

# ANDREW C. WINTERS

Assistant Professor  
Department of Atmospheric and Oceanic Sciences  
University of Colorado Boulder  
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## INTERESTS

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Synoptic-dynamic meteorology, mesoscale meteorology, the weather–climate interface, high-impact weather events, subseasonal-to-seasonal forecasting, scientific communication

## EDUCATION

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**Ph.D. – Atmospheric and Oceanic Sciences** **2015**

University of Wisconsin–Madison; Madison, WI

Advisor: Jonathan E. Martin

Dissertation: *The Role and Production of Polar/Subtropical Jet Superpositions in Two High-Impact Weather Events over North America*

Minor: Scientific Communication and Education, Delta Certificate

**B.S. – Atmospheric and Oceanic Sciences with Honors in the Liberal Arts** **2011**

University of Wisconsin–Madison; Madison, WI

Certificate: Mathematics

## RESEARCH / PROFESSIONAL EXPERIENCE

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**Assistant Professor** **Aug. 2019 – Present**

Department of Atmospheric and Oceanic Sciences

University of Colorado Boulder; Boulder, CO

**NSF–AGS Postdoctoral Research Fellow** **Jul. 2017 – Jul. 2019**

Department of Atmospheric and Environmental Sciences

University at Albany, SUNY; Albany, NY

Sponsoring Scientists: Daniel Keyser and Lance F. Bosart

**Postdoctoral Research Associate** **Aug. 2015 – Jun. 2017**

Department of Atmospheric and Environmental Sciences

University at Albany, SUNY; Albany, NY

Advisors: Lance F. Bosart and Daniel Keyser

**Graduate Research Assistant** **Jun. 2011 – Aug. 2015**

Department of Atmospheric and Oceanic Sciences

University of Wisconsin–Madison; Madison, WI

Advisor: Jonathan E. Martin

**Delta Program Intern** **Jan. 2014 – Jul. 2015**

Department of Atmospheric and Oceanic Sciences

University of Wisconsin–Madison; Madison, WI  
Advisor: Galen A. McKinley

**Honors Senior Thesis Participant**

**Aug. 2010 – May 2011**

Department of Atmospheric and Oceanic Sciences  
University of Wisconsin–Madison; Madison, WI  
Advisor: Jonathan E. Martin

**National Weather Center – REU Program Participant**

**May 2010 – Aug. 2010**

School of Meteorology  
University of Oklahoma; Norman, OK  
Advisors: Bryan Smith and Corey Mead

**Student Volunteer**

**May 2009 – Aug. 2009**

National Weather Service; Milwaukee/Sullivan, WI  
Advisors: Rusty Kapela and Jeffrey Craven

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**GRANTS AWARDED**

**National Science Foundation – Postdoctoral Research Fellowship**

**Jul. 2017 – Jun. 2020**

Division of Atmospheric and Geospace Sciences

Title: *Antecedent Remote and Local Synoptic Environments Most Conducive to North American Polar/Subtropical Jet Superpositions.*

PI(s): Andrew C. Winters

Amount: \$172,000

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**GRANTS PENDING**

**National Oceanic and Atmospheric Administration**

**est. Aug. 2021 – Jul. 2023**

Weather Program Office – Joint Technology Transfer Initiative

Title: *A Real Time North Pacific Jet Phase Diagram to Inform Week 2 Temperature and Precipitation Forecasts*

PI(s): Andrew C. Winters

Requested Amount: \$459,683

**National Science Foundation**

**est. Jul. 2021 – Jun. 2024**

Division of Atmospheric and Geospace Sciences

Title: *Collaborative Research: Winter Precipitation Type Research Multi-Scale Experiment (WINTRE-MIX)*

PI(s): Katja Friedrich and Andrew C. Winters

Requested Amount: \$1,869,563

**National Aeronautics and Space Administration**

**est. Apr. 2021 – Mar. 2024**

New (Early-Career) Investigator Program in Earth Science

Title: *Examination into the Characteristics, Predictability, and Projected Changes of Synoptic-Scale Environments Conducive to the Development of High-Latitude North Atlantic Atmospheric Rivers*

PI(s): Andrew C. Winters

Requested Amount: \$356,483

## **TEACHING EXPERIENCE**

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### **University of Colorado Boulder**

#### *Instructor of Record*

Course: ATOC 1050: Weather and the Atmosphere	<b>Spring 2021</b>
ATOC 4500/7500: Synoptic-Dynamic Meteorology	<b>Fall 2020</b>
ATOC 4700 – Weather Analysis and Forecasting	<b>Spring 2020</b>

### **University at Albany, SUNY**

#### *Guest Lecturer*

Course: ATM 317 – Dynamic Meteorology II	<b>Spring 2018; 2019</b>
ATM 210 – Atm. Structure, Thermodynamics, and Circulation	<b>Fall 2018</b>
ATM 631 – Mesoscale Dynamics	<b>Spring 2018</b>
ATM 621 – Structure and Dynamics of Extratropical Cyclones	<b>Spring 2017</b>
ATM 110 – Weather and Climate Issues	<b>Fall 2016</b>
ATM 409/509 – Atmospheric Precipitation Processes	<b>Fall 2016</b>
ATM 400 – Synoptic Meteorology I	<b>Fall 2016</b>
ATM 619 – The Cyclone Workshop Seminar	<b>Spring 2016</b>

### **University of Wisconsin – Madison**

<i>Certificate – Delta Program for Teaching and Learning</i>	<b>2015</b>
Confers recognition of teaching experience, awareness of effective ways to promote successful learning, and utilizing/performing research to improve learning.	

#### *Teaching Assistant*

Course: AOS 452 – The Frontal Cyclone	<b>Fall 2013; 2014</b>
AOS 101/100 – Introduction to Weather and Climate	<b>Spring 2012; 2013</b>

#### *Peer Mentor*

Course: Bradley Roundtable	<b>Fall 2008; Spring 2009</b>
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## **ADVISING EXPERIENCE**

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### **University of Colorado Boulder**

#### *Graduate Students*

- Ms. Rebecca Baiman, Ph.D candidate, ATOC Coadvised with Jan Lenaerts	<b>2020 – Present</b>
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#### *Undergraduate Students*

- Ms. Gillian Grasso, Independent Study / UROP	<b>2020 – Present</b>
- Ms. Elyse Hawkins, Independent Study / UROP	<b>2019 – 2020</b>
- Mr. David Rosencrans, Independent Study	<b>2019 – 2020</b>

#### *External Committees*

- Ms. Leann Anthony, M.S., Plymouth State University	<b>2020</b>
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### **University at Albany, SUNY**

#### *Graduate Students*

- Mr. Eli Turasky, M.S. Co-advised with Lance F. Bosart and Daniel Keyser Current: RiskPulse Weather Operations Division	<b>2018 – 2019</b>
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*Undergraduate Students*

- Ms. Jessica Blair, Honors Senior Thesis 2018 – 2019  
Co-advised with Ross A. Lazear  
Current: Graduate student at the University of Oklahoma

**OUTREACH EXPERIENCE**

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**Local School Visits** **Mar. 2014 – Jun. 2015**  
Madison, WI

Presented on weather systems at Wisconsin Heights Middle School, Edgewood Middle School, Madison East High School, Waupun Elementary School, Monona Grove High School, and Emerson Elementary School.

**Local Science Festivals** **Apr. 2012 – Apr. 2015**  
Madison, WI

Presented on weather systems at the “After School Science Expeditions”, “Science Saturdays”, “Martin Luther King Day of Service”, and the “UW Science Expeditions” programs sponsored by the Wisconsin Institute for Discovery.

**CIMSS Student Summer Workshop** **Jun. 2013; 2014; 2015**  
Madison, WI

Presented the local weather briefing for the annual student workshop.

**CIMSS Climate Digest** **Jun. 2014 – Mar. 2015**  
Madison, WI

Provided the narration for the monthly climate summary videos produced as part of the EarthNow project.

**Aldo Leopold Nature Center** **Oct. 2013; 2014**  
Monona, WI

Coordinated, developed, and implemented weather-related activities for visitors to the Aldo Leopold Nature Center during weekends in October.

**Madison Middle School Science Symposium** **Dec. 2012 – Apr. 2013**  
Madison, WI

Mentored three 6<sup>th</sup> grade students as they developed a science project for the annual science symposium hosted by the Madison Metropolitan School District.

**PROFESSIONAL SERVICE**

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**University of Colorado Boulder**

- Member, CU Boulder ATOC Chair Search Committee 2020
- Member, AMS Weather and Forecasting STAC Committee 2020 – Present
- Member, CU Boulder ATOC Curriculum Committee 2020 – Present
- Member, CU Boulder ATOC Colloquium Committee 2019 – Present
- Member, CU Boulder ATOC ESSS Poster Conference Planning Committee 2019 – Present
- Associate Editor, *Monthly Weather Review* 2018 – Present
- Reviewer 2016 – Present

Journals: *Journal of Atmospheric Science*; *Monthly Weather Review*; *Journal of Applied Meteorology and Climatology*; *Quarterly Journal of the Royal Meteorological Society*;

*Climate Research; Weather and Forecasting; Journal of Geophysical Research: Atmospheres; Weather, Climate, and Society; Journal of Climate; npj Climate and Atmospheric Science.*

Funding Agencies: NOAA, NSF, NASA

Member, 30 <sup>th</sup> AMS WAF/26 <sup>th</sup> NWP Conference Planning Committee	2018 – 2020
Judge, AMS/AGU Student Poster Competitions	2016 – 2020
Conference Session Chair	2015 – 2020
Conferences: <i>17th, 18th, and 19th Cyclone Workshop; 100th AMS Annual Meeting</i>	

### **University at Albany, SUNY**

Co-Chair, DAES/ASRC Departmental Seminar Series	2018 – 2019
Review Panelist, NSF Graduate Education Programs	2017; 2019
Facilitator, Cyclone Research Group	2016 – 2019
Member, 18th Cyclone Workshop Science Committee	2016 – 2017
Participant, NOAA–Hazardous Weather Testbed Spring Experiment	2017
Participant, AGU Congressional Visit Day	2016

### **University of Wisconsin–Madison**

Local Manager, WxChallenge Collegiate Forecasting Competition	2013 – 2015
Student–Faculty Liaison, UW–AOS Graduate Student Association	2013 – 2014
Recruitment Committee Co-Chair, UW–AOS Graduate Student Association	2012 – 2014
Ombudsman, UW–AOS Graduate Student Association	2012 – 2013
Senior Officer / President, UW–AOS Student Chapter of the AMS	2010 – 2011

### **INTERVIEWS**

<b>The Whit Online, Rowan University</b> Glassboro, NJ	2020
<i>“National researchers explain South Jersey’s mild winter”, C. Connors.</i>	
<b>Daily Cardinal, UW–Madison</b> Madison, WI	2013
<i>“Discovery of superposed jets may lead to better forecasting”, Z. Zhang.</i>	
<b>UW–Madison Communications</b> Madison, WI	2011
<i>“Global winds could explain record rains, tornadoes”, D. Tenenbaum.</i>	

### **AWARDS / HONORS**

<b>Best Graduate Student Poster</b> 5 <sup>th</sup> Annual UW–Madison Atmospheric and Oceanic Sciences Poster Session	2015
<b>UW–Madison Campus-Wide TA Award</b> Innovation in Instruction	2014
<b>Honorable Mention Graduate Student Poster</b> 4 <sup>th</sup> Annual UW–Madison Atmospheric and Oceanic Sciences Poster Session	2014
<b>Wahl Award for Excellence as a Teaching Assistant</b>	2013

UW–Madison Department of Atmospheric and Oceanic Sciences

<b>Honorable Mention</b> NSF Graduate Research Fellowship Program	<b>2012; 2013</b>
<b>Inductee</b> UW–Madison Alpha Chapter of Phi Beta Kappa	<b>2011</b>
<b>Horn Award for Excellence in Overall Performance as an Undergraduate</b> UW–Madison Department of Atmospheric and Oceanic Sciences	<b>2010</b>
<b>George Enfield Frazer Scholarship</b> UW–Madison College of Letters and Sciences	<b>2010</b>
<b>Dean’s List (8 semesters)</b> UW–Madison College of Letters and Sciences	<b>2007 – 2011</b>
<b>Academic Excellence Scholar</b> Wisconsin Higher Education Aids Board	<b>2007 – 2011</b>

## **REFEREED PUBLICATIONS**

### **2021**

**Winters, A. C.**, 2021: Kinematic processes contributing to the intensification of anomalously-strong North Atlantic jets. *Quart. J. Roy. Meteor. Soc.*, **147** [in review].

### **2020**

**Winters, A. C.**, D. Keyser, and L. F. Bosart, 2020: Composite vertical-motion patterns near North American polar–subtropical jet superposition events. *Mon. Wea. Rev.*, **148**, 4565–4585.

**Winters, A. C.**, D. Keyser, and L. F. Bosart, and J. E. Martin, 2020: Composite synoptic-scale environments conducive to North American polar–subtropical jet superposition events. *Mon. Wea. Rev.*, **148**, 1987–2008.

### **2019**

**Winters, A. C.**, L. F. Bosart, and D. Keyser, 2019: Antecedent North Pacific jet regimes conducive to the development of continental U.S. extreme temperature events during the cool season. *Wea. Forecasting*, **34**, 393–414.

**Winters, A. C.**, D. Keyser, and L. F. Bosart, 2019: The development of the North Pacific Jet phase diagram as an objective tool to monitor the state and forecast skill of the upper-tropospheric flow pattern. *Wea. Forecasting*, **34**, 199–219.

### **2018**

Schultz, D. M., L. F. Bosart, B. A. Colle, H. C. Davies, C. Dearden, D. Keyser, P. J. Roebber, O. Martius, W. J. Steenburgh, H. Volkert, and **A. C. Winters**, 2018: Extratropical cyclones: A century of research on meteorology’s centerpiece. *A Century of Progress in Atmospheric and Related Sciences: Celebrating the American Meteorological Society Centennial*, G. McFarquhar, Ed., Amer. Meteor. Soc., 16.1–16.56.

### **2017**

**Winters, A. C.**, and J. E. Martin, 2017: Diagnosis of a North American polar–subtropical jet

superposition employing piecewise potential vorticity inversion. *Mon. Wea. Rev.*, **145**, 1853–1873.

## **2016**

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**Winters, A. C.**, and J. E. Martin, 2016: Synoptic and mesoscale processes supporting vertical superposition of the polar and subtropical jets in two contrasting cases. *Quart. J. Roy. Meteor. Soc.*, **142**, 1133–1149.

## **2014**

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**Winters, A. C.**, and J. E. Martin, 2014: The role of a polar/subtropical jet superposition in the May 2010 Nashville Flood. *Wea. Forecasting*, **29**, 954-974.

## **2013**

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Smith, B. T., T. E. Castellanos, **A. C. Winters**, C. M. Mead, A. R. Dean, and R. L. Thompson, 2013: Measured severe convective wind climatology and associated convective modes of thunderstorms in the contiguous United States, 2003-09. *Wea. Forecasting*, **28**, 229-236.

## **INVITED PRESENTATIONS**

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**Winters, A. C.**, 2020: Composite synoptic-scale environments conducive to North American polar–subtropical jet superposition events. *North Carolina State University Department of Marine, Earth, and Atmospheric Sciences*, Raleigh, NC, 26 October 2020.

**Winters, A. C.**, 2020: The development of a North Pacific jet phase diagram to monitor the upper-tropospheric flow pattern. *Commodity Weather Group Webinar*, Virtual, 20 October 2020.

**Winters, A. C.**, 2020: Composite synoptic-scale environments conducive to North American polar–subtropical jet superposition events. *National Center for Atmospheric Research Mesoscale and Microscale Meteorology Laboratory*, Boulder, CO, 5 March 2020.

**Winters, A. C.**, 2019: Demystifying the tenure-track faculty search: Interviewing and negotiating. *National Center for Atmospheric Research*, Boulder, CO, 26 September 2019.

**Winters, A. C.**, 2019: Antecedent synoptic environments most conducive to North American polar/subtropical jet superpositions. *Stony Brook University School of Marine and Atmospheric Sciences*. Stony Brook, NY, 10 April 2019.

**Winters, A. C.**, 2019: Antecedent synoptic environments conducive to North American polar/subtropical jet superposition events. *Naval Postgraduate School Department of Meteorology*. Monterey, CA, 13 March 2019.

**Winters, A. C.**, 2019: Antecedent synoptic environments conducive to North American polar/subtropical jet superposition events. *University of Colorado Boulder Department of Atmospheric and Oceanic Sciences*. Boulder, CO, 4 March 2019.

**Winters, A. C.**, 2019: Antecedent environments conducive to North American polar/subtropical jet superposition events. *Cornell University Department of Earth and Atmospheric Sciences*. Ithaca, NY, 27 February 2019.

**Winters, A. C.**, 2018: Antecedent synoptic environments most conducive to North American polar/subtropical jet superpositions. *San Jose State Department of Meteorology and Climate Science*. San Jose, CA, 5 December 2018.

- Winters, A. C.**, 2018: Antecedent synoptic environments most conducive to North American polar/subtropical jet superpositions. *Georgia Tech Department of Earth and Atmospheric Sciences*. Atlanta, GA, 15 November 2018.
- Winters, A. C.**, D. Keyser, and L. F. Bosart, 2018: Antecedent synoptic environments most conducive to North American polar/subtropical jet superpositions. *EGU General Assembly*. Vienna, Austria, European Geosciences Union, 11 April 2018.
- Winters, A. C.**, 2018: Antecedent synoptic environments most conducive to North American polar/subtropical jet superpositions. *Penn State Department of Meteorology and Atmospheric Science*, University Park, PA, 28 February 2018.
- Winters, A. C.**, 2017: The development of the North Pacific Jet phase diagram as a tool to characterize the state of the upper-tropospheric flow pattern. *University at Albany, SUNY*, Albany, NY, 20 November 2017.
- Winters, A. C.**, 2017: The development of the North Pacific Jet phase diagram as a tool to characterize the upper-tropospheric flow pattern. *Weather Prediction Center*, College Park, MD, 14 July 2017.
- Winters, A. C.**, 2017: Weather regime-dependent predictability: Antecedent environments conducive to the production of extreme temperature events over the United States, *UW Department of Atmospheric Sciences*, Seattle, WA, 7 April 2017.
- Winters, A. C.**, 2017: Antecedent environments conducive to the production of extreme temperature events over the United States. *OU School of Meteorology*, Norman, OK, 2 March 2017.
- Winters, A. C.**, L. F. Bosart, and D. Keyser, 2016: An investigation of the skill of GFS/GEFS forecasts for two recent extreme weather events. *EMC Global Modeling Branch*, College Park, MD, 18 February 2016.
- Winters, A. C.**, 2014: The Northwest Passage and climate change. *Madison Literary Club*, Madison, WI, 8 December 2014.

## **FIRST-AUTHOR CONFERENCE PRESENTATIONS**

- Winters, A. C.**, 2021: Kinematic processes associated with the formation of anomalously-strong jet streaks over the North Atlantic. *Mesoscale Processes Across Scales: Engaging with Communities in the Physical and Social Sciences*, Virtual, American Meteorological Society, 353. (Poster)
- Winters, A. C.**, 2021: Subseasonal-to-seasonal prediction of the state and evolution of the North Pacific jet stream. *34th Conference on Climate Variability and Change*, Virtual, American Meteorological Society, 775. (Poster)
- Winters, A. C.**, 2020: Subseasonal-to-seasonal prediction of the state and evolution of the North Pacific jet stream. *AGU Fall Meeting*, Virtual, American Geophysical Union, A226-0015. (Poster)
- Winters, A. C.**, 2020: The influence of diabatic heating on the development of two North American jet superposition events. *30th Conference on Weather Analysis and Forecasting/26th Conference on Numerical Weather Prediction*, Boston, MA, American Meteorological Society, 5B.2. (Talk)
- Winters, A. C.**, 2019: The influence of diabatic heating on the development of two North American jet superposition events. *AGU Fall Meeting*, San Francisco, CA, American Geophysical Union, A24J-07. (Talk)



- Winters, A. C., D. Keyser, and L. F. Bosart, 2019:** The role of subsidence during the development of North American polar/subtropical jet superpositions. *19th Cyclone Workshop*, Seon, Bavaria, Germany, 30 September 2019. (Talk)
- Winters, A. C., D. Keyser, and L. F. Bosart, 2019:** Diagnosing the characteristic interaction between the polar and subtropical jet streams during North American jet superposition events. *44th Annual Northeastern Storm Conference*, Saratoga Springs, NY, Lyndon State College, 9 March 2019. (Talk)
- Winters, A. C., D. Keyser, and L. F. Bosart, 2019:** Diagnosing the characteristic interaction between the polar and subtropical jet streams during North American jet superposition events. *32<sup>nd</sup> Conference on Climate Variability and Change*, Phoenix, AZ, American Meteorological Society, 7B.2. (Talk)
- Winters, A. C., L. F. Bosart, and D. Keyser, 2018:** Diagnosing the characteristic interaction between the polar and subtropical jet streams during North American jet superposition events. *AGU Fall Meeting*, Washington, DC, American Geophysical Union, A31N-3130. (Poster)
- Winters, A. C., L. F. Bosart, and D. Keyser, 2018:** The development of the North Pacific Jet Phase Diagram at NCEP-WPC as an objective tool to characterize the upper-tropospheric flow pattern. *8<sup>th</sup> Conference on Transition of Research to Operations*, Austin, TX, American Meteorological Society, 11A.4. (Talk)
- Winters, A. C., D. Keyser, and L. F. Bosart, 2018:** Antecedent synoptic environments most conducive to North American polar/subtropical jet superpositions. *31<sup>st</sup> Conference on Climate Variability and Change*, Austin, TX, American Meteorological Society, 555. (Poster)
- Winters, A. C., D. Keyser, and L. F. Bosart, 2017:** Antecedent synoptic environments most conducive to North American polar/subtropical jet superpositions. *AGU Fall Meeting*, New Orleans, LA, American Geophysical Union, A43I-2585. (Poster)
- Winters, A. C., L. F. Bosart, and D. Keyser, 2017:** A North Pacific Jet Phase Diagram perspective on extreme weather events during 2016–2017: General characteristics. *18<sup>th</sup> Northeast Regional Operational Workshop*, Albany, NY, National Weather Service, A.2. (Talk)
- Winters, A. C., D. Keyser, and L. F. Bosart, 2017:** Discerning the relative importance of polar and tropical upper-tropospheric PV anomalies during North American polar/subtropical jet superpositions. *18<sup>th</sup> Cyclone Workshop*, Sainte Adele, QC, 2 October 2017. (Talk)
- Winters, A. C., L. F. Bosart, and D. Keyser, 2017:** A North Pacific Jet phase diagram perspective on extreme weather events during 2016–2017: General Characteristics. *42<sup>nd</sup> Annual Meeting*, Garden Grove, CA, National Weather Association, C.3. (Poster)
- Winters, A. C., L. F. Bosart, and D. Keyser, 2017:** Weather Regime-Dependent Predictability: The development of the North Pacific Jet Phase Diagram as a tool to characterize the upper-tropospheric flow pattern. *42nd Annual Northeastern Storm Conference*, Saratoga Springs, NY, Lyndon State College, 11 March 2017. (Talk)
- Winters, A. C., D. Keyser, and L. F. Bosart, 2017:** Weather regime-dependent predictability: Antecedent environments conducive to the production of high-impact weather events over the United States. *28<sup>th</sup> Conference on Weather Analysis and Forecasting*, Seattle, WA, American Meteorological Society, 11B.6. (Talk)
- Winters, A. C., L. F. Bosart, and D. Keyser, 2016:** Weather Regime-Dependent Predictability: Sequentially linked high-impact weather events over the United States during March 2016. *AGU Fall Meeting*, San Francisco, CA, American Geophysical Union, A33J-0397. (Poster)

- Winters, A. C.,** L. F. Bosart and D. Keyser, 2016: Weather Regime-Dependent Predictability: Sequentially linked high-impact weather events over the United States during March 2016. *S2S Extremes Workshop*, Palisades, NY, International Research Institute for Climate and Society, 6 December 2016. (Poster)
- Winters, A. C.,** D. Keyser, and L. F. Bosart, 2016: Regime-dependent predictability of extreme weather events: Characteristic regime types. *17<sup>th</sup> Northeast Regional Operational Workshop*, Albany, NY, National Weather Service, A.2. (Talk)
- Winters, A. C.,** L. F. Bosart, and D. Keyser, 2016: Regime-dependent predictability of extreme weather events: Characteristic regime types. *41<sup>st</sup> Annual Meeting*, Norfolk, VA, National Weather Association, 10.5. (Talk)
- Winters, A. C.,** D. Keyser, and L. F. Bosart, 2016: An investigation of the skill of GFS/GEFS forecasts for two recent extreme weather events impacting the eastern United States. *41<sup>st</sup> Northeastern Storm Conference*, Saratoga Springs, NY, WW1.2. (Talk)
- Winters, A. C.,** L. F. Bosart, and D. Keyser, 2016: An investigation of the skill of week two extreme temperature and precipitation forecasts in the context of two recent extreme weather events. *Special Symposium on Seamless Weather and Climate Prediction – Expectations and Limits of Multi-scale Predictability*, New Orleans, LA, American Meteorological Society, 902. (Poster)
- Winters, A. C.,** and J. Martin, 2015: Insights into the development of a jet superposition during the 18–20 December 2009 Mid-Atlantic Blizzard employing piecewise PV inversion. *17<sup>th</sup> Cyclone Workshop*, Pacific Grove, CA, 29 October 2015. (Poster)
- Winters, A. C.,** and G. A. McKinley, 2015: Communicating atmospheric science concepts to K12 students with a rotating tank. *CIRTL Forum 2015*, College Station, TX, Center for the Integration of Research, Teaching, and Learning. (Poster)
- Winters, A. C.,** 2015: Inverting the Sawyer-Eliassen Circulation Equation in a synoptic meteorology lab course at UW-Madison. *24<sup>th</sup> Symposium on Education*, Phoenix, AZ, American Meteorological Society, 5.2. (Talk)
- Winters, A.C.,** and J. Martin, 2014: The production of the vertical superposition of the polar and subtropical jets during the May 2010 Nashville Flood. *27<sup>th</sup> Conference on Severe Local Storms*, Madison, WI, American Meteorological Society, 98. (Poster)
- Winters, A.C.,** and J. Martin, 2014: An investigation of the mechanisms facilitating jet superpositions. *Department Seminar Series*, UW-Madison Dept. of Atmospheric and Oceanic Sciences, 24 March 2014 (Talk)
- Winters, A.C.,** and J. Martin, 2013: Investigation of the dynamical mechanisms facilitating jet superposition during the 2010 Nashville Flood. *16<sup>th</sup> Cyclone Workshop*, Sainte-Adele, QC, 23 September 2013. (Talk)
- Winters, A.C.,** and J. Martin, 2013: The impact of a superposed jet's ageostrophic circulation on the 1-2 May 2010 Nashville flooding event and the implications for a warmer climate. *25<sup>th</sup> Conference on Climate Variability and Change*, Austin, TX, American Meteorological Society, 7B.4. (Talk)
- Winters, A.C.,** 2012: The role of jet superpositions in high-impact weather events: The May 2010 Nashville Flood. *Department Seminar Series*, UW-Madison Dept. of Atmospheric and Oceanic Sciences, 5 December 2012. (Talk)
- Winters, A. C.,** J. Martin, 2011: Planetary-scale influences on the 1-2 May 2010 Tennessee flood event. *AGU Fall Meeting 2011*, San Francisco, CA, American Geophysical Union, A23D-0210. (Poster)
- Smith, B. T., **A. Winters**, C. Mead, A. Dean, and T. Castellanos, 2011: Measured severe convective wind gust climatology of thunderstorms for the contiguous United States,

2003-2009. *Tenth Annual Student Conference*, Seattle, WA, American Meteorological Society, S26. (Poster)

Smith, B. T., **A. Winters**, C. Mead, A. Dean and T. Castellanos, 2010: Measured severe convective wind gust climatology of thunderstorms for the contiguous United States, 2003-2009. *25th Conference on Severe Local Storms*, Denver, CO, American Meteorological Society, 16B.3. (Talk)

## **TECHNICAL SKILLS**

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Experienced and trained in:

- GEMPAK, Python, Matlab, NCL, Linux, Vis5D, WRF, HTML, Microsoft Word/PowerPoint/Excel, Adobe Illustrator

Forecasting experience through participation in the WxChallenge Collegiate Forecast Contest

Experience managing large datasets and analyzing deterministic and ensemble forecast output

## **PROFESSIONAL ORGANIZATIONS**

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American Meteorological Society (2009 – Present)

American Geophysical Union (2016 – Present)