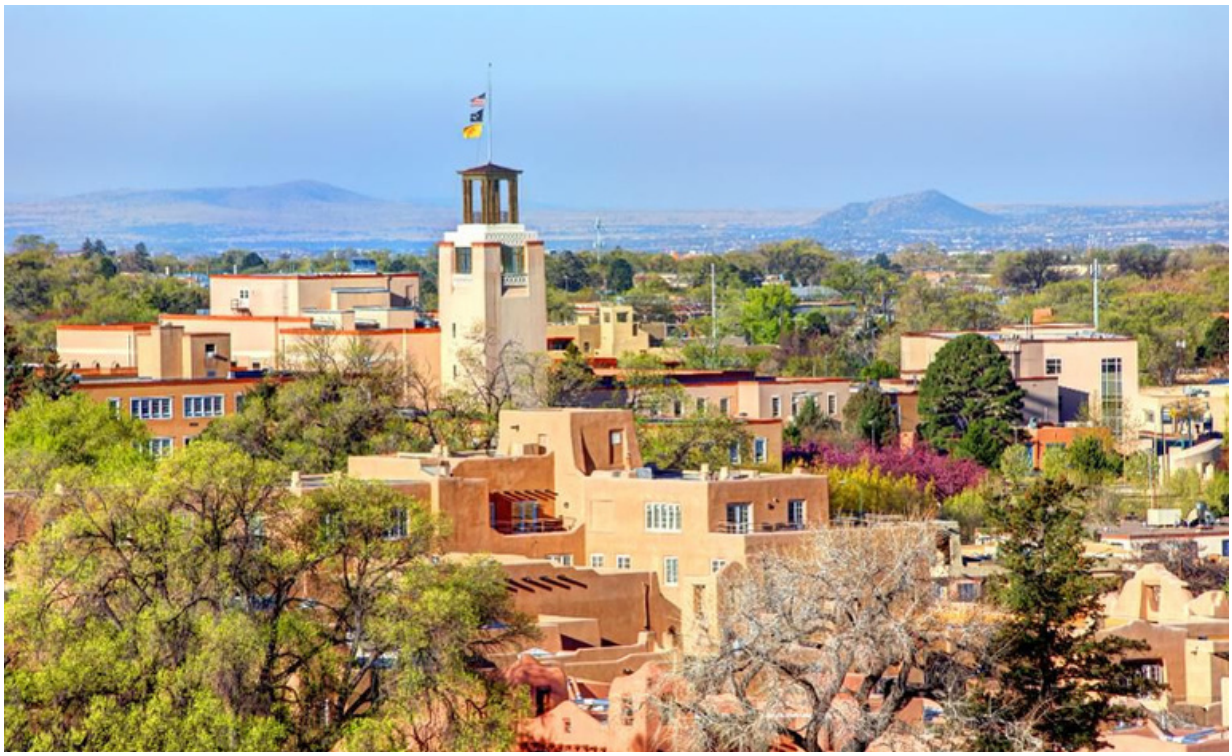
American Meteorological Society



30th Conference on Severe Local Storms

24-28 October 2022

Eldorado Hotel & Spa

Santa Fe, NM

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General Information

Organizers
The 30th Conference on Severe Local Storms is organized by the AMS Committee on Severe Local Storms and hosted by the American Meteorological Society.

Connect
Follow conference updates on Twitter @ametsoc. Also, Share posts using hashtags #30SLS

Conference Badges and Registration
All those in attendance of the AMS conference must register and wear the name badge. Please wear your badge in a viewable spot at all times during the conference. As a reminder, during registration, you agreed to follow the AMS Professional and Respectful Conduct and the AMS Commitment to Care.

The AMS Registration Desk is located in DeVargas. The AMS Registration Desk will be open for registration on Sunday, 23 October from 5:00 PM - 7:00 PM, and Monday-Friday during the hours shown below.

Monday: 7:00 AM - 7:00 PM
Tuesday: 7:00 AM - 6:00 PM
Wednesday: 7:00 AM - 4:00 PM
Thursday: 7:00 AM - 6:00 PM
Friday: 7:30 AM - 12:30 PM

Attendees who have registered for a full week package may attend all conference sessions, coffee breaks, and poster viewings.

Attendees who have registered for a one-day package may attend, for one calendar day, admission to all conference sessions, coffee breaks, poster viewings, and/or receptions that take place on that day.

EVENTS
Monday Student & Early Career Happy Hour
Monday, October 24, 6:00 PM - 7:00 PM - Casa Espana

The Student & Early Career Happy Hour is Sponsored by:

PennState
College of Earth and Mineral Sciences
Department of Meteorology and Atmospheric Science

Monday Ice Breaker Reception
Monday, October 24, 7:00 PM - 8:30 PM - Casa Espana

General Information

Formal Poster Viewings

Poster Session Set-Up, Viewing, and Tear-Down Schedule:
All posters will be located in the Anasazi Ballroom.

Set Up: and Tear Down Information:

Poster Group #	Set Up After	Formal Poster Viewing Time	Tear Down By*
Poster Session 1	MON: 10:00 AM	MON: 1:15-2:45 PM	TUE: 8:30 AM
Poster Session 2	TUES: 10:00 AM	TUES: 1:15-2:45 PM	WED: 8:30 AM
Poser Session 3	WED: 10:00 AM	WED: 1:15-2:45 PM	THURS: 8:30 AM
Poster session 4	THUR: 10:00 AM	THUR: 1:15-2:45 PM	FRI: 10:00 AM

*Note that AMS is not responsible for posters not removed by the tear down time.

Special Needs

It is our sincere desire to comply fully with both the letter and the spirit of the Americans with Disabilities Act of 1990 (ADA). Special housing needs should have been requested when making hotel reservations. Should you need assistance onsite, please see AMS Meetings Staff at the AMS Registration Desk.

Inclusivity at AMS

AMS is committed to creating an environment for meetings that "embraces diversity through the inclusion of individuals across age, gender, race, sex, nationality, ethnicity, physical ability, marital status, sexual orientation, body shape or size, gender identity and expression, socioeconomic status, and other facets of social diversity."

Professional and Respectful Conduct at AMS Meetings

Need to report unprofessional or disrespectful conduct? Email conduct@ametsoc.org or call 617-226-3965.

AMS is committed to safe and inclusive meetings for all attendees. Harassment, intimidation, or discrimination of any kind will not be tolerated at any meeting or event associated with the meeting. All communication should be appropriate for a professional audience including people of many different backgrounds. Be inclusive and respectful.

The recording or transmissions of any education sessions, presentations, demos, videos, or content in any format is strictly prohibited. Participants should not copy or take screenshots of Q&A or any chat room activity that takes place in the virtual space. This statement is meant to cover all meeting-associated events, including those sponsored by organizations other than AMS but held in relation to AMS events. This includes the scientific program, short courses, and exhibitions, as well as receptions, town hall meetings, and other informal or formal gatherings associated with AMS.

Similarly, participants shall adhere to this code of conduct in online spaces related to the meeting and meeting-associated events, including Facebook, Twitter, and other online venues. Those who violate the standards of professional and respectful conduct may be asked to leave the meeting immediately and without refund, may not be considered for service on AMS boards and committees, and may be subject to additional legal action.

General Information

Harassment, intimidation, or discrimination includes offensive comments and actions related to age, gender and gender identity, sexual orientation, disability, physical appearance, body size, race, religion; sexual images in public spaces; deliberate intimidation, stalking, or following; harassing photography or recording; sustained disruption of talks or other events; inappropriate physical contact; and unwelcome sexual attention.

As a reminder, during registration, you agreed to follow the AMS Professional and Respectful Conduct and the AMS Commitment to Care. This includes wearing a face mask at all times.

If you are the subject of unacceptable behavior or have witnessed any such behavior, please immediately either:

- Notify an AMS Staff Member (wearing a blue ribbon at an in-person meeting)
- Email conduct@ametsoc.org or call 617-226-3965
- Email AMS Executive Director, Stella Kafka, skafka@ametsoc.org
- If you witness or experience behavior that constitutes an immediate and serious threat, please call 911.

Thank you and enjoy the conference!

Welcome to the 30th AMS Conference on Severe Local Storms! We know it has been long delayed and we are excited to finally get together both here in Santa Fe and virtually. We are continuing the tradition of promoting discussion and collaboration throughout this conference and encourage everyone to participate both formally and informally. In addition to the discussion periods scheduled every morning, we also have the student and early career happy hour and a full ice breaker social at the Casa España Monday evening. Our venue is set up to foster connections and conversation. We have also made an effort, particularly in our plenary sessions, to blend research from scientists (physical and social), developers, and operational forecasters with varying backgrounds to bring diverse perspectives to our discussions.

Based on the number of submitted abstracts and requested presentations, the severe storms community shares our enthusiasm for the return of SLS. We received 375 abstracts and 256 talk requests, both of which we believe are the most ever received at SLS. The submissions represent an increase of 24% from Stowe (2018) and 10% from Portland (2016). We anticipated such an increase and chose Santa Fe to reflect the conference balance we are striving for: a location small enough to encourage community discussion and engagement, but large enough to comfortably accommodate our growing community. The idea of balance extends to our program, where we have increased the number of speaking slots from 105 to 130 in recognition of increased interest, while maintaining community-based morning plenary sessions.

In light of the loss of the 2020 conference, we have emphasized the importance of students and early-career scientists to the severe storms community in our program. Our conference theme is centered on the 2020s: “The Decade Ahead.” We hope that when the decade concludes, these young people will include those at the forefront of our field. It is more important than ever that they are welcomed into our growing community and given the opportunity to participate and engage in the scientific dialogue only found at conferences like SLS. We are excited by the increasingly global and diverse faces in our field. Attendees from Australia, Europe, Asia, and South America, including students, inform us of the growing reach of the conference. We also continue to see improvements in gender participation in the conference from past years. This year, 26% of talks will be given by female presenters, down from Stowe (34%) but up substantially from Portland (15%). We hope the coming years see an end to the disproportionate effects of Covid on female participation and production in the sciences.

We greatly appreciate the amount of work the Program Committee has done to make this a successful conference, particularly given the large number of abstract submissions. We would also like to thank those who helped plan a valuable and fun set of special events, including: the opening ice breaker and food/beverage breaks throughout the week (Tony Reinhart, Kenzie Krocak, Matt Flournoy), a women’s dinner on Wed. night (Becky Adams-Salin and Alex Anderson-Frey), and student presentation judging (Matt Brown, Alex Anderson-Frey, Shawn Murdzek, Manda Chasteen, Becky Adams-Selin, Bryan Smith, Scott Loeffler, Aaron Hill).

Finally, since we have been conference co-chairs for four years we have worked with multiple AMS Staff and Meeting Coordinators from the initial location selection, through remote options,

and to the final steps of actually carrying the conference out. Most recently Cati Iannarilli and Jeiry Nin Gomera, but also Jen Ives and Meghan Summers have all put in long hours, virtual meetings, and 100s of emails during the planning and execution of this conference. Thanks to all of you at AMS!

Thanks to everyone participating in the conference both locally and virtually. We look forward to an amazing week and hope you find this a fun and productive meeting!

Program co-chairs,

Kristin Calhoun and Michael French

Monday, 24 October 2022

Eldorado Ballroom

8:15 — The Decade Ahead: Forecasting, Communication, and Impacts — 8:15

Introductory Remarks

1.1: How Close is the Warn-on-Forecast System to Transitioning to Operations?
Pamela Heinselman

1.2: Can the 3DRTMA replace the SPC Mesoanalysis?
Therese Thompson Ladwig

1.3: Probabilistic Forecast Guidance for Severe Convective Storms Using GEFS Reforecasts and Machine Learning
Russ S. Schumacher

1.4: Adding Context to Risk: Climatology of Relative Probabilities in the SPC Convective Outlook
Sean Robert Ernst

1.5: Evaluating severe thunderstorm warning message characteristics: what are we communicating and how do people respond?
Makenzie Krocak

Discussion

10:00 — Coffee Break (Cava)

Eldorado Ballroom

10:45 — Hailstorms and Hailstones: Physical Processes and Properties — 10:45

2.1: Two Paradigms for Radar-Based Hail-Size Estimation: Problems & Possibilities
Matthew Kumjian

2.2: The Stochastic yet Opportunistic Nature of Hail Growth
Rebecca D. Adams-Selin

2.3: What Do You Hail From? Tracking Hail Sources in Bulk Microphysics
Edward Mansell

2.4: Physical assumptions about nonspherical hailstone shapes
Yuzhu Lin

2.5: Linking hailstone shapes to their polarimetric radar scattering properties
Robert Schrom

12:00 — Lunch Break — 12:00

1:15 — Formal Poster Viewing (Anasazi Ballroom) — 1:15

	Eldorado Ballroom A	Eldorado Ballroom B	
2:45	**Convection-allowing Models: Development, Assimilation, and Results**	**QLCS Analysis and Prediction**	2:45
	3.1A: Verification of Storm Attributes from RRFS and HRRR forecasts **Larissa Joy Reames** **3.2A:** A New Idealized Test Suite for Convective-Scale Models **Louis J. Wicker** **3.3A:** The influence of model configuration vs. initial and boundary conditions in next-day CAM forecasts: a controlled experiment **Adam J. Clark** **3.4A:** Assimilation of Novel Radar and Satellite Observations to Improve the Depiction of Trigger Mechanisms in the PBL for Convection Initiation **Keenan Christopher Eure** **3.5A:** Storm Modification of Kinematic and Thermodynamic Variables in WRF-Based CAMs **Benjamin Hauk Remington**	**3.1B:** Observed Low-Level Cloud and Related Boundary Layer Characteristics Preceding Severe Cold-Season QLCSs over Northern Alabama **Kevin Knupp** **3.2B:** Analysis of Cold Pool Heterogeneities in Quasi-Linear Convective Systems during PERiLS **Joshua S. Ostaszewski** **3.3B:** Examining Lightning Flash Rates and Areas as a Proxy for Cold-Pool Heterogeneity and Tornado Potential in QLCS storms during the PERiLS Field Project **Vicente Salinas** **3.4B:** Dual-Pol Radar Precursor Signatures for QLCS Mesovortices **Charles M. Kuster** **3.5B:** Investigation of Tornado-Like Vortex Genesis and Maintenance in Simulated High-Shear, Low-CAPE QLCSs **Jessica M. McDonald**	
4:00	**Coffee Break (Cava)**		4:00
4:30	**Interaction of Convective Storms and Tornadoes with Topography: Impacts and Importance**	**Artificial Intelligence for Severe Weather Prediction**	4:30
	4.1A: The Influence of Mountains on Simulated Low-level Vertical Vorticity in Idealized Quasi-linear Convective Systems **Kelly Lombardo** **4.2A:** Understanding the Role of Complex Terrain in Tornadogenesis Using Ensembles **Branden T. Katona** **4.3A:** Understanding Complex Terrain Effects on Tornado Dynamics Using Tree-Fall Observations and High-Resolution Simulations **David J. Bodine** **4.4A:** Relationships Between Topography and Land Cover with Tornadogenesis and Decay Points in Oklahoma and Arkansas **Jana B. Houser, PhD**	**4.1B:** Medium-range Severe Weather Predictions with Random Forests **Aaron Hill** **4.2B:** Does explicit convective mode information improve machine learning-based forecasts of convective hazards? **Ryan A. Sobash** **4.3B:** Machine Learning Estimation of Storm Updrafts **Randy J. Chase** **4.4B:** An Overview of the Machine Learning-Based Tornado Potential Algorithm for Real-Time Probabilistic Guidance **Thea Sandmael**	
5:30	**Sessions End for the Day**		5:30
6:00	**Student and Early Career Reception**		6:00
7:00	**Ice Breaker Reception (Casa Espana)**		7:00

Tuesday, 25 October 2022

Eldorado Ballroom

8:30 The Decade Ahead: Supercell Analysis, Forecasting, and Impacts

5.1: The influence of convection initiation strength on subsequent simulated supercell evolution
Matthew D. Flournoy

5.2: Three-Dimensional Thermodynamic Observations in a Supercell Thunderstorm on 31 May 2022 near Arkansas City, KS, via a Swarm of Balloon-Borne Sondes
Elissa Bartos

5.3: The Kinematic Character of Forward Flank Outflows from the TORUS Project
Christopher C. Weiss

5.4: Environmental versus storm-generated SRH contributions to low-level mesocyclonegenesis
Brice Evan Coffer

5.5: Insights into supercells and their environments through field-project soundings and comparison to SPC mesoanalysis
Michael C. Coniglio

Discussion

10:00 Coffee Break (Cava)

Eldorado Ballroom

10:45 Severe Convection in a Warming Climate

6.1: A Convective Windstorm in a Future Climate: A PGW Study of the 10 August 2020 Midwest Derecho
Sonia Lasher-Trapp

6.2: Global Climatology of Severe Storm Environments and Future Projections Under a Warming Climate
John T. Allen

6.3: The temperature dependence of severe convective storms at constant CAPE and shear
Daniel R Chavas

6.4: The Future of Supercells over North America
Walker S. Ashley

6.5: The impact of human-induced climate change on tornado intensity as revealed through multi-scale modeling
Robert J. Trapp

12:00 Lunch Break

1:15 Formal Poster Viewing (Anasazi Ballroom)

	Eldorado Ballroom A	Eldorado Ballroom B
2:45	**Forecasting Severe Hazards I**	**Supercells I: Supercell Evolution**
	7.1A: Evaluating Random Forest-Based Predictions of Tornadoes, Wind, and Hail at Two- to Three-Day Lead Times **Alexandra Mazurek**	**7.1B:** Targeted Observation by Radars and UAS of Supercells (TORUS): Summary of the 2019 and 2022 field campaigns **Adam L. Houston**
	7.2A: Resolution Requirements for Moving Towards Explicit Prediction of Tornadoes in the Warn-on-Forecast System **Austin W. Dixon**	**7.2B:** Using Remote and In Situ Observations from TORUS to Investigate the Evolution of Supercells Interacting with Airmass Boundaries on 28 May 2019 **Kristen L Axon**
	7.3A: Evaluation of First-Guess Watch Guidance in the 2022 HWT Spring Forecasting Experiment **David R. Harrison**	**7.3B:** Mesoscale Influences on the Evolution of the 27-28 April 2011 Supercell Tornado Outbreak, Part 2: Cell Mergers and Subsequent Supercell and Tornado Evolution **Anthony W. Lyza**
	7.4A: WoFS and the Wisdom of the Crowds: Exploring Experimental Forecasts Issued during the 2021 Spring Forecasting Experiment **Burkely Twiest Gallo**	**7.4B:** Role of Baroclinic Vorticity Generation in the 9 June 2009 Greensburg, KS supercell during VORTEX2 **Conrad L. Ziegler**
	7.5A: The Performance of the Warn-on-Forecast Hybrid Data Assimilation and Forecasting System During the HWT Spring Forecast Experiment in 2021 **Jidong Gao**	**7.5B:** Mutual influences of adjacent supercells in multistorm simulations **Adam D. Werkema**

4:00 Coffee Break (Cava)

4:30	**Novel observations and their use**	**Hazard Climatologies I**
	8.1A: Understanding damage variability of high-wind impacts and the role of land cover in rural areas using high-resolution imagery and geospatial analysis **Melissa A Wagner**	**8.1B:** Convective Mode Classification and Climatology of Tornado Events in the Contiguous United States 2000–2020. **Andrew D Lyons**
	8.2A: In-situ Impact Disdrometer & Physical Measurements of Hail in the 4 May 2022 Crowell, Texas Tornadic Supercell **Ian M. Giammanco**	**8.2B:** Automatically Derived Radar Attributes of Tropical Cyclone Tornadoes: A Climatology From 2013-2020 **Justin R Spotts**
	8.3A: Link Between Lightning Activity and Properties of ZDR Columns **Raquel M. Evaristo**	**8.3B:** Errors, Oddities and Artifacts in U.S. Tornado Data, 1995–2020 **Roger Edwards**
	8.4A: A Unified Theory of Satellite-Observed Features at the Top of Severe Stroms **Pao K. Wang**	**8.4B:** HREF Climatology of Storm-Attribute Fields **Israel L. Jirak**

7:30 From Theory to Practice: Novel Ideas in Tornado Science

9.1: Cataloging Madden-Julian oscillation influences on tornado and hail frequency
Victor A. Gensini

9.2: Predictability of Large-Scale Patterns that Lead to Tornado Outbreaks at Lead Times Out to 14 Days
Allison L. Brannan

9.3: Evaluating the Three-Ingredients Method for Nowcasting QLCS Tornadoes
Todd A Murphy

9.4: Disentangling the influences of storm-relative flow, updraft width, and horizontal streamwise vorticity on low-level supercell mesocyclones
John M. Peters

9.5: Is a coherent vorticity source required for tornadogenesis?
Matthew D. Parker

Discussion

9:00 Sessions End for the Day

Wednesday, 26 October 2022

Eldorado Ballroom

8:30 — The Decade Ahead: Tornado Analysis, Forecasting, and Impacts — 8:30

10.1: Towards an Updated Conceptual Model of Tornadogenesis
Jannick Fischer

10.2: Tornadogenesis in High-end Tornadic Supercells (Part 3) - Moore, Oklahoma EF5 on May 20, 2013 - A Representative Case of Tornadogenesis
John Christopher Broyles

10.3: Marginal US Tornado Environments: Tipping the Balance
Alexandra Anderson-Frey

10.4: Tornado Climatology, Ongoing Tornado Observational Studies, Future Tornado Structure Study
Joshua Wurman

10.5: Rethinking Warning Compliance and Complacency by Examining how People Manage Risk and Vulnerability during Real-world Tornado Threats
Julie Demuth

Discussion

10:00 — Coffee Break (Cava) — 10:00

	Eldorado Ballroom A	Eldorado Ballroom B	
10:45	**Assessing Impacts and Resiliency from Convectively-induced Winds and Tornadoes**	**Hailstorms and Hailstones II: Radar Analysis, Observations, and Environments**	10:45
	11.1A: On the Current Revision of the Enhanced Fujita (EF) Scale **Timothy P. Marshall** **11.2A:** Comparison of Wind Speed Estimation Methods Applied to the Monroe, LA tornado of 12 April 2020 **James G. LaDue** **11.3A:** Radar Estimates of Tornado Wind Speeds Using the Draft ASCE Standard: Monroe, LA Tornado of April 12, 2020 **Donald W. Burgess** **11.4A:** Development of the International Fujita (IF) scale to rate Tornado and Convective Wind Damage **Alois M. Holzer** **11.5A:** Investigating the Interaction of Tornadoes and Structures, and the Future of Tornado-Resilient Communities **Zachary B. Wienhoff**	**11.1B:** Rapid-Scan, Dual-Polarization Radar Observations of Hail-Producing Storms **Laura Shedd** **11.2B:** Analysis of Doppler Velocity in Three-Body Scattering Signatures for use in Hail Size Estimation **Anna VanAlstine** **11.3B:** Hailstone Trajectory Analysis from the Radar-Observed 29 – 30 May 2012 Kingfisher, OK Supercell **Lauren E. Pounds** **11.4B:** A High-Speed, High-Resolution, Dual-Camera Imager for Photographing Naturally Falling Hailstones **Jeffrey C. Snyder** **11.5B:** A 10-Year Proximity Sounding Analysis of Severe Hail-Producing Supercells **Elisa M. Murillo**	

12:00 — Lunch Break — 12:00

1:15 — Formal Poster Viewing (Anasazi Ballroom) — 1:15

2:45	Flash Flooding and Snow Squalls	Forecasting Severe Hazards II	2:45
	12.1A: The 24 August 2020 Whitehall, New York Flash Flood **Thomas A. Wasula** **12.2A:** ML-Based Guidance for Impact-Based Flash Flood Warnings **Jorge Alberto Duarte** **12.3A:** FV3-LAM CAM Ensemble Consensus and Machine Learning Products for Predicting Heavy Rain in the Hydrometeorology Testbed **Keith A. Brewster** **12.4A:** Multi-Scale Analysis of a Pair of High Impact Snow Squall Events in Central Pennsylvania **Gregory Alan DeVoir**	**12.1B:** Characteristics of GEFSv12 high and low skill day 10 forecasts for tornadoes in the United States **Douglas E. Miller** **12.2B:** The Use of Updraft Helicity as a Severe Weather Surrogate for Convective Systems **Morris L. Weisman** **12.3B:** Examination of Updraft Helicity Diagnostics in 1- and 3-km Grid-Spacing Versions of the NSSL-WRF **Kent H. Knopfmeier** **12.4B:** Post-processing and Verification of Storm Attributes from a Convection-permitting Ensemble for Hail Forecasting in Australia **Robert A Warren**	

3:45 — Sessions End for the Day — 3:45

Thursday, 27 October 2022

Eldorado Ballroom

8:30 — The Decade Ahead: QLCS Analysis, Forecasting, and Impacts

13.1: A Detailed Examination of QLCS Mesovortices in High Shear, Low CAPE Environments
Geoffrey R. Marion

13.2: Multi-Doppler Analysis of QLCS Mesovortices Observed During the 30 April 2017 Mission of the VORTEX-SE Field Campaign
Daniel M. Stechman

13.3: Microphysical and kinematic signals in lightning measurements from southeastern US storms
Kelcy Brunner

13.4: Using Radiosonde Observations to Assess The 'Three Ingredients' Method to Forecast QLCS Mesovortices
Max Ungar

13.5: Identification and Verification of Quasi-Linear Convective Systems Predicted by the Warn-on-Forecast System (WoFS)
Kelsey C. Britt

Discussion

10:00 — Coffee Break (Cava)

10:45 — High Impact Events

14.1: Mechanisms Driving Extreme Winds in the Iowa Derecho on 10 August 2020
Thomas Galarneau

14.2: Multiscale Process Interactions and Upscale Feedbacks During the 26-27 April 2011 Tornado Outbreak
Manda B. Chasteen

14.3: A Derecho, Wildfire Outbreak, and Sting Jet: Analysis of the High-Impact Weather Events in the Central Great Plains on 15 December 2021
Michelle R. Spencer

14.4: Risk Communication of
Christopher D. Wirz

14.5: Revisiting U.S. Nocturnal Tornado Vulnerability and its Influence on Tornado Impacts
Stephen M. Strader

12:00 — Lunch Break

1:15 — Formal Poster Viewing (Anasazi Ballroom)

	Eldorado Ballroom A	Eldorado Ballroom B
2:45	**Supercells II: Impact of Supercell Environments on Storm Properties and Processes**	**Derechos and Severe Wind**
	15.1A: An Analysis of the Impact of Vertical Wind Shear on Convection Initiation Using Large-Eddy Simulations: Importance of Wake Entrainment **Luke Justin LeBel**	**15.1B:** Analysis of the Predictability of Warm-season Progressive Derechos. Part I: Operational Predictability and Synoptic Pattern Results **Steven J. Weiss**
	15.2A: Hurricane Supercell Mesocyclone Tendency in Three Landfalling Tropical Cyclones **A. Addison Alford**	**15.2B:** Analysis of the Predictability of Warm-Season Progressive Derechos. Part II: Experiments Using a Convection-Allowing MPAS Ensemble **Bruno Ribeiro**
	15.3A: Assessing the Comparative Effects of Storm-relative Helicity Components within Right-moving Supercell Environments **Nicholas A. Goldacker**	**15.3B:** The Midwestern Derecho of August 10, 2020: Challenges and Surprises in FV3-LAM Simulations **William A. Gallus Jr.**
	15.4A: The Impact of the Lifting Condensation Level on Supercell Cold Pool Strength and the Sensitivity of Cold Pools to the Microphysics Parameterization **Shawn Murdzek**	**15.4B:** Elevated or Not: Case Studies of Discrete Nocturnal Convection Producing Significant Severe Winds **Keith Sherburn**
	15.5A: Examining the Impact of Mid-Level Shear and Low-Level Storm-Relative Flow on Supercell Characteristics and Evolution **Andrew James Muehr**	**15.5B:** Defining and Classifying Mesoscale Windstorms Associated with High-intensity Pressure Fall Phenomena **Anton Seimon**
4:00	**Coffee Break (Cava)**	
4:30	**Supercells III: Streamwise Vorticity Currents**	**Hazard Climatologies II**
	16.1A: Investigating Environmental Influences on the Streamwise Vorticity Current and its Downstream Impacts **Alex Schueth**	**16.1B:** Investigating pre-convective environments for different convective modes over Lake Victoria using ERA5 reanalysis **Anna del Moral, Ph.D**
	16.2A: Kinematic and Thermodynamic Analysis of Updraft Structure and the Streamwise Vorticity Current in a Southeastern Tornadic Supercell Storm **Michael J. Hosek**	**16.2B:** A Climatology of Convective Precipitation over Central and Southern Europe **Miranda Irene Bitting**
	16.3A: Possible Role of Storm-Generated Storm Relative Helicity in Low-Level Mesocyclone Development and Intensification in Simulated Supercells **Catherine A. Finley**	**16.3B:** High-Resolution Climatology of the Afternoon-to-Evening Transition using Ground-Based Remote Sensing **Matthew Starke**
	16.4A: The Development of Streamwise Vorticity Currents in Simulated Supercell Outflow Surges and Their Characteristics **Kevin Thomas Gray**	**16.4B:** Reconstructing Long-Term (1950-2021) Trends in Lightning, Large and Very Large Hail Using Additive Logistic Regression Models **Francesco Battaglioli**
5:30	**Sessions End for the Day**	

Friday, 28 October 2022

	Eldorado Ballroom A	Eldorado Ballroom B	
8:30	**Using Radar to Understand and Predict Severe Storms**	**Forecast and Warning Verification**	8:30
	17.1A: Evaluating Benefits & Capabilities of Phased Array Radar Scanning Modes for Detecting Tornado Formation and Intensification **Brandon K. Cohen** **17.2A:** Can We Advance Our Understanding of Supercell Dynamics and Microphysics Using Spectral Polarimetry? **Howard B. Bluestein** **17.3A:** An Analysis of the 17 May 2019 McCook / Farnam, NE Tornadic Supercell Observed during TORUS through a Triple-Doppler Retrieval and Diabatic Lagrangian Analysis Approach **Martin Satrio** **17.4A :** A Radar Simulation and Large-Eddy Simulation Approach to Exploring Observational Tornado Debris Signature Hypotheses **Rachael Nicole Cross** **17.5A:** A 10-Year Analysis of Radar Observations of Severe Hail-Producing Supercells **Cameron R. Homeyer** **17.6A:** Enhancing the Multi-Radar Multi-Sensor System Severe Products by Incorporating Supplemental X-Band Radars **Anthony E. Reinhart**	**17.1B:** Evaluating HRRR Model Forecasts of Impactful Severe Weather Events in Upstate New York Between 2017 and 2020 **Rachel Anne Eldridge** **17.2B:** Using Machine Learning to Predict Forecast Skill in the NSSL Warn-on-Forecast System **Corey K. Potvin** **17.3B:** Warn-on-Forecast System Output as a Verification Tool for Severe Wind Event**s** **Nathan A. Dahl** **17.4B:** Preliminary Evaluation of a Real-Time Diagnostic Tornado Damage Intensity Estimation Tool used at the Storm Prediction Center **Bryan T. Smith** **17.5B:** A Continuing Review of the "Tornado Possible" Tag in NWS Severe Thunderstorm Warnings **Sean Tod Whelan** **17.6B:** Tornado Warnings, Time, and the Merkle Conundrum **Harold E Brooks**	
10:00	**Coffee Break (Cava)**		10:00
10:45	**Storm and High-Resolution Modeling**		10:45
	18.1: Microphysical Effects on Convective Cold Pool Initiation during CACTI **Tobias Innes David Ross** **18.2:** Investigating the Relationship between Cloud Microphysics and Electrification in Southeast US Storms Using Cold pool and Lightning Characteristics **Milind Sharma** **18.3:** Entrainment in Simulated Supercell Thunderstorms **Enoch Jo** **18.4:** What controls the optimal surface drag strength for tornadogenesis in different environments? **Qin Jiang** **18.5:** Modeling Near-Surface Turbulence in Large-Eddy Simulations of a Tornado: Accounting for the Influence of Unsteadiness and Horizontal Heterogeneities **Aaron Wang** **18.6:** A vortex-relative perspective on tornadogenesis in a large-eddy supercell simulation containing a violent long-track tornado **Leigh Orf** Concluding Remarks		
12:30	**Conference Adjorns**		12:30

CONFERENCE ON SEVERE LOCAL STORMS
CONFERENCE SERIES

DATE	LOCATION	CONFERENCE
10–12 May 1960	St. Louis, MO	(First) Conference on Severe Local Storms
13–15 February 1962	Norman, OK	(Second) Conference on Severe Local Storms
12–14 November 1963	Urbana, IL	Third Conference on Severe Local Storms
19–21 October 1965	Reno, NV	(Fourth) Conference on Severe Local Storms
19–20 October 1967	St. Louis, MO	(Fifth) Conference on Severe Local Storms
8–10 April 1969	Chicago, IL	Sixth Conference on Severe Local Storms
5–7 October 1971	Kansas City, MO	Seventh Conference on Severe Local Storms
15–17 October 1973	Denver, CO	Eighth Conference on Severe Local Storms
21–23 October 1975	Norman, OK	Ninth Conference on Severe Local Storms
18–21 October 1977	Omaha, NE	10th Conference on Severe Local Storms
2–5 October 1979	Kansas City, MO	11th Conference on Severe Local Storms
12–15 January 1982	San Antonio, TX	12th Conference on Severe Local Storms
17–20 October 1983	Tulsa, OK	13th Conference on Severe Local Storms
29 Oct.–1 Nov. 1985	Indianapolis, IN	14th Conference on Severe Local Storms
22–26 February 1988	Baltimore, MD	15th Conference on Severe Local Storms
22–26 October 1990	Kananschis, AB, Canada	16th Conference on Severe Local Storms
4–8 October 1993	St. Louis, MO	17th Conference on Severe Local Storms
19–23 February 1996	San Francisco, CA	18th Conference on Severe Local Storms
14–18 September 1998	Minneapolis, MN	19th Conference on Severe Local Storms
11–15 September 2000	Orlando, FL	20th Conference on Severe Local Storms

12–16 August 2002	San Antonio, TX	21st Conference on Severe Local Storms
4–8 October 2004	Hyannis, MA	22nd Conference on Severe Local Storms
31 January—2 February	Atlanta, GA	Symposium on the Challenges of Severe Convective Storms
6–10 November 2006	St. Louis, MO	23rd Conference on Severe Local Storms
27–31 October 2008	Savannah, GA	24th Conference on Severe Local Storms
11-14 October 2010	Denver, CO	25th Conference on Severe Local Storms
5-8 November 2012	Nashville, TN	26th Conference on Severe Local Storms
2-7 November 2014	Madison, WI	27th Conference on Severe Local Storms
7-11 November 2016	Portland, OR	28th Conference on Severe Local Storms
22-26 October 2018	Stowe, VT	29th Conference on Severe Local Storms
24-28 October 2022	Santa Fe, NM	30th Conference on Severe Local Storms