

**CURRICULUM VITAE**  
**STEPHEN W. NESBITT**

**I. GENERAL**

A. Educational Background

<u>Degrees</u>	<u>Field of Study</u>	<u>Institution</u>	<u>Date of Degree</u>
B.S. ( <i>summa cum laude</i> )	Meteorology	State University of New York College at Oswego	1997
M.S.	Meteorology	Texas A&M University	1999
Ph.D.	Meteorology	University of Utah	2003

B. List of Academic Positions Since Final Degree

Research Scientist I, Department of Atmospheric Sciences, Colorado State University, Fort Collins, CO, 2003 – 2005

Research Scientist II, Department of Atmospheric Sciences, Colorado State University, Fort Collins, CO, 2005 – 2006

Assistant Professor, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, IL, 2006 – 2012

Associate Professor, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, IL, 2012 – present

Visiting Scientist, Servicio Meteorológico Nacional, Argentina, 2015

Affiliate, Computational Science and Engineering, University of Illinois at Urbana-Champaign, 2014 – present

Affiliate, Center for Latin American Studies, University of Illinois at Urbana-Champaign, 2015 – present

Visiting Professor, Departamento de Ciencias de la Atmósfera y los Océanos, Universidad de Buenos Aires, Argentina, 2015

Research Fellow, Consejo Nacional de Investigaciones Científicas y Técnicas, Centro de Investigaciones del Mar y la Atmósfera, Argentina, 2015

C. Other Professional Employment

Undergraduate Research Assistant, State University of New York College at Oswego, Oswego, NY, 1995 – 1997

Graduate Teaching Assistant, Department of Meteorology, Texas A&M University, College Station, TX, 1997

Graduate Research Assistant, Tropical Convection Research Program, Department of Meteorology, Texas A&M University, College Station, TX, 1997 – 1999

Graduate Research Assistant, Tropical Meteorology Group, University of Utah, Salt Lake City, UT, 1999 – 2003

**II. RESEARCH**

A. Honors, Recognitions, and Prizes

Highly Meritorious Meteorology Senior Award, State University of New York College at Oswego, 1997

Excellence in Graduate Research Award, University of Utah, 2003

NASA Earth System Science Graduate Fellowship, a highly selective fellowship within all disciplines in the earth sciences, 2001-2003

Editors' Citation for Excellence in Refereeing for *Journal of Geophysical Research – Atmospheres*, American Geophysical Union, 2006

List of Teachers Ranked as Excellent, Spring 2007, for ATMS 403: Weather Research and Forecasting, core course with 18 students enrolled

List of Teachers Ranked as Excellent, Fall 2007, for ATMS 403: Weather Research and Forecasting, core course with 11 students enrolled

NASA New Investigator Award, a highly selective funded award that includes all disciplines within the earth sciences, 2008

List of Teachers Ranked as Excellent, Fall 2009, for ATMS 406: Tropical Meteorology, elective course with 15 students enrolled

University of Illinois, College of Liberal Arts and Sciences, Reflective Teaching Seminar, 2010-11 academic year

NASA Group Achievement Award, *Genesis and Rapid Intensification Project* field campaign, 2011

Editors' Citation for Excellence in Refereeing for *Journal of Geophysical Research – Atmospheres*, American Geophysical Union, 2011

Co-Chair, 35th American Meteorological Society Conference on Radar Meteorology, Pittsburgh, PA, September 2011

Honors Council, College of Liberal Arts and Sciences, University of Illinois, 2012-2014 academic year

Elected chair, Scientific and Technical Advisory Committee on Radar Meteorology, American Meteorological Society, 2013-2016

List of Teachers Ranked as Excellent, Spring 2013, for ATMS 505: Weather Systems graduate core course with 9 students enrolled

Program theme lead and organizing committee, 36th American Meteorological Society Conference on Radar Meteorology, Breckenridge, CO, October 2013

Organizing committee, 8<sup>th</sup> European Conference on Radar in Meteorology and Hydrology, Garmisch-Partenkirchen, Germany, September 2014

List of Teachers Ranked as Excellent, Fall 2014, for ATMS 471: Graduate Professional Development, elective course with 11 students enrolled

Research Fellowship, Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina, Spring semester 2015

NASA Robert H. Goddard Award, *Global Precipitation Measurement mission* ground validation team for exceptional achievement in science, 2015

NASA Group Achievement Award, *Global Precipitation Measurement mission* science team, 2015

Program theme lead and organizing committee, 37th American Meteorological Society Conference on Radar Meteorology, Norman, OK, September 2015

Organizing committee, 8th European Radar and Hydrology Conference, Antalya, Turkey, October 2016

American Meteorological Society award for Outstanding Service as Member and Chair, Radar Meteorology, 2008-2016, June 2016

**B. Invited Lectures and Invited Conference Presentations Since Last Promotion**

Intense thunderstorms in the tropics, Local Chapter Meeting, Central Illinois Chapter of the American Meteorological Society, Lincoln, IL, September 2006

Observations and processes within intense thunderstorms, Seminar Series, Illinois State Water Survey, Champaign, IL, September 2006

Global Precipitation Mission ground validation strategies, Department of Energy Atmospheric Radiation Measurement Cloud Properties Working Group Meeting, Annapolis, MD, October 2006

North American Monsoon, Science Today Lecture Series, State University of New York College at Oswego, October 2007

Precipitation processes within the North American Monsoon, World Meteorological Organization Workshop on High Resolution Precipitation Products, Geneva, Switzerland, December 2007

Satellite studies of monsoon precipitation, Department of Earth Sciences, University of Goa, Goa, India, August 2008

North American Monsoon, Seminar Series, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, October 2008

High resolution precipitation data and analysis of the North American Monsoon, Second Climate Prediction Program for the Americas Principal Investigator's Meeting, Silver Spring, MD, October 2008

North American Monsoon, Under threat? Department of Physics and Engineering, Fort Lewis College, April 2010

Impact of soil moisture initialization on convection in the North American Monsoon, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, April 2010

Impact of soil moisture initialization on convection in the North American Monsoon, Department of Atmospheric Science, University of Utah, June 2010

Soil moisture feedbacks on deep convection in the North American Monsoon, Max Planck Institute for Meteorology, Hamburg, Germany, October 2010

Orographic precipitation in conditionally unstable flow, Department of Earth and Atmospheric Science, Purdue University, October 2010

Orographic precipitation in conditionally unstable flow, Department of Atmospheric Science, Colorado State University, November 2010

Warm season orographic precipitation, Complex Terrain Workshop, Biosphere 2/University of Arizona, February 2011

Convective structure of rapidly intensifying tropical cyclones, Department of Meteorology, University of Hawaii, December 2011

Biosphere-atmosphere interactions in the North American Monsoon, Energy Biosciences Institute, Water Workshop, Chicago, IL, June 2012

Radar-aircraft synergy in GPM Field Campaign Measurements, 5<sup>th</sup> NASA GPM Ground Validation Workshop, Toronto, Canada, July 2012

Advanced dual-polarization radar applications, Federal University of Santa Maria, Santa Maria, Rio Grande do Sul, Brazil, December 2012

NASA Global Precipitation Measurement Mission Ground Validation, Argonne National Laboratory, Chicago, IL, January 2013.

NASA Global Precipitation Measurement Mission Ground Validation, University of Wisconsin-Madison, Madison, WI, March 2013.

Microphysics research using matched radar-aircraft analyses, NASA Precipitation Measurement Missions Science Team Meeting, Annapolis, MD, March 2013.

What we don't know about snow: Snowfall retrieval science in the Global Precipitation Measurement Mission. Department of Atmospheric Sciences, University of Illinois, September 2013.

What we don't know about snow: Snowfall retrieval science in the Global Precipitation Measurement Mission. Illinois State Water Survey, Prairie Research Institute, University of Illinois, September 2013.

Science activities of the Global Precipitation Measurement Missions Drop Size Distribution Working Group, 6<sup>th</sup> NASA GPM Ground Validation Workshop, Rome, Italy, November 2013.

What we don't know about snow: Snowfall retrieval science in the Global Precipitation Measurement Mission. Program on Atmospheres, Oceans, and Climate, Massachusetts Institute of Technology, Cambridge, Massachusetts, November 2013.

Building the GPM-GV Column from the GPM Cold season Precipitation Experiment. American Geophysical Union Fall Meeting, San Francisco, California, December 2013.

What we don't know about snow: Snowfall retrieval science in the Global Precipitation Measurement Mission. Department of Atmospheric Sciences, University of North Dakota, Grand Forks, North Dakota, December 2014.

RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. Geosciences Division, National Science Foundation, Arlington, Virginia, July 2014.

RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. World Meteorological Organization, Working Group on Nowcasting Research, July 2014.

RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. Geosciences Division, National Science Foundation, Arlington, Virginia, August 2014.

RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. Universidad Nacional de Cuyo, Mendoza, Argentina, April 2015.

RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. Universidad Nacional de Córdoba, Córdoba, Argentina, April 2015.

RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. Universidad de Buenos Aires, Buenos Aires, Argentina, May 2015.

Improving Cold Season Precipitation Retrievals with GPM Ground Validation Data. 7<sup>th</sup> NASA Global Precipitation Measurement Ground Validation Workshop, Seoul, Korea, May 2015.

RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. Conference Keynote Presentation. XII Argentine Congress on Meteorology, Mar del Plata, Argentina, May 2015.

What we don't know about snow: Snowfall retrieval science in the Global Precipitation Measurement Mission. School of Architecture, Civil, and Environmental Engineering, École Polytechnique Fédéral de Lausanne, Lausanne, Switzerland, June 2015.

Constraining Global Precipitation Measurement Mission retrievals with GPM Field Campaign observations. NASA Precipitation Measurement Missions Science Team meeting.

Radar operations during the CACTI field campaign. Atmospheric Radiation Measurement Radar Meeting, Miami, Florida, February 2016.

Processes, prediction, and societal impacts of intense convection in subtropical South America. Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, March 2016.

Processes, prediction, and societal impacts of intense convection in subtropical South America. Environmental Sciences Division, Argonne National Laboratory, March 2016.

Processes, prediction, and societal impacts of intense convection in subtropical South America. NASA Marshall Space Flight Center and University of Alabama-Huntsville, March 2016.

CACTI-RELAMPAGO synergy. Atmospheric Radiation Measurement Atmospheric Systems Research Science Team Meeting, Tysons, Virginia, April 2016.

A critical evaluation of the GPM DPR algorithm assumptions using OLYMPEX data, OLYMPEX Workshop, Seattle, March 2017.

RELAMPAGO. Atmospheric Radiation Measurement Atmospheric Systems Research Science Team Meeting, Tysons, Virginia, March 2017.

#### C. Offices Held in Professional Societies

President-elect, Central Illinois Chapter of the American Meteorological Society, 2007

President, Central Illinois Chapter of the American Meteorological Society, 2007 – 2009

Member, American Meteorological Society Science and Technology Advisory Committee on Radar Meteorology, 2007 – 2012

Member of Validation Working Group, International Precipitation Working Group, Coordination Group for Meteorological Satellites, World Meteorological Organization, October 2008 – 2010

Rapporteur and member of Applications Working Group, International Precipitation Working Group, Coordination Group for Meteorological Satellites, World Meteorological Organization, October 2010 – 2012

Chair, Scientific and Technical Advisory Committee on Radar Meteorology, American Meteorological Society, 2013 – 2016

Member, Earth Science Council, Universities Space Research Association, 2016 – present

#### D. Editorships of Journals and Other Learned Publications

Editor, *Journal of Applied Meteorology and Climatology*, American Meteorological Society, 2010 – 2014

#### E. Grants Received

<i>Principal Investigator:</i>	Stephen W. Nesbitt
<i>Granting Agency:</i>	National Aeronautics and Space Administration, Global Precipitation Mission Ground Validation Program

*Dates of Award:* 5/15/07 – 5/14/08  
*Title:* Creation and Analysis of C3VP Synthesis Datasets for Global Precipitation Mission Algorithm Development and Evaluation  
*Award Amount:* \$20 K

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Oceanic and Atmospheric Administration, Climate Prediction Program for the Americas Program  
*Dates of Award:* 8/1/07 – 7/31/11  
*Title:* Diurnal variations and forcing of precipitation systems in the North American Monsoon system  
*Award Amount:* \$285 K

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Aeronautics and Space Administration, Global Precipitation Mission Ground Validation Program  
*Dates of Award:* 5/15/08 – 5/14/09  
*Title:* Analysis of C3VP Synthesis Datasets for Global Precipitation Mission Algorithm Development and Evaluation  
*Award Amount:* \$20 K

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Aeronautics and Space Administration, Global Precipitation Mission Ground Validation Program  
*Dates of Award:* 8/1/08 – 5/31/12  
*Title:* Improving the Measurement and Understanding of Orographic Precipitation using NASA Satellite Measurements  
*Amount:* \$319 K

*Principal Investigator:* Greg M. McFarquhar (Department of Atmospheric Sciences, University of Illinois)  
*Co-Investigators:* Stephen W. Nesbitt, Brian F. Jewett (Department of Atmospheric Sciences, University of Illinois)  
*Granting Agency:* National Aeronautics and Space Administration, Hurricane Science Research Program  
*Dates of Award:* 1/1/09 – 12/31/12  
*Title:* Application of NASA Field Observations, Satellite Retrievals and High Resolution WRF Simulations to Study Physical and Dynamical Processes Governing Tropical Cyclone Rainfall and Intensity Change  
*Amount:* \$614 K (\$270 K to SN)

*Principal Investigator:* Alison M. Anders (Department of Geology, University of Illinois)  
*Co-Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Science Foundation, Geomorphology and Land Use Dynamics  
*Dates of Award:* 7/1/09 – 3/31/14  
*Title:* Coupling Between Weather, Climate, and Landscape Evolution in the Western Ghats of India  
*Award Amount:* \$665 K (\$334 K to SN)

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Aeronautics and Space Administration – Earth System Science fellowship for Daniel Harnos  
*Dates of Award:* 9/1/10 – 8/31/13  
*Title:* Remote sensing and modeling studies of dynamical and microphysical processes in tropical cyclone intensification

<i>Amount:</i>	\$75 K
<i>Principal Investigator:</i>	Stephen W. Nesbitt
<i>Granting Agency:</i>	National Aeronautics and Space Administration, Global Precipitation Mission Ground Validation Program
<i>Dates of Award:</i>	10/1/10 – 9/30/12
<i>Title:</i>	Synthesis of aircraft and ground based measurements for NASA GPM algorithm validation
<i>Amount:</i>	\$180 K
<i>Principal Investigator:</i>	Stephen W. Nesbitt
<i>Granting Agency:</i>	National Aeronautics and Space Administration – Earth System Science fellowship for Kimberly Reed
<i>Dates of Award:</i>	9/1/11 – 8/31/14
<i>Title:</i>	An orographic optimization technique for improved satellite quantitative precipitation estimation in complex terrain
<i>Amount:</i>	\$75 K
<i>Principal Investigator:</i>	Stephen W. Nesbitt
<i>Co-Principal Investigators:</i>	Greg McFarquhar, Brian Jewett
<i>Granting Agency:</i>	National Aeronautics and Space Administration, Precipitation Measurement Missions
<i>Dates of Award:</i>	2/4/13 – 2/3/16
<i>Title:</i>	GPM field campaign aircraft and radar data synergy for algorithm improvement and error characterization
<i>Amount:</i>	\$474 K
<i>Principal Investigator:</i>	Stephen W. Nesbitt
<i>Granting Agency:</i>	National Aeronautics and Space Administration, Global Precipitation Mission Ground Validation Program
<i>Dates of Award:</i>	5/16/13 – 5/15/14
<i>Title:</i>	Illinois continued participation in Global Precipitation Mission field campaigns and analysis
<i>Amount:</i>	\$70 K
<i>Principal Investigator:</i>	Stephen W. Nesbitt
<i>Granting Agency:</i>	National Aeronautics and Space Administration, Global Precipitation Mission Ground Validation Program
<i>Dates of Award:</i>	5/16/14 – 5/15/15
<i>Title:</i>	Properties of ice and mixed phase particles in GPM-Ground Validation Field Campaigns
<i>Amount:</i>	\$75 K
<i>Principal Investigator:</i>	Stephen W. Nesbitt
<i>Granting Agency:</i>	National Aeronautics and Space Administration – Earth System Science fellowship for George Duffy
<i>Dates of Award:</i>	9/1/14 – 8/31/17
<i>Title:</i>	Improving spaceborne falling snow retrievals using in situ data, particle models, and validation
<i>Amount:</i>	\$75 K
<i>Principal Investigator:</i>	Timothy J. Lang (NASA MSFC)
<i>Co-Investigators:</i>	Stephen W. Nesbitt, Theonis Chronis (NASA MSFC)
<i>Granting Agency:</i>	National Aeronautics and Space Administration, Ocean Vector Winds Science Team
<i>Dates of Award:</i>	7/1/14 – 6/30/18

*Title:* Using scatterometer-measured vector winds to study high-impact weather events  
*Amount:* \$600 K

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Science Foundation – Graduate Research Fellowship for Stella Choi  
*Dates of Award:* 9/1/15 – 8/31/18  
*Title:* Influence of potential vorticity anomalies on flash flood-producing convective systems in subtropical South America  
*Amount:* \$90 K

*Principal Investigator:* Sonia Lasher-Trapp  
*Co-Investigators:* Stephen W. Nesbitt, Greg M. McFarquhar, Robert M. Rauber, Nicole Riemer, R. Jeffrey Trapp  
*Granting Agency:* University of Illinois Vice Chancellor for Research  
*Dates of Award:* 1/1/15 – 1/1/16  
*Title:* SCAMP: System for Characterizing And Measuring Precipitation  
*Amount:* \$90 K

*Principal Investigator:* J. Robert Trapp  
*Co-Principal Investigators:* Stephen W. Nesbitt, Sonia Lasher-Trapp  
*Granting Agency:* Department of Energy – Office of Science  
*Dates of Award:* 9/1/15 – 8/31/18  
*Title:* A Bottom-up Approach to Improve the Representation of Deep Convective Clouds in Weather and Climate Models  
*Amount:* \$551 K

*Principal Investigator:* Adam Varble (University of Utah)  
*Co-Investigators:* Stephen W. Nesbitt, Edward Zipser (University of Utah), Paola Salio (Universidad de Buenos Aires), Susan van den Heever (Colorado State University), Greg McFarquhar (University of Illinois), Robert Houze, Jr., (University of Washington), Kristen Rasmussen (National Center for Atmospheric Research), Michael Jensen (Brookhaven National Laboratory), Pavlos Kollias (McGill University), Ruby Leung (Pacific Northwest National Laboratory), Paul DeMott (Colorado State University), Sonia Kreidenweis (Colorado State University), David Romps (Lawrence Berkeley National Laboratory), David Gochis (National Center for Atmospheric Research), Christopher Williams (University of Colorado-Boulder/NOAA), Eldo Avila (Universidad Nacional de Córdoba)  
*Granting Agency:* Department of Energy – Office of Science  
*Dates of Award:* 8/1/18 – 4/30/18  
*Title:* Cloud, Aerosol, and Complex Terrain Interactions (CACTI) Experiment Proposal  
*Amount:* Facilities only

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Aeronautics and Space Administration, Global Precipitation Mission Ground Validation Program  
*Dates of Award:* 10/1/15 – 9/30/16  
*Title:* Participation in the OLYMPEX Field Campaign  
*Amount:* \$75 K

*Principal Investigator:* Stephen W. Nesbitt  
*Co-Principal Investigators:* Greg McFarquhar  
*Granting Agency:* National Aeronautics and Space Administration, Precipitation Measurement Missions  
*Dates of Award:* 2/4/16 – 2/3/19

*Title:* Ice and mixed phase precipitation system retrieval validation for improved multifrequency spaceborne precipitation measurements  
*Amount:* \$450 K

*Principal Investigator:* Stephen W. Nesbitt  
*Co-Principal Investigators:* Rita Roberts, National Center for Atmospheric Research  
 R. Jeffrey Trapp, University of Illinois  
*Dates of Award:* 8/1/18 – 7/31/18  
*Title:* RELAMPAGO (Remote sensing of Electrification, Lightning, And Mesoscale/microscale Processes with Adaptive Ground Observations) Scientific Overview Document and Experimental Design Overview Document  
*Amount:* \$30 K + NSF Lower Atmospheric Observing Facilities

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Science Foundation, Physical and Dynamical Meteorology  
*Dates of Award:* 8/1/17 – 7/31/21  
*Title:* Collaborative research: Collaborative Research: Use of RELAMPAGO observations to understand the thermodynamic, kinematic, and dynamic processes leading to heavy precipitation  
*Amount:* \$650 K

*Principal Investigator:* Stephen W. Nesbitt  
*Granting Agency:* National Aeronautics and Space Administration – Earth System Science fellowship for Randy Chase  
*Dates of Award:* 9/1/17 – 8/31/20  
*Title:* Use of GPM field campaign in-situ cloud measurements to evaluate precipitation retrieval assumptions  
*Amount:* \$140 K

*Principal Investigator:* Adam Varble, University of Utah  
*Co-Investigator:* Stephen W. Nesbitt  
*Granting Agency:* Department of Energy  
*Dates of Award:* 9/1/17 – 8/31/18  
*Title:* Activities to improve CACTI data collection, quality, and utility  
*Amount:* \$175 K

*Principal Investigator:* Larry Di Girolamo  
*Co-Principal Investigators:* Stephen Nesbitt, Robert Rauber, Greg McFarquhar, University of Illinois  
*Granting Agency:* National Aeronautics and Space Administration  
*Dates of Award:* 8/1/17 – 7/4/19  
*Title:* CAMP2Ex leadership, flight planning and integrative analysis for addressing heterogeneity issues in observing aerosol induced changes to cloud and precipitation properties  
*Amount:* \$450 K

Proposals in preparation

*Principal Investigator:* Greg McFarquhar, University of Oklahoma  
*Co-Principal Investigators:* Stephen Nesbitt, University of Illinois  
*Granting Agency:* National Aeronautics and Space Administration  
*Dates of Award:* 8/1/19 – 7/31/22  
*Title:* Earth Venture-3: Cloud and precipitation processes in the Southern Ocean  
*Amount:* \$450 K



E. Review Panels (e.g. for Governmental Agencies, Educational Institutions)

Review Panel for the Precipitation Measurement Missions, National Aeronautics and Space Administration, Washington, DC, August 2006

Review Panel for CubeSat Missions, National Science Foundation, Arlington, VA, July 2008

Review Panel for CloudSat/CALIPSO Science Team, National Aeronautics and Space Administration, Washington, DC, February 2010

Review Panel for The Science of Terra/Aqua, National Aeronautics and Space Administration, Washington, DC, August 2010

Review Panel for Lawrence Berkeley National Labs Climate and Atmospheric Systems Research Focus Areas, Department of Energy, September 2010

Review Panel for NASA Energy and Water cycle Study (NEWS), National Aeronautics and Space Administration, Washington, DC, December 2011

Review Panel for Making Earth Science Data Records for Use in Research Environments (MEASURES), National Aeronautics and Space Administration, Washington, DC, August 2012

Review Panel for CloudSat/CALIPSO Science Team, National Aeronautics and Space Administration, Washington, DC, June 2013

Review Panel for GoAMAZON, Department of Energy, Washington, DC, September 2013

Review Panel for The Science of Terra/Aqua, National Aeronautics and Space Administration, Washington, DC, September 2013

Review Panel for The Atmospheric Composition Campaign Data Analysis and Modeling (ACCDAM) program, National Aeronautics and Space Administration, Washington, DC, July 2014

Review Panel for The Earth Venture Instruments program, National Aeronautics and Space Administration, Washington, DC, September 2015

Review Panel for Weather Program, National Aeronautics and Space Administration, Tysons, VA, September 2016

Review Panel for National Science Foundation Graduate Research Fellowship, January 2017, online

Review Panel for National Science Foundation Major Research Instrumentation, April 2017, online

## F. Peer-Reviewed Publications and Publications in Preparation

- # Denotes any publication derived from a candidate's thesis
- \* Denotes any publication that has undergone stringent editorial review by peers
- + Denotes any publication that was invited and carries special prestige and recognition

1. \*Nesbitt, S. W., R. Zhang, and R. E. Orville, 2000: Seasonal and global NO<sub>x</sub> production by lightning estimated from the Optical Transient Detector (OTD). *Tellus*, **52**, 1206-1215.
2. \*#Nesbitt, S. W., E. J. Zipser, and D. J. Cecil, 2000: A census of precipitation features in the Tropics using TRMM: Radar, ice scattering, and lightning observations. *J. Climate*, **13**, 4087-4106.
3. \*Cecil, D. J., E. J. Zipser, and S. W. Nesbitt, 2002: Reflectivity, ice scattering, and lightning characteristics of hurricane eyewalls and rainbands. Part I: Quantitative description. *Mon. Wea. Rev.*, **130**, 769-784.
4. \*Toracinta E. R., D. J. Cecil, E. J. Zipser, and S. W. Nesbitt, 2002: Radar, passive microwave, and lightning characteristics of precipitating systems in the Tropics. *Mon. Wea. Rev.*, **130**, 802-824.
5. \*Petersen, W. A., S. W. Nesbitt, R. J. Blakeslee, R. Cifelli, P. Hein and S. A. Rutledge, 2002: TRMM observations of convective regimes in the Amazon. *J. Climate*, **15**, 1278-1294.
6. \*#Nesbitt, S. W., and E. J. Zipser, 2003: The diurnal cycle of rainfall and convective intensity according to three years of TRMM measurements. *J. Climate*, **16**, 1456-1475.
7. \*Barros, A. P., G. Kim, E. Williams, and S. W. Nesbitt, 2004: Probing orographic controls in the Himalayas during the monsoon using satellite imagery. *Nat. Haz. and Earth Sys. Sci.*, **4**, 1-23.
8. \*#Nesbitt, S. W., E. J. Zipser, and C. D. Kummerow, 2004: An examination of version 5 rainfall estimates from the TRMM microwave imager, precipitation radar, and rain gauges on global, regional and storm scales. *J. Appl. Meteor.*, **43**, 1016-1036.
9. \*Cecil, D. J., S. J. Goodman, D. J. Boccippio, E. J. Zipser, and S. W. Nesbitt, 2005: Three years of TRMM precipitation features. Part I: Radar, radiometric, and lightning characteristics. *Mon. Wea. Rev.*, **133**, 543-566.
10. \*Higgins, W., D. Ahijevych, J. Amador, A. Barros, E. H. Berbery, E. Caetano, P. Ciesielski, R. Cifelli, M. Cortez-Vazquez, A. Douglas, M. Douglas, G. Emmanuel, C. Fairall, D. Gochis, D. Gutzler, R. Johnson, C. King, T. Lang, M.-I. Lee, D. Lettenmaier, R. Lobato, V. Magaña, J. Meitin, K. Mo, S. Nesbitt, E. Pytlak, P. Rogers, S. Rutledge, J. Schemm, S. Schubert, F. Torres, A. White, C. Williams, A. Wood, R. Zamora, C. Zhang, 2006: The North American Monsoon Experiment (NAME) field campaign and modeling strategy. *Bull. Amer. Meteor. Soc.*, **87**, 79-94.
11. \*Matrosov, S., R. Cifelli, P. C. Kennedy, S. W. Nesbitt, V. N. Bringi, B. E. Martner, 2006: A comparative study of rainfall retrievals based on specific differential phase shifts at X- and S-band radar frequencies. *J. Atmos. Ocean. Tech.*, **23**, 952-963.
12. \*Zipser, E. J., D. J. Cecil, C. Liu, S. W. Nesbitt, and D. P. Yorty, 2006, Where are the most intense thunderstorms on earth? *Bull. Amer. Meteor. Soc.*, **87**, 1057-1071.
13. \*Nesbitt, S. W., R. Cifelli, and S. A. Rutledge, 2006: Storm morphology and rainfall characteristics of TRMM precipitation features. *Mon. Wea. Rev.*, **134**, 2702-2721.
14. \*Liu, C., E. J. Zipser, and S. W. Nesbitt, 2007: Global distribution of tropical deep convection: Different perspectives using infrared and radar as the primary data source. *J. Climate*, **20**, 489-503.
15. \*Lang, T. J., D. Ahijevych, S. W. Nesbitt, R. Carbone, and S. A. Rutledge: 2007: Radar-observed characteristics of precipitating systems during NAME 2004. *J. Climate*, **20**, 1713-1733.
16. \*Cifelli, R., S. W. Nesbitt, and S. A. Rutledge, W. A. Petersen, and S. E. Yuter, 2007: Radar characteristics of precipitation features in the EPIC and TEPPS regions of the East Pacific. *Mon. Wea. Rev.*, **135**, 1576-1595.
17. \*Lieberman, R. S., D. M. Riggan, D. A. Ortland, S. W. Nesbitt, and R. A. Vincent, 2007: Variability of mesospheric diurnal tides and tropospheric diurnal heating during 1997-1998. *J. Geophys. Res.*, **112**, D20110, doi:10.1029/2007JD008578.
18. \*Liu, C., E. J. Zipser, D. J. Cecil, S. W. Nesbitt, and S. Sherwood, 2008: A cloud and precipitation feature database from nine years of TRMM observations. *J. Appl. Meteor. Clim.*, **47**, 2712-2728.
19. \*Cifelli, R., S. W. Nesbitt, and S. A. Rutledge, W. A. Petersen, and S. E. Yuter, 2008: Diurnal characteristics of precipitation features over the East Pacific: A comparison of the EPIC and TEPPS regions. *Mon. Wea. Rev.*, **21**, 4068-4086.
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41. \*Harnos, D. S., and S. W. Nesbitt, 2016: Passive microwave observations of tropical cyclone inner-core cloud populations relative to subsequent intensity change. *Mon. Wea. Rev.*, **144**, 4461-4482.
42. \*Vidal, L., S. W. Nesbitt, P. V. Salio, C. Farias, G. M. Nicora, S. Osoreo, 2017: C-Band Dual-Polarization Observations of a Massive Volcanic Eruption in South America. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, **10**, 960-973.
43. \*Mulholland, J., J. Frame, S. Nesbitt, S. Steiger, K. Kosiba, and J. Wurman, 2017: Observations of misovortices within a long lake-axis-parallel lake-effect snow band during the OWLES project. *Mon. Wea. Rev.*, **145**, 3265–3291.
44. \*Trapp, R. J., G. Marion, and S. W. Nesbitt, 2017: The regulation of tornado intensity by updraft width. *J. Atmos. Sci.*, **74**, 4199–4211.
45. \*Flynn, W. A., S. W. Nesbitt, and A. M. Anders, P. Garg, 2017: Mesoscale precipitation characteristics near the Western Ghats during the Indian Summer Monsoon as simulated by a high-resolution regional model. *Quart. J. Roy. Meteor. Soc.*, **143**, 3070–3084.
46. Reed, K. A., and S. W. Nesbitt, 2017: Environmental controls on tropical orographic precipitation according to the Tropical Rainfall Measuring Mission. Submitted to *Quart. J. Roy. Meteor. Soc.*
47. Chase, R. C., J. A. Finlon, P. C. Borque, G. A. McFarquhar, S. W. Nesbitt, M. Poellot, S. Tanelli, 2018: Evaluation of triple-frequency radar retrieval of snowfall properties using coincident airborne in-situ observations during OLYMPEX. Submitted to *Geophys. Res. Lett.*
48. Borque, P. C., K. J. Harnos, S. W. Nesbitt, and G. McFarquhar, 2018: Uncorrelated mass parameters for improved size-distribution parameterization of ice particles. In preparation for *J. Atmos. Sci.*
49. Nesbitt, S. W., Rasmussen, K., M. Cancelada, P. Salio, 2017: Severe convection in central Argentina: storm modes and environments. In preparation for *Mon. Wea. Rev.*
50. Mulholland, J., S. W. Nesbitt, R. J. Trapp, K. Rasmussen, and P. Salio, 2018: Convective modes, morphologies, and environments near the Sierras de Córdoba, Argentina. In preparation for *Mon. Wea. Rev.*
51. Nesbitt, S. W., G. Marion, and R. J. Trapp, 2017: Convective overshooting top characterization using infrared brightness temperature gradients and relation to MC3E storm intensities and environments. In preparation for *J. Appl. Meteor. Clim.*
52. Salio, P., L. Vidal, S. W. Nesbitt, D. Vila, and E. J. Zipser, 2018: Orographic influences on extreme convective initiation in Subtropical South America, In preparation for *Quart. J. Roy. Meteor. Soc.*
53. Borque, P. C., S. W. Nesbitt, R. J. Trapp, and S. Lasher-Trapp, 2018: Relationship between convectively-generated cold pools and the microphysics of deep mid-latitude convection. In preparation for *Mon. Wea. Rev.*

G. Non-peer Reviewed Publications and Reports

1. #Cecil, D. J., D. B. Wolff, E. R. Toracinta, and S. W. Nesbitt, 1998: Multi-sensor comparison of TRMM satellite and ground validation products from Texas and Florida squall line events. Preprints, 19th Conf. Severe Local Storms, Minneapolis, MN, Amer. Meteor. Soc., 587-590.
2. #Nesbitt, S. W., 1999: A comparison of 85 GHz ice scattering, reflectivity structure and lightning observations of tropical precipitation by TRMM. Preprints, 23rd Conference on Hurricanes and Tropical Meteorology., Dallas, TX, Amer. Meteor. Soc., 939-942.
3. #Nesbitt, S. W., D. J. Cecil, and E. J. Zipser, 1999: TRMM Precipitation Features. Poster, TRMM Science Meeting, Pasadena, CA.
4. Nesbitt, S.W., Zipser, E. J., B. Xi, G. Heymsfield and R. Hood, 2000: Using radar profiles and passive microwave radiances as constraints for deriving microphysical profiles within cloud systems. Preprints, 13th International Conference on Clouds and Precipitation, Reno, NV, International Commission on Clouds and Precipitation, 250-253.
5. Zipser, E. J., G. V. Mota, and S. W. Nesbitt, 2000: Mesoscale convective systems observed during TRMM-LBA. Poster, First LBA Scientific Conference, Belem, Para, Brazil.
6. #Nesbitt, S. W. and E. J. Zipser, 2000: The diurnal cycle of convection according to 36 months of TRMM data. Poster, AGU Fall Meeting, San Francisco, CA.
7. Nesbitt, S. W., Preliminary findings from MOHRPREX, Annapurna Region, Nepal. Invited department seminar, Department of Meteorology, University of Utah, Salt Lake City, UT.

8. #Nesbitt, S. W. and E. J. Zipser, 2001: The diurnal cycle of rainfall from three years of Tropical Rainfall Measuring Mission (TRMM) data. IAMAS Joint Symposium, Innsbruck, Austria.
9. Yorty, D. P., E. J. Zipser, and S. W. Nesbitt, 2001: Global distribution of extremely intense storms between 36°S and 36°N using evidence from the TRMM radar. Preprints, 30th International Conf. on Radar Meteor., Munich, Germany, Amer. Meteor. Soc., 334-336.
10. #Nesbitt, S. W. and E. J. Zipser, 2002: Comparisons of TRMM rainfall products on regional, seasonal, and storm scales. Presentation, 1st TRMM International Science Conference, Honolulu, HI.
11. Nesbitt, S. W. and G. V. Mota, 2002: A comparison of precipitation estimates in the Himalayas and Andes. Preprints, 10<sup>th</sup> Conference on Mountain Meteorology and MAP Meeting, Park City, UT, Amer. Meteor. Soc., 237-238.
12. #Nesbitt, S. W., 2003: Precipitation features according to TRMM and implications for the Global Precipitation Mission (GPM), Invited Presentation, Climate and Radiation Branch Seminar Series, NASA Goddard Space Flight Center, Greenbelt, MD.
13. Nesbitt, S. W., R. Cifelli, and S. A. Rutledge, 2003: A comparison of rainfall characteristics in the EPIC and TEPPS field campaigns. Poster, EPIC-2001 Workshop, US CLIVAR Pan-American Workshop, Boulder, CO.
14. #Nesbitt, S. W., 2003: The diurnal cycle over land. Invited presentation, GCSS Working Group 4 Meeting, Broomfield, CO.
15. Nesbitt, S. W., R. Cifelli, S. A. Rutledge, and E. J. Zipser, 2003: Field campaign radar data collected in the context of the TRMM climatology: Comparisons of observed storm morphology and validation opportunities. Preprints, 31st Conference on Radar Meteorology, Seattle, WA, Amer. Meteor. Soc.
16. #Nesbitt, S. W., 2003: Rainfall, convective intensity, and lightning characteristics of Tropical precipitation features according to TRMM. Invited department seminar, Department of Atmospheric Science, Colorado State University, Fort Collins, CO.
17. #Nesbitt, S. W., 2003: Rainfall, convective intensity, and lightning characteristics of Tropical precipitation features according to TRMM. Invited department seminar, Department of Atmospheric Science, University of Wyoming, Laramie, WY.
18. #Nesbitt, S. W., R. Cifelli, S. A. Rutledge, D. J. Cecil, and E. J. Zipser, 2003: Rainfall, convective intensity, and lightning characteristics of mesoscale convective systems according to TRMM. Poster, AGU Fall Meeting, San Francisco, CA.
19. Nesbitt, S. W., T. J. Lang, D. Gochis, and S. A. Rutledge, 2004: Rainfall in the North American Monsoon Experiment Tier-I domain. Poster, 1st CLIVAR International Conference, Baltimore, MD.
20. Nesbitt, S. W., 2004: Identifying precipitation regimes using the Tropical Rainfall Measuring Mission. Seminar, Institute for Terrestrial and Planetary Atmospheres, Stony Brook University.
21. Cifelli, R., S. W. Nesbitt, S. A. Rutledge, W. A. Petersen, and S. A. Yuter, 2004: Convective variability across the East Pacific: A comparison of precipitation structure in the TEPPS and EPIC domains. Preprints, 26<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Miami, FL, Amer. Meteor. Soc.
22. Nesbitt, S. W., C. Liu, G. V. Mota, D. Gochis, E. Zipser, and C. D. Kummerow, 2004: A physical comparison of Version 5 TRMM PR and TMI rainfall estimates with each other and rain gauge networks on global, regional, and storm scales. Poster, 2nd TRMM International Science Conference, Nara, Japan.
23. Nesbitt, S. W., R. Cifelli, S. A. Rutledge, D. J. Cecil, D. J. Boccippio, and E. J. Zipser, 2004: The horizontal organization of Tropical precipitation features according to TRMM as a function of NCEP-reanalysis environmental parameters. Presentation, 2nd TRMM International Science Conference, Nara, Japan.
24. Nesbitt, S. W., R. Cifelli, S. A. Rutledge, M. Chronin, and C. Fairall, 2005: Comparisons of convective morphology, surface fluxes, and boundary layer recovery in EPIC and TEPPS: Convective wakes and the diurnal cycle. Presentation, EPIC Modeling Workshop, Seattle, WA.
25. Nesbitt, S. W., R. Cifelli, T. Lang, S. A. Rutledge, C. Williams, K. Gage, S. Matrosov, B. Martner, D. Kingsmill, V. Bringi, V. Chandrasekar, and P. Kennedy, 2005: The Global Precipitation Measurement (GPM) Mission Front Range Pilot Project (FRPP). Poster, AGU 2005 Joint Assembly, New Orleans, LA.
26. Nesbitt, S. W., R. Cifelli, and S. A. Rutledge, 2005: Storm morphology and rainfall characteristics of TRMM precipitation features. Poster, Precipitation Measurement Missions Meeting, Monterey, CA.
27. Nesbitt, S. W., R. Cifelli, and S. A. Rutledge, 2005: Storm morphology and rainfall characteristics of TRMM precipitation features. Presentation, Cloud Modeling Workshop, Fort Collins, CO.
28. Nesbitt, S. W., 2005: Precipitation system climatology in TRMM and prospects for GPM. Invited presentation, 5th International Global Precipitation Mission Planning Workshop, Tokyo, Japan.

29. Nesbitt, S. W., R. Cifelli, and S. A. Rutledge, 2005: Storm morphology and rainfall characteristics of TRMM precipitation features. Preprints, 32<sup>rd</sup> Conference on Radar Meteorology, Albuquerque, NM, Amer. Meteor. Soc.
30. Lang, T. J., D. Ahijevych, R. Carbone, R. Cifelli, S. W. Nesbitt, G. Pereira, S. A. Rutledge, 2005: Radar observations during NAME 2004. Part I: Data products and quality control. Preprints, 32<sup>rd</sup> Conference on Radar Meteorology, Albuquerque, NM, Amer. Meteor. Soc.
31. Lang, T. J., D. Ahijevych, R. Carbone, R. Cifelli, S. W. Nesbitt, G. Pereira, S. A. Rutledge, 2005: Radar observations during NAME 2004. Part II: Preliminary results. Preprints, 32<sup>rd</sup> Conference on Radar Meteorology, Albuquerque, NM, Amer. Meteor. Soc.
32. Rutledge, S., S. Nesbitt, R. Cifelli, T. Lang, B. Martner, S. Matrosov, D. Kingsmill, K. Gage, C. Williams, V. Bringi, V. Chandrasekar, and P. Kennedy, 2005: Report and recommendations of the Global Precipitation Mission (GPM) Ground Validation (GV) Front Range Pilot Project. Report, submitted to NASA GPM Project Office, 67 pp.
33. Nesbitt, S. W., 2006: Storm morphology and rainfall characteristics of TRMM precipitation features. Department seminar, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, IL.
34. Nesbitt, S. W., 2006: Storm morphology and rainfall characteristics of TRMM precipitation features. Department seminar, Department of Atmospheric and Oceanic Sciences, University of California at Los Angeles, Los Angeles, CA.
35. Nesbitt, S. W., R. Cifelli, S. A. Rutledge, 2006: Eight years of TRMM data: Towards a quantitative understanding of processes behind the diurnal cycle of precipitation. Preprints, 27<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Monterey, CA., Amer. Meteor. Soc.
36. Lang, T. J., S. W. Nesbitt, R. Cifelli, D. Ahijevych, R. Carbone, S. A. Rutledge, 2006: The diurnal cycle in NAME. Preprints, 27<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Monterey, CA., Amer. Meteor. Soc.
37. Nesbitt, S. W., T. J. Lang, and D. J. Gochis, 2006: The initiation and upscale growth of convection within the diurnal cycle along the Sierra Madre Occidental. 1st NOAA CPPA PI's Workshop, Tucson, AZ.
38. Nesbitt, S. W., and D. J. Gochis, 2007: Evaluation of high-resolution precipitation products during the North American Monsoon Experiment. World Meteorological Organization Workshop on High Resolution Precipitation Products, Geneva, Switzerland.
39. Nesbitt, S. W., and N. J. Schiffer, 2008: Using lightning and high resolution precipitation products to monitor and understand North American Monsoon processes. 3rd Conference on the Meteorological Applications of Lightning Data, New Orleans, LA, Amer. Meteor. Soc.
40. Nesbitt, S. W., A. M. Anders, and V. Mahadavan, 2008: High-resolution precipitation and climatologies from TRMM: How high can we go? 4th International NASA-JAXA Tropical Rainfall Measuring Mission International Science Conference, Las Vegas, NV.
41. Nesbitt, S. W., N. J. Schiffer, and A. Rosenow, 2008: Improved precipitation data for the study of the North American Monsoon. Second Climate Prediction Program for the Americas Principal Investigator's Meeting, Silver Spring, MD.
42. Schiffer, N. J., and S. W. Nesbitt, 2008: Gulf of California surges and precipitation events in the North American Monsoon: Processes and variability. Second Climate Prediction Program for the Americas Principal Investigator's Meeting, Silver Spring, MD.
43. Nesbitt, S. W., N. J. Schiffer, and A. Rosenow, 2008: Precipitation Bursts in the North American Monsoon. World Meteorological Organization Fourth International Workshop on Monsoons, Beijing, China.
44. Kaufeld, W. J., and S. W. Nesbitt, 2009: Toward assessing the effect of aerosols on deep convection: A numerical study using the WRF-Chem. Preprints, 11th Conference on Atmospheric Chemistry and the Special Symposium on Aerosol-Cloud-Climate Interactions, Phoenix, AZ, Amer. Meteor. Soc.
45. Nesbitt, S. W. and A. Anders, 2008: Very high resolution precipitation frequency and rainfall estimates from TRMM: Applications and uncertainties. Proceedings of the Fourth Meeting of the International Precipitation Working Group, Beijing, China, World Meteorological Organization.
46. Nesbitt, S. W., 2009: Using high resolution TRMM observations to understand the role of topography in spatial variations in precipitation and storm structure. Proceedings, 2009 General Assembly, European Geophysical Union, Vienna, Austria.
47. Nesbitt, S. W., 2009: Evaluation of the TRMM precipitation radar algorithms in complex terrain. Proceedings, 34th Conference on Radar Meteorology, American Meteorological Society, Williamsburg, VA.

48. Nesbitt, S. W., K. Reed, and R. Akers, 2009: TRMM precipitation radar retrievals in complex terrain: in a class by itself? Proceedings, Precipitation Measurement Missions science team meeting, National Aeronautics and Space Administration, Salt Lake City, UT.
49. Nesbitt, S. W., 2009: Using lightning and high-resolution precipitation data to monitor and understand North American Monsoon processes. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
50. Kaufeld, W. A., C. Peters-Lidard, and S. W. Nesbitt, 2009: Impact of high-resolution land surface initializations on simulations of North American Monsoon Convection. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
51. Schiffer, W. J. and S. W. Nesbitt, 2009: Moisture surges and precipitation variability associated with Gulf of California surges. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA
52. Nesbitt, S. W., and R. A. Akers, Jr., 2010: Using high-resolution long range lightning and spaceborne precipitation estimates to understand North American Monsoon processes. Proceedings, 3<sup>rd</sup> International Lightning Meteorology Conference, Orlando, FL.
52. Nesbitt, S. W., A. M. Anders, W. J. Kaufeld, and J. Colberg, 2010: Precipitation processes in southwest India during the summer monsoon: the Orographic Precipitation and Evolution of Landscapes-Western Ghats project (OPEL-WG). Proceedings, American Meteorological Society 29<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Tucson, AZ.
53. Kaufeld, W. J., and S. W. Nesbitt, 2010: Land surface–precipitation interactions in the North American Monsoon: Sensitivity to land surface model initialization and coupling. Proceedings, American Meteorological Society 29<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Tucson, AZ.
54. Meyers, E. C., G. M. McFarquhar, B. F. Jewett, and S. W. Nesbitt, 2010: Vertical velocity and microphysical distributions related to the rapid intensification of Hurricane Dennis (2005). Proceedings, American Meteorological Society 29<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Tucson, AZ.
55. Harnos, D. S., S. W. Nesbitt, and K. R. Knapp, 2010: Structural analysis of SSM/I and TMI overpasses of tropical cyclones from 1987-2008. Proceedings, American Meteorological Society 29<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Tucson, AZ.
56. Reed, K., and S. W. Nesbitt: Tropical orographic rainfall regimes according to the Tropical Rainfall Measuring Mission. Proceedings, American Meteorological Society 29<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, Tucson, AZ.
57. Nesbitt, S. W., and K. Gleicher, 2010: Value–added matched datasets for GPM ground validation. Proceedings, Precipitation Measurement Missions science team meeting, National Aeronautics and Space Administration, Seattle, WA.
58. Harnos, D. S., and S. W. Nesbitt, 2010: The evolution of convective structure in tropical cyclones undergoing rapid intensification as observed by passive microwave sensors. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
59. Reed, K. A., and S. W. Nesbitt, 2010: Tropical orographic rainfall regimes according to the Tropical Rainfall Measuring Mission. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
60. Nesbitt, S. W. and Z. Wang, 2011: The influence of coastal topography on the South Asian Monsoon. Proceedings, Michio Yanai Symposium, American Meteorological Society, Seattle, WA.
61. Kaufeld, W. A., and S. W. Nesbitt, 2011: How sensitive is the North American Monsoon to land surface characteristics? Proceedings, 25<sup>th</sup> Conference on Hydrology, American Meteorological Society, Seattle, WA.
62. Schiffer, N. S., and S. W. Nesbitt, 2011: How realistic is precipitation over the western U.S. and Mexico in IPCC AR4 GCMs? Proceedings, 23rd Conference on Climate Variability and Change and the 25th Conference on Hydrology, American Meteorological Society, Seattle, WA.
63. Nesbitt, S.W., and K. J. Gleicher, 2011: Multiple-wavelength radar perspectives of mixed-phase convective precipitation in MC3E. Proceedings, 35th Conference on Radar Meteorology, American Meteorological Society, Pittsburgh, PA.
64. Reed, K. A., and S. W. Nesbitt, 2011: Tropical orographic rainfall regimes according to the Tropical Rainfall Measuring Mission. Proceedings, 35th Conference on Radar Meteorology, American Meteorological Society, Pittsburgh, PA.
65. Harnos, D. S., and S. W. Nesbitt, 2011: Convective structure of two Atlantic 2010 rapidly intensifying tropical cyclones. Proceedings, 35th Conference on Radar Meteorology, American Meteorological Society, Pittsburgh, PA.

66. Nesbitt, S. W., and K. J. Gleicher, Matched radar-aircraft datasets in the GPM-CloudSat Light Precipitation Validation Experiment. Finnish Meteorological Institute, Helsinki, Finland.
67. Nesbitt, S. W., K. J. Gleicher, W. A. Petersen, and M. A. Schwaller, 2011: Multiple-wavelength radar perspectives of mixed-phase convective precipitation in MC3E. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
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71. Harnos, D. S., and S. W. Nesbitt, 2012: Convective evolution during rapid intensification under varying shear. Proceedings, 30<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, Ponte Verde, FL.
72. Reed, K. A., and S. W. Nesbitt, 2012: Environmental Controls on the Vertical Structure of Tropical Orographic Precipitation and Implications for Passive Microwave Retrievals. Proceedings, 30<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, Ponte Verde, FL.
73. Kaufeld, W. J., S. W. Nesbitt, and A. M. Anders, 2012: Local summer monsoon precipitation patterns in the Western Ghats. Proceedings, 30<sup>th</sup> Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, Ponte Verde, FL.
74. Nesbitt, S. W., A. VanLoocke, and C. J. Bernacchi, 2012: Biosphere-atmosphere interactions in the North American Monsoon, Water Workshop, Energy Biosciences Institute, Chicago, IL.
75. Nesbitt, S. W., K. J. Gleicher, A. Heymsfield, A. Bansemmer, M. Polleot, A. Newman, S. Collis, P. Kollias, W. A. Petersen, 2012: Multiple-wavelength radar perspectives of mixed-phase convective precipitation in MC3E. Proceedings, European Radar Conference, Toulouse, France.
76. Nesbitt, S. W., K. J. Gleicher, W. A. Petersen, A. Bansemmer, A. Heymsfield, M. Poellot, A. Newmann, D. Delene, G. Heymsfield, 2012: Radar-aircraft synergy in GPM-GV field campaigns. Oral presentation, Fall meeting, American Geophysical Union, San Francisco, CA.
77. Gleicher, K. J., and S. W. Nesbitt, 2013: An evaluation of WRF microphysics using airborne and ground instrumentation in LPVEx for GPM-GV. Proceedings, Fall meeting, American Geophysical Union, San Francisco, CA.
78. Harnos, D. S., and S. W. Nesbitt, 2013: Structural morphology of tropical cyclones as witnessed by passive microwave sensors. Proceedings, Annual meeting, American Meteorological Society, Austin, TX.
79. Nesbitt, S. W., A. M. Anders, 2013: Precipitation, elevation and relief in the tropics. Proceedings, Annual meeting, American Meteorological Society, Austin, TX.
80. Kaufeld, W. J., and S. W. Nesbitt, 2013: Influence of soil moisture initialization on local precipitation patterns in the Western Ghats. Oral presentation, Annual meeting, American Meteorological Society, Austin, TX.
81. Schiffer, N. S., and S. W. Nesbitt, 2013: Does increased model resolution over complex terrain improve precipitation for the right reasons? A North American Monsoon case study. Oral presentation, Annual meeting, American Meteorological Society, Austin, TX.
82. Nesbitt, S. W., 2013: Building the GV column: physical validation of GPM algorithms. Invited presentation, NASA Precipitation Measurement Missions science team meeting, Annapolis, MD.
83. Nesbitt, S. W., 2013: Building the GV column in the GPM Cold Season Precipitation Experiment (GCPEX). Invited poster presentation, NASA Precipitation Measurement Missions Science Team Meeting, Annapolis, MD.
84. Nesbitt, S. W., G. Duffy, G. McFarquhar, M. Kulie, C. V. Chandra, P. Kollias, S. Tanelli, W. A. Petersen, and A. Tokay, 2013: Quantifying snowfall scattering and microphysical properties from the Global Precipitation Mission Cold season Precipitation Experiment (GCPEX). Oral presentation, 36<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Breckenridge, CO.
85. Keeler, J. M., B. F. Jewett, R. M. Rauber, G. M. McFarquhar, A. A. Rosenow, D. M. Plummer, D. Leon, S. W. Nesbitt, R. M. Rasmussen, G. Thompson, L. Xue, and C. Liu, 2014: Comparisons of Wyoming Cloud Radar observations to simulations of precipitation generating cells in winter cyclones. Oral presentation, 36<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Breckenridge, CO.



86. Nesbitt, S. W., G. A. Duffy, K. Gleicher, G. M. McFarquhar, M. Kulie, C. R. Williams, W. A. Petersen, S. J. Munchak, A. Tokay, G. Skofronick-Jackson, V. Chandrasekar, P. Kollias, D. R. Hudak, S. Tanelli, 2013: Building the GPM-GV column from the GPM Cold season Precipitation Experiment. Invited oral presentation, American Geophysical Union Fall Meeting, San Francisco, CA.
87. Duffy, G., S. W. Nesbitt, G. McFarquhar, M. Poellot, V. Chandrasekar, D. Hudak, 2013: In situ microphysical and scattering properties of falling snow in GPM-GCPEX. Oral presentation, American Geophysical Union Fall Meeting, San Francisco, CA.
88. Gleicher, K., S. W. Nesbitt, G. Duffy, G. McFarquhar, A. Bansemmer, A. Heymsfield, W. A. Petersen, 2013: Evaluating relationships between particle size distribution parameters and environment from GCPEX. Proceedings, Fall meeting, American Geophysical Union Fall Meeting, San Francisco, CA.
89. Colle, B. E., A. Molthan, R. Yu, S. E. Yuter, and S. W. Nesbitt, 2013: Evaluation of model microphysics within precipitation bands of extratropical cyclones. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
90. Harnos, D. S. and S. W. Nesbitt, 2013: Evaluation of vertical motion contributions towards tropical cyclone rapid intensification under varying wind shear. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
91. Reed, K. A., S. W. Nesbitt, M. Kulie, T. S. L'Ecuyer, and N. Wood, 2013: An evaluation of satellite retrievals of snowfall in regions of complex terrain. American Geophysical Union Fall Meeting, San Francisco, CA.
92. Wang, Z., I. E. Hanks, S. M. Hristova-Velva, T. J. Dunkerton, and S. W. Nesbitt, 2014: Characteristics of tropical easterly wave pouches during tropical cyclone formation. Proceedings, 31<sup>st</sup> Conference on Hurricanes and Tropical Meteorology, San Diego, CA.
93. Harnos, D. S. and S. W. Nesbitt, 2014: Characterization of the dynamical role of convection in two simulated episodes of rapid intensification. Oral presentation, 31<sup>st</sup> Conference on Hurricanes and Tropical Meteorology, San Diego, CA.
94. Harnos, D. S., and S. W. Nesbitt, 2014: Passive microwave signatures of tropical cyclone symmetry as related to intensity change. Proceedings, 31<sup>st</sup> Conference on Hurricanes and Tropical Meteorology, San Diego, CA.
95. Duffy, G., S. W. Nesbitt, and G. McFarquhar, 2014: Evaluations of radar scattering models for falling snow. Proceedings, Precipitation Measurement Missions Science Team Meeting, NASA, Baltimore, Maryland.
96. Gleicher, K., S. W. Nesbitt, K. Reed, A. Bansemmer, A. Heymsfield, and W. Petersen, 2015: Evaluating Relationships between Particle Size Distribution Parameters from GCPEX. Proceedings, Precipitation Measurement Missions Science Team Meeting, NASA, Baltimore, Maryland.
97. Nesbitt, S. W., P. Salio, D. Cecil, R. Garreaud, R. Houze, Jr., K. Rasmussen, A. Varble, L. Machado, D. Gochis, and S. Goodman, 2014: RELAMPAGO and SAME-PACE: Extreme storms that impact society in Southeastern South America. Proceedings, World Weather Open Science Conference, World Meteorological Organization, Montréal, Canada.
98. Nesbitt, S. W., K. Gleicher, G. Duffy, K. Reed, V. Chandrasekar, W. Petersen, D. Hudak, 2014: Snowfall validation for the NASA Global Precipitation Measurement mission. Proceedings, 8<sup>th</sup> European Conference on Radar Meteorology and Hydrology, Garmisch-Partenkirchen, Germany.
99. Harnos, K., S. W. Nesbitt, K. Reed, G. Duffy, C. Williams, A. Bansemmer, S. Munchak, A. Heymsfield, W. Petersen, 2014: Comparison of airborne and ground based measurements and the relationships between microphysical parameters from GCPEX. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
100. Choi, S., S. W. Nesbitt, T. Lang, and T. Chronis, 2014: Influence of Mesoscale Ocean Wind Variability on Tropical Atmospheric Convection. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
101. Nesbitt, S. W., D. S. Harnos, K. Harnos, K. Reed, G. Duffy, G. McFarquhar, S. Tanelli, C. Williams, B. Johnson, W. Petersen, A. Tokey, A. Barros, A. Wilson, 2014: Constraints on a priori assumptions and microphysical properties in precipitation from in situ measurements in GPM-GV field campaigns: regime dependence and impact on retrievals. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
102. Colle, B., A. Molthan, R. Yu, and S. W. Nesbitt, 2014: Evaluation of Mixed-Phase Microphysics Within Winter Storms Using Field Data and In Situ Observations. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
103. Barros, A., W. Petersen, T. Lang, A. Wilson, Y. Duan, S. W. Nesbitt, R. Cifelli, M. Schwaller, D. Wolff, D. Miller, J. Gourley, M. Petters, 2014: IPHEX 2014: Observations of Orographic Precipitation Processes in

- the Southern Appalachians. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA. (invited)
104. Reed, K., S. W. Nesbitt, and A. Tokey: 2014: An Evaluation Of Cold Season Precipitation Microphysical Properties From A Ground-Based Perspective. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
  105. Kulie, M., S. W. Nesbitt, D. S. Harnos, A. Heymsfield, B. Johnson, S. Tanelli, 2014: Multi-Frequency Radar and Microwave Radiometer Simulations of Surface Snowfall Events from GCPEX: Synergistic Application of In-Situ Microphysics Observations with Modeled Ice Scattering Properties. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
  106. Duffy, G., S. W. Nesbitt, and G. McFarquhar, 2014: Evaluations of Particle Scattering Models for Falling Snow. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
  107. Nesbitt, S. W., 2015: Improving Cold Season Precipitation Retrievals with GPM Ground Validation Data. Proceedings, 7<sup>th</sup> NASA Global Precipitation Measurement Ground Validation Workshop, Seoul, Korea. (invited)
  108. Nesbitt, S. W., 2015: RELAMPAGO: Remote sensing of Electrification, Lightning, And Meso-scale/micro-scale Processes with Adaptive Ground Observations. Invited Conference Keynote Presentation, XII Argentine Congress on Meteorology, Mar del Plata, Argentina.
  109. Nesbitt, S. W., P. Salio, A. C. Saulo, 2015: RELAMPAGO Field Campaign. Proceedings, XII Argentine Congress on Meteorology, Mar del Plata, Argentina. (invited)
  110. Ruiz, J. J., L. Vidal Sr., P. Maldonado, S. Suarez Ruiz, P. Salio, Y. Garcia Skabar, Y. Garcia Skabar, A. C. Saulo, S. W. Nesbitt, E. Kalnay, and T. Miyoshi, 2016: Local ensemble transform Kalman filter experiments using radar observations: a case study over central Argentina. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  111. Vidal, L. Sr., S. W. Nesbitt, P. Salio, S. Osore, C. Farias, A. Rodriguez, J. Serra, and G. Caranti, 2015: C-Band Dual-Polarization Observations of a Massive Volcanic Eruption in South America. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  112. Salio, P. V., and L. Pappalardo, S. W. Nesbitt, L. Vidal Sr., M. D. L. M. Alvarez Imaz, and A. Scardilli, 2015: Variability of parameters for Attenuation Correction over mid-latitude extreme precipitating events. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  113. Nesbitt, S. W., G. Duffy, K. A. Reed, G. McFarquhar, and A. Tokay, 2015: Using particle size distribution observations from GPM field campaigns to constrain spaceborne precipitation retrievals. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  114. Vidal, L. Sr., S. R. Suarez, P. Salio, S. W. Nesbitt, and R. Mezher, 2015: S. Ruiz Suarez, P. Salio, S. W. Nesbitt, and R. Mezher, 2015: C-band Hydrometeor Classification Scheme and Its Application on Hail Detection over Central Argentina. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  115. Duffy, G., S. W. Nesbitt, and G. McFarquhar, 2015: A Comparison of Retrieved Mass-Diameter Relationships in Snowfall from Radar and Ice Water Content Measurements. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  116. Metzler, R., S. W. Nesbitt, and P. Salio, 2015: Investigating Hail Core Signatures Using C-Band Polarimetric Radar. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  117. Reed, K. A., and S. W. Nesbitt, 2015: An Evaluation of Cold Season Precipitation Microphysical Properties from a Radar Perspective. Proceedings, 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK.
  118. Nesbitt, S. W., and K. L. Rasmussen, 2015: Extremely tall convection: characteristics and controls. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
  119. Duffy, G. A., S. W. Nesbitt, and G. M. McFarquhar, 2015: Sensitivity of simulated snow cloud properties to mass-diameter parameterizations. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
  120. Fritz, C., Z. Wang, S. W. Nesbitt, and T. Dunkerton, 2015: Cloud Evolution during Tropical Cyclone Formation as Revealed by TRMM PR. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.
  121. Reed, K. A. and S. W. Nesbitt, 2015: An uncertainty model for snowfall rate retrievals from the GPM DPR. Proceedings, American Geophysical Union Fall Meeting, San Francisco, CA.

122. Nesbitt, S. W., and A. Varble, 2016: CACTI-RELAMPAGO synergy. Proceedings, Atmospheric Radiation Measurement Radar Meeting, Miami, FL.
123. Nesbitt, S. W., and A. Varble, 2016: CACTI-RELAMPAGO synergy. Proceedings, Atmospheric Radiation Measurement Atmospheric Systems Research Science Team Meeting, Tysons, VA.
124. Nesbitt, S. W., P. Borque, K. Rasmussen, P. Salio, R. J. Trapp, L. Vidal, M. Rugna, J. Mulholland, 2016: Severe Convection in Central Argentina: Storm Modes and Environments. Proceedings, 28<sup>th</sup> Conference on Severe Local Storms, American Meteorological Society, Portland, OR.
125. Nesbitt, S. W. and P. Borque, 2017: RELAMPAGO. Proceedings, Atmospheric Radiation Measurement Atmospheric Systems Research Science Team Meeting, Tysons, VA.
126. Nesbitt, S. W., R. Chase, P. Borque, J. Finlon, S. Ding, and G. McFarquhar, 2017: A critical evaluation of the GPM DPR algorithm assumptions using OLYMPEX data, OLYMPEX Workshop, Seattle, WA.

### III. TEACHING

#### A. Courses Taught

Spring 2007	Weather Analysis and Forecasting (ATMS 403)
Fall 2007	Weather Analysis and Forecasting (ATMS 403)
Spring 2008	Tropical Meteorology (ATMS 406, new course)
Fall 2008	Radar Meteorology (ATMS 410)
Spring 2009	Weather Systems (ATMS 505, new course)
Fall 2009	Tropical Meteorology (ATMS 406)
Spring 2010	Weather Systems (ATMS 505)
Fall 2010	Special Topics in Atmospheric Sciences (ATMS 597R: Mesoscale modeling with WRF, new course)
Spring 2011	Weather Systems (ATMS 505)
Fall 2011	Tropical Meteorology (ATMS 406)
Spring 2012	Weather Systems (ATMS 505)
Fall 2012	Satellite Remote Sensing (ATMS 411)
Fall 2012	Graduate Professional Development (ATMS 571)
Spring 2013	Weather Systems (ATMS 505)
Fall 2013	Graduate Professional Development (ATMS 571)
Spring 2014	Weather Systems (ATMS 505)
Spring 2014	Special Topics in Atmospheric Sciences (ATMS 597SN: Mesoscale modeling with WRF)
Fall 2014	Tropical Meteorology (ATMS 406)
Fall 2014	Graduate Professional Development (ATMS 571)
Fall 2015	Special Topics in Atmospheric Sciences (ATMS 391SN: Geophysical data analysis, new course)
Spring 2016	Special Topics in Atmospheric Sciences (ATMS 597SN: Mesoscale modeling with WRF)
Fall 2016	Tropical Meteorology (ATMS 406)
Spring 2017	Computing and Data Analysis (ATMS 305)

#### B. Supervision of Graduate Students

##### *M.S. Students*

Chase, Randy	M.S. student, 2016 – present
Zea, Lina Rivelli	M.S. student, 2017 – present

##### *Ph.D. Students*

Reed, Kimberly	Ph.D. student, 2009 – present, Passed Qualification Exam May 2013 (received NASA Earth System Science Graduate Fellowship Fall 2011)
Mulholland, Jake	Ph.D. student, 2016 – present

##### *Graduate Committees Served Upon*

Grim, Joseph	Ph.D., 2007: “The development, evolution, and forcing of the rear inflow jet in bow echoes during BAMEX”, Currently employed at the National Center for Atmospheric Research, Boulder, CO.
Zhang, Henian	Ph.D., 2008: “Impact of Saharan dust as CCN on the evolution of an idealized tropical cyclone”, Currently employed as a post doc at the Georgia Institute of Technology, Atlanta, GA.
Romine, Glen	Ph.D., 2008: “Improving storm-scale analyses of convection via assimilation of polarimetric radar observations”, Currently employed as a Project Scientist at the National Center for Atmospheric Research, Boulder, CO

Um, Junshik	Ph.D., 2009: “The microphysical and radiative properties of tropical cirrus from the 2006 Tropical Warm Pool International Cloud Experiment (TWP-ICE)”, Currently employed as a post doc at the University of Illinois, Urbana, IL
Kaufeld/Flynn, Wendilyn	Committee chair, Ph.D., 2012: “Land surface and orographic controls on precipitation patterns in the Sierra Madre Occidental and Western Ghats”, Currently an assistant professor of earth sciences at the University of Northern Colorado.
Van Loocke, Andrew	Ph.D., 2012: “The Impact of land-use and global change on water-related ecosystem services in the Midwest US”. Currently an assistant professor of agricultural meteorology at Iowa State University
Barman, Rahul	Ph.D., 2013: “Impacts of model-data uncertainties on biogeophysical-biochemical interactions in a land surface model (with an emphasis on the northern high-latitude regions).”
Ching, Joseph	Ph.D., 2013: “Black carbon mixing state impacts on aerosol activation— investigations using particle-resolved model simulations.” Currently a post doctoral research associate at Pacific Northwest National Laboratory.
Schiffer, Nicole	Committee chair, Ph.D., 2013: “Intraseasonal precipitation processes in complex terrain: The effects of model and terrain resolution on WRF simulations of the North American Monsoon.” Currently a science writing intern at the National Center for Supercomputing Applications.
Mills, Catrin	Ph.D., 2014: “Arctic synoptic activity associated with sea ice variability using self-organizing maps.” Currently a post doctoral research fellow at the University of Colorado-Boulder.
Daniel Harnos	Committee chair, Ph.D. 2014, “Characterization of the role of precipitation in tropical cyclone intensification”
Kirstin Harnos	Committee chair, Ph.D. 2014, “Parametrizing PSD assumptions for GPM algorithms”
Hankes, Isaac	Ph.D., 2014: “Atlantic tropical cyclone formation: Pre-genesis evolution of tropical easterly waves and impacts of the middle to upper tropospheric dry air”
Alvarez Imaz, Milagros	Licenciatura (Universidad de Buenos Aires, Argentina), 2015: “Procesos en la mesoescala que conducen al inicio de la convección húmeda profunda en el norte de la provincia de Córdoba”
Keeler, Jason	Ph.D., 2015: “Dynamics of Cloud-Top Generating Cells in Winter Cyclones”
Anselmo, Evandro	Ph.D. (Universidade de São Paulo, Brazil), 2015: “Morfologia das tempestades elétricas na América do Sul”
Grazioli, Jacopo	Ph.D. (École Polytechnique Fédérale de Lausanne, Switzerland), 2015: “Polarimetric weather radar: from signal processing to microphysical retrievals”
Duffy, George	M.S., 2013 – 2016 (co-advised with Greg McFarquhar), (received NASA Earth System Science Graduate Fellowship Fall 2014)
Choi, Stella	M.S., 2013 – 2016 (received NSF Graduate Fellowship Fall 2015)

Tian, Jian	Ph.D., 2016: “Investigation of the evolution of atmospheric particles with integration of the stochastic particle-resolved model PartMC-MOSAIC and atmospheric measurements”
Rosenow, Andrew	Ph.D., 2016: “Exploring methods to extract vertical motions in winter storms”
Fritz, Cody	Ph.D., 2017: “Coupling among the primary circulation, secondary circulation, and precipitation during tropical cyclogenesis”
Wu, Wei	Ph.D., 2017: “Observation and simulation of mid-latitude ice clouds”
Finlon, Joseph	Ph.D. candidate, passed prelim
Hu, Huancui	Ph.D. candidate, passed prelim
Norris, Bethany	Ph.D. candidate, passed prelim
Curtis, Jeffrey	Ph.D. candidate, passed prelim
Cancelada, Maite	Ph.D. Universidad de Buenos Aires (received Argentine NSF fellowship)
Mulholland, Jake	Ph.D. student
Garg, Piyush	Ph.D. student
Chase, Randy	M.S. student

#### IV. SERVICE

##### A. Summary of Service

##### 1. Public Service

Speaker at the Central Illinois Chapter of the American Meteorological Society, Lincoln, IL, September 2006

Speaker at the Illinois State Water Survey, Champaign, IL, October 2006

Interviewed by *Daily Illini* on the hurricane season, September 2007

Represented Atmospheric Sciences at the National Weather Service Open House, Lincoln, IL, October 2007

Speaker at earth science classes on field experiment in Nepal, Lancaster High School, Lancaster, NY, October 2007

Speaker in campus-wide lecture series on the North American Monsoon, State University of New York at Oswego, Oswego, NY, October 2007

Interviewed by *Daily Illini* on snowy weather, February 2008

Speaker at Early Learning preschool on hurricanes, Champaign, IL, December 2008

Speaker at Early Learning preschool on tornadoes, Champaign, IL, May 2009

Interviewed by *Daily Illini* on climate change impacts, October 2009

Interviewed by Medill News Service on weather exhibit at Chicago Museum of Science and Technology, May 2010

Speaker at Bottenfield Elementary School on tornadoes, Champaign, IL, May 2010

Interviewed by *Christian Science Monitor* on research on rapidly intensifying hurricanes, August 2011

Interviewed by American Institute of Physics *Discoveries and Breakthroughs Inside Science* on rapidly intensifying hurricanes, August 2011

Speaker at Booker T. Washington Elementary School on tornadoes, Champaign, IL, March 2012

Interviewed on rapidly intensifying hurricanes, *ORF* Austria Radio/Television, May 2012

Speaker at Leal Elementary School on weather and tornadoes, Urbana, IL, May 2012

Speaker at Polaris Charter Academy on Hurricanes, Chicago, IL, September 2012

Hosted the 7<sup>th</sup> grade class (~80 students) from Polaris Charter Academy in the Department of Atmospheric Sciences, Urbana, IL, November 2012

Invited webinar speaker on the Global Precipitation Mission, CoCoRAHS Webinar Series, June 2013

Invited webinar speaker on the Remote Sensing of Clouds and Precipitation, National Earth Science Teachers Association, August 2013

Invited webinar speaker on the Remote Sensing of Clouds and Precipitation, National Earth Science Teachers Association, February 2015

Led 8-day workshop on “Applications of dual polarization radar data” at Universidad de Buenos Aires, March-April 2015

Interviewed by the CANAL 10 television station (in Spanish) in Córdoba, Argentina, April 2015

Interviewed by the University of Buenos Aires Public Affairs Bureau on the RELAMPAGO field experiment, May 2015

Speaker on Clouds and Precipitation at Bottenfield Elementary School, Champaign, IL, May 2016.

Speaker on Clouds and Precipitation at University Primary School, Champaign, IL, October 2016

Interviewed by Business Insider on “Scientists around the world are worried about a Trump team proposal to ax NASA’s 58-year mission to study the Earth”, December 2016

## 2. Service to Disciplinary and Professional Societies or Associations

Member, American Meteorological Society Science and Technology Advisory Committee on Radar Meteorology, 2007 – 2012

President-elect, Central Illinois Chapter of the American Meteorological Society, 2007

President, Central Illinois Chapter of the American Meteorological Society, 2007 – 2009

Faculty advisor, University of Illinois Chapter of the American Meteorological Society, 2007 – 2013

Chaired session on “Error Metrics” at the World Meteorological Organization Workshop on High Resolution Precipitation Products, Geneva, Switzerland, December 2007

Chaired session on “Use of Lightning Data in the Operational Warning and Decision Making Process” at the 3<sup>rd</sup> Conference on the Meteorological Application of Lightning Data, American Meteorological Society Annual Meeting, New Orleans, LA, January 2008

Member of Validation Working Group, International Precipitation Working Group, Coordination Group for Meteorological Satellites, World Meteorological Organization, October 2008 – present

Served on National Academy of Sciences Committee on Progress and Priorities of US Weather Research and Research-to-Operations Activities”, Woods Hole, MA, July 2009

Chaired session on “Quantitative Precipitation Estimation” at the 34<sup>th</sup> American Meteorological Society Conference on Radar Meteorology, Williamsburg, VA, October 2009

Chaired session on “Convection” at the 29<sup>th</sup> American Meteorological Society Conference on Hurricanes and Tropical Meteorology, Tucson, AZ, May 2010

Selection committee, Max Eaton Prize at the 29<sup>th</sup> American Meteorological Society Conference on Hurricanes and Tropical Meteorology, Tucson, AZ, May 2010

Co-Chair, 35<sup>th</sup> American Meteorological Society Conference on Radar Meteorology, Pittsburgh, PA, September 2011

Selection committee, Spiros Geotis Prize at 35<sup>th</sup> American Meteorological Society Conference on Radar Meteorology, Pittsburgh, PA, September 2011



Session co-convener, “Orographic precipitation: Measurement, Mechanisms, and Impact on Landforms”, American Geophysical Union Fall Meeting, December 2011.

Session co-convener, “Remote Sensing of Tropical Cyclones and Tropical Convective Systems: Observation and Data Assimilation”, American Geophysical Union Fall Meeting, December 2012.

Chair, American Meteorological Society Science and Technical Advisory Committee on Radar Meteorology, 2013 – 2016.

Chaired session on “Applications” at the 4<sup>th</sup> International Workshop on Space-based Snowfall Measurement (IWSSM), Mammoth Lakes, CA, May 2013

Chaired session on “Precipitation and Microphysics Estimation – Research” at the 36<sup>th</sup> American Meteorological Society Conference on Radar Meteorology, Breckenridge, CO, September 2013

Chaired session on “Invited keynote speaker: Precipitation and Microphysics Estimation – research” at the 36<sup>th</sup> American Meteorological Society Conference on Radar Meteorology, Breckenridge, CO, September 2013

Chaired session on “Nowcasting techniques”, 8<sup>th</sup> European Conference on Radar in Meteorology and Hydrology, Garmisch-Partenkirchen, Germany, September 2014.

Session rapporteur, “Ground Validation Science”, at 7<sup>th</sup> NASA Global Precipitation Measurement Ground Validation Workshop, Seoul, Korea, May 2015.

Chaired session on “Microphysical Studies, General Topics in Radar Meteorology, and New and Emerging Radar Technology” at 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK, September 2015.

Chaired session on “Microphysical Studies” at 37<sup>th</sup> Conference on Radar Meteorology, American Meteorological Society, Norman, OK, September 2015.

Chaired session on “Intense Continental Convection” at 2015 Fall Meeting, American Geophysical Union, San Francisco, CA, December 2015.

Chaired session on “Polarimetric Radar Applications” at 2016 Fall Meeting, American Geophysical Union, San Francisco, CA, December 2016.

Chaired session on “Intense Continental Convection” at 2016 Fall Meeting, American Geophysical Union, San Francisco, CA, December 2016.

Member, Earth Sciences Council, United Space Research Association, 2016 – present

#### *Editorship of Journals*

Editor, *Journal of Applied Meteorology and Climatology*, American Meteorological Society, 2010 – 2014

*Journals, publishers, or federal agencies serving as a reviewer for submitted papers, books, or proposals*

Atmosfera

Atmospheric Chemistry and Physics

Atmospheric Research

Bulletin of the American Meteorological Society

Cambridge Press

Geography Compass

Geophysical Research Letters

International Journal of Climatology

IEEE Transactions on Remote Sensing

Journal of Applied Meteorology and Climatology  
Journal of Atmospheric Sciences  
Journal of Climate  
Journal of Geophysical Research – Atmospheres  
Journal of Hydrometeorology  
Journal of Atmospheric and Oceanic Technology  
Journal of the Meteorological Society of Japan  
Monthly Weather Review  
National Science Foundation  
National Oceanic and Atmospheric Administration  
National Aeronautics and Space Administration Quarterly  
Journal of the Royal Meteorological Society Weather and  
Forecasting

3. Service to the University

Member of College of Liberal Arts and Sciences Policy and Development Committee, 2007–2009

Organized Department Seminars, 2008 – 2009

Member of Department Graduate Affairs Committee, 2007 – 2009, 2013 – 2014

Chair, Department Web Committee, 2007 – present

Member of Department Curriculum Committee, 2007 – 2009, 2015 – present

Chair, Department Curriculum Committee, 2012 – 2015

Research Poster Judge, School of Earth, Society, and Environment Research Review, 2009, 2010, 2013

Ogura Research Award departmental review committee, 2010, 2011, 2014

Member of College of Liberal Arts and Sciences Honors Council, 2012 – 2015

Member of College of Liberal Arts and Sciences Dean’s Faculty Information Team, 2012 – 2013 Prepared questions for and graded questions from Ph.D. graduate qualification exam, 2007 – present Served on department head review committee, Spring 2013 semester

Chaired search committee for Junior Faculty Search, 2013 – 2014 academic year

Chaired discussion on department undergraduate and graduate Curriculum, 2014 department faculty retreat

Member of Water Council, Illinois Institute for Sustainability, Energy, and Environment (iSEE), 2014 – present

Member of Department of Atmospheric Sciences Executive committee, 2015 – 2016 academic year

Member of College of Liberal Arts and Sciences General Education Council, 2015 – 2016, 2016 – 2018 academic years