



NWA NEWSLETTER

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IMPORTANT DATES

March 31-April 2: 20th Annual
Severe Storms & Doppler Radar
Conference

June 13: Deadline for NWA Awards
Nominations ([see page 5](#))

Sept. 10: WeatherFest ([see page 7](#))

Sept. 10-15: 41st NWA Annual
Meeting ([see page 6](#))

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

NWA Advocating for Protection of the GOES Frequency

The NWA is concerned about an initiative to share a portion of the radio frequency spectrum used to transmit GOES data. The band in question is the 1675 – 1695 MHz spectrum, and specifically the 1675-1680 MHz portion. Wireless broadband providers are interested in this band, but there are significant concerns that sharing this spectrum could cause interference, impacting the timely receipt of GOES data by the weather enterprise. The implications of this issue are magnified by the fact that the GOES-R will generate a great deal more data than past generations of weather satellites.

For this reason, the NWA joined with the American Meteorological Society (AMS) in filing a letter with the FCC opposing the sharing of the 1675-1680 MHz spectrum until comprehensive federal and private infrastructure studies determine that another equally reliable, timely and cost-effective methodology could deliver critical GOES data to all stakeholders. The letter and other NWA statements can be found on the [NWA Advocacy section](#) of our website.

In early March, the NWA learned that the Senate Committee on Commerce, Science and Transportation was meeting to mark-up the MOBILE NOW act and the spectrum issue was on the agenda. The NWA sent a letter to several senators on the committee stating, "The NWA opposes sharing of the 1675-1680 megahertz spectrum and requests that it be DELETED from the bandwidth under consideration in the Act for fixed and wireless applications" and included the FCC letter signed with the AMS. The section relating to the spectrum was removed from the meeting agenda prior to the meeting.

In addition to the involvement of the NWA officers and Councilors, a small number of NWA staff hours were dedicated to this effort. Comments and suggestions from NWA members about this initiative are welcome.

Congressional staffers advise that issues carry more weight if multiple organizations deliver the message jointly rather than as individual voices. The NWA's goal is to ensure GOES and GOES-R data flows as seamlessly as possible to members in support of critical weather and hydrologic forecasts and warnings. If you share these concerns, please express them to those who represent you.

America's PrepareAthon!

The NWA would like to encourage its members to participate in America's PrepareAthon! – a grassroots campaign for action to get people better prepared for emergencies that could strike their communities.



America's PrepareAthon! works to build a more resilient nation by increasing the number of people that are prepared for emergencies.

Twice a year, National PrepareAthon! Day – a national day of action – focuses attention on the importance of being prepared. In the spring, it is on April 30. In the fall it is September 30 in conjunction with National Preparedness Month.

We are asking everyone to take action, be counted and spread the word. Visit ready.gov/prepare to find out how you can participate! NWA is proud to be a part of America's PrepareAthon!: a nationwide, community-based campaign to increase emergency preparedness.

WeatherFest September 10

The National Weather Association will be hosting a WeatherFest at Nauticus in Downtown Norfolk Saturday, September 10 from 9 a.m. to 2 p.m.



Enjoy lots of free activities, games, exhibits and book signings for families.

[See press release on page 7](#)

New NWA Seal Holder

Congratulations to our newest recipient of the NWA Television Seal of Approval, Chris Gilson from KRQE in Albuquerque, New Mexico.

Chris joined KRQE in March 2013 as a meteorologist for their weekend newscasts. No one from his childhood would be surprised by his career choice. His grade school teachers and classmates called him the “weatherman” because he would track the local weather around his home in eastern Ohio and call in his reports to local TV stations.

Prior to Albuquerque, Chris lived in the Quad Cities, working at WHBF-TV in Rock Island, Illinois. He holds a bachelor’s degree in earth sciences with a meteorology concentration from California University of Pennsylvania, and a master’s degree in geography with a natural hazards concentration from Northern Illinois University. He has also earned the American Meteorological Society’s Certified Broadcast Meteorologist designation.



Webinar Wednesday

NWA Awards and Awards Process

April 6 @ 2 p.m. CDT

NEW NWA MEMBERS

Please welcome these members
who joined the NWA
in February 2016!

Regular/Retired/ Active Military Members:

Cyrena Arnold
Patty Cox
Patrick Dougan
Amanda Graning
Nathan Hardin
Rodney Harris
Madelaine Heidenreich
Stephen Krieger
Courtney Phillips

Student Members:

Danielle Brazina
Courtney Byrd
Joseph Carolan
William Cochran Jr.
Burkely Gallo
JP Kalb
Jennifer Naillon
Christopher Pizzariella
Emily Rosenthal
Robert Schrom
Sarah Stough
Angie Ulsh

MEMBER NEWS

NWA Member Gets Published

NWA member Dr. Elizabeth Austin, CCM, founder and president of WeatherExtreme Ltd. will publish her book, “Treading on Thin Air: Atmospheric Physics, Forensic Meteorology, and Climate Change: How Weather Shapes Our Everyday Lives” on April 25, 2016.



Dr. Elizabeth Austin



If you have member or corporate member news you'd like to see in the NWA newsletter, please contact our Communications Coordinator, Hulda Johannsdottir (hjohannsdottir@nwa.org).

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



Credit Where Credit is Due

March President's Message By Dave Freeman

Watching a nightly network newscast in early February, I felt like the character Vizzini in the movie "Princess Bride." Faced with yet another amazing achievement of the Man in Black, Vizzini exclaims, "Inconceivable!"

Inigo Montoya replies, "You keep using that word. I do not think it means what you think it means."

The occasion was a round of severe weather in the Southeast on February 2. The nightly newscast on one network kicked off with a series of headlines including: "Without warning—tornadoes tear across the South. Dozens of homes destroyed, and a church torn apart as people inside prayed for their lives."

A quick check of the facts shows that this area was highlighted for the possibility of severe weather a full week ahead of time by the Storm Prediction Center. Let me say that again—a *full week ahead of time*.

On that day, Tornado Watches were issued hours in advance calling attention to the coming threat.

Preliminary numbers from SPC Storm Reports show 20 tornadoes occurred. Post event analysis showed that 15 of those had warnings with excellent lead times. Damage surveys suggest that four may have touched down shortly before warnings were issued. To be fair, it does appear one brief tornado occurred and ended before a warning could be issued.

And then there is the cruise ship. A massive cruise ship sails directly into a storm off the East Coast that had been very clearly identified four days in advance as hazardous. A full 48 hours in advance, warnings were issued for a "rapidly strengthening" storm with "hurricane force winds" and waves in excess of 30 feet. Yet the cruise ship company was widely quoted as saying the storm was much worse than forecast.

Which brings me back to Inigo Montoya: "You keep using that word. I do not think it means what you think it means."

If we gave a full week's heads-up for the potential of severe weather in the Southeast and outstanding lead times for the majority of tornadoes, how do we end up with a national news organization making such a statement? If the weather enterprise gives warning of dangerous conditions at sea days in advance, how does that translate into accusations that there was no warning? Does the word "warning" not mean what we think it means?

Some of this is on the news folks. I know of no other instance where a credible news organization would put a completely unsubstantiated accusation on the air without first checking the facts. All editors worth their salt would torpedo such sloppy journalism. It is incumbent upon journalists to do their job and check the facts—and when they don't, they should be held accountable.

That said, the same goes for all of us in the American weather enterprise. On those rare occasions when an event occurs that is not warned, we have to be open and honest about it. We have to acknowledge the limitations of the science, look straight into the camera and say, "We are still learning, and we are constantly trying to get better at what we do." Fundamentally, that is exactly what we do as meteorologists. We learn, we forecast, we learn some more.

But we have to do something else. We have to stand up for our science and get out the good word about what we do. And I am not saying this just because of bruised egos. Let me be clear about that. The reason this is important is that every time facts are misstated about our enterprise, it damages the credibility of the warning process. It also makes it more difficult for the weather enterprise to demonstrate its value when competing for increasingly scarce budget resources.

This also highlights one other line of action that we must pursue. We must continue to collaborate with our colleagues in the social sciences to diagnose where communication break downs are occurring. Perception, after all, is reality in the business of dealing with the public. So if the public somehow has the impression that there was no warning for this event or that, we need to research it, analyze it, find out why, and change what we are doing.

We know there will always be challenges, frustrations and disappointments when forecasting the weather and dealing with the reactions of human beings. But the American weather enterprise also demonstrates every day that there are victories and real value in what we do. And that story needs to be told.

With thanks to John Ferree, NWS Severe Storms Services Leader, and Greg Carbin, former Warning Coordinator Meteorologist at the Storm Prediction Center who is now at the WPC, for their assistance in compiling storm reports and warnings.



Three Rivers NWA Chapter Quarterly News January-March 2016 California University of Pennsylvania (Cal U)

Adam Andresen, Secretary

The Three Rivers Chapter of the NWA prides itself on its continued success and service through our members' involvement in academic conferences, educational outreach, colloquia and internships/research.



Chapter members and other volunteers at StormFest after the two-day event.

CONFERENCES:

Eleven members represented the chapter at the 96th American Meteorological Society (AMS) Annual Meeting January 8-14, in New Orleans, Louisiana. Members had the opportunity to take part in the 15th Annual Student Conference where they attended numerous sessions including Extreme Weather Events, Conversations with Professionals and a breakout session that discussed the many careers within the field of meteorology. Along with these talks, they also attended the Career Fair, Student Poster Session and Graduate School Reception. During the main conference, the students continued to spend time listening to the professional presentations and panel discussions. They were also able to see the posters and explore the Exhibit Hall in between the various sessions. Five chapter officers attended the Officers' Breakfast on January 12, were recognized with AMS Student Chapter Honor Roll and received third place for our chapter poster. Throughout the week our members made great strides in establishing contacts and relationships with professionals in their respective fields of interest.

Six students attended the March 19 Ohio University Meteorological Symposium in Athens, Ohio. Several speakers from different careers in meteorology were scheduled to give talks to the public throughout the day. This symposium is designed to provide a learning opportunity for students, professionals, and the general public to expand their knowledge of meteorology while also providing helpful insight to students entering or currently enrolled in a college meteorology program for future job opportunities and guidance.

STORMFEST:

The Three Rivers Chapter hosted its ninth annual StormFest on February 5-6 at the Carnegie Science Center in Pittsburgh, Pennsylvania. This is the chapter's largest educational outreach event. It is geared toward teaching K-6 children and their families about meteorology and the earth sciences through a myriad of hands-on activities. Attendees were able to complete an array of activities such as: Make a Weather Map, Home-made Thermometers, Cloud Spotter Guides, Make a Rock and Cloud in a Bottle. The event featured The Weather Channel's Nick Walker who engaged with the public and performed two of his "Weather Dude" shows that focused on weather preparedness and safety. In addition to students from the chapter, volunteers this year included students from the Cal U Department of Earth Sciences, the Ohio University Chapter of the AMS, Alpha Phi Omega-Lambda Omega service fraternity, and forecasters from the National Weather Service (NWS) office in Pittsburgh. There were over 4,100 attendees between

High Plains NWA Chapter Meeting

William Taylor, President
Wesley Hovorka, Secretary

The High Plains NWA Chapter met February 10 in Norton, Kansas. Sixteen chapter members made the meeting. Aaron Johnson, the Science and Operations Officer (SOO) from Dodge City, Kansas, gave a presentation (see below). No old business was brought up during the meeting, but there was new business. Cory Martin from the North Platte NWS office gave an update on the High Plains Conference being held later this year. The dates and location for this year's conference are Wednesday and Thursday, August 10 and 11, at the North Platte Community College. The NWS Central Region Director, Chris Strager, is expected to attend again and is willing to give a talk Wednesday morning. The North Platte office is currently looking for keynote speakers for the event. Registration fees will stay the same this year because we don't foresee any additional costs. The idea of having an open house at the North Platte forecast office the night before was mentioned so people could sign in for the event as well as meet and greet others attending the conference. Cory and Bill Turner are expected to get hotel blocks set up for the event soon, with La Quinta and possibly one other place as the hotels. Another topic of new business was talking about the Jim Johnson Scholarship. Volunteers are needed from each office for reviewing applications sent in for the scholarship. No nominations were sent in for elections this year so all positions of the chapter have accepted to remain at their positions for another year. However, William Taylor (president for four years) and Jeremy Wesley (Vice President for three years) have decided that this is their last year in these positions so new people can become president or vice president of the chapter. Annual dues were also discussed during the meeting with the fee of 15 dollars remaining the same. The next meeting will in April.

Aaron Johnson Discusses Snow Event

Aaron Johnson's presentation was on the December 13, 2015, Central Plains Snow Event. He discussed lessons learned when forecasting across other forecast offices and the Weather Prediction Center (WPC), as well as how to deal with collaboration between these offices to influence their forecasts. He talked about how WPC only uses ensemble models to make their forecasts, while the forecast offices use deterministic models in addition to ensemble models. The offices also look for mesoscale features in their area that could cause additional snow to fall in certain areas. WPC's winter weather desk generally has only one person working at a time to make a forecast for the entire United States who does not have time to look for these features. Aaron emphasized that coordination is a must between other offices and WPC to make the best forecasts for the public.

www.highplains-amsnwa.org

NWA Awards: A Great Way To Reward Excellence In The Field

Nominating your peers for their accomplishments in meteorology and related fields is a great way of acknowledging their greatness.

Nominations are being accepted now through June 13. Please consider nominating someone you know for the following categories:

- Operational Achievement Individual Award
- Operational Achievement Group Award
- Member of the Year Award
- The Dr. T. Theodore Fujita Research Achievement Award
- Walter J. Bennett Public Service Award
- Public Education Award
- Broadcaster of the Year Award
- Aviation Meteorology Award
- Local Chapter Award
- The Larry R. Johnson Special Award
- J. Kevin Lavin Leadership Award

[Nominate someone today!](#)



The 2015 NWA Annual Award winners, or their delegates, with NWA Leadership.

RIVERS from page 4

Friday and Saturday, making this another successful StormFest event. Next year the chapter will celebrate the 10th anniversary of the event.

COLLOQUIAL SERIES:

Nolan Doesken, Colorado State Climatologist and founder of the Community Collaborative Rain, Hail & Snow Network (CoCoRaHS), came to Cal U on March 24. He gave a talk to the chapter members and students, faculty and staff of the university about the work, challenges, and historical changes of being a state climatologist. Those in attendance also received a better insight of the CoCoRaHS project and how it is teaching meteorologists and climatologists about heavy precipitation.

EDUCATIONAL OUTREACH:

On February 22, chapter Educational Outreach chair Aaron Haegele traveled to California Area School District to give a presentation to the fifth and eighth graders. He talked about climate, winter weather and tied the two together to discuss El Nino/La Nina. He then went into detail about how these patterns effect the United States and, specifically, Southwest Pennsylvania.

On March 2, Aaron visited the sixth grade students at Wendover Middle School. There, he presented facts and media related to severe weather,

hazardous weather safety and storm chasing. He also discussed the details of thunderstorms, tornadoes, hail, high wind events, hurricanes, flood events and how to remain safe in these scenarios. At the end, there was an open question and answer session.

SOCIAL EVENTS:

On February 24, the club hosted a movie night in the meteorology lab in the Eberly Hall of Science and Technology. Club members were able to come and relax after many stressful weeks of the semester. Food and drinks were provided as well as a movie chosen by the club. During the middle of the movie, a storm came through the university, and the students decided to watch the storm roll through together from the safety of the building.

SKYWARN:

On March 30, the chapter will be hosting a SkyWarn training certification event inside the Eberly Hall of Science and Technology auditorium. The event is open to those members of the public who have a passion for the weather and are interested in becoming a certified spotter for the NWS. In past years, there has been a tremendous amount of interest from the community members who come out to become SkyWarn certified.

<http://sai.calu.edu/weather>

41st NWA Annual Meeting, September 10-15, 2016

Over 300 Abstracts Received!

REGISTRATION OPENING SOON!

Location: Norfolk, Virginia

41st NWA Annual Meeting Venue and Hotel:

[Norfolk Waterside Marriott](#), 235 East Main Street, Norfolk, VA

[See page 7](#) for hotel and lodging information

Theme: Better Science, Better Communication, Better Results

Operational meteorologists constantly strive to improve the science behind the forecast. We also want to make sure the people we serve receive, understand and then act on the information that we provide. If we utilize the best possible science and are effective communicators, lives will be saved and impacts to the economy minimized. Join the National Weather Association in Norfolk and help the weather enterprise advance on this path of service.

Important Dates in 2016

- Oral and Poster Presenters Notified: April 15
- Preliminary Agenda Posted On-line: July 1
- 2016 NWA Annual Meeting: September 10-15

Schedule of Events

- Broadcast Meteorology Workshop: **Sunday, September 11**
- Ninth Annual Student Session including Speed Mentoring: **Sunday, September 11**
- General Sessions: **Monday-Thursday, September 12-15**
- Workshops for K-12 Teachers: **Tuesday, September 13**
- NWA Annual Awards Luncheon: **Wednesday, September 14**

The Abstract Submission Period is CLOSED.

The Program Committee will notify presenters, via e-mail, regarding the disposition of their abstracts by April 15. A preliminary agenda will be posted on the NWA website by early July for presenters to review.



Photo courtesy of Visit Norfolk



The Annual Meeting Program Committee Co-Chairs are:

Ken Carey

ERT, Inc

Laurel, MD 20707

annualmeeting2016@nwas.org

Mike Vescio

NOAA National Weather Service

Pendleton, OR 97801

annualmeeting2016@nwas.org

The Broadcaster Workshop Program Chair:

Mike Goldberg

WTVR-TV

Richmond, VA 23230

broadcasterworkshop2016@nwas.org

Additional Information

For more information on exhibits, special accommodations, registration and the overall meeting program, keep checking the [2016 Annual Meeting Page](#) and its links, or contact the NWA office: 405-701-5167 or nwahelp@nwas.org.

NWA will provide updates on this Web page, on the [NWA Facebook Page](#), [Twitter](#) and other social media. Please use the hashtag [#NWA16](#) for any tweets associated with the 2016 Annual Meeting.

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 www.nwas.org/newsletters/.



41st NWA Annual Meeting, Hotel Details

Meeting Venue and Hotel: Norfolk Waterside Marriott,
235 East Main Street, Norfolk, VA 23510

(<http://www.marriott.com/hotels/travel/orfws-norfolk-waterside-marriott/>)

Reservations may be made online or by calling 1-800-874-0264 and telling them you're attending the National Weather Association meeting.

The room block is open until August 17, 2016, or until the NWA block is full.

Hotel rates are as follows:

Number of Guests 1-4

Nightly Rate Before Tax: \$87.00

Click to make your
reservation
<http://goo.gl/G8OzpV>

- Prices listed are per night and do not include tax or fees. The current tax rate is 14% and/or \$2.00 per room night occupied. Rates are subject to change.
- When requesting the room, they will ask how many will occupy the room. This will enable them to provide the correct type of room for the number of guests. (i.e., one bed vs. two beds). Rooms with two double beds cannot be guaranteed in advance unless this request appears as confirmed on your reservation.
- All reservation requests will require a credit card or a one room night deposit, to guarantee the room. Any deposits will be refunded for rooms canceled more than 72 hours prior to scheduled arrival. If you do not check into the hotel on your scheduled arrival date and do not cancel more than 72 hours in advance, one (1) room night cost will be charged to the credit card used to guarantee the room.
- Name changes to room reservations may be made up to one day prior to arrival.
- Check-in is available after 4 p.m. on arrival day; check-out is at 11 a.m.
- Complimentary Internet in all NWA attendee guest rooms.
- The hotel has a [smoke-free policy](#).

Additional Information

- Reduced overnight Self-Parking of \$14 (Main Street garage only). A 6% tax will apply.
- Valet parking is available for \$26/day for hotel guests.
- Taxi rides between the airport and hotel average around \$30. The hotel does not provide shuttle service.

The meeting sessions will be held at the hotel. [Visit Norfolk](#) has more info on restaurants, transportation and activities in the Norfolk area.

National Weather Association Hosting WeatherFest at Nauticus in Downtown Norfolk

Saturday, September 10, 2016, from 9 a.m. to 2 p.m. with lots of free activities, games, exhibits and book signings for families. Reduced price museum admission also available.

(Norfolk, VA)— Join the National Weather Association for its exciting annual WeatherFest at the Nauticus Science Center on Saturday, September 10, 2016 from 9 a.m. to 2 p.m. Weather enthusiasts of all ages are invited for a rare chance to meet meteorologists from all over the country. Learn about the science of meteorology and meet weather personalities from The Weather Channel and all of the local Hampton Roads television stations and many others.

Families will love the educational and fun weather games and activities. Adults will love the preparedness and safety information. Everyone will be able to meet their favorite weather-related authors. Exhibitors will be displaying their weather-related products, including weather stations and apps.

The Weather Dude, Nick Walker from The Weather Channel, will be performing musical program of weather education and storm preparedness for kids.

There will be an exciting slate of speakers talking about everything from hurricanes and tropical weather to tornadoes and severe storms to winter storms. A significant focus will be the impact of coastal flooding on southeastern Virginia.

Several authors will be on hand signing their books, including famous children's author and Fox News Network weather anchor Janice Dean.

Guests will be able to check out weather equipment on the plaza, including a Doppler radar, a mobile wind profiler and storm chase vehicles. They will also have an opportunity to get their NOAA weather radios programmed.

A Weather-Ready Nation™ preparedness badge event will be held for Boy and Girl Scouts.

All WeatherFest activities will be free and open to the public. Guests also receive reduced museum admission on September 10.

Over 5,000 adults and children are expected to attend.

For more, contact Bill Murray at 205-602-7249 or billmurray@theweatherfactory.com.



NWA Member Partners with UN on African Project

NWA member James Purpura, CCM, Director of Forecasting of WeatherExtreme Ltd., is part of a new program being developed by the United Nations through the World Meteorological Organization. The project will merge two systems now being put in place across nine nations in southern Africa: the Severe Weather Forecast Demonstration Project and the Southern African Region Flash Flood Guidance system.



James Purpura, CCM, (front row, far right) with the participants in the South African Warning Project

Journal of Operational Meteorology



New Articles in the Journal of Operational Meteorology

Three articles have been published in the NWA's JOM during the last month.

JOM 2016-4: Verification of National Weather Service Spot Forecasts Using Atmospheric Sounding Observations, by Nicholas J. Nauslar, Timothy J. Brown, and John D. Horel.

JOM 2016-5: Seasonal and Annual Validation of Operational Satellite Precipitation Estimates, by Scott Rudlosky, Meredith A. Nichols, Patrick C. Meyers, and David F. Wheeler.

JOM 2016-6: Next Generation Satellite RGB Dust Imagery Leads to Operational Changes at NWS Albuquerque, by Kevin K. Fuell, Brian J. Guyer, Dierdre Kann, Andrew L Molthan, and Nicholas Elmer.

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!

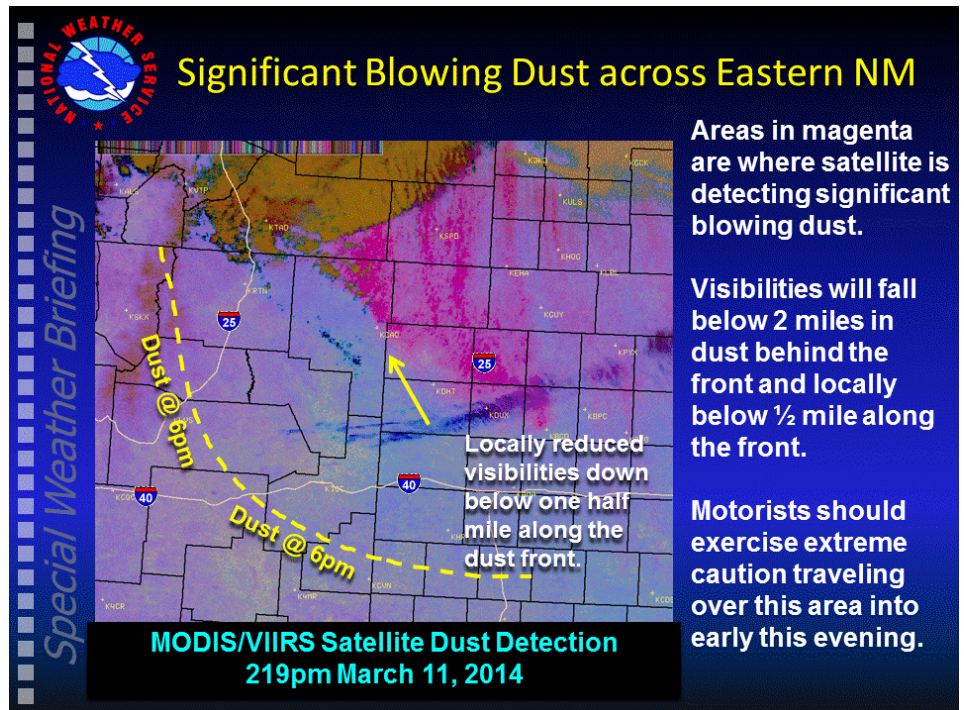


Figure 12 from JOM 2016-6. The NWS Albuquerque Graphicast issued at 3:00 p.m. local time on March 11, 2014. The dashed yellow line illustrates where the leading edge of the dust plume is forecast to be at 6:00 p.m. The Moderate Resolution Imaging Spectroradiometer (MODIS)/Visible Infrared Imaging Radiometer Suite (VIIRS) image is valid at 2:19 p.m.



Quarterly Announcement from COMET

Wendy Schreiber-Abshire, COMET Sr. Project Manager/Meteorologist

Read on for highlights of our most recent MetEd publications during the quarter. Follow the links of most interest to you for more information about each release.

New Lessons:

[Operational Models Encyclopedia](#)

[Introduction to Climatology for the Tropical Pacific Islands](#) (90 minutes)

[Climate and Water Resources Management, Part 1: Climate Variability and Change](#) (75 minutes)

[Enroute Icing](#) (90 minutes)

[Gridded Products in the NWS National Blend of Global Models](#) (30 minutes)

[Best Practices for Minimizing Errors during GNSS Data Collection video](#) (<15 minutes)

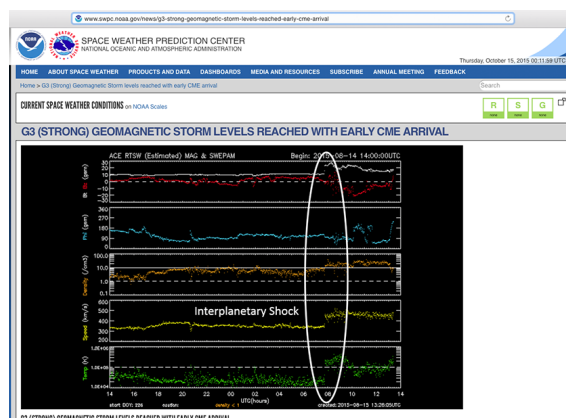
Spanish Lessons:

[Análisis de la intensidad de los ciclones tropicales](#)

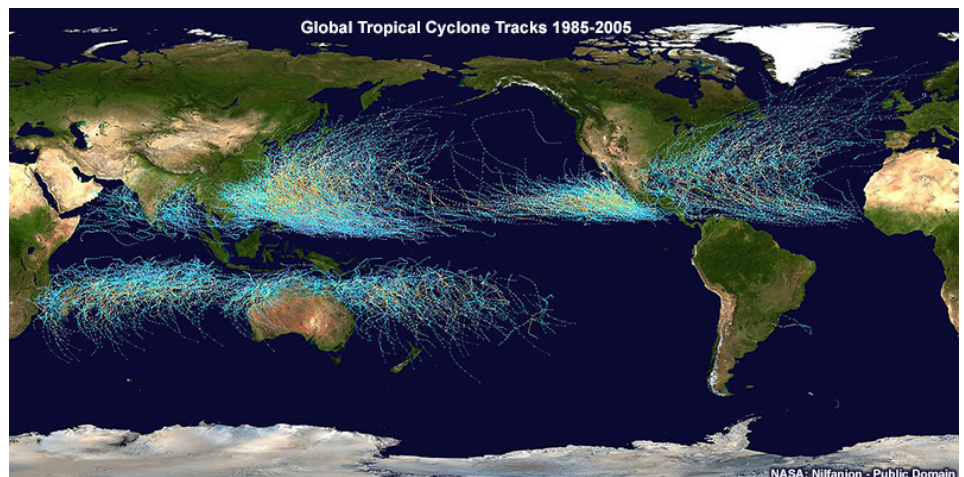
French Lessons:

[Correction de biais des données du modèle de prévision numérique](#)

[Évaluation de la prévision numérique du temps \(PNT\) avec l'imagerie de vapeur d'eau](#)



Below is from the "Best Practices for Minimizing Errors during GNSS Data Collection" module: and left is a screen shot of the NOAA Space Weather Prediction Center showing: G3 (strong) geomagnetic storm levels reached with early CME arrival (credit: NOAA).



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.

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PROFESSIONAL DEVELOPMENT & EVENTS

NWA Sponsored Meetings, Conferences & Special Events in 2016

(Click titles for more information)

[March 31–April 2: 20th Annual Severe Storms & Doppler Radar Conference](#)

It will be in Ankeny, Iowa at the Courtyard by Marriott.

[April 2-3: 14th Annual Southeast Severe Storms Symposium](#)

It will be at the Mississippi State University.

[August 10-11: 2016 High Plains Conference](#)

[September 10–15: 41st NWA Annual Meeting](#)

“Better Science, Better Communication, Better Results” is the theme of the 2016 Annual Meeting being held in Norfolk, Virginia.

[See page 6.](#)

Other Meetings, Conferences & Special Events

[March 27–April 2: Tsunami Preparedness Week](#)

[April 13-16: National Tropical Weather Conference](#)

It will be held in South Padre Island, Texas.

[April 22: Earth Day](#)

[April 30: National PrepareAthon Day](#)

[May 4–6: National Earthquake Conference](#)

2016 NEC: “What’s New? What’s Next? What’s Your Role in Building a National Strategy?”

[October 14-19: 64th Annual IAEM Conference and EMEX](#)

The International Association of Emergency Managers will hold this year’s annual conference in Savannah, Georgia.

NWA Spring Scholarships with upcoming deadlines

**Broadcast
Meteorology
Scholarship**

**David Sankey
& Minority
Scholarship**

Apply by April 29, 2016

ready.gov/calendar

2016

NATIONAL SEASONAL PREPAREDNESS MESSAGING CALENDAR

DECEMBER Winter Weather Safety* Holiday Safety* Flu Vaccination Week	JANUARY Winter Weather Safety* Holiday Safety*	FEBRUARY Flood Safety*
MARCH American Red Cross Month Severe Weather Safety* Tornado Safety Tsunami Safety	APRIL Financial Literacy Month National Volunteer Week National PrepareAthon! Day (4/30)*	MAY Older Americans Month Military Appreciation Month National Building Safety Month Nat'l Hurricane Preparedness Week* National Police Week National EMS Week National Small Business Week Wildfire Community Preparedness Day* National Dam Safety Awareness Day
JUNE Pet Preparedness Month* Extreme Heat Safety Lightning Safety	JULY Firework and Outdoor Cooking Safety	AUGUST National Night Out
SEPTEMBER National Preparedness Month & PrepareAthon! Day (9/30)* Youth Preparedness Education*	OCTOBER Cybersecurity Awareness Month National Crime Prevention Month Fire Prevention Week The Great ShakeOut Earthquake Drills	NOVEMBER Critical Infrastructure Preparedness Month Military Family Month Native American Heritage Month

*Asterisks denotes topics that will feature a preparedness related digital toolkit

• To learn more about each topic month or week and to get content to promote preparedness information all year visit: www.ready.gov/calendar
 • While FEMA suggests the above content to promote content please feel free to adapt topics to your local area and use this calendar as a guide only.

Ready.

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