J. Liao; A. Middlebrook; A. Welti; D. Sueper; D. Murphy

<b>Ryerson: Poster Dec. 17 OS33B-1065 Moscone West Poster Hall 1:40 pm - 6 pm</b>
"On the Deepwater Horizon drop size distributions"
T. Ryerson; E. Atlas; D. Blake; J. deGouw; C. Warneke; J. Peischl; C. Brock; S. McKeen

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<b>Wild: Poster Dec. 17 A33F-3261 Moscone South Poster Hall 1:40 pm – 6 pm</b>
"On-Road Measurements of NO <sub>2</sub> /NO <sub>x</sub> and NO <sub>x</sub> /CO Vehicle Emission Ratios in Colorado Summer Traffic"
R. Wild; J. Peischl; T. Ryerson; J. Neuman; W. Dube; S. Brown

**Thursday, December 18 Talks:**

<b>Rollins: Talk Dec. 18 A42D-02 Moscone West, 3006 10:35 am – 10:50am</b>
"Relative Humidity Distribution in the Tropical Tropopause Layer Measured During NASA ATTREX"
A. Rollins; T. Thornberry; R. Gao; S. Woods; T. Bui; D. Fahey

<b>Rosenlof: Talk Dec. 18 A42D-05 Moscone West, 3006 11:20 am - 11:35am</b>
"Variability and trends in UTLS temperatures and water vapor"
K. Rosenlof; B. Hassler; R. Neely; S. Davis; D. Hurst

<b>McDonald, Kim: Talk Dec. 18 A43J-01 Moscone West, 3010 1:40 pm- 1:55 pm</b>
"Reconciling Long-Term Trends in Air Quality with Bottom-up Emission Inventories for Los Angeles"
B. McDonald; S. Kim; G. Frost; R. Harley; M. Trainer

<b>deGouw: Talk Dec. 18 A43J-02 Moscone West, 3010 1:55 pm - 2:10 pm</b>
"Airborne Measurements of the Atmospheric Emissions from a Fuel Ethanol Refinery"
J. deGouw; S. McKeen; K. Aikin; C. Brock; S. Brown; J. Gilman; M. Graus; T. Hanisco; J. Holloway; B. Lerner; J. Kaiser; F. Keutsch; J. Liao; M. Markovic; A. Middlebrook; K. Min; J. Neumann; J. Nowak; J. Peischl; I. Pollack; J. Roberts; T. Ryerson; M. Trainer; P. Veres; C. Warneke; A. Welti; G. Wolfe

**Thursday, December 18 Posters:**

<b>Kazil: Poster Dec. 18 A41K-3224 Moscone South Poster Hall 8 am - 12:20 pm</b>
"Modulation of the Wind Speed Response of Marine Stratocumulus Clouds"
J. Kazil; G. Feingold

<b>Yamaguchi: Poster Dec. 18 A41K-3221 Moscone South Poster Hall 8 am - 12:20 pm</b>
"Role of Spatial Distribution of Rain in Formation of Open Cellular Circulation"
T. Yamaguchi; G. Feingold

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**Friday, December 19 Talks:**

<b>Hardesty: Talk Dec. 19 A510-03 Moscone West, 3010 8:30 am - 8:45 am</b>
"One Year of Doppler Lidar Observations Characterizing Boundary Layer Wind, Turbulence, and Aerosol Structure During the Indianapolis Flux Experiment"
R. Hardesty; A. brewer; P. Stepson; M. Cambaliza; O. Salmon; A. Heimbürger; K. Davis; T. Lauvaux; L. McGowan; N. Miles; S. Richardson; D. Sarmiento; A. Karion; C. Sweeney; L. Iraci; P. Hillyard; J. Podolske; K. Gurney; I. Razlivanov; Y. Song; J. Turnbull; J. Whetstone; A. Possolo; K. Prasad

<b>Froyd: Talk Dec 19 A52A-04 Moscone West, 2022-2024 11:05 am - 11:20 am</b>
"Biomass Burning as a Source of Mineral Dust and Giant Aerosol to the Free Troposphere"
K. Froyd; J. Liao; D. Murphy; L. Ziemba; B. Anderson; S. Woods

**Friday December 19 Posters:**

<b>Ervens: Poster Dec. 19 A51J-3167 Moscone South Poster Hall 8 am - 12:20 pm</b>
"Aqueous Secondary Organic Aerosol (aqSOA) Formation By Radical Reactions: Model Studies Comparing the Role of OH Versus Organic Radicals"
B.Ervens; P. Renard; A. Harris; V. Vaida; A. Monod