AMS

American Meteorological Society



32nd Conference on Weather Analysis and Forecasting (WAF)/28th Conference on Numerical Weather Prediction (NWP)/20th Conference on Mesoscale Processes

17-21 July 2023

Madison, WI

Monona Terrace Community and Convention Center

32nd Conferences on Weather Analysis and Forecasting (WAF) / 28th Conference on Numerical Weather Forecasting (NWP)

17-21 July 2023 – Madison, WI and Online

Welcome to Madison, Wisconsin, and the 32nd Weather Analysis and Forecasting (WAF) and 28th Numerical Weather Prediction (NWP) Conferences, hosted by the AMS Committee on Weather Analysis and Forecasting. Madison is not only a beautiful city that is rich with history and phenomenal lakeside views, but it is also significant in the meteorological community being home to the University of Wisconsin-Madison and the Collaborative Institute for Meteorological Satellite Studies (CIMSS). For these reasons, we were excited to choose the city to hold these conferences, along with the 20th Conference on Mesoscale Processes, hosted by the AMS Committee on Mesoscale Processes, running from July 17-21, 2023.

We have a comprehensive program in store for our attendees, with three dozen oral sessions, two poster sessions, several keynote speakers, and events for networking while you're here. With topics ranging from winter to tropical weather, mesoscale meteorology to planetary-scale atmospheric dynamics, data assimilation, ensemble forecasting, artificial intelligence, machine learning, and more, there should be something to offer for everyone.

There will also be several opportunities for networking, including an ice breaker reception on Monday evening, a DEIA reception sponsored by the University of Wisconsin-Madison on Tuesday evening, and a student reception on Wednesday evening. In addition, we'll be hosting a town hall on Monday regarding the research to operations challenges faced in our community. As for after the daily proceedings, we're sure you'll have no trouble finding activities and places to visit outside of the conference in Madison.

Though it is a labor of love, planning a conference is a large undertaking. We'd like to acknowledge a few individuals and groups for their invaluable efforts in making these conferences a success. Our sincere thanks go out to AMS Meetings Coordinator Allison Milliken and Assistant Meetings Manager Marissa Welch for being instrumental in coordinating the logistics of the conference. Our program committee, as well as the AMS Committee on Weather Analysis and Forecasting chair Dr. Stephen Bieda, were also vital to the abstract review and event planning process, and we thank them for volunteering their time and expertise.

Our committee is dedicated to representing the diverse interests of the government, academic, and private sectors concerning weather analysis and numerical weather prediction through outreach, advocacy, and conference organization. If there are any questions or issues, do not hesitate to speak with an AMS staff member or find one of us. We hope you have a fantastic time with us here in Madison!

Stephanie Avey, Dr. Alicia Bentley, and Matt Beitscher
Program Co-Chairpersons

20th Conference on Mesoscale Processes

17-21 July 2023 – Madison, WI and Online

Welcome to the 20th American Meteorological Society Conference on Mesoscale Processes, held in Madison, Wisconsin. We are thrilled to host this hybrid conference featuring in-person participation for the first time since our 2019 conference. We are also pleased to share this occasion with the 32nd Conference on Weather Analysis and Forecasting (WAF)/28th Conference on Numerical Weather Prediction (NWP).

The next five days will have presentations spanning a wide range of research topics in mesoscale meteorology. These include tropical and midlatitude deep convection; mesoscale convective systems; gravity waves and turbulence; mesoscale aspects of boundary-layer circulations; extreme precipitation; tropical cyclones, midlatitude cyclones and winter weather; the impacts of inhomogeneous surfaces on convection; and microphysical and orographic effects on precipitation. Many recent field campaigns on mesoscale phenomena – CPEX, DECODE, ESCAPE, IMPACTS, PERiLS, PRECIP, and TRACER, to name a few – will present their latest results. In addition, we are happy to host joint sessions with the WAF/NWP on winter weather and the predictability of weather phenomena. We are also excited to celebrate the legacy of the late Prof. Lev Gutman through a special two-session symposium. No matter what topics you are interested in, we have something to offer!

We are also excited about a keynote presentation by Prof. Casey Davenport, who is the recipient of the 2022 AMS STAC Mesoscale Processes Early Career Award. Prof. Davenport will speak about "The Role of Mesoscale Environmental Variability in Determining Supercell Evolution" on Monday afternoon. Please join us if you can to listen to this enlightening talk by our awardee!

In addition to our oral presentation sessions, we would like to highlight our poster sessions on Monday, Tuesday, Wednesday, and Thursday mornings. The Monday poster session will feature virtual presentations, while all other poster sessions will have in-person presenters. We hope that the morning timing of the poster sessions will lead to lively and productive discussions with our poster presenters!

This year we are once again pleased to have prominent participation by students and early career scientists, as evidenced by their large number of oral and poster presentations. Student presentations will be evaluated for awards, in addition to awards for the best presentations by very early career scientists.

In addition to the large response from U.S. institutions, we are fortunate to have many international attendees. This reflects the continued interest and importance of mesoscale meteorology within the broader field of atmospheric science. Thank you to all attendees, with special thanks to session proposers, speakers, session chairs, and judges for making this conference a success. Finally, on behalf of the Mesoscale Processes Committee, we would like to thank Marissa Welch and Allison Milliken of the AMS meetings staff for helping us to organize this meeting.

Welcome to Madison, where we hope you enjoy a productive and engaging week of science!

Rosimar Rios-Berrios and Yunji Zhang
Program Chairpersons

32nd Conference on Weather Analysis and Forecasting (WAF)/ 28th Conference on Numerical Weather Prediction (NWP)/ 20th Conference on Mesoscale Processes

17-21 July 2023
Madison, WI
Monona Terrace Community and Convention Center

General Information

Organizers

The 32nd Conference on Weather Analysis and Forecasting (WAF) and the 28th Conference on Numerical Weather Prediction (NWP) are organized by the AMS Committee on Weather Analysis and Forecasting and are hosted by the American Meteorological Society.

The 20th Conference on Mesoscale Processes is organized by the AMS Committee on Mesoscale Processes and is hosted by the American Meteorological Society.

Connect

Follow conference updates on Twitter @ametsoc. Also share your posts using the hashtag #AMS32WAF, #AMS28NWP, #AMS20Meso

Conference Badges and Registration

All those in attendance of the AMS conference must register and wear the name badge associated with their registration package. 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 at Registration 2, located on the Monona Terrace Community and Convention Center property. The AMS Registration Desk will be open for registration on Sunday 16 July from 5:00pm-7:00pm, and Monday-Friday during the hours of the conference.

Attendees who have registered for a full week package may attend all conference sessions (in person or virtual), coffee breaks, and events.

Attendees who have registered for a one day package may attend, for one calendar day, admission to all conference sessions (in person or virtual), coffee breaks, and/or receptions that take place on that day.

EVENTS

Queer Gatherings (QG) @ Madison

Monday, 17 July | 9:45 AM CT | Fair Trade Coffee House (418 State St, Madison, WI | 0.9 mile from Monona Terrace Community and Convention Center)

AMS Student Engagement Coffee Break

Monday, 17 July | 3:30-4:15 PM | Grand Terrace

Welcome Reception

Monday, 17 July | 5:30-7:00 PM | Rooftop Terrace

Coriolis DEIB Reception

Tuesday, 18 July | 5:30-7:00 PM | Rooftop Terrace
Sponsored by:

Division of Diversity, Equity & Educational Achievement
UNIVERSITY OF WISCONSIN-MADISON

General Information

AMS Student Engagement Social Hour

Wednesday, 19 July | 5:30-7:00 PM | Rooftop Terrace

Formal Poster Viewings

Poster Session Set-Up, Viewing, and Tear-Down Schedule:
All posters will be located in Hall of Ideas.

Set Up and Tear Down Information:

Poster Group	Set Up After	Formal Poster Viewing Time	Tear Down By
Tuesday	MON: 3:00 PM	TUE:9:45-11:15 AM	TUE: 5:00 PM
Wednesday	WED: 8:30 AM	Wed: 9:45-11:15 AM	Wed: 5:00 PM
Thursday	THURS: 8:30 AM	THURS: 9:45-11:15 AM	THURS: 5:00 PM

Formal In-Person Poster Viewing Hours
Tuesday: 9:45-11:15AM
Wednesday: 9:45-11:15AM
Thursday: 9:45-11:15AM

Virtual Poster Viewing Hours
Monday: 9:45-11:15AM

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 Marissa Welch 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.

General Information

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, as well as receptions, 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. 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.

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.

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Thank you and enjoy the conference!



Monday, 17 July 2023				
	32WAF	**28NWP**	**20Meso**	
	Madison Ballroom A	Madison Ballroom B	Madison Ballroom CD	
8:30	**Meso to Subseasonal Scale Meteorological Phenomena I** 8:30: **1.1**: Forecasting the Forecast Skill: GEFSv12 High- and Low-Skill Day-10 Tornado Forecasts **Victor A. Gensini** 8:45: **1.2**: Where'd That Come From? A Deeper Dive into Marginal U.S. Tornado Environments **Alexandra K. Anderson-Frey** 9:00: **1.3**: Rapid-Scan, Mobile Radar Observations of Tornadogenesis: Warning and Forecasting Implications **Jana B. Houser** 9:15: **1.4**: An Environment and Regime Based Approach to Large Hail Predictors **John T. Allen** 9:30: **1.5:** 27-Year Climatology of Severe Wind-Producing Mesoscale Convective Systems in the United States **Andrew Wade**	**Physics Parameterizations Across Scales for Weather and Climate Modeling I** 8:30: **1.1**: Atmospheric Model Physics for the NOAA Unified Forecast System Applications Across Scales **Fanglin Yang** 8:45: **1.2:** Comparison of Different Physics Schemes on Hurricane Forecasts within the UFS-Based HAFS and SRW Applications **Linlin Pan** 9:00: **1.3:** Using a Process-Based Analysis to Optimize the Orographic Drag Parameterization in the NOAA Unified Forecast System **Michael D. Toy** 9:15: **1.4**: Developing a Unified Prognostic Cloud Scheme for the UFS **Grant J Firl** 9:30: **1.5:** Developing Next-Generation Physics for UFS Applications: The Microphysics Parameterization Challenges **Jian-Wen Bao**	**Mesoscale Convective Systems** 8:30: **1.1:** Objectively Diagnosing Characteristics of Mesoscale Organization from Radar Reflectivity and Ambient Winds **Ewan Short** 8:45: **1.2**: Impact of Global Warming on U.S. Summertime Mesoscale Convective Systems: A Simple Lagrangian Parcel Model Perspective **Qiu Yang** 9:00: **1.3**: Processes of Colliding Cold Pools Derived from a 356-m High Met-Tower during an Extremely Heavy Rainfall Event Associated with a Squall Line **Yu Du** 9:15: **1.4**: Environmental Controls on MCS Lifetime Rainfall over Tropical Oceans **Xingchao Chen** 9:30: **1.5**: Monsoonal MCS Initiation and Gravity Wave Propagation over the Bay of Bengal: Observation and a Linear Theory **Chin-Hsuan Peng**	8:30
9:45	**AM Coffee Break/Virtual Poster Viewing (Grand Terrace)**			9:45
10:15			**Town Hall: NOAA Testbeds & Proving Grounds: Who We Are and How to Engage**	10:15
11:15	**Meso to Subseasonal Scale Meteorological Phenomena II** 11:15: **2.1**: Climatology and Typologies of Mesoscale Windstorms Associated with High-Intensity Pressure Fall Phenomena **Anton Seimon** 11:30: **2.2:** An Investigation of Easterly Wind Lake-Effect and Lake-Enhanced Precipitation Events over the Western Lake Superior Region **Nicholas D. Metz** 11:45: **2.3:** Serial Clustering of Atmospheric Rivers: Climatology, Relevance for Precipitation, and Synoptic–Dynamic Characteristics **Benjamin J. Moore** 12:00: **2.4**: Winter Extreme Precipitation Regimes (EPRs) in Eastern North America: Teleconnections, Rossby Wave Characteristics, and Case Study **Yeechian Low** 12:15: **2.5**: Analysis of Amplified Northern Hemisphere Persistent Flow Regimes **Tyler C. Leicht**	**Physics Parameterizations Across Scales for Weather and Climate Modeling II** 11:15: **2.1:** Fostering Vibrant Development of Physical Parameterizations via the CCPP **Ligia Bernardet** 11:30: **2.2**: Cloud and Precipitation Representation in the Marine Boundary Layer Using the Common Community Physics Packaged (CCPP) Single Column Model (SCM) **Tracy J. Hertneky** 11:45: **2.3:** Impact of Cumulus Convection Parameterization on 2022 Hurricane IAN and Earl Forecasts in the NOAA Global Forecast System **Qingfu Liu** 12:00: **2.4:** Demonstration of Hierarchical System Development Using Common Community Physics Package and Its Companion Single-Column Model to Inform Physics Development: An Example from An ARM SGP Case on June 11 2016 **Weiwei Li**	**Gravity Waves and Turbulence** 11:15: **2.1:** Spatiotemporal Variation and Characteristics of Gravity Waves in China Revealed by High-Resolution Radiosonde Network **Yuhan Luo** 11:30: **2.2**: Gravity Waves Associated with Frontal Rainfall as a Preconditioning Mechanism for Warm-Sector Heavy Rainfall in South China **Hongpei Yang** 11:45: **2.3**: Global Distributions of Tropospheric and Stratospheric Gravity Wave Momentum Fluxes Resolved By the 9-Km ECMWF Experiments **Junhong Wei** 12:00: **2.4**: Shear-Driven Turbulent Eddies within Frontal Systems Approaching Steep Terrain and the Impact on Precipitation **Na Zhou** 12:15: **2.5**: Spatial Patterns of Turbulence Near Thunderstorms **Stacey M. Hitchcock**	11:15
12:30	**Lunch Break**			12:30
2:00	**Winter Storms: Advances in Forecasting I** 2:00: **J3.1**: Innovations in Winter Storm Forecasting and Decision Support Services **David R. Novak** 2:15: **J3.2:** 3D Characteristics of Snow Bands and Implications for Surface Snowfall in Northeast Winter Storms **Laura M Tomkins** 2:30: **J3.3:** The Once-in-a-Generation Buffalo Blizzard and Lake Effect Event of December 23-26 2022 **David A Zaff** 2:45: **J3.4:** Regime-Dependent Predictability of Cold Season Precipitation Events in the St. Lawrence River Valley **Andrew C. Winters** 3:00: **J3.5:** Improving Cool-Season Snowfall Forecasts from Operational Modeling Systems over the Western Continental United States **Peter Veals** 3:15: **J3.6:** Validation of Cool-Season Precipitation Forecasts at a High-Elevation Site in Utah's Little Cottonwood Canyon **Michael David Pletcher**	**Model Development and Application: PBL and Land-Surface Physics** 2:00: **3.1:** Updates to the MYNN-EDMF PBL Scheme to Improve Operational Forecasting Applications **Joseph B. Olson** 2:15: **3.2**: Exploring the Dependence of MYNN PBL Scheme on Dynamic Cores (ARW and FV3) in Simulating Marine Boundary Layer Clouds **Xia Sun** 2:30: **3.3**: Improved Predictability of Lake-Effect Snowfall in the UFS Short-Range Weather Application Through the Use of Modeled Lake Surface Conditions **David M. Wright** 2:45: **3.4**: Evaluation of a New Land Surface Package in the Canadian Numerical Weather Prediction System Using Scree-Level Analyses **Nasim Alavi** 3:00: **3.5**: Performances of Land Surface Models in Sharp Vegetation Contrast Areas between Desert and Irrigation Oasis **Xuelei Wang** 3:15: **3.6:** A Local Method for Imposing Surface Drag Conditions on Deformed Terrain Boundaries **Craig C. Epifanio**	**Organized Moist Convection I** 2:00: **3.1**: The Role of Mesoscale Environmental Variability in Determining Supercell Evolution **Casey Davenport** 2:30: **3.2:** How is Convection Initiation Sensitive to Hodograph Characteristics? **Luke Justin LeBel** 2:45: **3.3**: Disparate Controls of Convective Cell Deepening and Intensification Based on Cell Width **Adam Varble** 3:00: **3.4:** Characteristics and Development of Streamwise Vorticity Currents in Simulated Supercells with Varying Midlevel Shear Vector Orientations **Kevin Thomas Gray** 3:15: **3.5:** The Influence of Midlevel Shear and Horizontal Rotors on Supercell Updraft Dynamics **Andrew James Muehr**	2:00
3:30	**PM Coffee Break (Grand Terrace)**			3:30
4:15	**Forecasting Tools and Techniques Across Weather Sacles: Precipitation and Flooding** 4:15: **4.1**: Evaluation of Freezing Rain Local Storm Reports as a Verification Source **Adam David Werkema** 4:30: **4.2**: Utilizing Climatologies to Aid in the Issuance of the Weather Prediction Center's Excessive Rainfall Outlook **Erica Bower** 4:45: **4.3**: Comparison of Hybrid 4DEnVar and 3DEnVar for the Prediction of Atmospheric Rivers **Minghua Zheng** 5:00: **4.4**: Ensemble Selection Strategies to Improve Precipitation Forecasts **Meng-Tze Lee** 5:15: **4.5**: Use of the National Water Model Retrospective Analysis to Provide Context for Real-time Flood Forecasts Issued by the National Weather Service **Martin A. Baxter**	**Improvements in Tropical Convection Forecasts** 4:15: **4.1:** Improving the Representation of Tropical Variability and Its Large-Scale Teleconnections in Noaa's Unified Forecast System **Lisa Bengtsson** 4:30: **4.2**: The Use of Regional Data Assimilation to Improve Numerical Simulations of Diurnal Characteristics of Precipitation during an Active Madden-Julian Oscillation Event over the Maritime Continent **Zhaoxia Pu** 4:45: **4.3**: GFS 3km Cloud Resolving Simulations for Hurricane Forecasts **Jiayi Peng** 5:00: **4.4**: Evaluation of Unified Forecast System Tropical Cyclone Quantitative Precipitation Forecasts **Kathryn M. Newman** 5:15: **4.5**: Impacts of Environmental Wind Shear Effect Parameterization and TKE-dependent Entrainment Enhancement in the Convective Updrafts on Hurricane Intensity and Track Forecasts **Jongil Han**	**Predictability Involving Multi-Scale Processes and Interactions** 4:15: **J4.1**: Multi-Scale Interaction and Predictability of the Tropical Cyclone Rapid Intensification **Masashi Minamide** 4:30: **J4.2:** Error-Growth Dynamics in Idealized Midlatitude Cyclones with Different Moist Baroclinic Life Cycles **Daniel James Lloveras** 4:45: **J4.3**: An Object-Based Approach to Atmospheric Predictability **Falko Judt** 5:00: **J4.4:** An Analysis of the Predictability of Warm-Season Progressive Derechos Using Synoptic-Scale Composites and Convection-Allowing Ensemble Forecasts **Bruno Ribeiro** 5:15: **J4.5:** Investigating the Model Representation of Cloud Tops: Toward a Better Understanding of Overshoot Dynamics **Devin Bissell**	4:15
5:30	**Sessions End for the Day**			5:30
5:30	**Welcome Reception (Rooftop Terrace)**			5:30

Tuesday, 18 July 2023

	32WAF	28NWP	20Meso	
	Madison Ballroom A	Madison Ballroom B	Madison Ballroom CD	
8:30	**Forecasting Tools and Techniques across Weather Scales: Probabilities and Bias** 8:30: **5.1:** Forecast Products Based on the 200-Member West-WRF Ensemble: A CW3E and NWS Western Region Collaborative Effort **Jonathan J. Rutz** 8:45: **5.2:** Dynamic Ensemble-Based Scenarios for IDSS (DESI): A New Decision Support Tool for Fast and Meaningful Interrogation of Ensemble-Based Numerical Weather Data **Travis Wilson** 9:00: **5.3:** An Introduction to the "Ken's 10" NWS Initiative: Probabilistic Impact-based Decision Support Services **Kathryn K. Gilbert** 9:15: **5.4:** Assessing Training and Competency Requirements in the Probabilistic Forecasting Era **Kevin Scharfenberg** 9:30: **5.5:** The Use of METplus to Inform Forecasters of Model Biases and Forecast Consistencies for Phenomena at Different Scales **Tara L. Jensen**	**Model Development and Application: Warn-on-Forecast System (WoFS) Development and Verification** 8:30: **5.1:** Towards the Development of Sub-km Scale Warn-on-Forecast System at the NOAA National Severe Storms Laboratory **Nusrat Yussouf** 8:45: **5.2:** Object-Based Verification to Inform Design and Real-Time Use of the Warn-on-Forecast System (WoFS) **Patrick S. Skinner** 9:00: **5.3:** Verification of Quasi-Linear Convective Systems Predicted by the Warn-on-Forecast System (WoFS) **Kelsey C. Britt** 9:15: **5.4:** Storm Object Size Analysis in a 1-km Warn-on-Forecast System Prototype **Christopher A. Kerr** 9:30: **5.5:** Potential Vorticity Diagnosis of Mesoscale Convective Systems in the Warn-on-Forecast System **Thomas J. Galarneau**	**Extratropical Cyclones and Winter Storms** 8:30: **5.1:** Coastal and Orographic Influences on Lake-Effect Systems:Results from Recent Observational and Modeling Studies **W. James Steenburgh** 8:45: **5.2:** The Dynamics and Predictability of a Mesoscale Windstorm and Wildfire Outbreak in the Central Great Plains on 15 December 2021**Thomas J. Galarneau** 9:00: **5.3:** Microscale Updrafts Within the U.S. Northeast Coastal Snowstorms Using High-Resolution Cloud Radar Measurements **Mariko Oue** 9:15: **5.4:** Enhanced Layers of Spectrum Width within Northeast U.S. Coastal Storms and Their Relationship with Precipitation Structures **Erin Leghart** 9:30: **5.5:** The Development of Snow Multi-Bands in High-Resolution Idealized Baroclinic Wave Simulations **Nicholas M. Leonardo**	8:30
9:45	**AM Coffee Break/Formal Poster Viewing (Grand Terrace/Hall of Ideas)**			9:45
11:15	**Forecasting Tools and Techniques Across Weather Scales: Severe/Fire** 11:15: **6.1:** Elevated Convection: Radar Signatures and Observations Associated with Gravity Wave-Breaking Damaging Winds **Brett Borchardt** 11:30: **6.2:** Extension of WoFs-Smoke to Ingest GOES-R Fire Radiative Power Retrievals **Thomas A. Jones** 11:45: **6.3:** A High-Impact Weather Identification and Visualization Product for the Operational and Client Service Meteorologists in Canada **Quanzhen Geng** 12:00: **6.4:** An Hourly Wildfire Potential Index for Predicting Short-Range Fire Activity Based on Rapidly-Updating Convection-Allowing Model Forecasts **Eric P. James** 12:15: **6.5:** Conditional Intensity Estimation of Tornadoes using Environmental Parameters **Israel L. Jirak**	**Model Development and Application: Data Assimilation** 11:15: **6.1:** Recent Progress and Future Plans for NCEP Global Data Assimilation **Daryl T. Kleist** 11:30: **6.2:** Development and Evaluation of a JEDI-based Prototype Global Data Assimilation System at NCEP **Cory R Martin** 11:45: **6.3:** Experiments with a Variable-Resolution Global Data Assimilation System with ~3-km Cell Spacing over North America **Craig Schwartz** 12:00: **6.4:** Progression of Data Assimilation for IBM GRAF: Towards a JEDI-Driven System **James P. Cipriani** 12:15: **6.5:** Development of the CMA-BJv2.0 Hourly Rapid Updated Catch-up Cycling Assimilation and Forecast System **Min Chen**	**Orographic Flows and Rainfall** 11:15: **6.1**: The Isotopic Composition of Rainfall on a Subtropical Mountainous Island **Giuseppe Torri** 11:30: **6.2:** Ensemble Modelling of Moist Convection in Complex Terrain, a Case Study from the CACTI Field Campaign **Andres Yamil Lopez** 11:45: **6.3:** Spatio-Temporal Characteristics of Rainfall over Complex Terrain in the Middle Reaches of the Yangtze River Basin during the Warm Seasons of 2016-2020 **Jianhua Sun** 12:00: **6.4:** Vertical Motions in Orographic Cloud Systems over the Payette River Basin: Controls on Liquid Water Content, Drop Number Concentrations, and Drop Size Distributions **Troy Justin Zaremba** 2:15: **6.5:** Orographic Modifications to Heavy Mei-Yu Rainfall in Taiwan **Ian Cornejo**	11:15
12:30	**Lunch Break**			12:30
2:00	**Winter Storms: Advances in Forecasting II** 2:00: **J7.1:** High-impact Observations for Enhancing Great Lakes Snowfall Forecasting **Claire Pettersen** 2:15: **J7.2:** Challenges with Winter Weather Products in the National Weather Service National Blend of Models **Adam D. Schnapp** 2:30: **J7.3:** Combining Radar and NWP to Build a Snow Rate AI Algorithm **Andrew A. Rosenow** 2:45: **J7.4:** Unifying and Simplifying Winter Precipitation Accumulations in NCEP Models **Geoffrey S. Manikin** 3:00: **J7.5:** Simulating the Transition From Freezing Rain to Ice Pellets: The Role of Secondary Ice Production During WINTRE-MIX IOP4 **Bin Han** 3:15: **J7.6:** P-type Processes and Predictability: A Case Study from the Winter Precipitation Type Research Multiscale Experiment (WINTRE-MIX) **Justin R Minder**	**Model Development and Application: RRFS Development and Planning** 2:00: **7.1:** Status on the Development of the First Version of the Rapid Refresh Forecast System **Jacob R. Carley** 2:15: **7.2:** Testing and Development of the Data Assimilation System for Rapid Refresh Forecast System **Shun Liu** 2:30: **7.3:** Ensemble-Based Tangent Linear Model to Extend Assimilation Window in the Rapid Refresh Forecast System (RRFS) **Sho Yokota** 2:45: **7.4:** NOAA Regional Models Consolidation and Retirement Plan: Rapid Refresh Forecast System **Youngsun Jung** 3:00: **7.5:** The Rapid Refresh Forecast System: Looking Beyond the First Operational Version **Curtis R. Alexander** 3:15: **7.6:** Assessment of Convective-scale Attributes of the FV3 Dycore using Idealized Simulations **Louis J. Wicker**	**Mesoscale Convective Systems II** 2:00: **7.1:** Investigate the Forcing Mechanisms Leading to the Formation of the African Easterly Waves Preceding the Genesis of Hurricanes in the Atlantic Ocean **S. M. Shajedul Karim** 2:15: **7.2:** A Preliminary Analysis of Low-Frequency Gravity Wave, Line-End Vortex, and Environmental Flow Contributions to Rear-to-Front Flow in Observed MCSs **Dillon V. Blount** 2:30: **7.3:** General Features of MCSs with the Organization of Multiple Parallel Rain Bands in China **Peiyu Wang** 2:45: **7.4:** Impacts of Low-Level Shear Orientation and Magnitude on Structure and Mesovortex Production in Idealized Squall Lines **Matthew C. Brown** 3:00: **7.5:** An Analytical Model Connecting Tropical MCS Convective Cores to Stratiform Region Growth Rates **Gregory S. Elsaesser** 3:15: **7.6:** Near-Storm Environments of Tropical Oceanic Convection As Observed from Recent NASA Airborne Campaigns **Angela Rowe**	2:00
3:30	**PM Coffee Break (Grand Terrace)**			3:30
4:15	**Advances Facilitated By New Observational Platforms and Capabilities** 4:15: **8.1:** MAPNet (Mobile Atmospheric Profiling Network): Updates and Research Applications **Kevin Knupp** 4:30: **8.2:** Optimizing Numerical Weather Prediction Utility of the Maryland Mesonet with Observing System Simulation Experiments **Joshua Eric McCurry** 4:45: **8.3:** Using WSR-88D Observations to Detect Convective Boundary Layer Depth **David J. Stensrud** 5:00: **8.4:** A Targeted Sounding and LiDAR Retrieved Wind Analysis of the 26 February 2023 Norman, OK Tornado **Madeline Diedrichsen** 5:15: **8.5:** An Explicit Microphysical and Electrical Charging Model to Study the Effects of Changing Aerosol Composition on the Electric Field and Lightning Distribution **Barry H Hugh Lynn**	**Model Development and Application: Global Model Development and Updates** 4:15: **8.1:** The Quasi-Elastic Dynamical Core of the Global Environmental Multiscale Model with a Height-Based Terrain-Following Vertical Coordinate **Syed Zahid Husain** 4:30: **8.2:** Fixing Inconsistencies between GFS Snow Accumulations and Precipitation Type **Alicia M. Bentley** 4:45: **8.3:** Sensitivity of Tropical Tropopause Layer Cirrus Prediction in GRAPES Global Forecast System **Jiong Chen** 5:00: **8.4:** Development of a Global-nested Severe Weather Forecast Model for CONUS (C-SHiELD) **Kai-Yuan Cheng** 5:15: **8.5:** Towards a Python-Based Performance-Portable Finite-Volume Dynamical Core for Numerical Weather Prediction **Stefano Ubbiali**	**Organized Moist Convection II** 4:15: **8.1:** A Theory for the Role of Vertical Wind Shear in Deep Convection Initiation **John M Peters** 4:30: **8.2:** The Simulated Organization of Deep Convection during MJO **Mingyue Tang** 4:45: **8.3:** Low-Level Jet Influences on the Warm Season Convective Environment in Central Argentina **Clayton Robert Stanley Sasaki** 5:00: **8.4:** Enhancing our Understanding of Tropical Convective Processes through the INCUS Mission **Susan C. Van Den Heever** 5:15: **8.5**: Synoptic and Mesoscale Environment Variability of US Large Hail Events **John T. Allen**	4:15
5:30	**Sessions End for the Day**			5:30
5:30	**Coriolis EDIB Reception (Rooftop Terrace)**			5:30

Wednesday, 19 July 2023				
	32WAF	**28NWP**	**20Meso**	
	Madison Ballroom A	Madison Ballroom B	Madison Ballroom CD	
8:30	**Other Topics on Weather Analysis and Forecasting: Tropical Cyclones and Hurricanes** 8:30: **9.1**: Thermodynamics of Overland Tropical Cyclone Intensity Change in Weakly/Non-Baroclinic Environments **Michael P. Vossen** 8:45: **9.2**: Predictability of the Overland Reintensification of North Atlantic Tropical Storm Erin (2007) **Ariel R. Tickner-Ernst** 9:00: **9.3**: Quantifying Impacts of Environmental Moisture Spatial Patterns on Tropical Cyclones Via Observational Datasets **Kimberly M. Wood** 9:30: **9.5:** Assessing Model Guidance for Hurricane Ian **Logan C. Dawson**	**Other Topics on Numerical Weather Prediction: Data Assimilation Development** 8:30: **9.1:** Multiscale Data Assimilation for Numerical Weather Prediction (Invited Presentation) **Xuguang Wang** 8:45: **9.2:** Scale-Dependent Localization and Multiscale Assimilation for NCEP Data Assimilation Systems **Daryl T. Kleist** 9:00: **9.3**: Toward Fully Non-Parametric Data Assimilation for Numerical Weather Prediction **Jonathan Poterjoy** 9:15: **9.4:** Developing a Coupled Land-Atmosphere Data Assimilation for UFS With JEDI: Evaluation With Near-Surface Weather Forecasting **Qien Huang** 9:30: **9.5**: Development of Surface Data Assimilation and Forecast for Rapid Refresh Forecast System **Ming Hu**	**Predictability of Arctic Cyclones I** 8:30: **J9.1:** Sensitivity and Predictability of Mesoscale Polar Lows **James D. Doyle** 8:45: **J9.2**: Sensitivity of an August 2022 Arctic Cyclone to Sea Ice and Ocean Representation in Polar WRF **Kyle K. Ahern** 9:00: **J9.3**: Coupled Simulations of a Wintertime Arctic Cyclone with Significant Surface Impacts Observed During MOSAiC **Ola Persson** 9:15: **J9.4:** Comparing the Predictability of Arctic and Atlantic Basin Cyclones Using Ensemble-Based Sensitivity Analysis of MPAS Forecasts **Peyton K. Capute** 9:30: **J9.5**: Investigating Arctic Cyclone-Tropopause Polar Vortex Interactions with Observing System Simulation Experiments **Matthew Bray**	8:30
9:45	**AM Coffee Break/Formal Poster Viewing (Grand Terrace/Hall of Ideas)**			9:45
11:15	**R2O and R2O2R Activities and Testing (e.g., testbeds)** 11:15: **10.1**: An Overview of the 1st Hybrid NOAA Hazardous Weather Testbed Spring Forecasting Experiment in 2023 **Adam J. Clark** 11:30: **10.2:** Evaluation of the Rapid Refresh Forecast System during the 2023 NOAA Hazardous Weather Testbed Spring Forecasting Experiment **Jacob Vancil** 11:45: **10.3**: Exploring Probabilistic Guidance for Aviation Decision Making through the Aviation Weather Testbed **Stephanie J. Avey** 12:00: **10.4**: Better Utilization of Ensembles in Operations Through Clustering: An R2O Success Story **Brian Anthony Colle** 12:15: **10.5**: Updates and Additions to the Prototype NWS Winter Storm Severity Index (WSSI) Travel **Dana Tobin**	**Model Development and Application: Model Overviews** 11:15: **10.1:** Development and Evaluation of the NEPTUNE Prediction System **James D. Doyle** 11:30: **10.2**: Modeling Updates at the US Air Force's 16th Weather Squadron **Evan L. Kuchera** 11:45: **10.3:** The Navy Earth System Prediction Capability: Version 2 Developments **Carolyn A. Reynolds** 12:00: **10.4**: The 200-Member West-WRF Near Real-Time Forecast Ensemble **Daniel F. Steinhoff** 12:15: **10.5**: IBM GRAF - Global High-Resolution Atmospheric Forecast System An Operational 2023 Update and Roadmap **Brett A. Wilt**	**Prediction Of and Data Assimilation in Mesoscale Processes and Mesoscale Extremes** 11:15: **10.1**: Simultaneous Assimilation of Polarimetric and All-Sky Satellite Data for Ensemble Convection Forecasts **Keenan Christopher Eure** 11:30: **10.2**: Impact of Soil Moisture Data Assimilation on the Numerical Simulation of Landfalling Hurricanes **Zhaoxia Pu** 11:45: **10.3**: Assessing the Value of Assimilating Surface, PBL, and Free Atmosphere Observations from TORUS on Storm-Scale Ensemble Forecasts **Matthew Wilson** 12:00: **10.4**: Improving the Prediction and Discernment of Frontal Boundaries with Deep Learning **Andrew Douglas Justin** 12:15: **10.5**: Improving Prediction and Advancing Understanding of Weather Systems over North Africa and the Tropical Atlantic **Shu-Hua Chen**	11:15
12:30	**Lunch Break**			12:30
2:00	**Forecasting of Extreme Precipitation Events: Atmospheric Rivers** 2:00: **11.1:** Atmospheric River Reconnaissance in Water Year 2023 – A Research and Operations Partnership **Anna M. Wilson** 2:15: **11.2:** Near-Real-Time Data Impact Studies for Extreme Precipitation Events during Atmospheric River Reconnaissance Program using NCEP Operational Global Forecast System **Vijay S. Tallapragada** 2:30: **11.3:** Application of Ensemble Sensitivity during the 2022/2023 AR-Recon Season **Ryan D. Torn** 2:45: **11.4:** Evaluation of Weather Forecast Errors during Major Atmospheric River Sequences Impacting California during Winter 2022-2023 **Rachel R. Weihs** 3:00: **11.5:** Drought-Alleviating Heavy Precipitation in California During Winter 2022–2023 **Lance F. Bosart** 3:15: **11.6:** An Overview of a Heavy Precipitation Event over California in October 2021: Roles of an Extreme Atmospheric River and Explosive Extratropical Cyclone **Clinton Alden**	**Forecast Verification Methods and Performance: Model Evaluation Techniques** 2:00: **11.1:** Application of Multi-Dimensional Stratification in Forecast Verification **Michael E. Baldwin** 2:15: **11.2:** Recent Advances in the METplus Verification and Diagnostic Capability Across Multiple Scales and Applications **Tara L. Jensen** 2:30: **11.3:** Convergence of Sampling Uncertainty in Forecast Models: When Do We Have Enough Ensemble Members? **Kirsten Tempest** 2:45: **11.4:** Validating HRRR Simulated Cloud Properties for Different Weather Phenomena Using Satellite and Radar Observations **Sarah Griffin** 3:00: **11.5:** Assessing the Meteorological Skill of the Navy Weather Model (COAMPS) **Sandra E. Yuter** 3:15: **11.6:** An Analysis on the Sources of Tropical Cyclone Forecast Track Bifurcation in the COAMPS-TC and GEFS Ensembles **Kevin Prince**	**Science and Prediction of Extreme Rainfall** 2:00: **11.1:** Environmental Properties of Heavy Rainfall Events under Extremely Humid Conditions during the Rainy Season (Baiu) in Japan **Tetsuya Takemi** 2:15: **11.2:** Evaluation and Assimilation of Low-Level Moisture from the MPD during the "PRE"-CIP Experiment **Yunji Zhang, PhD** 2:30: **11.3:** The Role of Wind Shear, Vertical Vorticity, and Pressure Perturbations on a Terrain Anchored, High-Precipitation Supercell **Terrence Corrigan** 2:45: **11.4:** Recent Observed Trends and Interannual Variability of Summertime Extreme Convective Rainfall Events in the Central and Eastern United States **Jason Chiappa** 3:00: **11.5:** Sensitivity of Tropical Oceanic Convection to Horizontal Model Resolution in Idealized Simulations Forced with PRECIP Observations **Rosimar Rios-Berrios** 3:15: **11.6:** Sources of Forecast Errors for Extreme-Rain-Producing Mesoscale Convective Systems **Russ S. Schumacher**	2:00
3:30	**PM Coffee Break (Grand Terrace)**			3:30
4:15	**Forecasting of Extreme Precipitation Events II** 4:15: **12.1:** The NOAA Precipitation Prediction Grand Challenge: Advancing Predictions of Extreme Rainfall **David R. Novak** 4:30: **12.2:** Characterizing Warm-Season Extreme Precipitation in the HREF Means **Diana Rose Stovern** 4:45: **12.3:** Characterizing Extreme Precipitation in HREF Individual Ensemble Members **Janice L. Bytheway** 5:00: **12.4:** Evaluation of Model Guidance for Two High-Impact Flooding Events in July 2022 **Marcel G. Caron** 5:15: **12.5:** Interconnections between SST and Extreme Rainfall in the Gulf of Guinea **Oye Ideki**	**Forecast Verification Methods and Performance: Unified Forecast System (UFS) Verification** 4:15: **12.1:** The Environmental Modeling Center Verification System (EVS): Real-Time Verification of Unified Forecast System (FS) Models **Jason J. Levit** 4:30: **12.2:** Comparison of Time-Lagging and Neighborhood Methods on the Performance of the Rapid Refresh Forecast System **Christina P. Kalb** 4:45: **12.3:** Convectively Coupled Equatorial Wave Skill in the Unified Forecast System **Maria Gehne** 5:00: **12.4:** The Unified Forecast System: Principles and Progress **Hendrik L. Tolman** 5:15: **12.5:** Evaluating RRFS Prototypes within an Agile Testing Framework to Help Inform Future Operational Implementation **Michelle A. Harrold**	**Organized Moist Convection III** 4:15: **12.1:** The Covariability of Microphysical and Dynamical Processes within Convective Updrafts in Different Environments and Storm Types **Peter J. Marinescu** 4:30: **12.2:** Sensitivity Study of Deep Convection Dynamics to Tropospheric Humidity Using Large-Eddy Simulations **Didier Ricard** 4:45: **12.3:** Dry Air Above the PBL As a Convection Initiation Failure Mode in Idealized Simulations **Christopher Nowotarski** 5:00: **12.4:** The Impact of CIN Depth on Simulated Deep Convection Initiation **Adam L. Houston** 5:15: **12.5:** Convective Stratospheric Hydration, AACPs, & Tropopause Height **Elisa Murillo**	4:15
5:30	**Sessions End for the Day**			5:30

Thursday, 20 July 2023

	32WAF	28NWP	20Meso	
	Madison Ballroom A	Madison Ballroom B	Madison Ballroom CD	
8:30	**Winter Storms: Effects of Extreme Temperature Outbreaks** 8:30: **J13.1:** An Analysis of the Predictability of the February 2021 Cold Air Outbreak at S2S Timescales **Grace Elizabeth Dines** 8:45: **J13.2:** A Space-Based Analysis of North Atlantic Snowfall and Clouds during Marine Cold-Air Outbreaks **Marian Mateling** 9:00: **J13.3**: Direct and Indirect Relationships Between Atmospheric Rivers and Precipitation in Colorado **Xun Zou** 9:15: **J13.4:** Climatological Perspective and Synoptic Analysis of Landfalling Atmospheric Rivers in California During December 2022 and January 2023 **Jason M. Cordeira** 9:30: **J13.5:** Cold-Season Subtropical Air Mass Intrusions into North American Extratropical Latitudes: Dynamic and Thermodynamic Impacts on Extreme Precipitation **John Richard Gyakum**	**New Post-Processing and Bias-Correction Techniques: Post-Processing and Diagnostic Tools for Weather Forecasting** 8:30: **13.1:** Global Statistical Postprocessing of Precipitation Amount at the IBM/Weather Company **Thomas M. Hamill** 8:45: **13.2:** Spatial Alignment of CAM Ensemble Members to Improve Ensemble Consensus Precipitation **Chang Jae Lee** 9:00: **13.3:** Ensemble Subsetting of Convection-Allowing Ensemble Forecasts to Improve Thunderstorm Initiation Nowcasting **George Limpert** 9:15: **13.4:** Design and Evaluation of an ESA-Based Method of Ensemble Subsetting for a WoF-like System **Dan Butler** 9:30: **13.5:** FV3-LAM CAM Ensemble Predictions and Consensus Products for Predicting Heavy Rain for the Hydrometeorology Testbed **Keith A. Brewster**	**Professor Lev Gutman's 100th Anniversary I** 8:30: **13.1:** The Legacy of Prof. Lev Gutman: A Short Bio and Curious Facts **Garik Gutman** 9:00: **13.2:** Professor Lev Gutman's Multiple Seminal Contributions to Mesoscale Meteorology **Roger A. Pielke Sr.** 9:30: **13.3:** Gutman and Mesoscale Modelling **Svante Bodin**	8:30
9:45	**AM Coffee Break/Formal Poster Viewing (Grand Terrace/Hall of Ideas)**			9:45
11:15	**Winter Storms: Results from NASA IMPACTS Field Campaign** 11:15: **J14.1:** Micro- and Mesoscale Structures within Snowbands in Winter Storms: Preliminary Results from the Inestigation of Microphysics and Precipitation for Atlantic Coast Threatening Snowstorms (IMPACTS) Field Campaign **Lynn McMurdie** 11:30: **J14.2:** Assessing Predictability of Winter Storms during the NASA IMPACTS Field Campaign **Steven J. Greybush** 11:45: **J14.3:** Passive Microwave Observations of Mesoscale Snow Bands from NASA IMPACTS **Matthew A. Miller** 12:00: **J14.4:** Multimodal Ice Crystal Size Distributions in Atlantic Coast Snowstorms: Results from IMPACTS 2020 **Peter Anthony Brechner** 12:15: **J14.5:** Variability of Cool Season Precipitation Structures Within the Cyclone Comma Head **Phillip Yeh**	**New Post-Processing and Bias-Correction Techniques: Machine Learning, Neural Networks, and Other Techniques** 11:15: **14.1:** Prospects for Machine Learning Activity within the United States National Weather Service **Paul J. Roebber** 11:30: **14.2:** Verification of a Sensitivity-Based Ensemble Subsetting Approach Augmented with Machine-Learning-Based Predictions of Severe Hazards **Austin A. Coleman** 11:45: **14.3:** A Neural-Network Based MPAS—Shallow Water Model and Its 4D-Var Data Assimilation System **Xiaoxu Tian** 12:00: **14.4:** Improvement in Track and Intensity Prediction of Hurricane Florence (2018) Using Hurricane WRF (HWRF) Model with Ensemble Techniques **Liping Liu** 12:15: **14.5:** How Should a Numerical Weather Prediction (NWP) Model Forecast be Used: Full Field or Anomaly? **Jun Du**	**Professor Lev Gutman's 100th Anniversary II** 11:15: **14.1:** Mesometeorological Motions Caused By Topography **Alexander P. Khain** 11:30: **14.2A:** Urban and Boundary Layer Meso-Meteorological Modeling for Integrated Systems: In Memory of Prof. L. Gutman **Alexander Baklanov** 11:45: **14.3:** Numerical Modeling of Dust Distribution in the Atmosphere of the Caucasus Region with Complex Terrain **Aleksandre Surmava** 12:00: **14.4:** Exact Solutions of the Ekman Problem with Periodic Forcing **Georgy Burde** 12:15: **14.6:** The Potential of an Index for Mesoscale Activity – Based on High Resolution INCA-Analysis Data **Pinhas Alpert**	11:15
12:30	**Lunch Break**			12:30
2:00	**Forecasting High-Impact Weather with Artificial Intelligence: Applications for Severe Weather** 2:00: **15.1:** Building Real-Time Machine Learning Forecast and Visualization Systems **David John Gagne II** 2:15: **15.2:** Applying Dense and Convolutional Neural Networks to the HRRR and RRFS to Generate Reliable, Skillful 1-48 Hour Predictions of Severe Weather Reports, Warnings, and Lightning **Ryan A. Sobash** 2:30: **15.3:** Producing Machine Learning-Based Severe Weather Guidance at Watch-to-Warning Lead Times **Samuel D. Varga** 2:45: **15.4:** Evaluation of the Warn-on-Forecast Machine Learning System in the 2022 Hazardous Weather Testbed Spring Forecasting Experiment **Montgomery L. Flora** 3:00: **15.5:** Evaluating Probabilistic Predictions of Lightning Generated with a Neural Network and HRRR Forecasts **David A. Ahijevych** 3:15: **15.6:** Making Sense of Random Forest-Based Severe Weather Forecasts Using Tree Interpreter **Alexandra C. Mazurek**	**Model Development and Application: Stochastic Physics** 2:00: **15.1** Testing Stochastic Physics Perturbation Methods in an Experimental Next-Generation 1-km Warn-on-Forecast System **Derek R. Stratman** 2:15: **15.2** Stochastic Physics in the FV3-LAM/SRW App: Implementation, Testing, and Transition to Operations in the RRFS **Jeff Beck** 2:30: **15.3** Evaluating Stochastic Parameter Perturbations in Convection-Permitting Ensemble Forecasts of Lake-Effect Snow **J.R. Minder** 2:45: **15.4** Impact of Ensemble Design in the Rapid Refresh Forecast System Using Initial Condition and Stochastic Physics Perturbations **Will Mayfield** 3:00: **15.5** Evaluation of Real-time Convection-Allowing FV3 Ensemble Forecasts from the 2022 HWT Spring Forecasting Experiment to Inform RRFS Ensemble Design **Nathan A. Snook** 3:15: **15.6** The Development and Evaluation of Rapid Refresh Forecast System (RRFS) Multiphysics Ensemble Prototype **Jill Dong**	**Predictability of Arctic Cyclones II** 2:00: **J15.1:** Investigating the Relationship between Tropopause Polar Vortices and Arctic Cyclone Longevity **Steven M. Cavallo** 2:15: **J15.2:** Characteristics and Lifecycles of Anticyclonic Tropopause Polar Vortices **Joseph Burzdak** 2:30: **J15.3:** Sensitivity of the February 2021 U.S. Cold-Air Outbreak to Tropopause Polar Vortex Intensity **Tomer Burg** 2:45: **J15.4:** Impact of Assimilating the THINICE2022 Continuous Windborne Observations inside a TPV on the Predictability of an Arctic Cyclone **Zhihong Chen** 3:00: **J15.5:** Impact of Windborne Observation Assimilation on Prediction of a TPV Merger and Arctic Cyclogenesis Case Study from THINICE **Aaron T. Johnson** 3:15: **J15.6:** The Impact of Assimilated Clear-Sky and Cloudy Retrievals on Arctic Prediction During THINICE 2022 **Steven Businger**	2:00
3:30	**PM Coffee Break (Grand Terrace)**			3:30
4:15	**Forecasting High-Impact Weather with Artificial Intelligence: Applications for Precipitation and Global Weather** 4:15: **16.1:** How Far into the Medium Range Can Probabilistic Excessive Rainfall Forecasts be Extended? **Russ S. Schumacher** 4:30: **16.2:** How Long of an Observational Record Is Needed for Skillful ML-Based Forecasts of Excessive Rainfall? **Aaron Hill** 4:45: **16.3:** Testing Random Forests for Prediction of Excessive Rainfall Based on the High-Resolution Rapid Refresh (HRRR) **Eric P. James** 5:00: **16.4:** Development of a Convolutional Neural Network to Predict Wintertime Orographic Precipitation Gradients of the Western US **Savanna Wolvin** 5:15: **16.5:** Impacts of Machine Learning for Targeted Observation Thinning in Satellite Data Assimilation **Kirana Olympia Bergstrom**	**Forecast Verification Methods and Performance: CAM Verification** 4:15: **16.1:** Deriving PBL Properties with Aircraft Data and Comparing to the HRRR Model **Jason M. English** 4:30: **16.2:** Determining Causes for Modeled Mesoscale Convective System Dissipation Time Errors **Sam Ritter** 4:45: **16.3:** Sensitivity of Object-Based Verification Results to Configuration Options Using MODE **Jeffrey D. Duda** 5:00: **16.4:** Comparing Surrogate Severe Forecasting Skill and Storm Object Properties of the Experimental NSSL MPAS, RRFS, and HRRR Models **Larissa Joy Reames** 5:15: **16.5:** Comparisons of the Experimental Rapid Refresh Forecast System (RRFS) Model With the Operational HRRR for a Variety of Significant Weather Events **Edward J. Szoke**	**Impacts of Inhomogeneous Underlying Surfaces on Convection Initiation and Organization I** 4:15: **16.1:** Lake-Breeze-Front-Like Features During Large-Scale Onshore Flow and Their Influence on Convection Initiation **Christian H Boyer** 4:30: **16.2:** Instability Maxima on the Cool Side of Lake-Breeze Fronts and Their Influence on Convection Initiation **Jason M. Keeler** 4:45: **16.3:** DEsert-oasis COnvergence line and Deep convection Experiment (DECODE) **Zhiyong Meng** 5:00: **16.4:** Evaluation of Real-Time Forecasts during DECODE 2022 in China **Murong Zhang** 5:15: **16.5:** Land-Atmosphere Interactions: Observations and Large Eddy Simulations over an Irrigation Gradient **Eric Rappin**	4:15
5:30	**Sessions End for the Day**			5:30

Friday, 21 July 2023

	32WAF	28NWP	20Meso	
	Madison Ballroom A	Madison Ballroom B	Madison Ballroom CD	
8:30	**Other Topics on Weather Analysis and Forecasting** 8:30: **17.1:** Forecast Verification at The Weather Company/IBM **Joseph P. Koval** 8:45: **17.2:** Extreme GFS Temperature Forecasts During the Summer of 2022 **Geoffrey Manikin** 9:00: **17.3:** Environmental Conditions and Forecast Error Evolution Associated with Synoptic Progressiveness Errors in GFS Forecasts **Kevin M. Lupo** 9:15: **17.4:** Calibration of Parameters of the Multigrid Beta Filter (MGBF) and its Performance within the Three-Dimensional Real-Time Mesoscale Analysis (3D RTMA) Project **Miodrag Rancic** 9:30: **17.5:** Continual Optimization and Refactoring of GSI for Rapid Refresh Forecast System (RRFS): Current Status and Prospect from the EMC Perspective**Ting lei** 9:45: **17.6:** A Damaging-Wind Based MCS Classification System and Formal Definition of a Derecho **Brian J. Squitieri**	**Other Topics on Numerical Weather Prediction: Data Assimilation Experiments and Applications** 8:30: **17.1:** The Impact of Reducing the Assimilation Interval in the NOAA Global Data Assimilation System **Jeffrey S. Whitaker** 8:45: **17.2:** Assimilation of Screen-Level Temperature and Humidity Observations into NOAA's Global NWP System **Clara S. Draper** 9:00: **17.3:** Prospects for Using a Multigrid Filter to Characterize the Errors of a Variational Analysis **Robert J. Purser** 9:15: **17.4:** Impacts of Northeastern Pacific Buoy Surface Pressure Observations **Carolyn A. Reynolds** 9:30: **17.5:** Impact of Microphysical Uncertainty on the Practical Predictability of the 10 August 2020 Midwest Derecho with the Assimilation of All-Sky Infrared Radiances **Yunji Zhang** 9:45: **17.6:** Evaluation of Real-Time WRF Forecasting Simulations during Escape **Yishi Hu**	**Diurnal Cycle, Radiative Feedback, Clouds, and Organized Moist Convection** 8:30: **17.1:** Stratiform–Radiation Feedback: A Dynamic Pathway of Upscale Convective Growth through Cloud–Radiation Feedback **James H. Ruppert Jr.** 8:45: **17.2:** Decomposing Forcing Mechanisms and Impacts of Simulated Diurnal Pulses **Jeremiah Otero Piersante** 9:00: **17.3:** Global Characteristics of "On-the-Clock" and "Off-the-Clock" Tropical Cyclone Diurnal Pulses **Kristen L. Corbosiero** 9:15: **17.4:** The Influence of Land–Sea Contrast and Topography on the Diurnal Cycle of Precipitation in the Bay of Bengal **ZiJian Chen** 9:30: **17.5:** Changes in the Structure and Intensity of Tropical Cyclones associated with Diurnal Pulsing **Weixin Xu** 9:45: **17.6:** Land Breeze Characteristics Off the West Coast of Sumatra **Ryan North**	8:30
10:00	**AM Coffee Break (Grand Terrace)**			10:00
10:45	**Other Topics on Weather Analysis and Forecasting: Weather Around the World** 10:45: **18.1:** Investigating Hail Melt Using Airbourne Observations and Concurrent Surface Observations of Hail **Hannah Vagasky** 11:00: **18.2:** Environments Associated with Hail Production in Organized Multicellular Systems in Subtropical South America **Rebecca D. Adams-Selin** 11:15: **18.3:** Examining Multi-Scale Interactions Associated with Offshore Rainfall Near the West Coast of Sumatra with Satellite Multi-Sensor Data, Reanalysis, and WRF Numerical Solutions **Johnathan Stoddard** 11:30: **18.4:** A Comparison between the Only Two Tornado Outbreak Events in China: Tropical Cyclone vs. Extratropical Cyclone Environments **Jingyi Wen** 11:45: **18.5:** Development of a Very Short-Range Forecast of Precipitation System in Vietnam **Kazuo Saito**	**Other Topics on Numerical Weather Prediction III** 10:45: **18.1:** Forecast Impacts of Observations from WindBorne Long-Duration Weather Balloons **Todd A. Hutchinson** 11:00: **18.2:** Applications of GOES-16/17 Atmospheric Motion Vectors to the Initialization and Forecast of Atmospheric Rivers in NWP Models **Minghua Zheng** 11:15: **18.3:** Evaluation of the Representation of Arctic Mixed-Phase Clouds in ECMWF Forecasts during ACLOUD **Hanno Mueller** 11:30: **18.4:** Probabilistic Prediction of Agricultural Spray Drift and Deposition Using an LES Ensemble **John Manobianco**	**Mesoscale Boundary-Layer Circulations** 10:45: **18.1:** Observations of Boundary-Layer Convergence Lines and Associated Updrafts in the US Southern Great Plains **Shanhe Liu** 11:00: **18.2:** Variability of Successive Cold Pools in BACS-1 **Christine A. Neumaier** 11:15: **18.3:** Variability Within and Among Midlatitude Cold Pools **Leah D. Grant** 11:30: **18.4:** What Causes Haboobs to Propagate Faster or Slower? **Nicholas Michael Falk** 11:45: **18.5:** The Relevance of Mean-State Critical Levels for the Intensification of Downslope Winds **Gert-Jan Duine**	10:45
12:00	**Lunch Break**			12:00
1:30			**Tropical and Extratropical Cyclones** 1:30: **19.1:** Asymmetric Tropical Cyclone Structures and Processes in Reanalyses and Climate Models **Jacob Carstens** 1:45: **19.2:** Formation of Tropical Storm Debby (2006) due to Thermal and Mechanical Forcing Associated with the Passage of the Pre-Debby African Easterly Waves over the Guinea Highlands **Jackson Tyler Wiles** 2:00: **19.3:** Differences in Tropical Cyclone Tornado Activities and Key Tornadic Environments between China and the U.S. **Jingyi Wen** 2:15: **19.4:** Manifestation of Elevated Convection in Wintertime Extratropical Cyclones During IMPACTS **Kaylee Heimes** 2:30: **19.5:** Preconditioning and Intensification of Upstream Extratropical Cyclones through Surface Fluxes **Reuben Demirdjian**	1:30
2:45	**PM Coffee Break (Grand Terrace)**			2:45
3:30			**Impacts of Inhomogeneous Underlying Surfaces on Convection Initiation and Organization II** 3:30: **20.1:** Some Clouds Just Really like Mountain Climbing: Relationships between LES-Modeled Deep Convection Initiation Events and Orographic Circulations **James N. Marquis** 3:45: **20.2:** Synoptic Impacts on the Occurrence of Mesoscale Boundaries and Their Associated Convection Over an Area of Sharp Vegetation Contrast **Yipeng Huang** 4:00: **20.3:** Effects of Land-Surface Heterogeneity on Sea-Breeze Convection **Benjamin David Ascher** 4:15: **20.4:** Convection Initiation Associated with a Boundary Layer Convergence Line over a Real-world Sharp Vegetation-Contrast Area **Hongjun Liu** 4:30: **20.5:** Environmental Characteristics of Coastal Convection in the Houston Region **Katherine E. McKeown** 4:45: **20.6:** Diurnal Cycle and Dipolar Pattern of Precipitation over Borneo during the MJO **Shuguang Wang**	3:30
5:00	**Conference Adjourns**			5:00

	Conf.	Paper #	Day	Time
A				
Adams-Selin, R. D.	32WAF	18.2	Fri	11:00 AM
Ahern, K. K.	20MESO	J9.2	Wed	8:45 AM
Ahijevych, D. A.	32WAF	15.5	Thu	3:00 PM
Alavi, N.	28NWP	3.4	Mon	2:45 PM
Alden, C.	32WAF	11.6	Wed	3:15 PM
Alexander, C. R.	28NWP	7.5	Tue	3:00 PM
Aligo, E. A.	20MESO	V2	Mon	9:45 AM
Allen, J. T.	32WAF	1.4	Mon	9:15 AM
Allen, J. T.	20MESO	8.5	Tue	5:15 PM
Allen, L. R.	20MESO	20	Tue	9:45 AM
Alpert, P.	20MESO	14.6	Thu	12:15 PM
Anderson-Frey, A. K.	32WAF	1.2	Mon	8:45 AM
Antonelli, P.	20MESO	V11	Mon	9:45 AM
Ascher, B. D.	32WAF	90	Thu	9:45 AM
Ascher, B. D.	20MESO	20.3	Fri	4:00 PM
Ash, K.	32WAF	100	Thu	9:45 AM
Avey, S. J.	32WAF	10.3	Wed	11:45 AM
B				
Baklanov, A.	20MESO	14.2A	Thu	11:30 AM
Baldwin, M. E.	28NWP	11.1	Wed	2:00 PM
Bao, J. W.	28NWP	1.5	Mon	9:30 AM
Baxter, M. A.	32WAF	4.5	Mon	5:15 PM
Beck, J.	28NWP	15.2	Thu	2:15 PM
Bengtsson, L.	28NWP	4.1	Mon	4:15 PM
Bentley, A. M.	28NWP	8.2	Tue	4:30 PM
Bergstrom, K. O.	32WAF	16.5	Thu	5:15 PM
Bernardet, L.	28NWP	2.1	Mon	11:15 AM
Berrington, A.	20MESO	V12	Mon	9:45 AM
Biernat, K. A.	32WAF	114	Thu	9:45 AM
Bissell, D.	20MESO	J4.5	Mon	5:15 PM
Blount, D. V.	20MESO	7.2	Tue	2:15 PM
Bluestein, H. B.	32WAF	95	Thu	9:45 AM
Bodin, S.	20MESO	13.3	Thu	9:30 AM
Borchardt, B.	32WAF	6.1	Tue	11:15 AM
Bosart, L. F.	32WAF	11.5	Wed	3:00 PM
Bower, E.	32WAF	4.2	Mon	4:30 PM
Boyer, C. H.	20MESO	16.1	Thu	4:15 PM
Bray, M.	20MESO	J9.5	Wed	9:30 AM
Brechner, P. A.	32WAF	J14.4	Thu	12:00 PM
Brewster, K. A.	28NWP	13.5	Thu	9:30 AM
Britt, K. C.	28NWP	5.3	Tue	9:00 AM
Brown, M. C.	20MESO	7.4	Tue	2:45 PM
Burde, G.	20MESO	14.4	Thu	12:00 PM
Burg, T.	20MESO	J15.3	Thu	2:30 PM
Burzdak, J.	20MESO	J15.2	Thu	2:15 PM
Businger, S.	20MESO	J15.6	Thu	3:15 PM
Butler, D.	28NWP	13.4	Thu	9:15 AM
Bytheway, J. L.	32WAF	12.3	Wed	4:45 PM
C				
Capute, P. K.	20MESO	J9.4	Wed	9:15 AM
Carley, J. R.	28NWP	7.1	Tue	2:00 PM
Caron, M. G.	32WAF	12.4	Wed	5:00 PM
Carstens, J.	20MESO	19.1	Fri	1:30 PM
Cavallo, S. M.	20MESO	J15.1	Thu	2:00 PM
Chalmers, Z. A.	20MESO	17	Tue	9:45 AM
Chasteen, M. B.	20MESO	19	Tue	9:45 AM
Chasteen, M. B.	32WAF	97	Thu	9:45 AM
Chen, J.	28NWP	8.3	Tue	4:45 PM
Chen, M.	28NWP	6.5	Tue	12:15 PM
Chen, S. H.	20MESO	10.5	Wed	12:15 PM
Chen, X.	20MESO	1.4	Mon	9:15 AM
Chen, Z.	20MESO	J15.4	Thu	2:45 PM
Chen, Z.	20MESO	17.4	Fri	9:15 AM
Cheng, K. Y.	28NWP	8.4	Tue	5:00 PM
Chiappa, J.	20MESO	11.4	Wed	2:45 PM
Cipriani, J. P.	28NWP	6.4	Tue	12:00 PM
Clark, A. J.	28NWP	42	Wed	9:45 AM
Clark, A. J.	32WAF	10.1	Wed	11:15 AM
Coleman, A. A.	28NWP	14.2	Thu	11:30 AM
Coleman, T. A.	20MESO	V15	Mon	9:45 AM
Colle, B. A.	32WAF	10.4	Wed	12:00 PM
Colle, B. A.	28NWP	53	Wed	9:45 AM
Corbosiero, K. L.	20MESO	17.3	Fri	9:00 AM
Cordeira, J. M.	32WAF	J13.4	Thu	9:15 AM
Cornejo, I.	20MESO	6.5	Tue	12:15 PM
Corrigan, T.	20MESO	11.3	Wed	2:30 PM
D				
Davenport, C.	20MESO	3.1	Mon	2:00 PM
Dawson, L. C.	32WAF	9.5	Wed	9:30 AM
Demirdjian, R.	20MESO	19.5	Fri	2:30 PM
Deng, L.	28NWP	63	Wed	9:45 AM
DeYoung, C.	32WAF	86	Thu	9:45 AM

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D (Continued)				
Diedrichsen, M.	32WAF	8.4	Tue	5:00 PM
Dines, G. E.	32WAF	J13.1	Thu	8:30 AM
Dong, J.	28NWP	15.6	Thu	3:15 PM
Doyle, J. D.	20MESO	J9.1	Wed	8:30 AM
Doyle, J. D.	28NWP	10.1	Wed	11:15 AM
Doyle, J. D.	28NWP	56	Wed	9:45 AM
Draper, C. S.	28NWP	17.2	Fri	8:45 AM
Du, J.	28NWP	14.5	Thu	12:15 PM
Du, Y.	20MESO	1.3	Mon	9:00 AM
Duda, J. D.	28NWP	16.3	Thu	4:45 PM
Duine, G. J.	20MESO	18.5	Fri	11:45 AM
E				
Elsaesser, G. S.	20MESO	7.5	Tue	3:00 PM
English, J. M.	28NWP	16.1	Thu	4:15 PM
Epifanio, C. C.	28NWP	3.6	Mon	3:15 PM
Esposito, N. R.	28NWP	62	Wed	9:45 AM
Eure, K. C.	20MESO	10.1	Wed	11:15 AM
Evans, A. N.	28NWP	52	Wed	9:45 AM
F				
Falk, N. M.	20MESO	18.4	Fri	11:30 AM
Feemster, C.	32WAF	101	Thu	9:45 AM
Fernandez, E.	20MESO	38	Tue	9:45 AM
Finocchio, P. M.	32WAF	89	Thu	9:45 AM
Firl, G. J.	28NWP	1.4	Mon	9:15 AM
Flora, M. L.	32WAF	15.4	Thu	2:45 PM
Fontanez, I. L.	32WAF	110	Thu	9:45 AM
Fragano, C.	28NWP	48	Wed	9:45 AM
Frank, M. C.	32WAF	112	Thu	9:45 AM
G				
Gabler, M. V.	20MESO	V14	Mon	9:45 AM
Gagne, D. J. II	32WAF	15.1	Thu	2:00 PM
Galarneau, T. J.	20MESO	5.2	Tue	8:45 AM
Galarneau, T. J.	28NWP	5.5	Tue	9:30 AM
Gallus, W. A. Jr.	28NWP	47	Wed	9:45 AM
Gao, W.	20MESO	V3	Mon	9:45 AM
Garcia Rosales, A.	20MESO	31	Tue	9:45 AM
Geerts, B.	20MESO	15	Tue	9:45 AM
Gehne, M.	28NWP	12.3	Wed	4:45 PM
Geng, Q.	32WAF	6.3	Tue	11:45 AM
Gensini, V. A.	32WAF	1.1	Mon	8:30 AM
Gholoubi, A.	28NWP	39	Wed	9:45 AM
Gilbert, K. K.	32WAF	5.3	Tue	9:00 AM
Goldacker, N.	20MESO	28	Tue	9:45 AM
Golden, N.	20MESO	30	Tue	9:45 AM
Gonzalez-Fuentes, M.	20MESO	34	Tue	9:45 AM
Graber, M.	20MESO	13	Tue	9:45 AM
Graham, R. II	20MESO	V6	Mon	9:45 AM
Grant, L. D.	20MESO	18.3	Fri	11:15 AM
Gray, K. T.	20MESO	3.4	Mon	3:00 PM
Greybush, S. J.	28NWP	40	Wed	9:45 AM
Greybush, S. J.	32WAF	J14.2	Thu	11:30 AM
Griffin, S.	28NWP	11.4	Wed	2:45 PM
Gutman, G.	20MESO	13.1	Thu	8:30 AM
Guzman Rey, O. F.	20MESO	V9	Mon	9:45 AM
Gyakum, J. R.	32WAF	J13.5	Thu	9:30 AM
H				
Hair, J. D.	28NWP	54	Wed	9:45 AM
Hamill, T. M.	28NWP	13.1	Thu	8:30 AM
Han, B.	32WAF	J7.5	Tue	3:00 PM
Han, J.	28NWP	4.5	Mon	5:15 PM
Harrold, M. A.	28NWP	12.5	Wed	5:15 PM
Heimes, K.	20MESO	19.4	Fri	2:15 PM
Hepper, R. M.	28NWP	65	Wed	9:45 AM
Herdies, D. L.	28NWP	69	Wed	9:45 AM
Hertneky, T. J.	28NWP	2.2	Mon	11:30 AM
Hickok, A. O.	32WAF	106	Thu	9:45 AM
Hill, A.	28NWP	68	Wed	9:45 AM
Hill, A.	32WAF	16.2	Thu	4:30 PM
Hitchcock, S. M.	20MESO	2.5	Mon	12:15 PM
Hong, S. Y.	20MESO	V13	Mon	9:45 AM
Houser, J. B.	32WAF	1.3	Mon	9:00 AM
Houser, J. B.	32WAF	102	Thu	9:45 AM
Houston, A. L.	20MESO	12.4	Wed	5:00 PM
Hu, M.	28NWP	9.5	Wed	9:30 AM
Hu, X.	20MESO	V4	Mon	9:45 AM
Hu, Y.	28NWP	17.6	Fri	9:45 AM
Hua, Z.	32WAF	108	Thu	9:45 AM
Huang, Q.	28NWP	9.4	Wed	9:15 AM
Huang, Y.	20MESO	20.2	Fri	3:45 PM
Husain, S. Z.	28NWP	8.1	Tue	4:15 PM
Hutchinson, T. A.	28NWP	18.1	Fri	10:45 AM

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I				
Ideki, O.	32WAF	12.5	Wed	5:15 PM
J				
Jahn, D. E.	28NWP	67	Wed	9:45 AM
James, E. P.	32WAF	6.4	Tue	12:00 PM
James, E. P.	32WAF	16.3	Thu	4:45 PM
Janiszeski, A.	32WAF	85	Thu	9:45 AM
Jellis, D.	20MESO	29	Tue	9:45 AM
Jensen, T. L.	32WAF	5.5	Tue	9:30 AM
Jensen, T. L.	28NWP	11.2	Wed	2:15 PM
Jensen, T. L.	28NWP	64	Wed	9:45 AM
Jewtoukoff, V.	20MESO	V1	Mon	9:45 AM
Jirak, I. L.	32WAF	6.5	Tue	12:15 PM
Johnson, A. T.	20MESO	J15.5	Thu	3:00 PM
Jones, T. A.	32WAF	6.2	Tue	11:30 AM
Judt, F.	20MESO	J4.3	Mon	4:45 PM
Judt, F.	28NWP	71	Wed	9:45 AM
Jung, Y.	28NWP	7.4	Tue	2:45 PM
Justin, A. D.	20MESO	10.4	Wed	12:00 PM
K				
Kalb, C. P.	28NWP	12.2	Wed	4:30 PM
Karim, S. M. S.	20MESO	7.1	Tue	2:00 PM
Karle, N. N.	28NWP	73	Wed	9:45 AM
Keeler, J. M.	20MESO	16.2	Thu	4:30 PM
Kerr, C. A.	28NWP	5.4	Tue	9:15 AM
Khain, A. P.	20MESO	14.1	Thu	11:15 AM
Kleist, D. T.	28NWP	6.1	Tue	11:15 AM
Kleist, D. T.	28NWP	9.2	Wed	8:45 AM
Knupp, K.	32WAF	8.1	Tue	4:15 PM
Ko, K. C.	20MESO	37	Tue	9:45 AM
Koval, J. P.	32WAF	17.1	Fri	8:30 AM
Kropiewnicki, C.	32WAF	107	Thu	9:45 AM
Kuchera, E. L.	28NWP	10.2	Wed	11:30 AM
L				
LeBel, L. J.	20MESO	3.2	Mon	2:30 PM
Lee, C. J.	28NWP	13.2	Thu	8:45 AM
Lee, J.	20MESO	25	Tue	9:45 AM
Lee, M. T.	32WAF	4.4	Mon	5:00 PM
Leffler, Z. W.	32WAF	98	Thu	9:45 AM
Leghart, E.	20MESO	5.4	Tue	9:15 AM
Lei, T.	32WAF	17.5	Fri	9:30 AM
Leicht, T. C.	32WAF	2.5	Mon	12:15 PM
Leonardo, N. M.	20MESO	5.5	Tue	9:30 AM
Leonardo, N. M.	28NWP	61	Wed	9:45 AM
Levit, J. J.	28NWP	12.1	Wed	4:15 PM
Li, W.	28NWP	2.4	Mon	12:00 PM
Li, Z.	20MESO	V7	Mon	9:45 AM
Limpert, G.	28NWP	13.3	Thu	9:00 AM
Liu, H.	20MESO	20.4	Fri	4:15 PM
Liu, J.	20MESO	24	Tue	9:45 AM
Liu, L.	28NWP	14.4	Thu	12:00 PM
Liu, Q.	28NWP	2.3	Mon	11:45 AM
Liu, S.	20MESO	18.1	Fri	10:45 AM
Liu, S.	28NWP	7.2	Tue	2:15 PM
Lloveras, D. J.	20MESO	J4.2	Mon	4:30 PM
Lojko, A.	20MESO	12	Tue	9:45 AM
Lopez, A. Y.	20MESO	6.2	Tue	11:30 AM
Low, Y.	32WAF	2.4	Mon	12:00 PM
Luo, Y.	20MESO	2.1	Mon	11:15 AM
Lupo, K. M.	32WAF	17.3	Fri	9:00 AM
Luthi, S.	20MESO	4	Tue	9:45 AM
Lynn, B. H. H.	32WAF	8.5	Tue	5:15 PM
M				
Madsen, M. M.	28NWP	41	Wed	9:45 AM
Majdi, M.	28NWP	43	Wed	9:45 AM
Manikin, G.	32WAF	17.2	Fri	8:45 AM
Manikin, G. S.	32WAF	J7.4	Tue	2:45 PM
Manobianco, J.	28NWP	18.4	Fri	11:30 AM
Marinescu, P. J.	20MESO	12.1	Wed	4:15 PM
Marquis, J. N.	20MESO	20.1	Fri	3:30 PM
Martin, C. R.	28NWP	6.2	Tue	11:30 AM
Mass, C. F.	28NWP	74	Wed	9:45 AM
Mateling, M.	32WAF	J13.2	Thu	8:45 AM
Matyas, C. J.	32WAF	82	Thu	9:45 AM
Mayfield, W.	28NWP	15.4	Thu	2:45 PM
Mazurek, A. C.	32WAF	15.6	Thu	3:15 PM
McCurry, J. E.	32WAF	8.2	Tue	4:30 PM
McKeown, K. E.	20MESO	20.5	Fri	4:30 PM
McMurdie, L.	32WAF	J14.1	Thu	11:15 AM
Melanson, S. D.	20MESO	16	Tue	9:45 AM
Meng, Z.	20MESO	7	Tue	9:45 AM
Meng, Z.	20MESO	16.3	Thu	4:45 PM
M (Continued)				
Metz, N. D.	32WAF	2.2	Mon	11:30 AM
Miller, M. A.	32WAF	J14.3	Thu	11:45 AM
Minamide, M.	20MESO	J4.1	Mon	4:15 PM
Minder, J. R.	32WAF	J7.6	Tue	3:15 PM
Minder, J. R.	28NWP	15.3	Thu	2:30 PM
Mitchell, A. K.	20MESO	3	Tue	9:45 AM
Moncrieff, M. W.	20MESO	1	Tue	9:45 AM
Moore, B. J.	32WAF	2.3	Mon	11:45 AM
Morris, M. T.	28NWP	60	Wed	9:45 AM
Moses, J.	32WAF	103	Thu	9:45 AM
Mroczka, B.	20MESO	2	Tue	9:45 AM
Muehr, A. J.	20MESO	3.5	Mon	3:15 PM
Mueller, H.	28NWP	18.3	Fri	11:15 AM
Muetzelfeldt, M. R.	20MESO	26	Tue	9:45 AM
Murillo, E.	20MESO	12.5	Wed	5:15 PM
N				
Neumaier, C. A.	20MESO	18.2	Fri	11:00 AM
Newman, K. M.	28NWP	4.4	Mon	5:00 PM
North, R.	20MESO	17.6	Fri	9:45 AM
Novak, D. R.	32WAF	J3.1	Mon	2:00 PM
Novak, D. R.	32WAF	12.1	Wed	4:15 PM
Nowotarski, C.	20MESO	12.3	Wed	4:45 PM
Nowotarski, C.	32WAF	113	Thu	9:45 AM
O				
Olson, J. B.	28NWP	3.1	Mon	2:00 PM
Oue, M.	20MESO	5.3	Tue	9:00 AM
P				
Pan, L.	28NWP	1.2	Mon	8:45 AM
Peng, C. H.	20MESO	1.5	Mon	9:30 AM
Peng, J.	28NWP	4.3	Mon	4:45 PM
Persson, O.	20MESO	J9.3	Wed	9:00 AM
Peters, J. M.	20MESO	8.1	Tue	4:15 PM
Peters, J. M.	20MESO	33	Tue	9:45 AM
Pettersen, C.	32WAF	J7.1	Tue	2:00 PM
Pielke, R. A. Sr.	20MESO	13.2	Thu	9:00 AM
Piersante, J. O.	20MESO	17.2	Fri	8:45 AM
Piper, M.	32WAF	78	Thu	9:45 AM
Pittman, K.	20MESO	35	Tue	9:45 AM
Pletcher, M. D.	32WAF	J3.6	Mon	3:15 PM
Poterjoy, J.	28NWP	9.3	Wed	9:00 AM
Potvin, C. K.	28NWP	46	Wed	9:45 AM
Potvin, C. K.	32WAF	99	Thu	9:45 AM
Prince, K.	28NWP	11.6	Wed	3:15 PM
Pryor, K. L.	20MESO	10	Tue	9:45 AM
Pu, Z.	28NWP	4.2	Mon	4:30 PM
Pu, Z.	20MESO	10.2	Wed	11:30 AM
Pu, Z.	28NWP	70	Wed	9:45 AM
Purser, R. J.	28NWP	17.3	Fri	9:00 AM
Pye, M. J.	32WAF	88	Thu	9:45 AM
R				
Rancic, M.	32WAF	17.4	Fri	9:15 AM
Rappin, E.	20MESO	16.5	Thu	5:15 PM
Rea, D.	32WAF	111	Thu	9:45 AM
Reames, L. J.	28NWP	16.4	Thu	5:00 PM
Reiher, C. A.	28NWP	58	Wed	9:45 AM
Reynolds, C. A.	28NWP	10.3	Wed	11:45 AM
Reynolds, C. A.	28NWP	17.4	Fri	9:15 AM
Ribeiro, B.	20MESO	J4.4	Mon	5:00 PM
Ricard, D.	20MESO	22	Tue	9:45 AM
Ricard, D.	20MESO	12.2	Wed	4:30 PM
Rios-Berrios, R.	20MESO	11.5	Wed	3:00 PM
Rios-Berrios, R.	32WAF	105	Thu	9:45 AM
Ritter, S.	28NWP	49	Wed	9:45 AM
Ritter, S.	28NWP	16.2	Thu	4:30 PM
Roebber, P. J.	28NWP	14.1	Thu	11:15 AM
Rosenow, A. A.	32WAF	J7.3	Tue	2:30 PM
Rowe, A.	20MESO	7.6	Tue	3:15 PM
Ruppert, J. H. Jr.	20MESO	17.1	Fri	8:30 AM
Rutz, J. J.	32WAF	5.1	Tue	8:30 AM
Rutz, J. J.	20MESO	5	Tue	9:45 AM
S				
Saito, K.	20MESO	9	Tue	9:45 AM
Saito, K.	32WAF	79	Thu	9:45 AM
Saito, K.	32WAF	18.5	Fri	11:45 AM
Sasaki, C. R. S.	20MESO	8.3	Tue	4:45 PM
Scharfenberg, K.	32WAF	5.4	Tue	9:15 AM
Schiede, M.	28NWP	57	Wed	9:45 AM
Schima, J. C.	32WAF	96	Thu	9:45 AM

	Conf.	Paper #	Day	Time
S (Continued)				
Schnapp, A. D.	32WAF	J7.2	Tue	2:15 PM
Schumacher, R. S.	20MESO	11.6	Wed	3:15 PM
Schumacher, R. S.	32WAF	16.1	Thu	4:15 PM
Schwartz, C.	28NWP	6.3	Tue	11:45 AM
Schwartz, C.	28NWP	45	Wed	9:45 AM
Seimon, A.	32WAF	2.1	Mon	11:15 AM
Sessa, M.	20MESO	V10	Mon	9:45 AM
Shin, Y.	20MESO	14	Tue	9:45 AM
Short, E.	20MESO	1.1	Mon	8:30 AM
Short, E.	28NWP	44	Wed	9:45 AM
Shumpert, L.	32WAF	80	Thu	9:45 AM
Silcott, M. K.	20MESO	23	Tue	9:45 AM
Skinner, P. S.	28NWP	5.2	Tue	8:45 AM
Snook, N. A.	28NWP	15.5	Thu	3:00 PM
Sobash, R. A.	28NWP	50	Wed	9:45 AM
Sobash, R. A.	32WAF	15.2	Thu	2:15 PM
Spencer, P.	28NWP	66	Wed	9:45 AM
Squitieri, B. J.	32WAF	17.6	Fri	9:45 AM
Starke, M.	20MESO	36	Tue	9:45 AM
Stauffer, D. R.	28NWP	75	Wed	9:45 AM
Steenburgh, W. J.	20MESO	5.1	Tue	8:30 AM
Steenburgh, W. J.	28NWP	55	Wed	9:45 AM
Steinhoff, D. F.	28NWP	10.4	Wed	12:00 PM
Stensrud, D. J.	32WAF	8.3	Tue	4:45 PM
Stoddard, J.	32WAF	18.3	Fri	11:15 AM
Stovern, D. R.	32WAF	12.2	Wed	4:30 PM
Stratman, D. R.	28NWP	15.1	Thu	2:00 PM
Sun, J.	20MESO	6.3	Tue	11:45 AM
Sun, R.	20MESO	6	Tue	9:45 AM
Sun, X.	28NWP	3.2	Mon	2:15 PM
Surmava, A.	20MESO	14.3	Thu	11:45 AM
Szoke, E. J.	20MESO	8	Tue	9:45 AM
Szoke, E. J.	28NWP	16.5	Thu	5:15 PM
T				
Takemi, T.	20MESO	11.1	Wed	2:00 PM
Tallapragada, V. S.	32WAF	11.2	Wed	2:15 PM
Tang, M.	20MESO	8.2	Tue	4:30 PM
Tempest, K.	28NWP	11.3	Wed	2:30 PM
Tian, X.	28NWP	14.3	Thu	11:45 AM
Tickner-Ernst, A. R.	32WAF	9.2	Wed	8:45 AM
Tinoco-Morales, M.	20MESO	11	Tue	9:45 AM
Tobin, D.	32WAF	10.5	Wed	12:15 PM
Tolman, H. L.	28NWP	12.4	Wed	5:00 PM
Tolman, H. L.	28NWP	76	Wed	9:45 AM
Tomkins, L. M.	32WAF	J3.2	Mon	2:15 PM
Torn, R. D.	32WAF	11.3	Wed	2:30 PM
Torri, G.	20MESO	6.1	Tue	11:15 AM
Toy, M. D.	28NWP	1.3	Mon	9:00 AM
U				
Ubbiali, S.	28NWP	8.5	Tue	5:15 PM
V				
Vagasky, H.	20MESO	32	Tue	9:45 AM
Vagasky, H.	32WAF	18.1	Fri	10:45 AM
Van Den Heever, S. C.	20MESO	8.4	Tue	5:00 PM
Vancil, J.	32WAF	10.2	Wed	11:30 AM
Varble, A.	20MESO	3.3	Mon	2:45 PM
Varga, S. D.	32WAF	15.3	Thu	2:30 PM
Veals, P.	32WAF	J3.5	Mon	3:00 PM
Vossen, M. P.	32WAF	9.1	Wed	8:30 AM
W				
Wade, A.	32WAF	1.5	Mon	9:30 AM
Wang, C.	32WAF	109	Thu	9:45 AM
Wang, J.	32WAF	77	Thu	9:45 AM
Wang, P.	20MESO	7.3	Tue	2:30 PM
W (Continued)				
Wang, S.	20MESO	20.6	Fri	4:45 PM
Wang, X.	20MESO	V8	Mon	9:45 AM
Wang, X.	28NWP	3.5	Mon	3:00 PM
Wang, X.	28NWP	9.1	Wed	8:30 AM
Wei, J.	20MESO	2.3	Mon	11:45 AM
Weihs, R. R.	32WAF	11.4	Wed	2:45 PM
Wen, J.	32WAF	18.4	Fri	11:30 AM
Wen, J.	20MESO	19.3	Fri	2:00 PM
Werkema, A. D.	32WAF	4.1	Mon	4:15 PM
Wermter, J. E.	28NWP	59	Wed	9:45 AM
Wermter, J. E.	32WAF	104	Thu	9:45 AM
Whitaker, J. S.	28NWP	17.1	Fri	8:30 AM
Wicker, L. J.	28NWP	7.6	Tue	3:15 PM
Wiles, J. T.	20MESO	18	Tue	9:45 AM
Wiles, J. T.	20MESO	19.2	Fri	1:45 PM
Wilson, A. M.	32WAF	11.1	Wed	2:00 PM
Wilson, M.	20MESO	10.3	Wed	11:45 AM
Wilson, T.	32WAF	5.2	Tue	8:45 AM
Wilt, B. A.	28NWP	10.5	Wed	12:15 PM
Winters, A. C.	32WAF	J3.4	Mon	2:45 PM
Wolvin, S.	32WAF	16.4	Thu	5:00 PM
Wood, K. M.	32WAF	9.3	Wed	9:00 AM
Wright, D. M.	28NWP	3.3	Mon	2:30 PM
X				
Xu, W.	20MESO	17.5	Fri	9:30 AM
Xu, X.	20MESO	V5	Mon	9:45 AM
Y				
Yang, F.	28NWP	1.1	Mon	8:30 AM
Yang, H.	20MESO	2.2	Mon	11:30 AM
Yang, Q.	20MESO	1.2	Mon	8:45 AM
Yeh, P.	32WAF	J14.5	Thu	12:15 PM
Yeh, P.	32WAF	93	Thu	9:45 AM
Yokota, S.	28NWP	7.3	Tue	2:30 PM
Yussouf, N.	28NWP	5.1	Tue	8:30 AM
Yuter, S. E.	28NWP	11.5	Wed	3:00 PM
Z				
Zaff, D. A.	32WAF	J3.3	Mon	2:30 PM
Zaremba, T. J.	20MESO	6.4	Tue	12:00 PM
Zaremba, T. J.	32WAF	94	Thu	9:45 AM
Zhang, M.	20MESO	16.4	Thu	5:00 PM
Zhang, X.	32WAF	92	Thu	9:45 AM
Zhang, Y.	32WAF	83	Thu	9:45 AM
Zhang, Y.	20MESO	11.2	Wed	2:15 PM
Zhang, Y.	28NWP	17.5	Fri	9:30 AM
Zhang, Z.	20MESO	27	Tue	9:45 AM
Zheng, M.	32WAF	4.3	Mon	4:45 PM
Zheng, M.	28NWP	18.2	Fri	11:00 AM
Zheng, Y. Sr.	32WAF	91	Thu	9:45 AM
Zhou, N.	20MESO	2.4	Mon	12:00 PM
Zibton, Z. A.	28NWP	72	Wed	9:45 AM
Zibton, Z. A.	32WAF	81	Thu	9:45 AM
Zipser, E. J.	20MESO	21	Tue	9:45 AM
Zou, X.	32WAF	J13.3	Thu	9:00 AM

Weather Analysis & Forecasting (WAF)

Conference Series

23–25 March 1966	Chicago, IL	(First) Conf. on Modern Methods of Weather Forecasting & Analysis
28 Feb.–2 March 1967	Santa Barbara, CA	Conference on Fair Weather Meteorology
3–5 September 1969	Virginia Beach, VA	Third Conference on Weather Forecasting & Analysis
1–4 May 1972	Portland, OR	Fourth Conference on Weather Forecasting & Analysis
4–7 March 1974	St. Louis, MO	Fifth Conference on Weather Forecasting & Analysis
10–13 May 1976	Albany, NY	Sixth Conference on Weather Forecasting & Analysis
16–19 October 1978	Silver Springs, MD	Seventh Conference on Weather Forecasting & Analysis
10–13 June 1980	Denver, CO	Eighth Conference on Weather Forecasting & Analysis
28 June–1 July 1982	Seattle, WA	Ninth Conference on Weather Forecasting & Analysis
25–29 June 1984	Clearwater Beach, FL	10th Conference on Weather Forecasting & Analysis
17–20 June 1986	Kansas City, MO	11th Conference on Weather Forecasting & Analysis
2–6 October 1989	Monterey, CA	12th Conference on Weather Forecasting & Analysis
3–6 August 1993	Vienna, VA	13th Conference on Weather Forecasting & Analysis
15–20 January 1995	Dallas, TX	14th Conference on Weather Forecasting & Analysis
19–23 August 1996	Norfolk, VA	15th Conference on Weather Forecasting & Analysis
11–16 January 1998	Phoenix, AZ	16th Conference on Weather Forecasting & Analysis
13–17 September 1999	Denver, CO	17th Conference on Weather Analysis & Forecasting
30 July–2 August 2001	Ft. Lauderdale, FL	18th Conference on Weather Analysis & Forecasting
12–16 August 2002	San Antonio, TX	19th Conference on Weather Analysis & Forecasting
11–15 January 2004	Seattle, WA	20th Conference on Weather Analysis & Forecasting
1–5 August 2005	Washington, D.C.	21st Conference on Weather Analysis & Forecasting
25–9 June 2007	Park City, Utah	22nd Conference on Weather Analysis & Forecasting
1–5 June 2009	Omaha, NE	23rd Conference on Weather Analysis & Forecasting
22–27 January 2011	Seattle, WA	24th Conference on Weather Analysis & Forecasting
29 May–1 June 2012	Montreal, Canada	25th Conference on Weather Analysis & Forecasting
2–6 February 2014	Atlanta, GA	26th Conference on Weather Analysis & Forecasting
29 June–3 July 2015	Chicago, IL	27th Conference on Weather Analysis & Forecasting
22-26 January 2017	Seattle, WA	28th Conference on Weather Analysis & Forecasting
4-8 June 2018	Denver, CO	29th Conference on Weather Analysis & Forecasting
12-16 January 2020	Boston, MA	30th Conference on Weather Analysis & Forecasting
22-27 January 2022	Houston, TX & Online	31st Conference on Weather Analysis & Forecasting
17-21 July 2023	Madison, WI & Online	32nd Conference on Weather Analysis & Forecasting

Numerical Weather Prediction (NWP)

Conference Series

16–18 October 1967	Monterey, CA	(First) Conference on Numerical Weather Prediction
1–4 October 1973	Monterey, CA	Second Conference on Numerical Weather Prediction
26–28 April 1977	Omaha, NE	Third Conference on Numerical Weather Prediction
29 Oct.–1 Nov. 1979	Silver Springs, MD	Fourth Conference on Numerical Weather Prediction
2–6 November 1981	Monterey, CA	Fifth Conference on Numerical Weather Prediction
6–9 June 1983	Omaha, NE	Sixth Conference on Numerical Weather Prediction
17–20 June 1985	Montreal, QC, Canada	Seventh Conference on Numerical Weather Prediction
22–26 February 1988	Baltimore, MD	Eighth Conference on Numerical Weather Prediction
14–18 October 1991	Denver, CO	Ninth Conference on Numerical Weather Prediction
18–22 July 1994	Portland, OR	10th Conference on Numerical Weather Prediction
19–23 August 1996	Norfolk, VA	11th Conference on Numerical Weather Prediction
11–16 January 1998	Phoenix, AZ	12th Conference on Numerical Weather Prediction
13–17 September 1999	Denver, CO	13th Conference on Numerical Weather Prediction
30 July–2 August 2001	Ft. Lauderdale, FL	14th Conference on Numerical Weather Prediction
12–16 August 2002	San Antonio, TX	15th Conference on Numerical Weather Prediction
11–15 January 2004	Seattle, WA	16th Conference on Numerical Weather Prediction
1–5 August 2005	Washington, D.C.	17th Conference on Numerical Weather Prediction
25–29 June 2007	Park City, Utah	18th Conference on Numerical Weather Prediction
1–5 June 2009	Omaha, NE	19th Conference on Numerical Weather Prediction
22–27 January 2011	Seattle, WA	20th Conference on Numerical Weather Prediction
29 May–1 June 2012	Montreal, QC, Canada	21st Conference on Numerical Weather Predition
2–6 February 2014	Atlanta, GA	22nd Conference on Numerical Weather Prediction
29 June–3 July 2015	Chicago, IL	23rd Conference on Numerical Weather Prediction
22-26 January 2017	Seattle, WA	24th Conference on Numerical Weather Prediction
4-8 June 2018	Denver, CO	25th Conference on Numerical Weather Prediction
12-16 January 2020	Boston, MA	26th Conference on Numerical Weather Prediction
22-27 January 2022	Houston, TX & Online	27th Conference on Numerical Weather Prediction
17-21 July 2023	Madison, WI & Online	28th Conference on Numerical Weather Prediction

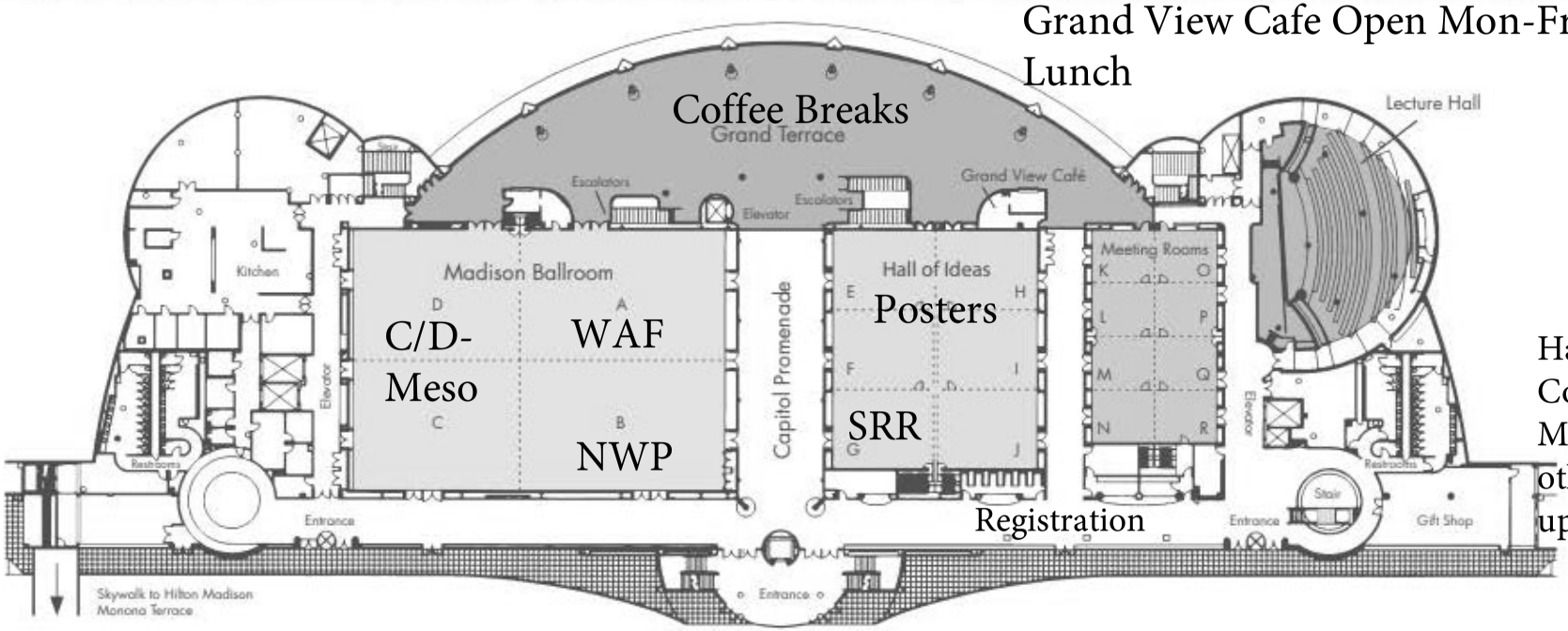
Mesoscale Processes

Conference Series

6–9 May 1975	Las Vegas, NV	Conference in Regional Mesoscale Modeling, Analysis, & Prediction
24–25 October 1977	Boulder, CO	Workshop on Mesoscale Interactions with Cloud Physics
31 May–3 June 1983	Norman, OK	(First) Conference on Mesoscale Meteorology
3–7 June 1985	University Park, PA	Second Conference on Mesoscale Meteorology
21–26 August 1987	Vancouver, BC, Canada	Third Conference on Mesoscale Meteorology
25–29 June 1990	Boulder, CO	Fourth Conference on Mesoscale Meteorology
5–10 January 1992	Atlanta, GA	Fifth Conference on Mesoscale Meteorology
18–22 July 1994	Portland, OR	Sixth Conference on Mesoscale Meteorology
9–13 September 1996	Reading, Berks., UK	Seventh Conference on Mesoscale Meteorology
28 June–2 July 1999	Boulder, CO	Eighth Conference on Mesoscale Processes
29 July–2 August 2001	Fort Lauderdale, FL	Ninth Conference on Mesoscale Processes
22–27 July 2003	Portland, OR	10th Conference on Mesoscale Processes
24–28 October 2005	Albuquerque, NM	11th Conference on Mesoscale Processes
6-9 August 2007	Waterville Valley, NH	12th Conference on Mesoscale Processes
17-20 August 2009	Salt Lake City, UT	13th Conference on Mesoscale Processes
1-4 August 2011	Los Angeles, CA	14th Conference on Mesoscale Processes
6-9 August 2013	Portland, OR	15th Conference on Mesoscale Processes
3-6 August 2015	Boston, MA	16th Conference on Mesoscale Processes
24-27 July 2017	San Diego, CA	17th Conference on Mesoscale Processes
29 July-1 August 2019	Savannah, GA	18th Conference on Mesoscale Processes
22-27 January 2023	Houston, TX & Online	19th Conference on Mesoscale Processes
17-21 July 2023	Madison, WI & Online	20th Conference on Mesoscale Processes

LEVEL 4 - MEETING ROOMS / GRAND TERRACE

Grand View Cafe Open Mon-Fri for Lunch



Registration

Hall of Ideas J-Committee Meetings and other meetings upon request