



NWA NEWSLETTER

February 2017
No 17 - 2

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Newsletter Submissions



We welcome articles from members. Send to: nwanewsletter@nwas.org by the 15th of the month for publication in the following month's edition at the earliest.

Newsletter info and a link to author guidelines can be found at: nwas.org/newsletter/instructions-for-authors/.

The NWA: Connecting operational meteorologists in pursuit of excellence in weather forecasting, communication and service.

Weather-Ready Nation

Do you know where your "safe place" is while you are at work, at home, or traveling? In early April, Weather-Ready Nation will be launching a 4-day #SafePlaceSelfie campaign to encourage everyone across the country to take action when extreme weather threatens. Participate using your organization's social media accounts (Twitter, Facebook, Instagram, etc.) or your personal accounts. It is fun. It is free. And it will go a long way to building a Weather-Ready Nation!

#SafePlaceSelfie is a WRN grass-roots social media campaign to get individuals, businesses, and all organizations ready, responsive, and resilient to extreme weather events.

Knowing your safe place when extreme weather threatens is the #1 preparedness action anyone can take. To help everyone find their safe place, the social media campaign will be launched on April 3 and culminate in a TweetChat on Thursday, April 6.

This doesn't have to require a large time commitment and can open the door to greater preparedness (creating a family emergency plan, emergency kit, etc.)

Encourage others on social media by tagging them and asking "Where is your safe place?"

The focus is not on just one severe weather element, like tornadoes, but is across the spectrum of natural hazards including lightning, tornadoes, high winds, extreme temperatures, flooding, wildfires, hurricanes, and tsunamis. Your safe place may be very different for the various hazards. For instance, a car may be a safe place from lightning, but is a dangerous place during a flash flood.

Get creative! Is there a beach nearby or are locals planning vacations to warmer climates? Go to the WRN website to find the hazards in your location and learn how to be safe when they occur.





Life's Moving Pretty Fast

February President's Message
Gail Hartfield

We are (hopefully) heading over the hump of the 2016-2017 winter weather season with the heart of severe weather season rapidly approaching. That famously astute philosopher Ferris Bueller once said, "Life moves pretty fast. If you don't stop and look around once in a while, you could miss it." One could make a similar case for our atmosphere: Weather events move pretty fast; if we don't pause to evaluate the season and events that have just passed, we may miss something important. I enjoy looking back at recent weather events, even the mundane ones, to determine why and how they unfolded as they did. But, too often, I don't have enough time to fully analyze an event before the next one is waiting in the wings needing my attention. At the very least, I find value in reviewing the recently passed season in a general sense, looking for trends, themes or issues that have dominated the weather picture over the last several months. While innovations and the inevitable changes in weather forecasting and services are constant and many in number, three issues have stood out to me this winter.

- **Accuracy vs. precision.** There is no doubt that forecast accuracy continues to improve. Yet there remains demand among those we serve to strain the boundaries of what we are currently able to achieve in our science. It is no longer enough to say, "We are expecting a significant snowstorm this weekend." People want to know exactly how much snow will fall in their backyard and exactly when it will fall. So, operational meteorologists are being asked to state specific numbers and timing in a deterministic sense, even down to the tenth of an inch and to the hour or minute. Mixed wintry precipitation complicates the picture further, necessitating detailed predictions of ice accrual along with sleet and snow depths, and high temporal precision of start/end/changeover times. While the NWS, broadcasters, and private companies strive to convey scientifically sound snowfall ranges and probabilities (e.g., the NWS's Probabilistic Snowfall Experiment), the decision-makers and the general public still want—and, in many cases, need—specific numbers for their locations. This forces forecasters to focus on precision with a high risk of being incorrect rather than on the more scientifically appropriate practice of providing ranges of snowfall and timing, which encapsulates the inherent uncertainty of winter precipitation accumulations.

The public wants precise forecasting.



Steady model improvement will ameliorate this issue; however the battle of precision vs. accuracy will continue as our users push us to stretch the limits of these models and of the science in general.

- **Importance of conveying impacts.**

While forecasting remains the heart of what we do, our focus is gradually evolving to include specifications of impacts from weather conditions on different groups and individuals. Going beyond wind chills and ice accumulation predictions, we're now telling folks if they need to wear heavy jackets and gloves, if power outages will be widespread, if the afternoon commute will be treacherous. This isn't anything new, of course—broadcasters have been highlighting varieties of a "bus stop forecast" and the like for years—but it's an important and necessary aspect of our service that is expanding across the weather enterprise, driving development of user-focused weather consulting companies, not to mention the NWS's Weather-Ready Nation efforts. I've seen some wonderful impact-focused graphics from broadcasters and others on social media this winter that provide abundant, high-quality weather impact information in a clear and succinct manner. Which brings me to...

- **Social media as a blessing and a curse.** This topic could easily fill an entire newsletter. We've all seen the weather enthusiast who finds the model run (among hundreds) that cranks out the greatest snowfall and posts its output on social media. It then spreads rampantly and, frequently, is misinterpreted by many as an official forecast. This is not just annoying, it's dangerous. Real harm, both physically and fiscally, can befall people and organizations that make decisions based on this bad information. (Here's a good time to put in a plug for the NWA Digital Seal!) But, on the positive side, the weather enterprise is now reaching more people than ever before with quality, scientifically-based, helpful weather information thanks to platforms like Facebook, Twitter, Instagram, Snapchat, and others. A former coworker of mine once quipped, "A thousand words are worth a picture." In fact, many of the wordy forecast products of the past are much more effective at eliciting the proper response when communicated via well-constructed graphics. Whether it's a weather threat timeline, ensemble mean snowfall projections, or a graphical representation of sleet formation processes, each of us can quickly and easily inform and educate hundreds (thousands? millions?) and assist them in their decision-making with just a few clicks. While we may not completely drown out the irresponsible "media-ologists," we can be content in knowing we do our best to be the loudest voice in the room, to communicate the most well-reasoned and accurate information and forecasts we can, and to let our scientific integrity help build our users' trust in us. Let's keep fighting the good fight!



WEATHER NEWS FLASH



A monthly look at interesting news factoids and stories from around the globe. Click titles for details!

[California's Wet Weather Has Some Believing the Drought is Over](#)

A statewide downpour brought chaos to Californians this week, but it also provided some welcome relief to the state's 20 million residents who have suffered from drought conditions for more than four years.

[February Looks To Be Warm And Not Because A Groundhog Says So](#)

I could actually write this on my deck today because my thermometer in metropolitan Atlanta says that it topped out at 73 degrees (Jan. 31).

[How Industry Can Create Snow](#)

Credit the "Wegener-Bergeron process" for making this rare blotch of human-induced snow.

[Lake Tahoe Gained 8.7 Billion Gallons Of Water In Just 2 Days](#)

Lake Tahoe has had a great past few months, receiving 8.7 billion gallons of water in just two days. It hasn't stopped there.

[Maple Syrup Farmers Relish Weather Trends for Ideal Sap Collection](#)

No one is more dependent on the mercy of temperature swings these days than John Thomas and his son — at least when it comes to producing maple syrup, the 71-year-old from Donegal Township said.

[Oroville Dam Spillway Emergency: Number of People Ordered to Evacuate Rises to Nearly 200,000](#)

Nearly 200,000 people remained under evacuation orders Monday as California authorities try to fix erosion of the emergency spillway at the nation's tallest dam that could unleash uncontrolled flood waters if it fails.

[Tiny Airborne Probe Could Help Local Weather Forecasts](#)

To date, it hasn't been easy to get loads of airborne weather data beyond major airports.

In Memoriam ...

Connor Vernon



Connor Vernon, a long-time meteorologist who began his career in radio and worked at television stations in Florida, Texas and Alabama, died January 21. He was 63. Vernon joined the NWA in 1983 and was awarded the NWA Seal in 1987.

Vernon was born in Birmingham in 1953. He attended Troy State University on a track scholarship and received a degree in business administration. He received a master's degree in meteorology from Mississippi State.

He worked as an announcer with WTBF while attending Troy State and worked with WKMX in the mid-1970s.

Vernon began his television career on WTXL in Tallahassee, Florida, as a meteorologist. He moved to Austin, Texas, where he worked with KTBC for 17 years.

Vernon returned to Dothan, Alabama, in 2002 to be closer to family. He worked with WTVY Radio and then WTVY Television, and joined the WDHN Channel 18 staff in December 2014.

Troy Kimmel, NWA member and Seal holder, remembers Connor: "Connor was a friend and a colleague in the weather business. It was my honor to get the opportunity to follow him as Chief Meteorologist at KTBC TV in 1993 when he and his wife Sue made some changes and decided to return to Alabama. Connor was one of a kind, a true gentleman and an outstanding meteorologist. My thoughts are with Sue and his family at this time."

NWA March Wednesday Webinar

The [NWA March Webinar](#) will be held on Wednesday, March 8, 2017 at 11am EST/10am CST.

Title: *Should weather messaging wear uniforms? The role of consistency versus uniformity of visuals and messaging within the weather community.*



Hosted by the NWA Societal Impacts Committee

We often hear the word “consistency” in the weather community, but what does it mean?

Where do we draw the line between uniform messaging and creating a unique product?

Who determines the definition of consistency, and are there potential problems with being too consistent?

With a diverse panel of professionals from the weather and visual arts communities, this webinar will shed light on some of the ideas behind consistency in meteorology.

An Algorithm for Awareness Jennifer Hogan, NWA Diversity Committee

Many of us could not imagine a world without computers. Do you know that the word “computer” was used to describe a human who computed equations, or double-checked work, all day long? Think about the technological advances many of us take for granted—a few simple clicks and you are looking at upper level winds or vorticity forecasts on your PC or smart phone in Oklahoma, Asia, or anywhere in the world. Many scientific breakthroughs relied on human computers for number crunching. Lewis Fry Richardson (Richardson Number), who applied the ideas of numerical modeling for forecasting the weather, stated that it would take over 60,000 fast-paced human computers to create a 24-hour forecast before the next day’s weather occurred. Remember how long it took to derive the equations in our dynamic meteorology courses?



Female human computers played a significant role in World War II. After the war ended, their influence trickled into the lofty goals of the U.S. space program. At that time, ballistic and trajectory motions were calculated by hand. Katherine Johnson and Mary Jackson are two notable African-American women whose intellect proved invaluable at this critical time in our nation’s history. In fact, many of the world’s first computer programmers and software engineers were women, some of whom were self-taught: Ada Lovelace, Grace Hopper, Dorothy Vaughan, and Margaret Hamilton.

Ironically, the computing field is no longer dominated by women. Not ironic were the expectations that working women of the 20th century still had to uphold the societal norms of taking care of the house, kids, and spouses—aspects that many of these women expressed as challenges then are still being discussed now.

So, the next time you sit down at your electronic computer to rummage through runs from several different models to compile your weather forecast, think about the history behind it, the effort of those who got us to this point, and the passion that drove many to make the advances that now allow us to create our forecast within hours rather than in days.

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You're On Social Media... So Are We!



Huzzah to Our Newest Seal Holders!

Submitted by Justin Chambers

You can slap a Seal on the business cards of these three talented meteorologists. They have all completed the process to earn the NWA Seal of Approval. Let's meet them!



Bri Eggers - WHDH Boston

Who would have known when her grandfather nicknamed her "Breezy" that one day she would hold the prestigious NWA Seal! Bri Eggers grew up in Idaho as the third generation daughter of a peppermint farmer. She has worked at WHDH in Boston since 2014 and just last year ran the Boston Marathon.



After working as a multi-media journalist, Eggers wanted to learn everything about a TV newsroom.

"I had the opportunity to fill in for the weather anchor one weekend and it was the first time in my life the light bulb came on; I knew I was hooked," exclaims Eggers. "It wasn't really a

surprise how much I loved learning more about meteorology. My dad is a farmer and forecasts are vital to his business." She enrolled in Mississippi State's broadcast meteorology program and started working as a full time forecaster.

If she wasn't doing weather, Eggers says she would be a teacher. She used to be a substitute teacher and loves doing school presentations in her current position. As for her favorite sandwich: "I'm thinking a grilled Brie sandwich with caramelized onions, arugula and cranberries. Yes. That sounds just about right," says Eggers.

Make sure to congratulate Eggers the next time you see her. When you do, ask her about when she was a tram driver for Disney World.

Dann Cianca - KION Monterey-Salinas

It took 108 years for Dann Cianca's favorite team to win the World Series. He received his NWA Seal of Approval a lot quicker than that!

Cianca has been studying meteorology since 2004 when he attended Metro State University in Denver. There, he earned his bachelor's degree in meteorology. He worked in Colorado before landing as the Chief Meteorologist for KION.

Cianca was born and raised in Butte, Montana, where he discovered his love for weather at an early age. Storm chasing videos—even every meteorologist's favorite movie "Twister"—set him on the path to earning his NWA seal.



He enjoys hiking, photography, and rooting for Chicago sports teams. Go Cubs Go! Cianca says if he wasn't doing weather he would be a park ranger at a western national park. His favorite type of cloud is altocumulus castellanus because as he says "it just shows so much hope and potential."

Kyle Roberts - WFAA Dallas

Kyle Roberts is another one of our newest NWA sealholders. He grew up in the Dallas-Fort Worth (DFW) area and started at WFAA in December.

He graduated from Texas A&M with a bachelor's degree in meteorology. Roberts had worked in Tyler, Texas, and Oklahoma City before returning to the DFW area.

On his Twitter feed, Roberts describes himself as, "Tweeter of weather, sports, and whatever crosses my mind (usually in that order)."





New Article in the Journal of Operational Meteorology

One article has been published in the NWA's JOM since the last update in December.

[JOM 2017-1 \(Article\): Impacts to Aviation Weather Center Operations Using Total Lightning Observations from the Pseudo-GLM, by Amanda Terborg and Geoffrey T. Stano. \(Click to view article\)](#)

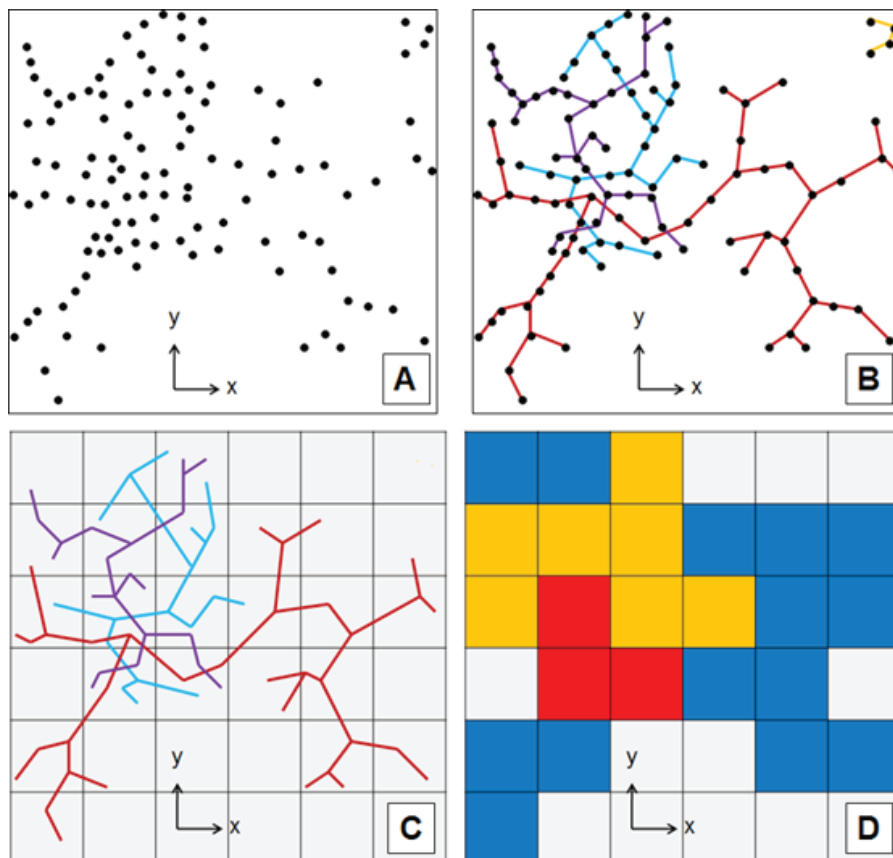


Figure 2 from JOM 2017-1: Development of the pseudo Geostationary Lightning Mapper product evaluated at the Aviation Weather Center showing the raw source input (A), linking sources to flashes via the flash algorithm (B), binning each flash onto a grid (C), and the resultant flash extent density (D). For the Aviation Weather Center, the flash extent density from all ground-based LMAs shows the number of flashes that occurred in each 8×8 km grid box over a two minute time period.

The JOM publishes submissions in four categories: Article, Short Contribution, Images of Note and Commentary. The JOM is a peer-reviewed, all-electronic journal with an international scope, providing authors with the benefits of economical publication costs and rapid publication following acceptance.

If you are interested in submitting a paper to the JOM, please go [to the website](#) for author information. Thank you to the JOM authors, reviewers and editors for continuing to make JOM a success!

**THE NATIONAL
WEATHER
ASSOCIATION
42ND ANNUAL
MEETING**

PUTTING SCIENCE INTO SERVICE

GARDEN GROVE, CALIFORNIA
SEPTEMBER 16-21, 2017

ABSTRACTS DUE MARCH 9

#NWA17
NWA.ORG

NEW NWA MEMBERS

Please welcome these members who joined the NWA in January 2017!

Leann Anthony
Christopher Cawley
Russell Clemins
Michael Everett
Anthony Farnell
Thomas Geboy
Bryan Norcross
Jessica Olsen
Christy Ross
Ben Schink
Kevin Thiel

"Putting Science into Service"



The 42nd NWA Annual Meeting

Hyatt Regency Orange County

Garden Grove, California

September 16 - 21, 2017



Important Dates

- Abstract Submission Deadline: March 9
- Oral and Poster Presenters Notified: late April
- Preliminary Agenda Posted On-line: Summer 2017
- NWA Annual Meeting: September 16-21

"Putting Science into Service"

Every day, operational meteorologists put their knowledge and understanding of the science of weather, climate, and related fields to work, in service to a wide variety of partners and users. They work together in a circular process chain – with researchers providing relevant study and modeling results to those creating warnings and forecasts and to those charged with clearly conveying this information to the public and other users, in order to help them make crucial weather- and climate-dependent decisions.

The needs of these users then help inform the research, and the process begins anew. Within this process, achieved through strong partnerships among all entities within the weather enterprise, operational meteorologists apply the science to solve weather- and climate-related problems, benefit society, and fulfill countless weather and climate needs.

Program Committee Co-Chairs

Todd Lericos
NOAA National Weather Services
Las Vegas, NV

Miles Muzio
KBAK-TV
Bakersfield, CA

Broadcaster Meteorology Workshop Program Chair

Mike Goldberg
WTVR-TV
Richmond, VA

[Click for program chair contact info](#)

Schedule of Events

- WeatherReady Fest: Saturday, September 16
- Broadcast Meteorology Workshop: Sunday, September 17
- Ninth Annual Student Session including Speed Mentoring: Sunday, September 17
- General Sessions: Monday-Thursday, September 18-21
- NWA Annual Awards Luncheon: Wednesday, September 20

Abstract Submission

The Committee is looking for session presentations or posters to be considered for the meeting; they must be submitted via an abstract. This document should be short, but contain enough information to allow the conference organizers and attendees sufficient understanding of what the author intends to express. It must contain an introduction, body and conclusion. Points to be addressed are your motivation (why are you writing the paper), your issue (what the subject is), your approach (how you resolve the issue), your result, and finally your conclusion.

Presentation Relevance to Conference Theme

Each year the Annual Meeting has a specific theme chosen by the NWA President. Below is a generalized list of theme components for this year's meeting. In addition to the traditional sessions (e.g. severe weather, winter, flooding, etc.), the Program Committee is specifically soliciting abstracts that relate to one of the following theme components. If your submission fits one or more of the following, please select all that apply.

- Putting science into service
- Vulnerable populations (public safety and environmental threats)
- Progress in weather services (science in service advancements)
- Innovations in observational methods and applications (new atmospheric monitoring)
- Partnerships in the weather enterprise (alliances and team building)

Abstracts will be vetted by the conference program committee. Successful submissions will be evaluated on quality, uniqueness and public interest. [Click for more on abstracts including this year's theme components and how to submit.](#)

COMET Quarterly Announcement: Winter 2017

David Russi
COMET Spanish Translator

COMET made several new publications available on MetEd over the last quarter. This update includes four new COMET lessons, one of which was published concurrently in English and traditional Chinese, and several new lessons in Spanish and French.

New COMET Lessons (*click titles to view more*)

- [Weather Ready Nation: Prepare and Be Safe!](#)
- [Using NWP Lightning Products in Forecasting](#)
- [Typhoon QPF in Taiwan \(English\)](#)
- [Typhoon QPF in Taiwan \(Chinese\)](#)
- [Forecasting Mountain Wave Turbulence for Aviation](#)

Spanish Lessons

- [Pronósticos de marejada ciclónica](#)
- [La marejada ciclónica y los datums](#)
- [Elementos de cartografía meteorológica](#)

French Lessons

- [Prévision des fortes pluies et des glissements de terrain en Afrique de l'Est](#)
- [Produits climatologiques satellitaires pour la surveillance de la convection au-dessus de l'Afrique de l'Ouest et du Centre](#)
- [Les vents de couloir](#)
- [Estimation des précipitations \(1re partie\) : la mesure](#)
- [La mise à l'échelle inférieure des données de PNT](#)
- [La convection sévère : les systèmes convectifs de mésoéchelle](#)
- [Identification des caractéristiques satellitaires : La cyclogenèse](#)
- [Comprendre le rôle des PNT déterministes par rapport à celui des PNT probabilistes](#)

Currently, these materials are freely available to everyone, courtesy of our primary sponsors: NOAA's NWS, NESDIS and National Ocean Service programs, EUMETSAT, the Naval Meteorology and Oceanography Command, the Meteorological Service of Canada, Bureau of Meteorology, the U.S. Army Corps of Engineers, and the Department of the Interior Bureau of Reclamation.

PROFESSIONAL DEVELOPMENT

NWA Sponsored Meetings, Conferences & Special Events in 2017

(Click titles for more information)

** CEU options for Seal Holders*

[March 10-12: 42nd Northeastern Storm Conference *](#)

Saratoga Springs, New York

[March 30-April 1: 21st Severe Storms & Doppler Radar Conference *](#)
Ankeny, Iowa

[Spring: Southeast Severe Storm Symposium *](#)
Starkville, Mississippi

[September 16-21: NWA 42 Annual Meeting *](#)
Garden Grove, California
([See page 7](#))

[October 25-27: FLASH Annual Conference](#)
Atlanta, Georgia

Other Meetings, Conferences & Special Events in 2017

[March 3-4: 2017 Texas Weather Conference *](#)
Austin Texas
Seal holder CEU opportunity!

[April 5-9: National Tropical Weather Conference *](#)
South Padre Island, Texas

[April 17-20: National Hurricane Conference *](#)
New Orleans, LA

** One CEU for full day; .5 CEU for half days*

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nwas.org/newsletter/instructions-for-authors/.

Members receive the Apex award-winning Newsletter online and access to an online portal which includes the Journal of Operational Meteorology as part of their regular, student or corporate membership privileges.

Address, phone number, email and affiliation changes can now be made online: member.nwas.org.

