

SARA LANCE - Curriculum Vitae

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Atmospheric Sciences Research Center
State University of New York, University at Albany
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EDUCATION

PhD, Georgia Institute of Technology <i>Atmospheric Science</i> Graduate Advisor: Dr. Athanasios Nenes Thesis: "Quantifying Compositional Impacts of Ambient Aerosol on Cloud Droplet Formation"	Dec 2007 Atlanta, GA
BSE, Arizona State University <i>Chemical Engineering</i>	May 2002 Tempe, AZ

EMPLOYMENT

Atmospheric Science Research Center (ASRC) State University of New York, University at Albany (SUNY-Albany) <i>Research Faculty (9-mo State Funded Position, Tenured Sep 2023)</i> <i>Director, Whiteface Mountain Field Station (as of 2024)</i>	Aug 2016 – Present Albany, NY
Earth, Atmospheric and Planetary Sciences Massachusetts Institute of Technology (MIT) <i>Research Scientist within the lab of Dr. Daniel J. Cziczo</i>	2015 – 2016 Cambridge, MA
Stratton Park Engineering Company (SPEC), Inc. Cloud Physics and Instrumentation <i>Research Scientist</i>	2012 – 2015 Boulder, CO
Cooperative Institute for Research in Environmental Sciences (CIRES)/ National Oceanic and Atmospheric Administration (NOAA) <i>Research Scientist I/II, Chemical Sciences Division, Earth System Research Lab</i>	2010 – 2012 Boulder, CO
Research Associates Program, National Research Council/NOAA <i>Postdoctoral Fellow within the lab of Dr. Charles A. Brock</i>	2008 – 2010 Boulder, CO
Advanced Studies Program, National Center for Atmospheric Research (NCAR) <i>Graduate Fellow within the lab of Dr. James N. Smith</i>	2004 – 2007 Boulder, CO

RESEARCH INTERESTS

- Fundamental Aerosol-Cloud-Chemistry Interactions, including:
 - Cloud impacts on the chemical properties and mixing-state of aerosol particles
 - Chemical and physical properties of cloud condensation nuclei
 - Cloud Chemistry
- Instrument development and characterization
- Ambient Measurements

CONTRACTS MANAGED by PRINCIPAL INVESTIGATOR S. LANCE

- \$300,000 New York State Environmental Protection Fund (EPF), 4/2024 – 4/2026, “Air quality monitoring and cloud collection and analysis at Whiteface Mountain Field Station”
- \$ 23,730 Bender Scientific, 1/2024 – 1/2026, “UAlbany Weather, Climate & Chemistry Camp”
- \$449,826 New York State Energy Research and Development Authority (NYSERDA) Agreement: 48971, 1/2024 – 1/2026, “Atmospheric Chemistry and Air Quality Measurements and analysis at Three Locations in New York State”
- \$ 78,388 U.S. Environmental Protection Agency (EPA), 10/2023 – 9/2026, “Northeast Mountain Environmental Information Exchange Network”, Subcontract through University of Vermont grant
- \$134,339 National Aeronautics & Space Administration (NASA) Future Investigators in NASA Earth and Space Science and Technology (FINESST) Award: 20-EARTH20-0298, 9/2021 – 8/2025, “Emergence of a New Chemical Regime: Organic Carbon and Base Cations in Whiteface Mountain Cloud Water”
- \$410,295 National Science Foundation (NSF) Award: ANS- 2000404, 9/2020 – 8/2025, “Collaborative Proposal: CHemistry in the Artic: Clouds, Halogens and Aerosols (CHACHA) Field Campaign”
- \$ 29,885 NSF Award: AGS-2025215, 7/2020 – 6/2021, “Workshop on the proposed Network of Mountain Observatories for Composition of the Atmosphere”
- \$783,691 NSF CAREER Award: AGS-1945563, 2/2020 – 2/2026, “Revitalizing aerosol-cloud-chemistry research at Whiteface Mountain during an era of chemical change characterized by high pH, water soluble organics and ammonium”
- \$240,901 NYSERDA Award: 81244, 3/2018 – 3/2023, “Whiteface Mountain Cloud Sampling & Analysis”
- \$ 24,930 NSF RAPID Award: 1753278, 5/2017 – 7/2018, “Supporting Cloud Water Collection at Whiteface Mountain Research Observatory: Pilot Study to Assess Chemical Processing of Organics within Clouds”
- \$ 30,000 CIRES Innovative Research Program, 2011, “Contact Freezing on Demand: Measurement of contact nuclei with a novel instrument using single droplets levitated in an optical trap”

PUBLICATIONS (students supervised by Dr. Lance are underlined)

- 32 Rattigan, O.V., Y.T., Hassanzadeh, A.C. Teora, H.D. Felton, K.L. Civerolo, **S. Lance**, J.J. Schwab and P.K. Hopke, Ultrafine Particle Measurements in New York State, *Atmos. Poll. Res.*, 15(8), 102164, doi: 10.1016/j.apr.2024.102164, 2024.
- 31 Lawrence, C., M. Barth, J. Orlando, P. Casson, R. Brandt, D. Kelting, E. Yerger, and **S. Lance**, Process analysis of elevated concentrations of organic acids at Whiteface Mountain, New York, *Atmos. Chem. Phys.*, 24, 13693–13713, <https://doi.org/10.5194/acp-24-13693-2024>, 2024.

- 30 Hennigan, C. J., M. McKee, V. Pratap, B. Boegner, J. Reno, L. Garcia, M. McLaren, and **S. Lance**, pH dependence of brown-carbon optical properties in cloud water, *Atmos. Chem. Phys.*, 23, 14437–14449, doi: 10.5194/acp-23-14437-2023, 2023.
- 29 Lawrence, C., P. Casson, R. Brandt, J.J. Schwab, P. Snyder, E. Yerger, D. Kelting, T. VandenBoer and **S. Lance**, Long-term monitoring of cloud water chemistry at Whiteface Mountain: Emergence of a New Chemical Regime, *Atmos. Chem. Phys.*, 23, 1619–1639, doi: 10.5194/acp-23-1619-2023, 2023, [winner of 2023 Paul Crutzen publication award](#).
- 28 Barth, M.C., B. Ervens, H. Herrmann, A. Tilgner, V.F. McNeill, W.G. Tsui, L. Deguillaume, N. Chaumerliac, A. Carlton and **S. Lance**, Box Model Intercomparison of Cloud Chemistry, *J. Geophys. Res. Atmos.*, 126 (21), e2021JD035486, doi: 10.1029/2021JD035486, 2021.
- 27 Pratap, V., A.E. Christiansen, A.G. Carlton, **S. Lance**, P. Casson, J. Dukett, H. Hassan, J.J. Schwab and C.J. Hennigan, Investigating the evolution of water-soluble organic carbon in evaporating cloud water, *Environ. Sci. Atmos.*, 1 (1), 21–30, doi: 10.1039/D0EA00005A, 2021.
- 26 Zhang, J., **S. Lance**, J. Marto, Y. Sun, M. Ninneman, Q. Zhang, B.A. Crandall, J. Wang and J.J. Schwab: Evolution of aerosol under moist and fog conditions in a rural forest environment: insights from high resolution aerosol mass spectrometry, *Geophys. Res. Lett.*, 47 (19), e2020GL089714, doi: 10.1029/2020GL089714, 2020.
- 25 Zhang, J., **S. Lance**, X. Wang, J. Wang and J.J. Schwab, Estimation of aerosol liquid water from optical scattering instruments using ambient and dried sample streams, *Atmos. Environ.*, 239 (15), 117787, doi: 10.1016/j.atmosenv.2020.117787, 2020.
- 24 **Lance, S.**, J. Zhang, J.J. Schwab, P. Casson, R.E. Brandt, D.R. Fitzjarrald, M.J. Schwab, J. Sicker, C.-H. Lu, S.-P. Chen, J. Yun, J.M. Freedman, B. Shrestha, Q. Min, M. Beauharnois, B. Crandall, E. Joseph, M.J. Brewer, J.R. Minder, D. Orlowski, A. Christiansen, A.G. Carlton, M.C. Barth, Overview of the Cloud Processing of Organics within Clouds (CPOC) Pilot Study at Whiteface Mountain, NY, *Bull. Amer. Meteor. Soc.*, 101 (10), E1820–E1841, doi: 10.1175/BAMS-D-19-0022.1, 2020.
- 23 Zawadowicz, M. A., **S. Lance**, J.T. Jayne, P. Croteau, D.R. Worsnop, F. Mahrt, T. Leisner, and D.J. Cziczo, Quantifying and Improving the performance of the Laser Ablation Aerosol Particle Time of Flight Mass Spectrometer (LAAPToF) Instrument, *Aeros. Sci. Technol.*, 54 (7), 761–771, doi: 10.1080/02786826.2020.1724867, 2020.
- 22 Lawson, R.P., S. Woods, E. Jensen, M. Gallagher, P. Connolly, J. Whiteway, A. Baran, P. May, A. Heymsfield, C. G. Schmitt, G. McFarquhar, J. Um, A. Protat, M. Bailey, **S. Lance**, A. Muhlbauer, J. Stith, C. Gurganus, A. Korolev, O. B. Toon, M. Kramer, A Review of Ice Particle Shapes in Cirrus formed In Situ and in Anvils, *J. Geophys. Res.*, 124, 10,049–10,090, doi: 10.1029/2018JD030122, 2019.
- 21 Zhang, J. **S. Lance**, J. Marto, Y. Sun, B.A. Crandall, J. Wang, J.J. Schwab, Observed below-cloud aerosol chemical and physical properties on Whiteface Mountain, New York during August 2017, *ACS Earth Space Chem.*, 3, 8, 1438–1450, doi: 10.1021/acsearthspacechem.9b00117, 2019.
- 20 Zhang, J., **S. Lance**, J.M. Freedman, Y. Sun, B.A. Crandall, X. Wei, and J.J. Schwab, Detailed Measurements of Submicron Particles from an Independence Day Fireworks Event in Albany, New York Using HR-ToF-AMS, *ACS Earth Space Chem.*, 3, 8, 1451–1459, doi: 10.1021/acsearthspacechem.9b00046, 2019.
- 19 **Lance, S.**, M. Barth, and A.M. Carlton, Multiphase chemistry: Experimental design for coordinated measurement and modeling of cloud processing at a mountain top, *Bull. Amer. Meteor. Soc.*, ES163–167, doi: 10.1175/BAMS-D-17-0015.1, 2017.

- 18 Carlton, A., M. Barth and **S. Lance**, Designing mountaintop cloud experiments, *EOS*, 98, <https://doi.org/10.1029/2017EO072373>, 2017.
- 17 Cziczo, D.J., L. Ladino-Moreno, Y. Boose, Z.A. Kanji, P. Kupiszewski, **S. Lance**, S. Mertes, H. Wex, Measurements of Ice Nucleating Particles and Ice Residuals. *Meteor. Mono.*, 58, 8.1-8.13, doi: 10.1175/amsmonographs-D-16-0008.1, 2017.
- 16 Davis, R. D., **S. Lance**, J. A. Gordon, S. B. Ushijima, M. A. Tolbert, Contact Efflorescence as a pathway for crystallization of atmospherically relevant particles, *Proc. Nat. Acad. Sci.*, 112 (52), 15815-15820, doi:10.1073/pnas.1522860113, 2015.
- 15 Davis, R. D., **S. Lance**, J. A. Gordon, M. A. Tolbert, A long working-distance optical trap for in situ analysis of contact induced phase transformations of single aerosol particles, *Anal. Chem.*, 87 (12), 6186–6194, doi: 10.1021/acs.analchem.5b00809, 2015.
- 14 Beswick, K., D. Baumgardner, M. Gallagher, A. Volz-Thomas, P. Nedelec, K.-Y. Wang, and **S. Lance**, The backscatter cloud probe – a compact low-profile autonomous optical spectrometer, *Atmos. Meas. Tech.*, 7, 1443-1457, 2014.
- 13 **Lance, S.**, T. E. Raatikainen, T. Onasch, D. Warsnop, X.-Y. Yu, L. Alexander, M. Stolzenberg, P. McMurry, J. N. Smith and A. Nenes, Aerosol mixing-state and cloud activation efficiency during MIRAGE 2006, *Atmos. Chem. Phys.*, 13, 5049-5062, doi:10.5194/acpd-13-5049-2013, 2013.
- 12 Jensen, E. J., G. Diskin, R. P. Lawson, **S. Lance**, T. P. Bui, D. Hlavka, M. McGill, L. Pfister, O.B. Toon, and R. Gao, Ice nucleation and dehydration in the Tropical Tropopause Layer, *Proc. Nat. Acad. Sci.*, 110 (6), 2041-2046, 2013.
- 11 Raatikainen, T., A. Nenes, J.H. Seinfeld, R. Morales, R.H. Moore, T. Lathem, **S. Lance**, L.T. Padro, J.J. Lin, K.M. Cerully, A. Bougiatioti, J. Cozic, C.R. Ruel, P.Y. Chuang, B.E. Anderson, R.C. Flagan, H. Jonsson, N. Mihalopoulos, J.N. Smith, Worldwide data sets constrain the water vapor uptake coefficient in cloud formation, *Proc. Natl. Acad. Sci.*, 110 (10), 3760-3764, doi:10.1073/pnas.1219591110, 2013.
- 10 McBride, P. J., K. S. Schmidt, P. Pilewskie, A. Walther, A. K. Heidinger, D. E. Wolfe, C. Fairall, and **S. Lance**, A Calnex climatology of cloud optical properties retrieved from a ship-based spectrometer and comparisons with satellite and aircraft retrieved cloud properties, *J. Geophys. Res.*, 117, D00V23, doi:10.1029/2012JD017624, 2012.
- 9 **Lance, S.**, Coincidence Errors in a Cloud Droplet Probe (CDP) and a Cloud and Aerosol Spectrometer (CAS), and the Improved Performance of a Modified CDP, *J. Atmos. Oceanic Technol.*, 29, 1532-1541, doi:10.1175/JTECH-D-11-00208.1, 2012.
- 8 Baumgardner, D., L. Avallone, A. Bansemer, S. Borrmann, P. Brown, U. Bundke, P. Y. Chuang, D. Cziczo, P. Field, M. Gallagher, J.-F. Gayet, A. Heymsfield, A. Korolev, M. Krämer, G. McFarquhar, S. Mertes, O. Möhler, **S. Lance**, P. Lawson, M. D. Petters, K. Pratt, G. Roberts, D. Rogers, O. Stetzer, J. Stith, C. Twohy, M. Wendish, In situ airborne instrumentation: addressing and solving measurement problems in ice clouds, *Bull. Amer. Meteor. Soc.*, 93, ES29-ES34, doi: 10.1175/BAMS-D-11-00123.1, 2012.
- 7 Cerully, K. M., T. Raatikainen, **S. Lance**, D. Tkacik, P. Tiitta, T. Petaja, M. Ehn, M. Kulmala, D. R. Worsnop, A. Laaksonen, J. N. Smith, and A. Nenes, Aerosol hygroscopicity and CCN activation kinetics in a boreal forest environment during the 2007 EUCAARI campaign, *Atmos. Chem. Phys.*, 11, 12369-12386, 2011.
- 6 **Lance, S.**, M. Shupe, G. Feingold, C.A. Brock, J. Cozic, J. S. Holloway, R. H. Moore, A. Nenes, J. P. Schwartz, J. R. Spackman, K. D. Froyd, D. M. Murphy, J. Brioude, O. R. Cooper, A. Stohl, J. F. Burkhardt, H. Sodemann, Cloud condensation nuclei as a modulator of ice processes in Arctic mixed-phase clouds, *Atmos. Chem. Phys.*, 11, 8003-8015, 2011.

- 5 Brock, C. A., J. Cozic, R. Bahreini, K. D. Froyd, A. M. Middlebrook, A. McComiskey, J. Brioude, O. R. Cooper, A. Stohl, K. C. Aikin, J. A. de Gouw, D. W. Fahey, R. A. Ferrare, R.-S. Gao, W. Gore, J. S. Holloway, G. Hubler, A. Jefferson, D. A. Lack, **S. Lance**, et al., Characteristics, sources, and transport of aerosols measured in spring 2008 during the aerosol, radiation, and cloud processes affecting Arctic Climate (ARCPAC) Project, *Atmos. Chem. Phys.*, 11, 2423-2453, 2011.
- 4 **Lance, S.**, C.A. Brock, D. Rogers, and J.A. Gordon, Water droplet calibration of a cloud droplet probe and in-flight performance in liquid, ice and mixed-phase clouds during ARCPAC, *Atmos. Meas. Tech.*, 3, 1683–1706, 2010.
- 3 **Lance, S.**, A. Nenes, C. Mazzoleni, M.K. Dubey, H. Gates, V. Varutbangkul, T.A. Rissman, S.M. Murphy, A. Sorooshian, R.C. Flagan, J.H. Seinfeld, G. Feingold, H.H. Jonsson, Cloud condensation nuclei activity, closure, and droplet growth kinetics of Houston aerosol during the Gulf of Mexico Atmospheric Composition and Climate Study (GoMACCS), *J. Geophys. Res.*, 114, D00F15, doi:10.1029/2008JD011699, 2009.
- 2 **Lance, S.**, J. Medina, J.N. Smith and A. Nenes. Mapping the Operation of the DMT Continuous Flow CCN Counter, *Aerosol Sci. Technol.*, 40 (4): 242–254, 2006.
- 1 **Lance, S.**, T. Rissman and A. Nenes, Chemical and Dynamical Effects on Cloud Droplet Number: Implications for Estimates of the Aerosol Indirect Effect, *J. Geophys. Res.*, 109, D22208, 2004.

PRESENTATIONS since 2019 (authors supported by Dr. Lance are underlined)

- **Lance, et al.**, May 2025, *Long-term Trends in Organic Carbon Concentrations within Cloud Water and Precipitation Samples in the Northeastern United States*, European Geophysical Union (EGU) General Assembly, Vienna Austria.
- Tripathy, A. et al., May 2025, *Cloud-Aerosol Chemistry Observations at Whiteface Mountain: Organic Acids and the Growing Importance of Ammonium*, EGU General Assembly, Vienna Austria.
- Lombardo, S. et al., May 2025, *Preliminary study of Microbiology in Clouds at Whiteface Mountain in New York*, EGU General Assembly, Vienna Austria.
- Lombardo, S. et al., Apr 2025, *Integrated Analysis of Airborne In-situ Cloud and Aerosol Microphysics Data during the 2022 Chemistry in the Arctic: Clouds, Halogens, and Aerosols (CHACHA) Field Campaign*, EGU General Assembly, Vienna Austria.
- **Lance, S.** et al., Apr 2025, *Long-Term Trends in Organic Carbon Concentrations within Cloud Water and Precipitation Samples in the Northeastern United States*, Invited Seminar, Institut de Chimie de Clermont-Ferrand France.
- **Lance, et al.**, Apr 2025, *Long-term Trends in Organic Carbon Concentrations within Cloud Water and Precipitation Samples in the Northeastern United States*, Chemistry of Clouds Conference, Sonderborg Denmark.
- Tripathy, A. et al., Apr 2025, *Cloud-Aerosol Chemistry Observations at Whiteface Mountain: Organic Acids and the Growing Importance of Ammonium*, Chemistry of Clouds Conference, Sonderborg Denmark.
- Lawrence, C. et al., Dec 2024, *Exploring the Increasing Trend of Organic Carbon in the Atmospheric Aqueous Phase*, American Geophysical Union (AGU) Fall Meeting, Washington DC.
- Lawrence, C. et al. (presented by **S. Lance**), Nov 2024, *Exploring the Increasing Trend of Organic Carbon in the Atmospheric Aqueous Phase*, National Acid Deposition Program (NADP) Scientific Symposium & Fall Meeting, Duluth MN.
- Tripathy, A. et al., Oct 2024, *Organic Acids in Cloud Water, Aerosols, and Cloud Droplet Residuals at the Summit of Whiteface Mountain (WFM)*, American Association for Aerosol Research (AAAR) Annual Meeting, Albuquerque NM.

- Lawrence, C. et al., Nov 2024, *Exploring the Increasing Trend of Organic Carbon in the Atmospheric Aqueous Phase*, National Acid Deposition Program (NADP) Scientific Symposium & Fall Meeting, Duluth MN.
- Tripathy, A. et al., Jan 2024, *Organic Acids in Cloud Water, Aerosols, and Cloud Droplet Residuals at the Summit of Whiteface Mountain 2018-2023*, American Meteorological Society (AMS) Conference, Baltimore MD.
- Deitsch, A. et al., Jan 2024, *Per- and Polyfluoroalkyl Substances (PFAS) in Precipitation and Cloud Water Samples from Whiteface Mountain, NY*, AMS Conference, Baltimore MD.
- Deitsch, A. et al., Oct 2023, *Persistent Pollutants in Cloud Water and Precipitation Collected in the Adirondack Mountains*, NADP Scientific Symposium & Fall Meeting, Madison, WI.
- Lawrence, C. et al., Oct 2023, *Impacts of Transported Wildfire Smoke on the Whiteface Mountain Aqueous Chemical System*, NADP Scientific Symposium & Fall Meeting, Madison, WI.
- Tripathy, A. et al., Oct 2023, *Organic Acids in Cloud Water, Aerosols and Cloud Droplet Residuals at Whiteface Mountain, NY*, NADP Scientific Symposium & Fall Meeting, Madison, WI.
- **Lance, S.** et al., May 2023, *Whiteface Mountain as a Natural Laboratory to Study Chemical Processing of Aerosols by Clouds*, Adirondack Research Consortium, Lake Placid, NY.
- **Lance, S.** et al., Mar 2023, *Whiteface Mountain as a Natural Laboratory to Study Chemical Processing of Aerosols by Clouds*, Invited Seminar, Ocean & Climate Seminar Series, Lamont Doherty, Columbia University, NY.
- **Lance, S.** et al., Jan 2023, *Whiteface Mountain as a Natural Laboratory to Study Chemical Processing of Aerosols by Clouds*, Joint ACOM/EOL Seminar at the National Center for Atmospheric Research, Boulder, CO.
- Lawrence, C. et al., Jan 2023, *Investigating the Contribution of Cloud Water Chemistry to Organic Acids at Whiteface Mountain*, American Meteorological Society (AMS) Conference, Denver, CO.
- **Lance, S.** et al., Jan 2023, *Whiteface Mountain as a Natural Laboratory to Study Chemical Processing of Aerosols by Clouds*, AMS Conference, Denver, CO.
- Tripathy, A. et al., Jan 2023, *Organic Acids in Cloud Water Samples from Whiteface Mountain*, AMS Conference, Denver CO.
- Deitsch, A. et al., Jan 2023, *Assessing Filter-Based Measurements for Evidence of Atmospheric Micro- and Nanoplastic (MNP) Aerosols through Laboratory Analysis*, AMS Conference, Denver, CO.
- **Lance, S.** et al., Jan 2023, *Overview of the CHEMistry in the Arctic: Clouds, Halogens, and Aerosols (CHACHA) Campaign Conducted Along the Coastal Alaskan North Slope (Invited Presentation, Core Science Keynote)*, AMS Conference, Denver, CO.
- Woods, S. et al., Jan 2023, *Arctic lead cloud microphysics observed during CHACHA (Invited Presentation)*, AMS Conference, Denver, CO.
- Fuentes, J.D. et al., Jan 2023, *Atmospheric Boundary Layer characteristics over the Coastal Alaskan North Slope during spring 2022 (Invited Presentation)*, AMS Conference, Denver, CO.
- Lawrence, C. et al, Nov 2022, *The Emerging Role of Organic Carbon in Atmospheric Chemistry at Whiteface Mountain*, NADP Scientific Symposium & Fall Meeting (won “Best Student Oral Presentation”), Knoxville, TN
- **Lance, S.** et al., Oct 2022, *Whiteface Mountain as a Natural Laboratory to Study Chemical Processing of Aerosols by Clouds (Invited)*, Frontiers in Atmospheric Chemistry Seminar Series, MIT, online format.
- **Lance, S.** et al., Oct 2022, *The Shifting Adirondacks: Observed Trends of Atmospheric Chemistry and Ecosystem Health (Invited)*, Adirondack Research Consortium Fall Webinar Series and Panel Discussion

- Hennigan, C. et al., Sep 2022, pH-Dependence of Brown Carbon (BrC) Absorbance in Cloud Water, AAAR Annual Conference, poster, Raleigh, NC
- **Lance, S.** et al., May 2022, *Long-term monitoring of cloud water at Whiteface Mountain*, New York State Energy Research and Development Authority (NYSERDA) project status meeting, Albany, NY
- Lawrence, C. et al., Jan 2022, *Investigating the Chemistry of Water Soluble Organic Gases in Upstate New York Using WRF-Chem and Chemical Box Modeling*, American Meteorological Society (AMS) Conference, online format
- Lawrence, C. et al., Oct 2021, *Changes in Atmospheric Aqueous Chemistry at Whiteface Mountain: Shifting focus from Acid Rain*, National Acid Deposition Program (NADP) Scientific Symposium & Fall Meeting, online format
- **Lance, S.** et al., May 2021, *Long-term monitoring of cloud water at Whiteface Mountain*, NYSERDA project status meeting, Albany, NY
- Lawrence, C. et al., Jan 2021, *Investigating Characteristic Air Masses Affecting Organic and Inorganic Cloud Water Composition at Whiteface Mountain Using HYSPLIT and Cluster Analysis*, AMS Conference, online format
- **Lance, S.** et al., Nov 2020, *Characterization of Organics in Cloud Water: Measurements from the Present Day and from Decades Past at Whiteface Mountain*, Brookhaven National Lab Seminar, online format
- Lawrence, C. et al., Oct 2020, *Box Model and WRF-Chem Intercomparison Study Investigating the July 1st/2nd 2018 Pollution Event at Whiteface Mountain*, American Association for Aerosol Research (AAAR) Conference, online format
- **Lance, S.** et al., Oct 2020, *Characterization of Organics in Cloud Water: Measurements from the Present Day and from Decades Past at Whiteface Mountain*, ASRC colloquium, online format
- Lawrence, C. et al., Jul 2020, *The Role of Clouds in Atmospheric Chemistry: Current Understanding, Ongoing Research and Future Work at Whiteface Mountain*, Falconer Lecture Series, ASRC, online format
- **Lance, S.** et al., May 2020, *Long-term monitoring of cloud water at Whiteface Mountain*, NYSERDA project status meeting, Albany, NY
- Lawrence, C. et al., Jan 2020, *Emergence of a New Chemical Regime: Growing Abundance of Water Soluble Organics in Cloud Water Associated with a Growing Ion Imbalance*, New York State Department of Environmental Conservation (NYSDEC) Bureau of Air Quality Analysis and Research (BAQAR) scientific poster session, Albany, NY
- Niehaus, J. et al., Jan 2020, *Developing an Electrodynamical Balance for Chemical Speciation of Atmospheric Organics in Cloud Water*, NYSDEC BAQAR scientific poster session, Albany, NY
- **Lance, S.** et al., Jan 2020, *Characterization of Organics in Cloud Water: Measurements from the Present Day and Decades Past*, NYSDEC BAQAR scientific poster session, Albany, NY
- Lawrence, C. et al., Jan 2020, *Emergence of a New Chemical Regime: Growing Abundance of Water Soluble Organics in Cloud Water Associated with a Growing Ion Imbalance*, AMS Conference, Boston, MA
- **Lance, S.** et al., Jan 2020, *Characterization of Organics in Cloud Water: Measurements from the Present Day and Decades Past*, AMS Conference, Boston, MA

TEACHING

Guest Lecture, “ESE 332: Environmental and Sustainable Engineering” taught by Prof. Aynul Bari, SUNY-Albany, Spring 2023.

Guest Lecturer, “ATM 480: Special Topics in Atmospheric Sciences: Atmospheric Science Fieldwork Experience” taught by Prof. Justin Minder & Bhupal Shrestha, SUNY-Albany, Spring 2023.

Co-Lecturer, “ATM 505: Atmospheric Physics”, SUNY-Albany, Spring 2018, 2020, 2021, 2023.

Guest Lecturer, “12.335/12.835: Experimental Atmospheric Chemistry” taught by Prof. Dan Cziczo, MIT, Fall 2015.

Guest Lecturer, “ATOC 5151: Atmospheric Chemistry” taught by Prof. Maggie Tolbert, CU-Boulder, Spring 2015.

MENTORSHIP

Graduate Students (*primary PhD or Master’s advisor, †PhD or Master’s thesis committee member)

Sara Lombardo*, Atmospheric Sciences Research Center (ASRC)/Department of Atmospheric and Environmental Sciences (DAES), SUNY-Albany, 2023-Present

Ali Catena†, ASRC/DAES, SUNY-Albany, 2022-Present

Adam Deitsch*, ASRC/DAES, SUNY-Albany, 2021-Present

Archana Tripathy*, ASRC/DAES, SUNY-Albany, 2020-Present

Christopher Lawrence*, ASRC/DAES, SUNY-Albany, 2018-2024

Suqian Chu†, ASRC/DAES, SUNY-Albany, 2021-Present

Kevin Michael Scruggs Walker†, Department of Earth Atmospheric and Planetary Sciences (EAPS), Purdue, 2021-Present

Dr. Jie Zhang†, ASRC/DAES, SUNY-Albany, 2017-2019

Dr. Joseph Marto†, ASRC/DAES, SUNY-Albany, 2017-2021

Dr. Ryan Davis, CU-Boulder, 2011-2015

Postdoctoral Researchers

Dr. Joseph Niehaus, 2019-2021

Undergraduate Students

Kathleen DeMarle, SUNY-Albany CHM student, Spring 2025, Summer 2025

Lily Hammond, SUNY-Albany CHM student, Fall 2023, 2024

Rudra Patel, SUNY-Albany BIO student, Summer 2023, 2024

Daniel Orlowski, RPI student, Summer 2017

Matthew Brewer, SUNY-Albany DAES student, Summer 2017

SERVICE, DISTINCTIONS and AWARDS

Atmospheric Chemistry and Physics (ACP) Paul Crutzen Publication Award, 2023

<https://www.atmospheric-chemistry-and-physics.net/awards/paul-crutzen-publication-award.html>.

NSF Faculty Early Career Development Award, 2020 <https://www.albany.edu/news-center/news/2021-ualbany-research-team-studies-cloud-aerosol-interactions-whiteface-mountain>

CIRES Innovative Research Program, CU-Boulder, 2011 <https://cires.colorado.edu/award-programs/innovative-research-program>

Postdoctoral Fellowship, Research Associates Program (RAP), National Research Council (NRC) of the National Academies, 2008-2010.

Glen Cass Award, Georgia Institute of Technology, 2006.

Advanced Study Program (ASP) Graduate Fellowship, National Center for Atmospheric Research (NCAR), Boulder CO, 2004-2007.

President's Fellowship, Georgia Institute of Technology, Atlanta GA, 2002-2003.

Department of Energy (DoE) funded Energy Research Undergraduate Laboratory Fellowship (ERULF) at Argonne National Laboratory-West, Idaho Falls ID. Ceramic Nuclear Wasteform Research, 2001.

NSF funded Research Experience for Undergraduates (REU) at North Carolina State University, Raleigh NC. Modeling phase equilibria associated with continuous polymerization in supercritical carbon dioxide, 2000.

Arizona State University Academic Scholarship, Regents and President's Awards, Tempe AZ, 1998.

Graduated 9th out of 447 students from Westview High School, Avondale AZ, 1998.