

## CSL AGU Presentation Schedule 2024

*Italics represent former students/guests/employees of NOAA*

| Presentation Date     | Presenter Name  | Presentation Title   | Presentation Length (EST) | Session Time (EST) | Session Number | Session Title   | Presentation Type | Room Number   |
|-----------------------|-----------------|--|---------------------------|--------------------|----------------|---|-------------------|---|
| <b>MONDAY 12.9.24</b> |                 |  |                           |                    |                |   |                   |   |
| 12/9/24               | Becky Schwantes | Session Chair (N/A)  | 8:30 - 10:00              | 8:30 - 10:00       | A11A           | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns I  | Oral              | Washington Convention Center, 154 A-B                 |
| 12/9/24               | Ewa Bednarz     | Stratospheric Aerosol Injection could prevent future Atlantic Meridional Overturning Circulation decline but injection location is key (Session Chair)   | 8:30 - 12:20              | 8:30 - 12:20       | GC11G          | Advances in Climate Engineering Science I   | Poster            | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/9/24               | Chia-Hua Hsu    | Intercomparison of top-down estimates of anthropogenic and soil NO <sub>x</sub> emissions using TEMPO and TROPOMI NO <sub>2</sub> remote sensing observations in the U.S.  | 8:30 - 12:20              | 8:30 - 12:20       | A11M           | Constellation of Satellites for Atmospheric Composition and Air Quality I   | Poster            | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/9/24               | Han Huynh       | Evaluation of In Situ Aerosol Composition and Optical Properties Measurements from the 2023 AEROMMA Airborne Field Mission to Validate and Improve Satellite Data Products   | 8:30 - 12:20              | 8:30 - 12:20       | A11I           | Advances in the Integrated Global Observing System for Air Quality: Science and Societal Benefit I  | Poster            | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/9/24               | Drew Rollins    | Evaluation of TEMPO V03 retrievals of nitrogen dioxide and formaldehyde using in-situ observations from the NASA DC-8 during AEROMMA   | 8:30 - 12:20              | 8:30 - 12:20       | A11I           | Advances in the Integrated Global Observing System for Air Quality: Science and Societal Benefit I  | Poster            | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/9/24               | Carsten Warneke | The Atmospheric Emissions and Reactions Observed from Megacities to Marine Areas (AEROMMA) urban field campaign  | 8:40 - 8:50               | 8:30 - 10:00       | A11A           | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns I  | Oral              | Washington Convention Center, 154 A-B                 |
| 12/9/24               | Ann Middlebrook | The Impact of Aged Canadian Wildfire Smoke on Measurements of Organic Aerosol Particles over Chicago, Detroit, Toronto, and New York City during the 2023 Atmospheric Emissions and Reactions Observed from Megacities to Marine Areas (AEROMMA) Study | 9:21 - 9:33               | 8:30 - 10:00       | A11G           | Wildfire Smoke in North America: Distribution, Health, and Policy Implications I  | Oral              | Washington Convention Center, 152 A                   |
| 12/9/24               | Becky Schwantes | Session Chair (N/A)  | 10:20 - 11:50             | 10:20 - 11:50      | A12A           | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns II | Oral              | Washington Convention Center, 154 A-B                 |

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|-------------------------|-------------------|--|---------------|---------------|-------|--|--------|---|
| 12/9/24                 | Chelsea Stockwell | Leveraging Recent Field Measurements to Elucidate the Emissions, Chemistry, and Atmospheric Impacts from Non-traditional Anthropogenic Sources | 10:20 - 10:30 | 10:20 - 11:50 | A12A  | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns II  | Oral   | Washington Convention Center, 154 A-B                 |
| 12/9/24                 | Caroline Womack   | Observations and Initial Findings from the 2024 Utah Summer Ozone Study (USOS)   | 10:50 - 11:00 | 10:20 - 11:50 | A12A  | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns II  | Oral   | Washington Convention Center, 154 A-B                 |
| 12/9/24                 | Adam Ahern        | Direct measurements of the aerosol scattering phase function from fresh and aged wildfire smoke  | 13:40 - 17:30 | 13:40 - 17:30 | A002  | Accelerating our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns     | Poster | Washington Convention Center, Hall B-C (Poster Hall)  |
| 12/9/24                 | Chuck Brock       | Aerosol Properties in California's Central Valley During AEROMMA 2023  | 13:40 - 17:30 | 13:40 - 17:30 | A13A  | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns III | Poster | Washington Convention Center, Hall D (Poster Hall)    |
| 12/9/24                 | Becky Schwantes   | Evaluating Air Quality Models with the AEROMMA Dataset Using the New MELODIES MONET Model Evaluation Tool                                      | 13:40 - 17:30 | 13:40 - 17:30 | A13A  | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns III | Poster | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/9/24                 | Chris Senff       | Ozone Transport and Distribution Along the Northern Shore of the Long Island Sound Observed with Ozone and Wind Lidars                         | 13:40 - 17:30 | 13:40 - 17:30 | A13A  | Accelerating Our Understanding of Summertime Urban Air Quality and Greenhouse Gases Using Data from the Last Decade of Field Campaigns III | Poster | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/9/24                 | Ewa Bednarz       | Session Chair (N/A)  | 14:10 - 15:40 | 14:10 - 15:40 | GC13U | Advances in Climate Engineering Science II   | Oral   | Washington Convention Center, Salon G                 |
| 12/9/24                 | Ewa Bednarz       | Session Chair (N/A)  | 16:00 - 17:30 | 16:00 - 17:30 | GC14A | Advances in Climate Engineering Science III  | Oral   | Washington Convention Center, Salon G                 |
| 12/9/24                 | Shuka Schwarz     | Intentional Stratospheric Dehydration - zeroth-order evaluation and first-order questions  | 16:30 - 16:40 | 16:00 - 17:30 | GC14A | Advances in Climate Engineering Science III  | Oral   | Washington Convention Center, Salon G                 |
| <b>TUESDAY 12.10.24</b> |                   |  |               |               |       |  |        |   |
| 12/10/24                | John Daniel       | Session Chair (N/A)  | 8:30 - 12:20  | 8:30 - 12:20  | GC21S | Limiting Global Warming Overshoot: Earth and Human System Impact Assessments to Inform Explicit Target Setting                             | Poster | Washington Convention Center, Hall B-C (Poster Hall)  |
| 12/10/24                | Daun Jeong        | Elevated Gas Phase Cl <sub>2</sub> above the Remote Marine Boundary Layer during ATom-3,4  | 8:30 - 12:20  | 8:30 - 12:20  | A21H  | General Atmospheric Chemistry, Urban Winter Air Quality, and Constraints on Atmospheric Oxidation Capacity IV                              | Poster | Washington Convention Center, Hall B-C (Poster Hall)  |
| 12/10/24                | Shuka Schwarz     | The atmosphere's "fingerprint access" control of aerosol transport to the polar stratosphere   | 13:15 - 13:30 | N/A           | N/A   | N/A  | Oral   | NOAA Booth  |

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| 12/10/24                  | Steve Brown    | The 2024 Airborne and Remote Sensing Methane and Air Pollutant Surveys (AIRMAPS) Campaign in Colorado and Utah                 | 13:40 - 17:30 | 13:40 - 17:30 | SY23D | Providing Accessible and Credible Greenhouse Gas Information from the U.S. Government and Partners to Meet User Needs II | Poster     | Washington Convention Center, Hall D (Poster Hall)    |
| 12/10/24                  | Claire Granier | Surface emissions at the global and regional scales for air quality forecasts and reanalyses during the past two decades       | 13:40 - 17:30 | 13:40 - 17:30 | GC23F | Improvements in Regional and Global Air Pollutant and GHG Emissions Inventories II                                       | Poster     | Washington Convention Center, Hall B-C (Poster Hall)  |
| 12/10/24                  | Audrey Gaudel  | Multi-scale quantification of air quality in New York City   | 13:40 - 17:30 | 13:40 - 17:30 | A23H  | Interdisciplinary Community-Engaged Research to Tackle Environmental Injustice: Focus on Air Inequity                    | Poster     | Washington Convention Center, Hall B-C (Poster Hall)  |
| 12/10/24                  | Congmeng Lyu   | The U.S. Greenhouse gas And Air Pollutants Emissions System (GRA2PES)  | 13:40 - 17:30 | 13:40 - 17:30 | SY23D | Providing Accessible and Credible Greenhouse Gas Information from the U.S. Government and Partners to Meet User Needs II | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/10/24                  | Jian He        | Investigating methane and ethane emissions from US oil and natural gas industry  | 13:40 - 17:30 | 13:40 - 17:30 | A23B  | Emissions and Air Quality Impacts of Atmospheric Pollutants from Oil, Gas, and Coal Operations I                         | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| <b>WEDNESDAY 12.11.24</b> |                |  |               |               |       |  |            |   |
| 12/11/24                  | Yaosheng Chen  | Dependence of LWP adjustment slope on droplet number concentration   | 8:30 - 12:20  | 8:30 - 12:20  | A31B  | Advances in Cloud and Precipitation Processes: Integrating Observations, Modeling, and Theory I                          | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/11/24                  | Jianhao Zhang  | Unraveling the striking difference in causal low-cloud susceptibility to aerosol between GCM and observation                   | 8:30 - 12:20  | 8:30 - 12:20  | A31B  | Advances in Cloud and Precipitation Processes: Integrating Observations, Modeling, and Theory I                          | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/11/24                  | Greg Frost     | Session Presenter (N/A)  | 12:30 - 13:30 | 12:30 - 13:30 | TH33C | GeoXO Town Hall: Preparing for Geostationary Satellite Observations of the Future  | Town Hall  | Washington Convention Center, 209 A-C                 |
| 12/11/24                  | Zach Decker    | Detailed in-situ observations of stratospheric N2O5 constrain stratospheric heterogeneous chemistry and its influence on ozone | 14:31 - 14:34 | 14:10 - 15:40 | A33M  | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation I                         | eLightning | Washington Convention Center, eLightning Theater 1    |
| 12/11/24                  | Jianhao Zhang  | Large radiative forcing from the 2020 shipping fuel regulation is hard to detect   | 16:50 - 17:00 | 16:00 - 17:30 | A34D  | Boundary Layer Clouds and Climate Change II  | Oral       | Washington Convention Center, 202 A                   |
| <b>THURSDAY 12.12.24</b>  |                |  |               |               |       |  |            |   |
| 12/12/24                  | Sunil Baidar   | Improving Urban Greenhouse Gas Emission Estimates from Mass Balance Method using Airborne Doppler Lidar Measurements           | 8:30 - 12:20  | 8:30 - 12:20  | A41N  | New Developments in Urban Greenhouse Gas Emissions Quantification II   | Poster     | Washington Convention Center, Hall D (Poster Hall)    |
| 12/12/24                  | Alex Baron     | Stratospheric Aerosol layer responses to volcanic and wildfire perturbations   | 8:30 - 12:20  | 8:30 - 12:20  | A41U  | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation III                       | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |

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| 12/12/24 | Dillon Elsbury | The influence of major sudden stratospheric warmings on longitudinally resolved tracer distributions   | 8:30 - 12:20  | 8:30 - 12:20  | A41Q  | Stratospheric Dynamics, Aerosol Processes, and Interactions with the Troposphere I   | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/12/24 | Jake Gristey   | Session Chair (N/A)  | 8:30 - 10:00  | 8:30 - 10:00  | A41D  | The Spectral Dimension of Shortwave and Longwave Radiation in the Earth System I   | Oral       | Washington Convention Center, 201                     |
| 12/12/24 | Chris Maloney  | Modeling the atmospheric transport and potential radiative impact of alumina aerosols emitted from the coming increase in satellite reentry frequency  | 8:30 - 10:00  | 8:30 - 10:00  | A41F  | Spaceflight and Earth's Atmosphere: How the Coming Era of Larger and More Frequent Rocket Launches and Space Debris Reentries Could Affect Global Climate, Ozone, High-Altitude Clouds, Airglows, and Space Weather II | eLightning | Washington Convention Center, eLightning Theater 1    |
| 12/12/24 | Drew Rollins   | Evaluating reactive nitrogen and sulfur as secondary aerosol precursors in the Asian Summer Monsoon Anticyclone using in-situ airborne observations  | 8:30 - 12:20  | 8:30 - 12:20  | A41U  | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation III   | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/12/24 | Karen Rosenlof | Rocket launches and satellite re-entry: Initial findings and the need for observational constraints given projections of a rapidly increasing number of Low Earth Orbit large satellite constellations | 8:30 - 10:00  | 8:30 - 10:00  | A41F  | Spaceflight and Earth's Atmosphere: How the Coming Era of Larger and More Frequent Rocket Launches and Space Debris Reentries Could Affect Global Climate, Ozone, High-Altitude Clouds, Airglows, and Space Weather II | eLightning | Washington Convention Center, eLightning Theater 1    |
| 12/12/24 | Dan Murphy     | Impacts of Spacecraft Reentry on the Stratosphere  | 8:56 - 8:59   | 8:30 - 10:00  | A41F  | Spaceflight and Earth's Atmosphere: How the Coming Era of Larger and More Frequent Rocket Launches and Space Debris Reentries Could Affect Global Climate, Ozone, High-Altitude Clouds, Airglows, and Space Weather II | eLightning | Washington Convention Center, eLightning Theater 1    |
| 12/12/24 | Eshkol Eytan   | Cloud Radiative Effects in "Clear Sky": From Spectral High-resolution Radiance to Broadband Fluxes   | 10:50 - 11:00 | 10:20 - 11:50 | A42A  | Advances in Cloud and Precipitation Processes: Integrating Observations, Modeling, and Theory II   | Oral       | Washington Convention Center, 201                     |
| 12/12/24 | Greg Frost     | Primary Contact/Presenter (N/A)  | 12:30 - 13:30 | 12:30 - 13:30 | TH43B | U.S. Federal Marine Carbon Dioxide Removal Research and Coordination   | Town Hall  | Mariott Marquis, Liberty I-K                          |
| 12/12/24 | Jake Gristey   | Generation of "split-shortwave" Irradiance for Future Libera Earth Radiation Budget Satellite Observations   | 13:40 - 17:30 | 13:40 - 17:30 | A43N  | The Spectral Dimension of Shortwave and Longwave Radiation in the Earth System II  | Poster     | Washington Convention Center, Hall B-C (Poster Hall)  |
| 12/12/24 | Jianhao Zhang  | Session Chair (N/A)  | 14:10 - 15:40 | 14:10 - 15:40 | A43O  | Advances in Cloud and Precipitation Processes: Integrating Observations, Modeling, and Theory III  | Oral       | Washington Convention Center, 201                     |

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|------------------------|----------------|---|---------------|---------------|---------|---|------------|---|
| 12/12/24               | Jake Gristey   | Session Chair (N/A)   | 16:00 - 17:30 | 16:00 - 17:30 | A44I    | The Spectral Dimension of Shortwave and Longwave Radiation in the Earth System III  | eLightning | Washington Convention Center, eLightning Theater 1    |
| 12/12/24               | Eshkol Eytan   | Cloud Radiative Effects in "Clear Sky": From Spectral High-resolution Radiance to Broadband Fluxes                    | 16:12 - 16:15 | 16:00 - 17:30 | A44I    | The Spectral Dimension of Shortwave and Longwave Radiation in the Earth System  | eLightning | Washington Convention Center, eLightning Theater 1    |
| <b>FRIDAY 12.13.24</b> |                |   |               |               |         |   |            |   |
| 12/13/24               | Dillon Elsbury | Session Chair (N/A)   | 8:30 - 10:00  | 8:30 - 10:00  | A51F    | Stratospheric Dynamics, Aerosol Processes, and Interactions with the Troposphere II   | Oral       | Washington Convention Center, Ballroom C              |
| 12/13/24               | Shuka Schwarz  | Tracking Tropospheric/Stratospheric transport with measurements of an inert aerosol tracer                            | 8:40 - 8:50   | 8:30 - 10:00  | A51F    | Stratospheric Dynamics, Aerosol Processes, and Interactions with the Troposphere II   | Oral       | Washington Convention Center, Ballroom C              |
| 12/13/24               | Quazi Rasool   | Kinetic modeling of SOA processes in WRF-Chem: Emerging SOA precursors and application to air quality in Los Angeles  | 9:20 - 9:30   | 8:30 - 10:00  | A51A-06 | Advancing Understanding of Volatile Organic Compounds: Integrating Modeling and Measurement Approaches I  | Oral       | Washington Convention Center, 154 A-B                 |
| 12/13/24               | Jake Gristey   | An Apparent Lack of Impact of Cloud Shadows on Continental Shallow Cumulus Cloud Evolution                            | 9:41 - 9:51   | 8:30 - 10:00  | A51I    | Understanding Land-Atmosphere Interactions: The Role of Surface Fluxes, Boundary Layer Processes, and the Free Atmosphere I   | Oral       | Washington Convention Center, 151 B                   |
| 12/13/24               | Eric Ray       | Session Chair (N/A)   | 10:20 - 11:50 | 10:20 - 11:50 | A52H    | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation IV   | Oral       | Washington Convention Center, Ballroom C              |
| 12/13/24               | Tak Yamaguchi  | Influence of Aerosol-Cloud Interactions on Dynamical and Radiative Properties of the Hadley Circulation               | 11:05 - 11:15 | 10:20 - 11:50 | A52A    | Atmospheric Aerosols and Their Interactions with Clouds, Radiation, and Climate II  | Oral       | Washington Convention Center, 201                     |
| 12/13/24               | Karen Rosenlof | Session Presenter (N/A)   | 12:30 - 13:30 | 12:30 - 13:30 | TH53D   | Presenting the World Climate Research Programme's Lighthouse Activity for Research on Climate Intervention: Identifying Goals, Timelines, and Outcomes and Obtaining Community Feedback | Town Hall  | Marriot Marquis, 12-13                                |
| 12/13/24               | Meng Li        | Speciated NMVOC emission trends in Asia since 2010  | 13:40 - 17:30 | 13:40 - 17:30 | A53C    | Advancing Understanding of Volatile Organic Compounds: Integrating Modeling and Measurement Approaches II   | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/13/24               | James Roberts  | Measuring Liquid-phase Reaction Rates of Atmospheric Interest by On-Line Chemical Ionization Mass Spectrometry (CIMS) | 13:40 - 17:30 | 13:40 - 17:30 | A53L    | Laboratory Studies and Chemical Syntheses in Atmospheric Sciences: Join Session II  | Poster     | Washington Convention Center, Halls B-C (Poster Hall) |
| 12/13/24               | Shuka Schwarz  | How well are we achieving closure on carbonaceous aerosol light absorption in biomass burning smoke?                  | 14:10 - 14:20 | 14:10 - 15:40 | A53W    | Light-Absorbing Carbon Aerosols: Observations, Models, Processes, and Impacts III   | Oral       | Washington Convention Center, 151B                    |
| 12/13/24               | Dan Murphy     | Novel Chlorine Chemistry in Biomass Burning Particles That Reach the Stratosphere                                     | 14:30 - 14:40 | 14:10 - 15:40 | A53Z    | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation V  | Oral       | Washington Convention Center, Ballroom C              |

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|----------|--------------|---|---------------|---------------|------|---|------|--|
| 12/13/24 | Mike Lawler  | Composition and stratospheric processing of aerosol originating in the polar vortex   | 14:40 - 14:50 | 14:10 - 15:40 | A53Z | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation V  | Oral | Washington Convention Center, Ballroom C |
| 12/13/24 | Gregg Schill | The Asian Tropopause Aerosol Layer is Dominated by Secondary Aerosol  | 14:50 - 15:00 | 14:10 - 15:40 | A53Z | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation V  | Oral | Washington Convention Center, Ballroom C |
| 12/13/24 | Eric Ray     | Detecting multi-decadal changes in the Brewer-Dobson circulation from in situ trace gas measurements and idealized modeling | 16:00 - 16:10 | 16:00 - 17:30 | A54J | Upper Troposphere, Stratosphere, and Mesosphere: Chemistry, Dynamics, Transport, and Radiation VI | Oral | Washington Convention Center, Ballroom C |