

# SONIA G. LASHER-TRAPP

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## EDUCATION

The University of Oklahoma, Ph.D. in Meteorology, 1998  
The University of Oklahoma, M.S. in Meteorology, 1993  
Saint Louis University, B.S. in Meteorology *Summa cum Laude*, 1990

## EMPLOYMENT & APPOINTMENTS

Blue Waters Professor, Dept. of Atmos. Sciences, Univ. of Illinois, Aug 2014- present  
Associate Professor, Dept. of Earth, Atmos. & Planet. Sci., Purdue University, 2009-2014  
Sabbatical Visitor, School of Environment, University of Leeds, Jan 2010- Aug 2010  
Assistant Professor, Dept. of Earth & Atmos. Sci., Purdue University, Jan 2003-Jul 2009  
Research Scientist, New Mexico Institute of Mines and Technology, in residence at the  
National Center for Atmospheric Research (NCAR), Dec 2000- Dec 2002  
Postdoctoral Fellow, Advanced Study Program, NCAR, Aug 1998-Nov 2000

## PROFESSIONAL ACTIVITIES

Author of new undergraduate textbook: *Mostly Cloudy: Cloud Physics for Meteorologists*. Sundog  
Publishing, Madison WI, expected online 2023  
Advisory Board Member, University of Oklahoma College of Atmospheric and Geological  
Sciences, 2021-2024  
Workshop Section Leader, International Cloud Modeling Workshop, 2021  
ARM Science Board Member, 2020-2022  
NCSA Resource Allocation committee, 2019-2021  
Member, AMS Cloud Physics committee, 2019-2021  
Session Chair: 15<sup>th</sup> AMS Conference on Clouds Physics, 2018  
Session Chair: 17<sup>th</sup> International Conference on Clouds and Precipitation, 2016  
Member, Program Committee, 17<sup>th</sup> Int. Conf. on Clouds and Precipitation, 2015-2016  
Session Chair: European Conference on Severe Storms, 2015  
Editor, Journal of the Atmospheric Sciences, 2015- 2017  
Session Chair: AMS 14<sup>th</sup> Conference on Cloud Physics, 2014  
Member, COPE Steering Committee, 2012-2013

Member, Program Committee, 16<sup>th</sup> Int. Conf. on Clouds and Precipitation, 2011-2012  
Member, ICE-T Steering Committee, 2010-2011  
Associate Editor, Journal of the Atmospheric Sciences, 2008 - 2009  
Elected Member, International Commission on Clouds and Precipitation, 2008-2016  
Member, NSF Observing Facilities Assessment Panel (OFAP), 2006-2009  
Chair, program committee, AMS 12<sup>th</sup> Conference on Cloud Physics, 2005-2006  
Member, AGU Cloud and Precipitation Committee, 2005-2007  
Member, AMS Cloud Physics committee, 2001-2007  
Session chair: AMS 11<sup>th</sup> Conference on Cloud Physics, 2002

### HONORS & AWARDS

Faculty Award for Outstanding Teacher in an Atmospheric Sciences Course, 2023  
Fellow of the American Meteorological Society, 2023  
American Meteorological Society Edward N. Lorenz Teaching Excellence Award, 2021  
University of Illinois College of Liberal Arts and Sciences Dean's Award for Excellence in Undergraduate Teaching, 2020  
Purdue University Teaching Academy, 2013  
Purdue University College of Science Undergraduate Advising Award, 2013  
Purdue University College of Science Graduate Mentoring Award, 2010  
Purdue University College of Science Outstanding Contributions to Undergraduate Teaching by an Assist. Professor, 2007  
Purdue University Dept. of EAS Outstanding Faculty Graduate Advisor, 2006  
Patricia Roberts Harris Fellow, The University of Oklahoma

### PROFESSIONAL SOCIETY MEMBERSHIPS

American Meteorological Society  
American Geophysical Union

### FIELD PROGRAMS

Southern Ocean Clouds Radiation Aerosol Transport Experimental Study (SOCRATES), Tasmania, Jan-Feb 2018  
CONvective Precipitation Experiment (COPE), SW England, July-Aug 2013  
Ice in Cumulus Experiment- Tropical (ICE-T), St. Croix, July 2011  
Rain in Cumulus over the Ocean (RICO), Antigua/Barbuda, Dec 2004-Jan 2005  
Aircraft Icing Research Study II (AIRSII), Cleveland, OH, Nov-Dec 2003  
Small Cumulus Microphysics Study (SCMS), Cape Kennedy, FL, July & Aug 1995  
Verification of the Origin of Rotation in Thunderstorms Experiment (VORTEX), Summer 1990 and 1991

## FUNDING

- Principle Investigator: *Aerosol Effects upon Convective Cold Pools: Establishing General Trends*, 2020-2023, DOE-ASR, \$334,441
- Co- Investigator: *A Pseudo-Global-Warming Investigation of Convective Hazards*, 2019-2022, NSF, \$627,402
- Principle Investigator: *Quantifying Entrainment and its Effects in Isolated, Sheared Cumuli and Thunderstorms*, 2017-2020, NSF, \$549,738
- Co- Investigator: *Microphysical Processes within Southern Ocean Clouds*, 2017-2020, NSF, \$821,614
- Co- Investigator: *A Bottom-up Approach to Improve the Representation of Deep Convective Clouds in Weather and Climate Models*, 2015-2018, DOE-ASR, \$551,150
- Principle Investigator: *A System for Characterizing and Measuring Precipitation (SCAMP)*, 2015, University of Illinois Vice Chancellor for Research Equipment Funding, \$58,640
- Co- Investigator: *Development of a Geographic Winter-weather Severity Index for the Assessment of Maintenance Performance*, 2014, INDOT, \$174,231
- Principle Investigator: *The Convective Precipitation Experiment- Microphysical and Entrainment Dependencies (COPE-MED)*, 2013-2016, NSF, \$524,815
- Principle Investigator: *Changes in Precipitation Processes and Efficiency within Convective Clouds over the Continental U.S. in a Warmer Climate.*, 2011-2012, Purdue Research Foundation, \$15,750
- Principle Investigator: *Ice Nucleation in Maritime Cumuli: Considering Dynamical and Microphysical Interactions*, 2010-2014. NSF, \$423,253
- Principle Investigator: *Numerical Modeling of Precipitation Changes Resulting from Regional Climate Change Across the U.S.*, Summer 2010, Purdue Climate Change Research Center, \$6,000
- Principle Investigator: *The Application of a Successful Research-Based Laboratory Model to Atmospheric Science*, 2009-2011, NSF, \$150,000
- Principle Investigator: *Entrainment, Ultragrantic Particles, and Warm Rain Formation in Trade Wind Cumulus* (supplement), 2008-2009, NSF, \$20,807
- Principle Investigator: *The Effects of Entrainment and Mixing on Droplet Populations in Trade Wind Cumuli*, 2008-2009, Purdue Research Foundation, \$16,300
- Co-principal Investigator: *Sub-Daily Scale Extreme Precipitation in Future Climate-Change Scenarios: A Pilot Study*, 2006-2008, NSF, \$275,075
- Co-principal Investigator: *Collaborative Research: An Advanced Interactive Multifield, Multisource Atmospheric Visual Analysis Environment*, 2005-2009, NSF, \$686,163
- Principal Investigator: *Entrainment, Ultragrantic Particles, and Warm Rain Formation in Trade Wind Cumulus*, 2004-2008, NSF, \$352,761
- Co-principal Investigator: *Interdisciplinary Earth and Atmospheric Science Research: A Unique Challenge for Graduate Student Recruitment*, 2004-2005, Purdue Graduate College, \$10,000
- Principal Investigator: *Supercooled Large Drop Formation by Ultragrantic Particles in Wintertime Stratiform Clouds during the Second Alliance Icing Research Study (AIRS II)*, 2003-2006, NSF, \$201,089
- Co-principal Investigator: *Interdisciplinary Earth and Atmospheric Science Research: A Unique Challenge for Graduate Student Recruitment*, 2003-2004, Purdue Graduate College, \$5,000
- Co-principal Investigator: *The Roles of Ultragrantic Aerosols and Entrainment and Mixing in the Warm Rain Process*, 2000-2003, NSF, \$193,139

PUBLICATIONS (student authors underlined)

- Jo, E., and S. Lasher-Trapp, 2023: Entrainment in a Simulated Supercell Thunderstorm. Part III: The Influence of Decreased Environmental Humidity and General Effects upon Precipitation Efficiency. *J. Atmos. Sci.*, 80, 1107-1122.
- Xue, L., S. Bera, S. Chen, H. Choudhary, S. Dixit, W. W. Grabowski, S. Jayakumar, S. Krueger, G. Kulkarni, S. Lasher-Trapp, H. Mallinson, T. Prabhakaran, and S. Shima, 2022: Progress and challenges in modeling dynamics-microphysics interactions: from the Pi chamber to Monsoon convection. *Bull. Amer. Meteor. Soc.*, 103, E1413-1420.
- Jo, E., and S. Lasher-Trapp, 2022: Entrainment in a Simulated Supercell Thunderstorm. Part II: The Influence of Vertical Wind Shear and General Effects upon Precipitation. *J. Atmos. Sci.*, 79, 1429-1443.
- Trapp, R. J., M. J. Woods, S. G. Lasher-Trapp, and M. A. Grover, 2021: Alternative implementations of the “pseudo-global-warming” methodology for event-based simulations. *J. Geophys. Res. Atmos.*, 126, e2021JD035017.
- Lasher-Trapp, S., E. L. Scott, E. Jarvinen, M. Schnaiter, F. Waitz, P. J. DeMott, C. S. McCluskey, and T. C. J. Hill, 2021: Observations and Modeling of Rime-Splintering in Southern Ocean Cumuli. *J. Geophys. Res. Atmos.*, 126, e2021JD035479.
- Lasher-Trapp, S., E. Jo, L. R. Allen, B. N. Engelsen, and R. J. Trapp, 2021: Entrainment in a simulated supercell thunderstorm, Part I: The evolution of different entrainment mechanisms and their dilutive effects. *J. Atmos. Sci.*, 78, 2725-2740.
- Raupach, T. H., O. Martius, J. T. Allen, M. Kunz, S. Lasher-Trapp, S. Mohr, K. L. Rasmussen, R. J. Trapp, and Q. Zhang, 2021: The effects of climate change on hailstorms. *Nature Revs Earth and Environ.*
- McFarquhar, G. M., and 50 other co-authors including S. Lasher-Trapp, 2020: Observations of clouds, aerosols, precipitation, and surface radiation over the Southern Ocean: an overview of CAPRICORN, MARCUS, MICRE and SOCRATES. *Bull. Amer. Meteor. Soc.*, in press.
- Borque, P., S. W. Nesbitt, R. J. Trapp, S. Lasher-Trapp, and M. Oue, 2020: Observational study of the thermodynamics and morphological characteristics of a midlatitude continental cold pool event. *Mon. Wea. Rev.*, 148, 719-737.
- Mallinson, H. M., and S. Lasher-Trapp, 2019: An Investigation of Hydrometeor Latent Cooling Upon Convective Cold Pool Formation, Sustainment, and Properties. *Mon. Wea. Rev.*, 147, 3205-3222.
- Trapp, R. J., K. A. Hoogewind, and S. Lasher-Trapp, 2019: Future Changes in Hail Occurrence in the United States Determined through Convection-Permitting Dynamical Downscaling. *J. Clim.*, 32, 5493-5509.
- Jackson, R., J. R. French, D. C. Leon, D. M. Plummer, S. Lasher-Trapp, A. M. Blyth, A. Korolev, 2018: Observations of the microphysical evolution of convective clouds in southwest United Kingdom. *Atmos. Chem. Phys.*, <https://doi.org/10.5194/acp-2018-437>
- Lasher-Trapp, S., S. Kumar, D. H. Moser, A. M. Blyth, J. R. French, R. C. Jackson, D. C. Leon, and D. M. Plummer, 2018: On Microphysical Pathways Leading to Convective Rainfall. *J. Appl. Meteor. Clim.*, 57, 2399-2417.
- Moser, D. H. and S. Lasher-Trapp, 2018: Cloud Spacing Effects upon Entrainment and Rainfall along a Convective Line. *J. Appl. Meteor. Clim.*, 57, 1865-1882.
- Plummer, D. M., J. R. French, D. C. Leon, A. M. Blyth, S. Lasher-Trapp, L. J. Bennett, D. R. L. Dufton, R. C. Jackson, and R. R. Neely, 2017: Radar-derived Structural and Precipitation

- Characteristics of Warm-based Convection Developing Z<sub>DR</sub> Columns. *J. Appl. Meteor. Clim.*, 57, 2485-2505. DOI: 10.1175/JAMC-D-17-0134.1
- Field, P., and 28 other coauthors, 2017: Secondary Ice Production: Current State of the Science and Recommendations for the Future. *AMS Monographs*, Chapter 7, 1-20.
- Moser, D. H. and S. Lasher-Trapp, 2017: The Influence of Successive Thermals on Entrainment and Dilution in a Simulated Cumulus Congestus. *J. Atmos. Sci.*, 74, 375-392.
- Lasher-Trapp, S., D. C. Leon, P. J. DeMott, C. M. Villanueva-Birriel, A. V. Johnson, D. H. Moser, C. S. Tully, and W. Wu, 2016: A Multi-Sensor Investigation of Rime-Splintering In Tropical Maritime Cumuli. *J. Atmos. Sci.*, 73, 2547-2564.
- Leon, D. C., J. R. French, S. Lasher-Trapp, A. M. Blyth, and 41 co-authors, 2016: The Convective Precipitation Experiment (COPE): Investigating the Origins of Heavy Precipitation in the Southwestern United Kingdom. *Bull. Amer. Meteor. Soc.*, 97, 1003-1020.
- Villanueva-Birriel, C. M., S. Lasher-Trapp, R. J. Trapp, and N. S. Diffenbaugh, 2014: Sensitivity of the Warm Rain Process in Convective Clouds to Regional Trends in Tropospheric Warming in the Contiguous U.S. *J. Clouds, Aerosol and Radiation*, 1, 1-17.
- Johnson, A., S. Lasher-Trapp, A. Bansemer, Z. Ulanowski and A. J. Heymsfield, 2014: Detection and Quantification of Ice with the Small Ice Detector 2 HIAPER (SID-2H). *J. Atmos. Ocean. Tech.*, 31, 1263-1275.
- Cooper, W. A., S. G. Lasher-Trapp, and A. M. Blyth, 2013: The influence of entrainment and mixing on the initial formation of rain in a warm cumulus cloud. *J. Atmos. Sci.*, 70, 1727-1743.
- Quardokus, K., S. Lasher-Trapp and E. M. Riggs, 2012: Can students perform authentic research early in their undergraduate program? *Bull. Amer. Meteor. Soc.*, 93, 1641-1649.
- Bewley, J.L., and S. Lasher-Trapp, 2011: Progress on Predicting the Breadth of Droplet Size Distributions Observed in Small Cumuli. *J. Atmos. Sci.*, 68, 2921-2929.
- Cooper, W.A., S. G. Lasher-Trapp, and A. M. Blyth, 2011: Initiation of Coalescence in a Cumulus Cloud: A Beneficial Influence of Entrainment and Mixing. *Atmos. Chem. Phys. Disc.*, 11, 10557-10613.
- Arthur, D. K., S. Lasher-Trapp, A. Abdel-Haleem, N. Klosterman, and D. S. Ebert, 2010: A New Three-Dimensional Visualization System for Combining Aircraft and Radar Data and Its Application to RICO Observations. *J. Atmos. Oceanic Tech.*, 27, 811-828.
- Reiche, C. H., and S. Lasher-Trapp, 2010: The minor importance of giant aerosol to precipitation development within small trade wind cumuli observed during RICO. *Atmospheric Research*, 95, 386-399.
- Parker, L. C., G. H. Krockover, S. Lasher-Trapp and D. C. Eichinger, 2008: Ideas about the nature of science held by undergraduate atmospheric science students. *Bull. Amer. Meteor. Soc.*, 89, 1681-1688.
- Lasher-Trapp, S., S. Anderson-Bereznicki, A. Shackelford, C. H. Twohy and J. G. Hudson, 2008: An investigation of the influence of droplet number concentration and giant aerosol particles upon supercooled large drop formation in wintertime stratiform clouds. *J. Appl. Meteor. Climatol.*, 47, 2659-2678.
- Lasher-Trapp, S., 2007: Clouds in a warmer climate: Friend or foe? *Forum on Public Policy*, 3, 353-368.
- Rauber, R. M., and coauthors, 2007: Rain in shallow cumulus over the ocean—the RICO campaign. *Bull. Amer. Meteor. Soc.*, 88, 1912-1928.
- Rauber, R. M., and coauthors, 2007: Supplement to Rain in shallow cumulus over the ocean. *Bull. Amer. Meteor. Soc.*, 88, S12-S18.

- Lasher-Trapp, S., and J. P. Stachnik, 2007: Giant and Ultragiant Aerosol Particle Variability over the Eastern Great Lakes Region. *J. Appl. Meteor.*, 46, 651-659.
- Song, Y., J. Ye, N. Svakhine, S. Lasher-Trapp, M. Baldwin and D. S. Ebert, 2006: An Atmospheric Visual Analysis and Exploration System. *IEEE Transactions on Visualization and Computer Graphics*, 12, 1157-1164.
- Barth, M., and coauthors, 2006: Coupling Between Land Ecosystems and the Atmospheric Hydrologic Cycle through Biogenic Aerosol Pathways. *Bull. Amer. Meteor. Soc.*, 86, 1738-1742.
- Blyth, A. M., S. G. Lasher-Trapp and W. A. Cooper, 2005: A Study of Thermals in Cumulus Clouds. *Quart. J. Roy. Meteor. Soc.*, 131, 1171-1190.
- Lasher-Trapp, S. G., W. A. Cooper and A. M. Blyth, 2005: Broadening of Droplet Size Distributions from Entrainment and Mixing in a Cumulus Cloud. *Quart. J. Roy. Meteor. Soc.*, 131, 195-220.
- Blyth, A. M., S. G. Lasher-Trapp, W. A. Cooper, C. A. Knight and J. Latham, 2002: The Role of Giant and Ultra-giant Aerosols in the Initiation of Rain in Warm Cumulus Clouds. *J. Atmos. Sci.*, 60, 2557-2572.
- Knight, C. A., J. Vivekanandan and S. Lasher-Trapp, 2002: First Radar Echoes and Early ZDR History of Florida Cumulus. *J. Atmos. Sci.*, 59, 1454-1472.
- Lasher-Trapp, S. G., W. A. Cooper and A. M. Blyth, 2002: Measurements of Ultragiant Aerosol Particles in the Atmosphere from the Small Cumulus Microphysics Study. *J. Atmos. Ocean. Tech.*, 19, 402-408.
- Lasher-Trapp, S., C. A. Knight and J. M. Straka, 2001: Early Radar Echoes from Ultragiant Aerosol in a Cumulus Congestus: Modeling and Observations. *J. Atmos. Sci.*, 58, 3545-3562.
- Doswell, C. A. III, and S. G. Lasher-Trapp, 1997: Measuring the Degree of Irregularity in Observation Networks. *J. Atmos. Ocean. Tech.*, 14, 120-132.

### INVITED PRESENTATIONS

- Invited Presentation, 15th Aerosol-Cloud-Climate symposium of the 102<sup>nd</sup> AMS Annual Meeting, Denver, CO, 2023: “*On the Effects of Immersion-Freezing Ice Nucleating-Particles to Deep Convection*”
- Invited Presentation, International Workshop on Cold Pools, Tagernsee, Germany, 2022: *Some Environmental and Microphysical Effects on Cold Pools over Land.*
- Iowa State University, Ames, IA, 2022: *Studying the August 2020 Midwest Derecho under Possible Climate Change.*
- Keynote Presentation, 11<sup>th</sup> Student Conference of the 101<sup>st</sup> AMS Annual Meeting, virtual, 2021: “*Engaging the Future: Teaching, Learning, & Scientific Communication (about the Nature of Science)*”
- Keynote Presentation, Symposium on Education, 101<sup>st</sup> AMS Annual Meeting, virtual, 2021: “*Collegiate Teaching: Lessons Learned and Shared*”
- Mini symposium on Fluid Dynamics of Atmospheric Clouds, American Physics Society Fall meeting, virtual, 2020: “*Entrainment in a Simulated Supercell Thunderstorm*”
- Session on Skills for the Field, 10<sup>th</sup> Student Conference of the 100<sup>th</sup> AMS Annual Meeting, Boston, MA, 2020: “*Demonstrating Your Excellence: Giving Noteworthy Presentations*”.
- Session on Establishing Primary and Secondary Ice Production Contributions in Cold Clouds, 100<sup>th</sup> AGU Fall Meeting, San Francisco, CA, 2019: “*Primary Ice Nucleation and Secondary Ice Production: Recent Developments from Field Campaign Measurements Combined with Numerical Modeling Predictions*”.

- Keynote Presentation, European Conference on Severe Storms, Krakow, Poland, 2019: *“Investigating Possible Future Changes in Hailfall Occurrence and Intensity Using a Pseudo-Global Warming Approach”*
- Florida International University, Miami, FL, 2018: *“Chasing Ice with Aircraft.”*
- North Carolina State University, Raleigh, NC, 2017: *“The COPE: COnvective Precipitation Experiment”*
- Secondary Ice Multiplication Symposium, Manchester, England 2015: Invited co-Lead for group presentation on *“Modeling/Theory”*.
- Pennsylvania State University, 2015: *“The Enhanced Production of Ice in Tropical Cumuli: Observations and Numerical Modeling”*
- Northern Illinois University, DeKalb, IL, 2015: *“Extreme Precipitation in Future Climates: A Microphysical Emphasis”*
- Northern Illinois University, DeKalb, IL, 2015: *“The Enhanced Production of Ice in Tropical Cumuli”*
- Illinois State Water Survey, Champaign, IL, 2015: *“The Enhanced Production of Ice in Tropical Cumuli”*
- Dept. of Atmospheric Science, University of Illinois Urbana-Champaign, 2014: *“Extreme Precipitation in Future Climates: A Microphysical Emphasis”*
- National Science Teachers Association National Conference on Science Education, Indianapolis, IN, 2012: *“Clouds and Precipitation in a Future Climate: Why Isn’t There an App for This Yet?”*
- UK National Centre for Atmospheric Science, Summer School on Atmospheric Measurement, Arran, Scotland, 2011: *“Cloud Physics: Precipitation Processes”*
- National Center for Atmospheric Research, Boulder, CO, 2011: *“Progress on Entrainment and its Effects in Small Cumuli”*
- University of Illinois, Urbana-Champaign, IL, 2011: *“Vignettes on Entrainment and its Effects in Small Cumuli”*
- University of Leeds, Leeds, England, 2010: *“Initiation of Coalescence in a Cumulus Cloud: Influence of Variability in Drop Growth Histories Produced by Entrainment”*
- University of Manchester, Manchester, England, 2010: *“Initiation of Coalescence in a Cumulus Cloud: Influence of Variability in Drop Growth Histories Produced by Entrainment”*
- UK Met. Office, Exeter, England, 2010: *“CCN vs GA: Strength in Numbers”*
- Oxford Round Table (Invited speaker), Oxford, England, 2007: *“Clouds in a Warmer Climate: Friend or Foe?”*
- Dept. of Geosciences, University of Nebraska (Stout lecture), 2007: *“Aerosol Effects Upon Supercooled Clouds and Aircraft Icing”*
- National Severe Storms Laboratory, 2005: *“When Do the Microphysics Matter?”*
- Department of Physics, Michigan Technical University, 2005: *“Evidence for Giant Aerosol Particles as a Source of Large Supercooled Drops, and a Possible Forecasting Technique”*
- National Center for Atmospheric Research, 2005: *“More Evidence for Giant Aerosol Particles as a Source of Large Supercooled Drops in Stratiform Mixed-Phase Clouds”*
- Department of Physics, DePauw University, 2004: *“Giant Aerosol Particles and Aircraft Icing: A New Connection”*
- National Center for Atmospheric Research, 2004: *“Giant Aerosol Particles: Source of Large Supercooled Drops in Mixed-Phase Clouds?”*
- Department of Atmospheric Science, U. of Illinois Urbana-Champaign, 2003: *“Broadening of Droplet Size Distributions from Entrainment and Mixing in a Cumulus Cloud”*
- Department of Geological and Atmospheric Sciences, Iowa State University, 2002: *“Observational Analysis of Microphysical Processes within Cores of Small Warm Cumuli”*

Department of Atmospheric Science, Texas A&M University, 2000: “*Modeling and Observations of Warm Rain Processes in Small Cumuli*”

Department of Atmospheric Science, University of Wyoming, 1999: “*The Importance of Ultragrantic Aerosol Particles to Warm Rain Formation*”

OTHER RECENT CONFERENCE, SYMPOSIA & WORKSHOP PRESENTATIONS (last 5 years; student presenters/authors underlined)

- Lasher-Trapp, S., S. Orendorf, and R. J. Trapp, 30<sup>th</sup> AMS Conference on Severe Local Storms, Santa Fe, NM, 2022: *A Convective Windstorm in a Future Climate: A PGW Study of the 10 August 2020 Midwest Derecho*.
- Ross, T., and S. Lasher-Trapp, 30<sup>th</sup> AMS Conference on Severe Local Storms, Santa Fe, NM, 2022: *Microphysical Effects on Convective Cold Pool Initiation during CACTI*.
- Jo, E., and S. Lasher-Trapp, 30<sup>th</sup> AMS Conference on Severe Local Storms, Santa Fe, NM, 2022: *Entrainment in Simulated Supercell Thunderstorms*.
- Mallinson, H.M., S. Lasher-Trapp, and R. J. Trapp, 16<sup>th</sup> AMS Conference on Cloud Physics, Madison, WI, 2022: *Changes in Mesoscale and Microscale Processes Influencing Hail Characteristics in a Future Climate*
- Ross, T., and S. Lasher-Trapp, 16<sup>th</sup> AMS Conference on Cloud Physics, Madison, WI, 2022: *Investigating the Effects of CCN on the Timing of Convective Cold Pool Initiation*.
- Jo, E., and S. Lasher-Trapp, 16<sup>th</sup> AMS Conference on Cloud Physics, Madison, WI, 2022: *Entrainment in Simulated Supercell Thunderstorms*.
- Lasher-Trapp, S., and T. Ross, ASR Aerosol-Clouds-Precipitation-Climate Workshop, virtual, 2022: *Investigating the Effects of CCN on the Timing of Convective Cold Pool Initiation during CACTI*.
- Jo, E., and S. Lasher-Trapp, 19<sup>th</sup> Conference on Mesoscale Processes, virtual, 2022: *How does Vertical Wind Shear affect Entrainment, Dilution, and Precipitation in a Supercell Thunderstorm?*
- Ross, T. I. and S. Lasher-Trapp, 19<sup>th</sup> Conference on Mesoscale Processes, virtual, 2022: *Investigating the Effects of CCN on the Timing of Convective Cold Pool Initiation*.
- Orendorf, S., S. Lasher-Trapp and R. J. Trapp, American Geophysical Union Fall Meeting, New Orleans, LA, 2021: *Convective Windstorms in a Warmer Climate: A PGW Study Based on the 10 August 2020 Midwestern Derecho Event*.
- Mallinson, H.M., S. Lasher-Trapp, and R. J. Trapp, American Geophysical Union Fall Meeting, New Orleans, LA, 2021: “*Potential Changes in Hail Characteristics and Processes in a Future Climate Using a Pseudo-Global Warming Approach*”.
- S. Lasher-Trapp, International Conf. on Clouds and Precipitation, virtual, 2021: “*Entrainment in Simulated Supercell Thunderstorms*”.
- H. Mallinson and S. Lasher-Trapp, International Conf. on Clouds and Precipitation, virtual, 2021: “*Changes in Hail Properties and Processes in a Future Climate Using a Pseudo-Global Warming Approach*”.
- Lasher-Trapp, S., Aug 2021: “*Case 3: Deep Convection in Strong Vertical Wind Shear*”, Session Leader for International Cloud Modeling Workshop, virtual
- T. Ross and S. Lasher-Trapp, 2021: “*Investigating the Effects of CCN on the Timing*”



- of Convective Cold Pool Initiation During CACTI*". ARM/ASR 2021 Joint Meeting, virtual.
- H. Mallinson and S. Lasher-Trapp, 2020: "*An Investigation of Hydrometeor Latent Cooling upon Cold Pool Formation, Sustainment, and Properties*". Severe Local Storms Symposium, 100<sup>th</sup> AMS Annual Meeting, Boston, MA
  - L. Allen and S. Lasher-Trapp, 2019: "*Entrainment in Simulated Developing Convective Storms*". Session on Atmospheric Convection: Processes, Dynamics, and Links to Weather and Climate, 100<sup>th</sup> AGU Fall Meeting, San Francisco, CA.
  - S. Lasher-Trapp, 2019: "*Primary Ice Nucleation and Secondary Ice Production: Recent Developments from Field Campaign Measurements Combined with Numerical Modeling*". Predictions Session on Establishing Primary and Secondary Ice Production Contributions in Cold Clouds, 100<sup>th</sup> AGU Fall Meeting, San Francisco, CA.
  - S. Lasher-Trapp, Emma Scott, and co-authors, 2019: "*Multi-thermal Augmentation of Rime-Splintering*". Southern Ocean Atmospheric Research (SOAR) Workshop, Hobart, Tasmania.
  - (Presentation Award) E. Jo and S. Lasher-Trapp, 2019: "*Entrainment in Supercells*". European Conference on Severe Storms, Krakow, Poland.
  - S. Lasher-Trapp and R. J. Trapp, 2019: "*Possible Changes in Hailfall Occurrence and Intensity in the US under Human-Induced Climate Change*". Dept. of Atmos. Sciences seminar series, Urbana, IL.
  - S. Lasher-Trapp and E. Scott, 2018: "*Comparison of Rime-Splintering in Summertime Southern Ocean Cumuli vs. Tropical Caribbean Cumuli*". Southern Ocean Science Meeting, Boulder, CO.
  - E. Scott, and S. Lasher-Trapp, 2018: "*Investigating Rime-Splintering in Southern Ocean Cumuli*". Southern Ocean Science Meeting, Boulder, CO
  - S. Lasher-Trapp and R. J. Trapp, 2018: "*Hail Production Under Anthropogenic Climate Change Investigated with a Pseudo-global Warming Approach*". North Amer. Hail Workshop, Boulder, CO.
  - S. Lasher-Trapp, S. Kumar, D. H. Moser, A. M. Blyth, J. French, R. Jackson, D. C. Leon and D. Plummer, 2018: "*Rime-Splintering within Cumuli as Modulated by the Cloud Environment*". AMS 15<sup>th</sup> Conference on Cloud Physics, Vancouver, BC.
  - H. Mallinson and S. Lasher-Trapp, 2018: "*Microphysical Influences on Cold Pools*". AMS 15<sup>th</sup> Conference on Cloud Physics, Vancouver, BC.
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