

# ANDREW C. WINTERS

Assistant Professor  
Department of Atmospheric and Oceanic Sciences  
University of Colorado Boulder  
311 UCB, Boulder, CO 80309

P: (303) 735-5775 | E: [andrew.c.winters@colorado.edu](mailto:andrew.c.winters@colorado.edu) | W: <http://acwinters.weebly.com>

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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 Teaching 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

**<sup>a</sup>NSF–AGS Postdoctoral Research Fellow** **Jul. 2017 – Jul. 2019**

Department of Atmospheric and Environmental Sciences

University at Albany, SUNY; Albany, NY

Advisors: 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

**Honors Senior Thesis Participant** **Aug. 2010 – May 2011**

Department of Atmospheric and Oceanic Sciences

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<sup>a</sup> A full list of acronyms with their corresponding definitions is provided on the last page of this CV.

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

**AWARDED GRANTS (\$2,370,945 Total || \$2,198,945 to CU)**

**Department of Energy**

**Sep. 2023 – Aug. 2026**

Office of Biological and Environmental Research  
Title: *Elevated Land Surface Heat Anomalies as Sources of U.S. Summer Hydroclimate Predictability: E3SMv2 Low-Level Jet and Precursor Event Sensitivities*  
Lead PI: Craig Ferguson (UAlbany)  
Institutional PI: **Andrew C. Winters**  
Amount: \$226,943 to CU

**National Science Foundation**

**Sep. 2021 – Aug. 2024**

Division of Atmospheric and Geospace Sciences  
Title: *Collaborative Research: Winter Precipitation Type Research Multi-Scale Experiment (WINTRE-MIX)*  
PI: Katja Friedrich  
Co-PI: **Andrew C. Winters**  
Amount: \$1,837,002 to CU (\$769,768 co-managed by Friedrich/Winters, rest is sub to UIllinois)

**National Aeronautics and Space Administration**

**Sep. 2021 – Aug. 2024**

Future Investigators in NASA Earth and Space Science and Technology (FINESST)  
Title: *Constraining the Atmospheric Drivers of Thwaites Glacier Mass Balance and Implications for Future Sea Level*  
PI: **Andrew C. Winters** (transferred from J. Lenaerts in Sept. 2022)  
Future Investigator: Michelle Maclennan  
Amount: \$135,000 to CU (\$95,553 managed by Winters after transfer)

**<sup>b</sup>National Science Foundation**

**Jul. 2017 – Jun. 2020**

Division of Atmospheric and Geospace Sciences Postdoctoral Research Fellowship  
Title: *Antecedent Remote and Local Synoptic Environments Most Conducive to North American Polar/Subtropical Jet Superpositions*  
PI: **Andrew C. Winters**  
Amount: \$172,000 to Winters

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<sup>b</sup> A. C. Winters was the PI at UAlbany before coming to CU, and no funds were sent to CU after A. C. Winters moved to CU in 2019.

## PENDING GRANTS (\$2,318,397 to CU)

### **National Science Foundation**

est. Jun. 2024 – May 2027

Division of Atmospheric and Geospace Sciences

Title: *Large-Scale Circulation Regimes Conducive to Extreme Temperatures and Winds along the Colorado Front Range*

PI: **Andrew C. Winters**

Co-PIs: John Cassano and Julie Lundquist (CU)

Requested Amount: \$1,325,690 to CU

### **National Science Foundation**

est. Aug. 2024 – Jul. 2029

Division of Atmospheric and Geospace Sciences

Title: *CAREER: Global Characteristics and Future Changes in the Dynamics of Polar–Subtropical Jet Superposition Events*

PI: **Andrew C. Winters**

Requested Amount: \$992,707 to CU

## TEACHING EXPERIENCE

### University of Colorado Boulder

#### *Courses Developed*

Course: ATOC 4890/5890 – Synoptic-Dynamic Meteorology

Fall 2020

#### *Instructor of Record*

Course: ATOC 5050 – Intro. to Atm. Thermodynamics and Dynamics

Fall 2021, 2023

ATOC 1050 – Weather and the Atmosphere

Spring 2021, 2023

ATOC 4890/5890 – Synoptic-Dynamic Meteorology

Fall 2020, 2022

ATOC 4700 – Weather Analysis and Forecasting

Spring 2020, 2022

ATOC 6020 – Special Topics in Atm. & Ocn. Sci.

Spring 2022

#### *Informal Educational Activities*

Leader – ATOC Weekly Weather Discussion

2019 – Present

Local Manager – WxChallenge Collegiate Forecast Competition

2019 – Present

### University at Albany, SUNY

#### *Guest Lecturer*

Course: ATM 317 – Dynamic Meteorology II

Spring 2018; 2019

ATM 210 – Atm. Structure, Thermodynamics, and Circulation

Fall 2018

ATM 631 – Mesoscale Dynamics

Spring 2018

ATM 621 – Structure and Dynamics of Extratropical Cyclones

Spring 2017

ATM 110 – Weather and Climate Issues

Fall 2016

ATM 409/509 – Atmospheric Precipitation Processes

Fall 2016

ATM 400 – Synoptic Meteorology I

Fall 2016

ATM 619 – The Cyclone Workshop Seminar

Spring 2016

### University of Wisconsin – Madison

*Certificate – Delta Program for Teaching and Learning*

2015

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  
AOS 101/100 – Introduction to Weather and Climate

Fall 2013, 2014  
Spring 2012, 2013

*Peer Mentor*

Course: Bradley Roundtable

Fall 2008, Spring 2009

## **STUDENT ADVISING**

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### **University of Colorado Boulder**

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#### *Graduate Students*

Zachary Michael, <i>Ph.D candidate, ATOC</i>	2023 – Present (est. 2027)
<sup>c</sup> Michelle Maclennan, <i>Ph.D candidate, ATOC</i>	2022 – Present (est. 2024)
McKenzie Larson, <i>Ph.D candidate, ATOC</i>	2022 – Present (est. 2027)
Clairisse Reiher, <i>Ph.D candidate, ATOC</i>	2021 – Present (est. 2026)
Rebecca Baiman, <i>Ph.D candidate, ATOC</i>	2020 – Present (est. 2025)

#### *Undergraduate Students*

Christian McGinty, <i>Undergraduate Research Asst.</i>	2023
Seryna Robles, <i>ATOC REU Student, Texas A&amp;M</i>	2023
Sierra Brown, <i>CU SMART Student, Virginia Tech</i>	2023
Eva Ramm, <i>ATOC Internship</i>	2023
Benjamin Danielski, <i>Independent Study</i>	2023
Brody Kuehl, <i>Independent Study</i>	2023
Erica Bortfeldt, <i>Independent Study</i>	2023
Rebecca Torres, <i>ATOC REU Student, UTRGV</i>	2022
Alexandre Collin, <i>Independent Study</i>	2022
McKenzie Larson, <i>Honors Thesis (summa cum laude)</i>	2021 – 2022
Gillian Grasso, <i>Independent Study / UROP</i>	2020 – 2022
Laura Smith, <i>ATOC REU Student, MSU Denver</i>	2021
Elyse Hawkins, <i>Independent Study / UROP</i>	2019 – 2020
David Rosencrans, <i>Independent Study</i>	2019 – 2020

#### *High School Students*

Clayton Malott, <i>Volunteer Research Asst.</i>	2022
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#### *Student Committee Membership*

Sydney Kramer, Ph.D., <i>University of Colorado Boulder</i>	2023 – Present
Ethan Murray, Ph.D., <i>University of Colorado Boulder</i>	2023 – Present
Zhixing Xie, Ph.D., <i>University of Colorado Boulder</i>	2023 – Present
Joey Taylor, Ph.D., <i>University of Colorado Boulder</i>	2023 – Present
Nathan Agarwal, Ph.D., <i>University of Colorado Boulder</i>	2023 – Present
Andrew Kumler, Ph.D., <i>University of Colorado Boulder</i>	2022 – Present
Mikell Warms, Ph.D., <i>University of Colorado Boulder</i>	2022 – Present
Timothy Higgins, Ph.D., <i>University of Colorado Boulder</i>	2022 – Present
David Rosencrans, Ph.D., <i>University of Colorado Boulder</i>	2022 – Present
Tyler Leicht, Ph.D., <i>University at Albany, SUNY</i>	2021 – Present
Rory Laiho, Ph.D., <i>University of Colorado Boulder</i>	2020 – Present

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<sup>c</sup> M. Maclennan transferred into the group following the departure of J. Lenaerts from CU in Sept. 2022.

Brennan Dettmann, M.S., <i>University of Colorado Boulder</i>	2023
Sean Butters, B.A., <i>University of Colorado Boulder (Honors Thesis)</i>	2022
Leann Anthony, M.S., <i>Plymouth State University</i>	2020

*Student Awards and Fellowships*

Zachary Michael, <i>NSF Graduate Research Fellowship</i>	2023
Rebecca Baiman, <i>Best Oral Presentation (36<sup>th</sup> Conf. on Clim. Var. &amp; Change)</i>	2023
Michelle MacLennan, <i>Best Student Presentation (WAIS Workshop)</i>	2022
McKenzie Larson, <i>DOE Computer Science Graduate Fellowship (Accepted)</i>	2022
McKenzie Larson, <i>NSF Graduate Research Fellowship (Declined)</i>	2022
McKenzie Larson, <i>AMS Graduate Fellowship (Accepted)</i>	2022
Clairisse Reiher, <i>CU Boulder Devaney Fellowship</i>	2021
Rebecca Baiman, <i>Best “Ice Sheet” Presentation (ATOC Poster Conference)</i>	2021

**University at Albany, SUNY**

*Graduate Students*

Eli Turasky, M.S.	2018 – 2019
Co-advised with Lance F. Bosart and Daniel Keyser	
Current: Meteorological Developer, Everstream Analytics	

*Undergraduate Students*

Jessica Blair, Honors Senior Thesis	2018 – 2019
Co-advised with Ross A. Lazear	
Current: Research Associate, NWS Warning Decision Training Branch	

**PROFESSIONAL SERVICE**

**National / International**

<b>Co-Organizer</b> , Cyclone Workshop	est. 2024
<b>Co-Organizer</b> , 2nd Antarctic Atmospheric River Workshop	2023
<b>Participant</b> , NOAA–Hazardous Weather Testbed Spring Experiment	2017, 2021, 2022
<b>Participant</b> , Early Career Geoscience Faculty Workshop	2021
<b>Member</b> , AMS Weather and Forecasting STAC Committee	2020 – Present
<b>Associate Editor</b> , <i>Monthly Weather Review</i>	2018 – Present
<b>Member</b> , AMS WAF/NWP Conference Planning Committee	2018 – 2022
<b>Member</b> , Cyclone Workshop Science Committee	2016 – 2017
<b>Participant</b> , AGU Congressional Visit Day	2016
<b>Reviewer</b>	2016 – Present
Journals: <i>Journal of Atmospheric Science</i> ; <i>Monthly Weather Review</i> ; <i>Journal of Applied Meteorology and Climatology</i> ; <i>Quarterly Journal of the Royal Meteorological Society</i> ; <i>Climate Research</i> ; <i>Weather and Forecasting</i> ; <i>Journal of Geophysical Research: Atmospheres</i> ; <i>Weather, Climate, and Society</i> ; <i>Journal of Climate</i> ; <i>npj Climate and Atmospheric Science</i> ; <i>Weather and Climate Dynamics</i> ; <i>Frontiers in Earth Science</i> ; <i>Bulletin of the American Meteorological Society</i> ; <i>Geophysical Research Letters</i>	
Funding Agencies: NOAA, NSF, NASA, Swiss National Science Foundation, Israel National Science Foundation	
<b>Judge</b> , AMS/AGU Student Poster Competitions	2016 – 2023
<b>Conference Session Chair</b>	2015 – 2023
<i>Cyclone Workshop</i> ; <i>AMS Annual Meeting</i> ; <i>AMS WAF/NWP Conference</i>	

## University of Colorado Boulder

<b>Faculty Advisor</b> , AMS Student Chapter	2022 – Present
<b>Member/Chair</b> , ATOC Colloquium Committee	2019 – Present
<b>Reviewer</b> , ATOC Graduate Admissions Committee	2019 – Present
<b>Member</b> , Personnel Committee for ATOC Assistant Teaching Professor	2022
<b>Participant</b> , Introductory Leadership Workshop, LEAP program	2022
<b>Member</b> , CU Research Computing and CRDDS Focus Group	2021
<b>Member</b> , ATOC Curriculum Committee	2020 – 2022
<b>Member/Chair</b> , ESSS Poster Conference Planning Committee	2019 – 2022
<b>Member</b> , ATOC Chair Search Committee	2020

## University at Albany, SUNY

<b>Co-Chair</b> , DAES/ASRC Departmental Seminar Series	2018 – 2019
<b>Facilitator</b> , Cyclone Research Group	2016 – 2019

## University of Wisconsin–Madison

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

## OUTREACH EXPERIENCE

<b>Westminster 7:10 Rotary Club</b> Westminster, CO Presented on the status of western U.S. drought.	<b>Aug. 2021</b>
<b>Panelist</b> Boulder, CO Served on a panel focused on applying and interviewing for academic faculty positions.	<b>May 2021</b>
<b>Local School Visits</b> Madison, WI Presented on weather systems at 6 area middle schools and high schools.	<b>Mar. 2014 – Jun. 2015</b>
<b>Local Science Festivals</b> Madison, WI Presented on the dynamics of weather systems at 4 different science festivals.	<b>Apr. 2012 – Apr. 2015</b>
<b>CIMSS Student Summer Workshop</b> Madison, WI Presented a weather briefing for the annual student workshop.	<b>Jun. 2013; 2014; 2015</b>
<b>CIMSS Climate Digest</b> Madison, WI Provided narration for climate summary videos produced as part of the EarthNow project.	<b>Jun. 2014 – Mar. 2015</b>
<b>Aldo Leopold Nature Center</b> Monona, WI Developed weather-related activities for visitors to the Aldo Leopold Nature Center.	<b>Oct. 2013; 2014</b>

**Madison Middle School Science Symposium**  
Madison, WI

**Dec. 2012 – Apr. 2013**

Mentored three 6<sup>th</sup> grade students on a science project for the annual science symposium.

## **INTERVIEWS**

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<b>USA Today</b> National	<b>2023</b>
<i>“How Deion Sanders thrived in first Colorado winter despites concerns about cold, snow”, B. Schrotenboer</i>	
<b>CU Boulder Today</b> Boulder, CO	<b>2022</b>
<i>“It’s been unusually windy this spring. Here’s why you should care”, K. Simpkins</i>	
<b>KGNU Community Radio</b> Boulder, CO	<b>2021</b>
<i>“The science behind windstorms”, S. Young</i>	
<b>The Whit Online, Rowan University</b> Glassboro, NJ	<b>2020</b>
<i>“National researchers explain South Jersey’s mild winter”, C. Connors</i>	
<b>Daily Cardinal, UW–Madison</b> Madison, WI	<b>2013</b>
<i>“Discovery of superposed jets may lead to better forecasting”, Z. Zhang</i>	
<b>UW–Madison Communications</b> Madison, WI	<b>2011</b>
<i>“Global winds could explain record rains, tornadoes”, D. Tenenbaum</i>	

## **AWARDS / HONORS**

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<b>ATOC Service Award</b> Recognized for developing weekly weather discussions	<b>2023</b>
<b>ATOC Service Award</b> Recognized for contributions to the department colloquium and ATOC REU program	<b>2022</b>
<b>American Meteorological Society Editor’s Award</b> <i>Monthly Weather Review</i>	<b>2022</b>
<b>Best Graduate Student Poster</b> 5 <sup>th</sup> Annual UW–Madison Atmospheric and Oceanic Sciences Poster Session	<b>2015</b>
<b>UW–Madison Campus-Wide Teaching Assistant Award</b> Innovation in Instruction	<b>2014</b>
<b>Honorable Mention Graduate Student Poster</b> 4 <sup>th</sup> Annual UW–Madison Atmospheric and Oceanic Sciences Poster Session	<b>2014</b>
<b>Wahl Award for Excellence as a Teaching Assistant</b> UW–Madison Department of Atmospheric and Oceanic Sciences	<b>2013</b>

<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

Publications in Preparation (5 total; 0 led by Winters as first-author; 3 led by student advisees):

<sup>1</sup> – Winters as primary advisor for student/postdoc || <sup>2</sup> – Winters as secondary advisor or committee member for student/postdoc

- [24] <sup>1</sup>**Baiman, R. L., A. C. Winters**, B. Pohl, V. Favier, J. D. Wille, and K. R. Clem: Discriminators of Antarctic atmospheric river environments. In preparation.
- [23] Wille, J. D., B. Pohl, V. Favier, **A. C. Winters**, S. Cavallo, C. L. dos Santos, <sup>1</sup>**R. Baiman**, K. Clem, D. G. Udy, T. R. Vance, I. Gorodetskaya, F. Codron, and A. Berchet: Examining atmospheric river life cycles in east Antarctica. In preparation.
- [22] <sup>2</sup>**Higgins, T. B.**, A. Subramanian, W. Chapman, D. Lavers, and **A. C. Winters**: Subseasonal potential predictability of horizontal vapor transport and precipitation extremes in the North Pacific. In preparation.
- [21] Morales, A., M. J. Molina, B. Moore, W. Rudisill, <sup>1</sup>**R. Baiman**, **A. C. Winters**, A. Flores, M. Hughes, and K. Mahoney: Connecting large-scale weather patterns to simulated precipitation in the East River intermountain valley of Colorado. In preparation.
- [20] <sup>2</sup>**Laiho, R.**, K. Friedrich, and **A. C. Winters**: Synoptic-scale meteorological patterns associated with heavy rainfall in the Minnesota region. In preparation.

Publications in Review (2 total; 0 led by Winters as first-author; 2 led by student advisees):

<sup>1</sup> – Winters as primary advisor for student/postdoc || <sup>2</sup> – Winters as secondary advisor or committee member for student/postdoc

- [19] <sup>1</sup>**Larson, M. L., A. C. Winters**, and P. T. Schlatter, 2023: Downslope wind verification of the National Blend of Models across the northern Front Range of Colorado. *J. Operational Meteorology*, [accepted pending revisions].
- [18] <sup>1</sup>**Reiher, C. A.** and **A. C. Winters**, 2023: Discriminating factors that favor the development of high-impact weather events in association with polar–subtropical jet superpositions. *Mon. Wea. Rev.* [accepted pending revisions].

Publications at CU (10 total; 6 led by Winters as first-author; 3 led by student advisees):

<sup>1</sup> – Winters as primary advisor for student/postdoc || <sup>2</sup> – Winters as secondary advisor or committee member for student/postdoc

\*\* – Manuscript selected as a highlight paper by journal

- 2023:** [17] Minder, J. R., N. Bassill, F. Fabry, J. R. French, K. Friedrich, I. Gultepe, J. Gyakum, D. E. Kingsmill, K. Kosiba, M. Lachapelle, D. Michelson, L. Nichman, C. Nguyen, J. M. Thériault, **A. C. Winters**, M. Wolde, J. Wurman, 2023: P-type processes and



- predictability: The Winter Precipitation Type Research Multiscale Experiment (WINTRE-MIX). *Bull. Amer. Meteor. Soc.* [accepted], <https://doi.org/10.1175/BAMS-D-22-0095.1>.
- [16] <sup>1</sup>**Baiman, R. L., A. C. Winters**, J. T. M. Lenaerts, C. A. Shields, 2023: Synoptic drivers of atmospheric river induced precipitation near Dronning Maud Land, Antarctica. *J. Geophys. Res. Atmos.*, **128**, e2022JD037859, <https://doi.org/10.1029/2022JD037859>.
- [15] <sup>\*\*1</sup>**Maclennan, M. L.**, J. T. M. Lenaerts, C. A. Shields, A. O. Hoffman, N. Wever, M. Thompson-Munson, **A. C. Winters**, E. C. Pettit, T. A. Scambos, and J. D. Wille, 2023: Climatology and surface impacts of atmospheric rivers on West Antarctica. *The Cryosphere*, **17**, 865–881, <https://doi.org/10.5194/tc-17-865-2023>.
- [14] <sup>2</sup>**Laiho, R.**, K. Friedrich, and **A. C. Winters**, 2023: Characteristics of warm season heavy rainfall in Minnesota. *Wea. Forecasting*, **38**, 163–177, <https://doi.org/10.1175/WAF-D-21-0186.1>.
- 2022: [13] **Winters, A. C.** and H. E. Attard, 2022: North Pacific and North Atlantic jet covariability and its relationship to cool season temperature and precipitation extremes. *Wea. Forecasting*, **37**, 1581–1600, <https://doi.org/10.1175/WAF-D-21-0203.1>.
- [12] **Winters, A. C.** and C. L. Walker, 2022: A jet-centered framework for investigating High Plains winter storm severity, *J. Appl. Meteor. Climatology*, **61**, 709–728, <https://doi.org/10.1175/JAMC-D-21-0211.1>.
- 2021: [11] **Winters, A. C.**, 2021b: Subseasonal prediction of the state and evolution of the North Pacific jet stream, *J. Geophys. Res. Atmos.*, **126**, e2021JD035094, <https://doi.org/10.1029/2021JD035094>.
- [10] **Winters, A. C.**, 2021a: Kinematic processes contributing to the intensification of anomalously strong North Atlantic jets. *Quart. J. Roy. Meteor. Soc.*, **147**, 2506–2532, <https://doi.org/10.1002/qj.4037>.
- 2020: [09] **Winters, A. C.**, D. Keyser, and L. F. Bosart, 2020b: Composite vertical-motion patterns near North American polar–subtropical jet superposition events. *Mon. Wea. Rev.*, **148**, 4565–4585, <https://doi.org/10.1175/MWR-D-20-0140.1>.
- [08] **Winters, A. C.**, D. Keyser, L. F. Bosart, and J. E. Martin, 2020a: Composite synoptic-scale environments conducive to North American polar–subtropical jet superposition events. *Mon. Wea. Rev.*, **148**, 1987–2008, <https://doi.org/10.1175/MWR-D-19-0353.1>.

Publications prior to CU (7 total; 5 led by Winters as first-author):

- [07] **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, <https://doi.org/10.1175/WAF-D-18-0168.1>.
- [06] **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, <https://doi.org/10.1175/WAF-D-18-0106.1>.
- [05] Schultz, D. M., L. F. Bosart, B. A. Colle, H. C. Davies, C. Dearden, D. Keyser, O. Martius, P. J. Roebber, W. J. Steenburgh, H. Volkert, and **A. C. Winters**, 2019: 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, <https://doi.org/10.1175/AMSMONOGRAPHS-D-18-0015.1>.
- [04] **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, <https://doi.org/10.1175/MWR-D-16-0262.1>.
- [03] **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, <https://doi.org/10.1002/qj.2718>.
- [02] **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, <https://doi.org/10.1175/WAF-D-13-00124.1>.
- [01] 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, <https://doi.org/10.1175/WAF-D-12-00096.1>.

## **NON-REFEREED PUBLIC DATASETS**

<sup>1</sup> – Winters as primary advisor for student/postdoc || <sup>2</sup> – Winters as secondary advisor or committee member for student/postdoc

- [07] **Winters, A. C.**, J. R. Minder, B. Han, J. M. Theriault, M. Lachapelle, J. Gyakum, J. Wray, and <sup>1</sup>**R. Baiman**, 2022: WINTRE-MIX field collected sounding data. Version 4.0 [Data set]. UCAR/NCAR-Earth Observing Laboratory, <https://doi.org/10.26023/DN6Q-VKKE-V002>.
- [06] Lachapelle, M., B. Han, J. R. Minder, **A. C. Winters**, <sup>1</sup>**R. Baiman**, J. M. Theriault, J. Gyakum, and J. Wray, 2022: WINTRE-MIX: Manual hydrometeor photographs dataset. Version 1.0 [Data set]. UCAR/NCAR-Earth Observing Laboratory, <https://doi.org/10.26023/D0SE-720B-K60J>.
- [05] Han, B., J. R. Minder, **A. C. Winters**, <sup>1</sup>**R. Baiman**, J. M. Theriault, M. Lachapelle, J. Gyakum, J. Wray, 2022: WINTRE-MIX: Manual hydrometeor observation reports. Version 1.0 [Data set]. UCAR/NCAR-Earth Observing Laboratory, <https://doi.org/10.26023/68S9-0EBB-5A0D>.
- [04] **Winters, A. C.**, 2022: Subseasonal forecasts of the state and evolution of the North Pacific jet stream [Data set]. University of Colorado Boulder, <https://doi.org/10.25810/787V-6N17>.
- [03] **Winters, A. C.**, 2021: Anomalously-strong jet streaks in the NCEP Climate Forecast System Reanalysis over North America and the North Atlantic during 1979–2018 [Data set]. University of Colorado Boulder, <https://doi.org/10.25810/55W4-4A03>.
- [02] **Winters, A. C.**, 2021: The state of the North Pacific jet and North Atlantic jet in the context of their two leading modes of variability [Data set]. University of Colorado Boulder, <https://doi.org/10.25810/CKN0-GP39>.
- [01] **Winters, A. C.**, 2020: North American jet superposition events within the NCEP Climate Forecast System Reanalysis Dataset during November–March 1979–2010 [Data set]. University of Colorado Boulder, <https://doi.org/10.25810/tscc-2k05>.

## **INVITED SEMINARS (10 while at CU)**

<sup>1</sup> – Winters as primary advisor for student or postdoc || <sup>2</sup> – Winters as secondary advisor or committee member for student or postdoc

- [24] **Winters, A. C.**, 2024: Current and future perspectives on North American polar-subtropical jet superposition events. *Daniel Keyser Symposium: A Celebration of Synoptic-Dynamic*

- Meteorology, Past, Present, and Future*, Baltimore, MD, American Meteorological Society, 29 January 2024 (upcoming).
- [23] **Winters, A. C.**, 2023: Regime-dependent predictability of cold season precipitation events in the St. Lawrence River Valley. *University of Michigan Department of Climate and Space Sciences and Engineering*, Ann Arbor, MI, 2 November 2023 (upcoming).
- [22] **Winters, A. C.** and **C. A. Reiher**, 2023: Linkages between the structure and evolution of the upper-tropospheric jet streams and high-impact weather events. *Commodity Weather Group*, Virtual, 26 September 2023 (upcoming).
- [21] **Winters, A. C.**, 2022: Subseasonal prediction of the state and evolution of the North Pacific jet stream. *NOAA Physical Sciences Laboratory*, Boulder, CO, 8 November 2022.
- [20] **Winters, A. C.**, 2022: Subseasonal prediction of the state and evolution of the North Pacific jet stream. *NCAR ASP Summer Colloquium Workshop*, Boulder, CO, 14 July 2022.
- [19] **Winters, A. C.**, 2021: The development of a North Pacific jet phase diagram to monitor the upper-tropospheric flow pattern. *NCEP Weather Prediction Center*, Virtual, 19 October 2021.
- [18] **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*, Virtual, 26 October 2020.
- [17] **Winters, A. C.**, 2020: The development of a North Pacific jet phase diagram to monitor the upper-tropospheric flow pattern. *Commodity Weather Group*, Virtual, 20 October 2020.
- [16] **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.
- [15] **Winters, A. C.**, 2019: Demystifying the tenure-track faculty search: Interviewing and negotiating. *National Center for Atmospheric Research*, Boulder, CO, 26 September 2019.
- [14] **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.
- [13] **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.
- [12] **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.
- [11] **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.
- [10] **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.
- [09] **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.
- [08] **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.

- [07] **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.
- [06] **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.
- [05] **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.
- [04] **Winters, A. C.**, 2017: Weather regime-dependent predictability: Antecedent environments conducive to the production of extreme temperature events over the United States, *University of Washington Department of Atmospheric Sciences*, Seattle, WA, 7 April 2017.
- [03] **Winters, A. C.**, 2017: Antecedent environments conducive to the production of extreme temperature events over the United States. *University of Oklahoma School of Meteorology*, Norman, OK, 2 March 2017.
- [02] **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.
- [01] **Winters, A. C.**, 2014: The Northwest Passage and climate change. *Madison Literary Club*, Madison, WI, 8 December 2014.

## NON-REFEREED CONFERENCE PRESENTATIONS WHILE AT CU

<sup>1</sup> – Winters as primary advisor for student or postdoc || <sup>2</sup> – Winters as secondary advisor or committee member for student or postdoc

- [41] Minder, J. R., N. P. Bassill, F. Fabry, J. R. French, K. Friedrich, I. Gultepe, J. Gyakum, K. A. Kosiba, M. Lachapelle, D. Michelson, L. Nichman, C. Nguyen, J. M. Thériault, **A. C. Winters**, M. Wolde, and J. Wurman, 2023: P-type processes and predictability: A case study from the Winter Precipitation Type Research Multiscale Experiment (WINTRE-MIX). *32nd Conference on Weather Analysis and Forecasting*, Madison, WI, American Meteorological Society, J7.6. (Talk)
- [40] **Winters, A. C.**, N. P. Bassill, J. R. Gyakum, and J. R. Minder, 2023: Regime-dependent predictability of cold season precipitation events in the St. Lawrence River Valley. *32nd Conference on Weather Analysis and Forecasting*, Madison, WI, American Meteorological Society, J3.4. (Talk)
- [39] <sup>1</sup>**Reiher, C. A.** and **A. C. Winters**, 2023: Synoptic-scale predictability of two near-freezing precipitation events during the WINTRE-MIX field campaign. *28th Conference on Numerical Weather Prediction*, Madison, WI, American Meteorological Society. (Poster)
- [38] <sup>2</sup>**Lojko, A.**, **A. C. Winters**, C. Jablonowski, and A. Payne, 2023: The role of North American convective storms on jet stream dynamics: A negative potential vorticity perspective. *20th Conference on Mesoscale Processes*, Madison, WI, American Meteorological Society. (Poster)
- [37] <sup>1</sup>**Maclennan, M. L.**, A. C. Winters, C. A. Shields, J. D. Wille, R. Thaker, L. Barthelemy, F. Codron, V. Favier, and B. Markle, 2023: Antarctic atmospheric rivers in past and future climates. *2nd Antarctic Atmospheric River Workshop*, Boulder, CO, 28 June 2023. (Talk)
- [36] <sup>1</sup>**Baiman, R. L.**, A. C. Winters, B. Pohl, V. Favier, J. Wille, and K. Clem, 2023: Discriminators of Antarctic atmospheric river environments. *2nd Antarctic Atmospheric River Workshop*, Boulder, CO, 27 June 2023. (Talk)

- [35] <sup>1</sup>**Maclennan, M. L., A. C. Winters**, C. Shields, J. Wille, R. Baiman, L. Barthelemy, V. Favier, 2023: Antarctic atmospheric rivers in the past and future climates. *EGU General Assembly*, Vienna, Austria, European Geosciences Union, CR7.3. (Talk)
- [34] <sup>2</sup>**Lojko, A., A. C. Winters**, C. Jablonowski, and A. Payne, 2023: The role of North American convective storms on jet stream dynamics: A negative potential vorticity perspective. *EGU General Assembly*, Vienna, Austria, European Geosciences Union, AS1.17. (Poster)
- [33] **Winters, A. C.** and H. E. Attard, 2023: North Pacific and North Atlantic jet covariability and its relationship to cool season temperature and precipitation extremes. *36<sup>th</sup> Conference on Climate Variability and Change*, Denver, CO, American Meteorological Society, 6B.4. (Talk)
- [32] Friedrich, K., J. R. Minder, J. Wurman, K. A. Kosiba, J. R. French, D. E. Kingsmill, **A. C. Winters**, N. P. Bassill, J. M. Thériault, and J. Gyakum, 2023: Variability of mesoscale cloud and precipitation structures during near-freezing surface conditions using ground-based radar observations from WINTRE-MIX. *Third Symposium on Mesoscale Processes*, Denver, CO, American Meteorological Society. (Poster)
- [31] <sup>2</sup>**Laiho, J. R.**, K. Friedrich, and **A. C. Winters**, 2023: Self-organizing map analysis of mesoscale conditions associated with heavy rainfall in Minnesota. *Third Symposium on Mesoscale Processes*, Denver, CO, American Meteorological Society. (Poster)
- [30] <sup>1</sup>**Larson, M.**, C. A. Shields, G. A. Meehl, **A. C. Winters**, A. Morales, and A. C. Subramanian, 2023: Present and future climate sensitivity studies of downslope winds in Boulder, Colorado. *Third Symposium on Mesoscale Processes*, Denver, CO, American Meteorological Society, 8.4. (Talk)
- [29] Minder, J. R., N. P. Bassill, F. Fabry, J. R. French, K. Friedrich, I. Gultepe, J. Gyakum, D. E. Kingsmill, K. A. Kosiba, M. Lachapelle, D. Michelson, L. Nichman, C. Nguyen, J. M. Thériault, **A. C. Winters**, M. Wolde, and J. Wurman, 2023: P-type processes and predictability: The Winter Precipitation Type Research Multiscale Experiment (WINTRE-MIX). *Third Symposium on Mesoscale Processes*, Denver, CO, American Meteorological Society, 4.1. (Talk)
- [28] Mazza, E., S. S. Chen, B. W. Kerns, and **A. C. Winters**, 2023: Multiscale interactions of the MJO-jet stream-atmospheric rivers and their influence on western US rainfall. *11<sup>th</sup> Symposium on the Madden-Julian Oscillation and Sub-Seasonal Monsoon Variability*, Denver, CO, American Meteorological Society. (Poster)
- [27] Girouard, M., M. Lachapelle, J. M. Thériault, I. Gultepe, J. R. Minder, and **A. C. Winters**, 2023: Microphysical and mesoscale processes for an ice pellet and freezing rain storm during the 2022 WINTRE-MIX field campaign in southern Quebec, Canada. *Third Symposium on Mesoscale Processes*, Denver, CO, American Meteorological Society. (Poster)
- [26] <sup>2</sup>**Higgins, T.**, A. C. Subramanian, W. E. Chapman, D. Lavers, and **A. C. Winters**, 2023: Assessing the potential predictability of North Pacific winter IVT and precipitation extremes in subseasonal to seasonal forecasts. *37<sup>th</sup> Conference on Hydrology*, Denver, CO, American Meteorological Society. (Poster)
- [25] <sup>1</sup>**Reiher, C. A.** and **A. C. Winters**, 2023: An analysis of North American polar-subtropical jet superpositions that coincide with high-impact weather events. *36<sup>th</sup> Conference on Climate Variability and Change*, Denver, CO, American Meteorological Society, 6B.5. (Talk)
- [24] Fagerson, A., K. Friedrich, K. A. Kosiba, **A. C. Winters**, J. Wurman, J. R. Minder, J. M. Thériault, and J. Gyakum, 2023: Airflow dynamics during a mixed-phase winter

- precipitation event using radar observations from WINTRE-MIX. *Third Symposium on Mesoscale Processes*, Denver, CO, American Meteorological Society. (Poster)
- [23] Beaty, P., J. E. Martin, **A. C. Winters**, and G. M. Lackmann, 2023: A PV inversion based diagnosis of an unusual case of rapid cyclogenesis in the northeast Pacific basin. *Third Symposium on Mesoscale Processes*, Denver, CO, American Meteorological Society, 576. (Poster)
- [22] <sup>1</sup>**Baiman, R.**, B. Pohl, **A. C. Winters**, J. Wille, V. Favier, and K. Clem, 2023: A circumpolar view of synoptic drivers of atmospheric rivers reaching Antarctica. *36<sup>th</sup> Conference on Climate Variability and Change*, Denver, CO, American Meteorological Society, J9B.2. (Talk)
- [21] <sup>2</sup>**Lojko, A.**, C. Jablonowski, A. E. Payne, and **A. C. Winters**, 2022: The role of severe thunderstorm jet streaks over North America on the intensification of atmospheric rivers in the Euro-Atlantic. *AGU Fall Meeting*, Chicago, IL, American Geophysical Union, A45O-2065. (Poster)
- [20] <sup>1</sup>**Larson, M.**, C. A. Shields, G. Meehl, **A. C. Winters**, A. Morales, A. C. Subramanian, 2022: Present and future climate sensitivity studies of downslope winds in Boulder, Colorado, *AGU Fall Meeting*, Chicago, IL, American Geophysical Union, A55P-1332. (Poster)
- [19] <sup>2</sup>**Maclennan, M. L.**, J. T. M. Lenaerts, J. Wille, C. A. Shields, **A. C. Winters**, L. Barthelemy, F. Codron, V. Favier, 2022: Antarctic atmospheric rivers in the past and future climates. *WAIS Workshop*, Estes Park, CO. (Talk)
- [18] **Winters, A. C.**, 2022: Kinematic processes contributing to the intensification of anomalously-strong North Atlantic jets. *EMS Annual Meeting 2022*, Bonn, Germany, European Meteorological Society, EMS2022-298. (Talk)
- [17] Minder, J. R., J. R. French, K. Friedrich, D. E. Kingsmill, **A. C. Winters**, N. P. Bassill, and B. Han, 2022: Orographic influences of precipitation type in the Champlain and Saint Lawrence Valleys during the WINTRE-MIX field campaign. *20th Conference on Mountain Meteorology*, Park City, UT, American Meteorological Society, 6.2. (Talk)
- [16] <sup>1</sup>**Baiman, R.**, **A. C. Winters**, J. Lenaerts, and C. A. Shields, 2022: Synoptic drivers of landfalling atmospheric rivers near Dronning Maud Land, Antarctica. *17th Conference on Polar Meteorology and Oceanography*, Madison, WI, American Meteorological Society. (Talk)
- [15] French, J. R., D. E. Kingsmill, C. Nguyen, L. Nichman, M. Wolde, J. R. Minder, K. Friedrich, **A. C. Winters**, N. P. Bassill, S. DiVito, B. Bernstein, and S. D. Landolt, 2022: Airborne observations of super-cooled drizzle and secondary ice production during WINTRE-MIX. *16th Conference on Cloud Physics*, Madison, WI, American Meteorological Society. (Talk).
- [14] <sup>1</sup>**Baiman, R.**, **A. C. Winters**, J. Lenaerts, and C. A. Shields, 2022: Synoptic drivers of landfalling atmospheric rivers near Dronning Maud Land, Antarctica. *EGU General Assembly*, Vienna, Austria, European Geosciences Union, CR7.2. (Talk)
- [13] Friedrich, K., J. Minder, J. Wurman, K. Kosiba, J. French, D. Kingsmill, **A. C. Winters**, N. Bassill, J. Theriault, and J. Gyakum, 2022: Variability of mesoscale cloud and precipitation structures during near-freezing surface conditions using ground-based radar observations from WINTRE-MIX. *11th European Conference on Radar in Meteorology and Hydrology*, Locarno, Switzerland. (Talk)
- [12] **Winters, A. C.**, and C. L. Walker, 2022: A jet-centered framework for examining synoptic environments conducive to High Plains winter weather events. *31st Conference on*

- Weather Analysis and Forecasting/27th Conference on Numerical Weather Prediction*, Houston, TX, American Meteorological Society, 2.2. (Talk)
- [11] Minder, J. R., N. Bassill, J. R. French, K. Friedrich, D. E. Kingsmill, C. Nguyen, L. Nichman, and **A. C. Winters**, 2022: An overview of the Winter Precipitation Type Research Multi-Scale Experiment (WINTRE-MIX). *19th Conference on Mesoscale Processes*, Houston, TX, American Meteorological Society. (Poster)
- [10] <sup>2</sup>**Laiho, R.**, K. Friedrich, and **A. C. Winters**, 2022: Characteristics of warm season heavy rainfall in Minnesota. *26th Conference on Applied Climatology*, Houston, TX, American Meteorological Society. (Poster).
- [09] <sup>1</sup>**Baiman, R.**, **A. C. Winters**, J. Lenaerts, and C. A. Shields, 2021: Synoptic categorization of landfalling atmospheric rivers near Dronning Maud Land, Antarctica using self-organizing maps. *AGU Fall Meeting*, New Orleans, LA, American Geophysical Union, (Poster).
- [08] **Winters, A. C.**, 2021: Subseasonal prediction of the North Pacific jet stream and implications for high-latitude blocking. *Atmospheric Blocking Workshop: Dynamics and Processes*, Virtual, Waves to Weather Program (Talk)
- [07] Attard, H. E., and **A. C. Winters**, 2021: Stratospheric and upper-tropospheric interactions prior to multiple nor'easters in March 2018, *34th Conference on Climate Variability and Change*, Virtual, American Meteorological Society, 750. (Poster)
- [06] **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)
- [05] **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)
- [04] **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)
- [03] **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)
- [02] **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)
- [01] **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)

## FIRST-AUTHOR CONFERENCE PRESENTATIONS PRIOR TO CU

- [28] **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)
- [27] **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)
- [26] **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)
- [25] **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)
- [24] **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)
- [23] **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)
- [22] **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)
- [21] **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)
- [20] **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)
- [19] **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. *42<sup>nd</sup> Annual Northeastern Storm Conference*, Saratoga Springs, NY, Lyndon State College, 11 March 2017. (Talk)
- [18] **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)
- [17] **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)
- [16] **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)
- [15] **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)



- [14] **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)
- [13] **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)
- [12] **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)
- [11] **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)
- [10] **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)
- [09] **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)
- [08] **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)
- [07] **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)
- [06] **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)
- [05] **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)
- [04] **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)
- [03] **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)
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## **PROFESSIONAL AFFILIATIONS**

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American Meteorological Society (2009 – Present)

American Geophysical Union (2016 – Present)

## **ACRONYM LEGEND**

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AGU: American Geophysical Union

AGS: Atmospheric and Geospace Sciences

AMS: American Meteorological Society

ASP: Advanced Study Program

ASRC: Atmospheric Science Research Center

ATOC: Department of Atmospheric and Oceanic Sciences

CIMSS: Cooperative Institute for Meteorological Satellite Studies

CRDDS: Center for Research Data and Digital Scholarship

CU: University of Colorado

DAES: Department of Atmospheric and Environmental Sciences

DOE: Department of Energy

EGU: European Geophysical Union

EMC: Environmental Modeling Center

EMS: European Meteorological Society

ESSS: Earth System and Space Science

LEAP: Leadership Education for Advancement and Promotion

MSU: Metropolitan State University

NASA: National Aeronautics and Space Administration

NCAR: National Center for Atmospheric Research

NCEP: National Centers for Environmental Prediction

NOAA: National Oceanic and Atmospheric Administration

NSF: National Science Foundation

NWP: Numerical Weather Prediction

REU: Research Experiences for Undergraduates

SMART: Summer Multicultural Access to Research Training Program

STAC: Science and Technological Activities Commission

SUNY: State University of New York

UAlbany: University at Albany, SUNY

UROP: Undergraduate Research Opportunities Program

UTRGV: University of Texas Rio Grande Valley

UW: University of Wisconsin

UW–AOS: University of Wisconsin Department of Atmospheric and Oceanic Sciences

WAF: Weather Analysis and Forecasting