

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

No. 14 - 3

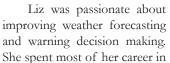
Newsletter M A R C H

2014

Rest in Peace Liz Quoetone

The meteorological community lost an important contributor to the operational forecasting world with the

passing of Liz Quoetone on March 18. If you have taken training on the WSR-88D radar, you have benefited from the hard work of Liz. If you have applied the concept of situational awareness to your warning decision process, your thinking has been influenced by Liz.





the professional development of forecasters through her work at the NWS Warning Decision Training Branch. To stay in touch with the challenges forecasters face on shift, she regularly worked on the forecast desk at the NWS Weather Forecast Office in Norman, Okla. She proved that those who teach can also do.

If you met Liz, you were immediately taken by her friendly manner and interest in you as a person. She genuinely cared about people and the challenges they faced, personally and professionally. Her work was about helping individuals do their jobs better. She also encouraged people across the weather enterprise to voice their views and opinions in order to fully explore topics and find better ways to serve the customers of weather services.

Her lifelong passion for weather started during her childhood spent in Oklahoma. As her career progressed, she became aware that forecasters can be well trained in the details of meteorology and the equipment and data

See LIZ, p. 5

NWA Named Weather-Ready Nation Ambassador

The NWA is a new <u>Weather-Ready Nation AmbassadorTM</u>, an initiative by NOAA where ambassadors strive to improve the nation's readiness against extreme weather events.

"NWA shares NOAA's vision of building a Weather-Ready Nation," said Louis Uccellini, Ph.D., director of NOAA's National Weather Service. "Working together we will provide useful and relevant information

to communities, businesses and individuals to help them become ready, responsive and resilient to extreme weather and water events."

The Weather-Ready Nation Ambassador initiative helps unify the efforts across government, nonprofits, academia, and private industry



toward making the nation more ready, responsive, and resilient against extreme environmental hazards, according to the NOAA web site.

The NWA is honored to be named a Weather-Ready Nation Ambassador. "Our members have dedicated their lives to meteorology – committing countless hours to making sure residents are safe when weather brings on dangerous conditions," said Janice Bunting, Executive Director of the NWA.

In its application to become an ambassador, NWA stated, "Our mission is: Connecting operational meteorologists in pursuit of excellence in weather forecasting, communication and service. Our individual and corporate members represent the government, private, military, broadcast, and academic sectors. We can spread WRN information through many avenues. We will partner with NOAA to share and communicate information that makes our nation more responsive and resilient to natural hazards."

"This is a great honor which validates the dedication of our members for their contribution to the safety and security of our nation," said Jeff Craven, NWA President. "Weather-Ready Nation is about building community resilience and strives to integrate physical science and social science towards improving the way we communicate weather information."

The NWA Council approved the proposal to apply for ambassador status. They encourage all NWA members to share the <u>Weather-Ready Nation</u> message.

INSIDE THIS EDITION ... 2014 National Awareness Events 2 North Florida Webinar Series NWA Rapid Response Team 2 **New NWA Members** President's Message NWA Annual Meeting/Call for Abstracts Scholarship & Grant Applications 3 **Professional Development** 4 New JOM Papers On-Line Chapter Updates Twin Cities AMS/NWA Chapter **Important Dates**

2014 National Awareness Events

Click on the awareness week's title for corresponding website and more information about that week. Air Quality Awareness Week
Safe Boating Week
May 17-23
Heat Awareness Day
May 23

Hurricane Preparedness Week May 25-May 31

Rip Current Awareness Week Jun 1-7
Lightning Safety Awareness Week Jun 22-28

NWA Rapid Response Team

The NWA Rapid Response Team was created to provide the NWA membership with near real-time updates on major weather events. The team is composed of a diverse group of NWA members (operational forecasters, researchers, broadcasters, students, IT specialists and social media experts) under the direction of the NWA Vice President.

The team swings into action when a major weather event is anticipated (see links below), and begins to gather and compile data, observations and forecasts that will be used to describe its evolution and impact. A Web article is developed and linked to the NWA home page for a period generally lasting up to one week. Social media (Facebook, Twitter and Google+) as well as the What's New page and its associated RSS feed are used to advertise the article. The articles are stored within the News Archive after removal from the home page.

The process of putting together the web page usually involves several iterations of writing and the insertion of data and pictures to tell the story. The team uses a web-based project management and collaboration tool called Basecamp to coordinate its efforts.

The definition of a major weather event includes at least one of the following attributes:

- * Impact to one or more major (population greater than 1 million) metropolitan centers
- * Disruption of transportation (air and/or land)
- * Record weather defined by temperature, precipitation, wind or severity
- * Local catastrophic weather event such as the Joplin, Mo., tornado or Albert Pike Recreation Area, Ark., flash flood

Examples of data sets used in the preparation of these articles include:

- * Surface and rawinsonde
- * Satellite and radar
- * Locally/regionally generated graphics
- * Numerical guidance
- * Picture(s)/video(s) of the event

Since inception, there have been five events that have met the criteria (click for details on each):

- * September 10-13, 2013 Colorado Front Range Floods
- * November 17, 2013 Tornado Outbreak
- * January 5-7, 2014 Arctic Outbreak
- * January 28-29, February 2014 Deep South Winter Storm
- * February 12-14, 2014 Winter Storm (Eastern 1/2 Nation)

Current members of the Rapid Response Team are:

Michael Eckert – NWS Aviation Weather Center
Gregory Carbin – NWS Storm Prediction Center
Richard Grumm – NWS WFO State College, Pa.
Thomas Niziol – The Weather Channel
Frank Alsheimer – NWS WFO Charleston, S.C.
Dan Brown – NWS National Hurricane Center
Brad Herold – NWS WFO Indianapolis, Ind./NWA IT
Steve Listemaa – NWS WFO Peachtree City, Ga./NWA IT
Patrick Marsh – NWS Storm Prediction Center
John Scala - WGAL-TV/CCM
Matt Kelsch – COMET



Newsletter Submissions

Michael Folmer – NESDIS

We welcome Newsletter article submissions from members. Send articles to nwanewsletter@nwas.org by the 25th of the month for publication in the following month's edition at the earliest. Information about the Newsletter and a link to author guidelines can be found at http://www.nwas.org/newsletters/.

NWA Awards: Recognition for Work Well Done

Jeff Evans

NWA Vice President and Awards Committee Chair

What a privilege to be a part of the NWA, an organization dedicated to operational meteorology. One of the benefits of our wonderful organization is the ability to interact with great people from a variety of specialties around the field of weather. From public to private, visible to behind the scenes most of us simply love what we do and the mission we serve, applying energy and enthusiasm to our jobs without thinking about recognition. That passion is one reason our field is somewhat unique; generally those of us who pursue careers in meteorology simply love weather and trying to help people. That love of mission also drives innovation and dedication that often goes unnoticed, or perhaps more importantly, unrecognized. The NWA Annual Awards provide an opportunity to recognize some of the amazing things being done by members of our organization each and every day. A list of the awards can be found on the NWA Awards Web page. It includes individual and group awards for specific achievements, as well as for outreach and education, applied science, leadership, public service, and aviation.

As the Awards Chair, I am often asked what makes a good nomination. The most competitive awards packets include not just the nomination, which details the nominee's accomplishment and an explanation on why they deserve the award, but also references

explaining the significance of the accomplishment. Once someone is nominated, they will remain in the running for a total of three years and the nomination can be updated each year.

Receiving an award is gratifying in itself for the acknowledgment it brings, but knowing that those nominating and selecting you are your peers simply adds to the significance. Speaking for



the Awards Committee, we look forward to seeing and learning about the fabulous things our fellow NWA members do each year. I would like to challenge each and every member of our amazing organization to take notice of the great things being done around us, and devote a part of a morning or afternoon to nominate someone for an award. It takes a small amount of effort to put a nomination package together and to upload it to the submission site. Knowing you are responsible for someone receiving a deserving, and perhaps long overdue, recognition is well worth the small amount of time it takes to nominate them.

Applications Now Open for NWA Scholarships and Grants

The NWA is pleased to announce that applications are now being accepted for scholarships and two grants.

NWA David Sankey Minority Scholarship in Meteorology Open until April 15

NWA Dr. Roderick A. Scofield Scholarship in Meteorology Open until May 16

NWA Broadcast Meteorology Scholarship *Open until May 16*

NWA Ken Reeves Memorial AccuWeather Undergraduate Scholarship in Meteorology – Open until May 31

NWA Sol Hirsch Education Fund Grants for teachers and educators of grades K-12 – Open until June 1

NWA Meteorological Satellite Applications Awards Grant Open until July 1



Joyce Scofield and other family members of the late Dr. Roderick A. Scofield generously donate funds to support the Scofield scholarship.

The Sankey and Broadcast Meteorology scholarships are funded by NWA members through direct donations and the NWA Annual Meeting Golf Outing and Raffle organized by Betsy Kling. AccuWeather, Inc., a charter NWA Corporate Member sponsors the scholarship honoring the late Ken Reeves. Sol Hirsch and many NWA members donate to the Education Fund Grants. Frances Holt, a former chair of the NWA Remote Sensing Committee, sponsors the Meteorological Satellite Application Awards Grant. The NWA sincerely thanks all who support and promote our scholarship and grant opportunities.

Click for details on:

Grants

Scholarships

CHAPTER NEWS

NWA Local Chapter Updates

Our local chapters are part of the glue that keeps the NWA together. Members can interact with each other more often at the local level than the once-a-year Annual Meeting. Local chapters invite speakers to discuss local weather topics, organize tours, sponsor and judge science fairs, organize conferences on specific topics, and participate in community services. They also provide opportunities for professional development and networking by attending the NWA Annual Meeting and other regional conferences.

We have 51 local chapters in 30 states, north to south and east to west, covering the gamut of weather phenomena. The monthly NWA

Newsletter is a perfect medium for local chapters to showcase their activities. We do get periodic articles from a few local chapters, but we would like to hear from all of them. Articles about local chapter activities can be submitted monthly, quarterly, or whenever the chapter would like to share what they've been doing.

Please consider sending an article showcasing the activities of your local chapter to the Newsletter. The author instructions are found at nwas.org/newsletters/newsletter instructions.php, and if you have any questions, email nwanewsletter@nwas.org.

Twin Cities AMS/NWA Chapter News

January and February Meeting Summaries Chris Bovitz, Secretary

The January 2014 meeting of the Twin Cities Meteorological Society (TCMS) occurred on Jan. 20 at a restaurant in downtown Minneapolis. There were about a dozen members and guests that arrived early for dinner, and a half-dozen more who came for just the meeting. During the business meeting, the chapter voted to again become a sponsor of the Minnesota Skywarn Workshop next month, discussed judging for local science fairs, updated the weather contest, and revealed the new name of our newsletter: The Blue Norther. The meeting adjourned for our speaker, Dr. Kenny Blumenfeld.

Dr. Blumenfeld, a TCMS member, has taught at branches of the universities of Minnesota and Wisconsin and currently works with Hennepin County Emergency Management. His speech was in two parts. In the first portion he talked about how most colleges teach their introductory meteorology courses, and he gave his opinion as to how he thinks they should. These courses would likely be one of the few, if not the only, science class many college

students would take. While factually correct, Dr. Blumenfeld felt they lacked making connections between weather, society and other natural aspects and would have more impact on students if they discussed the interconnectedness.

The second and main portion of Dr. Blumenfeld's presentation showed the process he is going through to make films about the seasons in the Upper Midwest. He aspires to make a sweeping documentary about all four seasons in a style similar to the nature specials by the British Broadcasting Corporation, starting with winter. The movies will be meteorologically comprehensive, and they will involve the human element, including interviews with local people. His winter movie will have three interwoven pieces: winter's personality; its loveable villain character shaped by the conspiring elements of darkness, cold, and snow; and its health, which is in serious decline. Locally, this non-universally loved season defines our region and who we are. Some people love and embrace it; others tolerate it; but everyone knows about it. Winter's decline is being noted in many objective measures such as reductions in annual snowfall, warming temperatures, and a shorter cold season. But despite these and other trends, winter will still be the coldest and darkest time of the year, there will still be a rebirth after it, and we in the Upper Midwest will still be able to retain our bragging rights.



Winter in the Twin Cities (photo by Chris Bovitz).

TCMS held its February 2014 meeting on Feb. 18 at Hopkins West Junior High School in Minnetonka. Nine TCMS members were there. During the business meeting, the chapter approved an allocation to bring NSSL deputy director, Dr. Lans Rothfusz, to town to talk about NSSL's Forecasting a Continuum of Environmental Threats, or FACETs, project. Members were urged to help promote this event to the entire Twin Cities meteorological community.

Our meeting was then turned over to Toni Schwartz, the K-12 STEM coordinator for the Hopkins School District and a middle school earth science teacher. She introduced us to the Minnesota state science standards by giving us an exercise: We examined the standards for elementary, middle, and high school and came up with teachable themes. We also discussed what we felt were missing from the standards, mainly dealing with atmospheric sciences: modeling, measuring, and forecasting.

Ms. Schwartz walked us through her earth science curriculum and described the technological tools she employs. All her students have iPads that they use to discover and illustrate scientific concepts, create projects, and work on assignments. Her teaching employs asking "Why?" or "How?" or "What if we..." and using the scientific method.

North Florida Chapter Professional Development Webinar Series

Brandon Daly, Secretary

The North Florida Chapter of the AMS/NWA hosted its first live webcast of its Professional Development Webinar Series on Feb. 27. The focus of the series is to give students and recent graduates the information they need to pursue and jump-start their careers. The first seminar's special guest was Ken Carey, Vice President for Science and Engineering at Earth Resources Technology (ERT), Inc. and self-proclaimed "private-sector guru." His talk, titled "Opportunities for Private Sector Meteorologists," highlighted some potentially obscure jobs available for meteorologists entering the field and gave insights on how to best prepare oneself to stand out from one's peers and future competition. He touched on careers in broadcast, wind and energy, private client forecasting, technology, analytics, marine interests, and research.

He was joined on the panel by Janice Bunting, Executive Director of the NWA; Frank

Alsheimer, Science Operations Officer at the NWS Office in Charleston, S.C.; and representatives of the Blue Ridge Chapter of the AMS/ NWA. The Google+ Hangout platform was used for the webcast, which allowed for the webcast to be broadcast live for public viewing and archived for later viewing on YouTube. It also allows for an interactive discussion and facilitated a faceto-face student question and answer period after the talk.

The chapter has planned at least two more webcasts in this Professional Development



Ken Carey speaking to a room full of college students, and anyone on the internet who may have been watching. Google+ Hangouts are a great tool to turn exclusive seminars into world-wide panel webinars to connect great minds and smiling faces.

Webinar Series. Those dates and speakers will be announced via their social media pages. You can connect with the chapter on Twitter (@NorthFLAMSNWA) or search #AMSNWA where they live-tweet during meetings and other events. Their Google+ page at plus.google. com/+northflamsnwa will be the direct link to live webcasts. You can also get information from their Facebook page at www.facebook.com/northflamsnwa, on their web site at: http://northflamsnwa.wordpress.com, or email them at northflamsnwa@gmail.com.

LIZ from p. 1

used to measure and analyze conditions, but knew there was more to issuing effective and timely forecasts, watches and warnings. She examined the human factors that affected forecasters' decision making processes and began teaching about situational awareness to help them apply these concepts to organize their approach in handling severe weather events.

Liz's impact on the weather community was not limited to the NWS. She has been a constant presence in the leadership of the NWA for many years. A member since 1997, Liz became NWA President in 2012. She also served as a councilor, the vice president and the commissioner of committees. Her dedication and gift of her time illustrated

how important she felt the NWA is to the operational community.

Liz had a quote taped to her computer that said, "It's amazing what we can accomplish when we don't care who gets the credit." Her focus was on results, not what was in it for her. Her hard work and humble attitude made her a force that has changed the field of meteorology forever. The world is a better and safer place because Liz was part of it. If you want to learn more about Liz and her life, go to www.nwas.org/archive/2014/quoetone/memoriam.php.

For those who choose, Liz's family requests donations be made to the NWA for the establishment of a scholarship in Liz's name. Donations can be made online New NWA Members in February 2014

Regular/Military/Retired

Augustin Busschaert Belen De Leon James Ellis **Garry Frank Neil Haley** John Huntington **Matt Jones** Sarah Lane **David McAnally** Karen Rome **Christopher Spears** Darren Van Cleave James Wallmann Matthew Winterkorn Norman King Henry Voegtle

Student

Matthew Callihan
Stephen Decatur
Rachel Eidelman
Alex Ferguson
Matthew Gillespie
Isaac Hankes
Ian Schwartz
Margaret Scott
Erik Smith
Christine Spencer
Reuben Weiner

at https://member.nwas.org/civicrm/contribute/transact?reset=1&id=14, or mailed to:

National Weather Association 350 David. L. Boren Blvd Ste 2750 Norman, OK 73072

Make checks payable to the National Weather Association with "LizQ Scholarship" in the memo line.

39th NWA ANNUAL MEETING

Salt Lake City, Utah: 18-23 October 2014

Where:

The meeting and host hotel is the Sheraton sessions will take place at the Salt Lake City Hotel, 150 W 500 S, Salt Lake City, UT, 84101. http://www.sheratonsaltlakecityhotel.com/

Host hotel reservation options:

Online: https://www.starwoodmeeting.com/StarGroupsWeb/booking/reservation?id=1402260480&key=856AD#

Call: 1-888-627-8152 (Ask for the National Weather Association room block.)

Nightly rates: One or two occupants is \$103 + tax; three occupants is \$113 + tax; four occupants is \$123 + tax. *NWA rates apply until Sept. 15, 2014, or until sold-out, whichever comes first.*

Theme:

"Building a 21st Century Weather Enterprise: Facilitating Research to Operations – Optimizing Communication and Response"

Among the greatest challenges for the Weather Enterprise in the 21st century is to produce the highest level of science-based hazard information, while at the same time communicating the associated uncertainty, impacts, and risks in a manner that results in the maximum benefit to society. Events such as



the Moore and El Reno tornadoes in Oklahoma and the Yarnell Hill and Rim wildfires in the Western U.S. highlight the need for both excellent forecasts and effective communication. The results from innovative research must be efficiently transferred to governmental and commercial providers of environmental information services. Additionally, forecasts must be effectively communicated in a manner that elicits an informed response by private citizens, organizations, businesses, and emergency managers and other first responders. Given these challenges, the focus of the 2014 NWA Annual Meeting will be to share research results that can improve operations and on communication platforms and methods that promote appropriate societal response.

Important Dates:

- May 31: Abstracts for Oral presentations due
- June 7: Abstracts for Poster presentations due
- Oct. 18–23: The 39th NWA Annual Meeting

Schedule of Events:

- Sunday, Oct. 19: The annual Broadcast Meteorology Workshop
- Sunday, Oct. 19: The Seventh Annual Student Session
- Oct. 20-23: The general sessions
- Wednesday, Oct. 22: The NWA Annual Awards Luncheon

For more information on exhibits, special accommodations, registration and the overall meeting program, keep checking the 2014 Annual Meeting Page (http://www.nwas.org/meetings/nwa2014/) or contact the NWA office at 405-701-5167.

NWA will provide updates on-line, on the NWA 2014
Annual Meeting Facebook Page, Facebook Page,
Twitter, and other social media. Please use the hashtag
#NWAS14 for 2014 Annual Meeting posts.

Abstract Submission:

- Submit abstracts for oral presentations by May 31 and abstracts for poster presentations by June 7.
- Abstracts should be sent via the online form on the NWA website at: www.nwas.org/2014abstracts.php. If you are unable to submit your abstract via the online form, contact the NWA office: 405-701-5167 or email exdir@nwas.org.
- The Program Committee will notify presenters, via email, regarding the disposition of their abstracts by July 18. A preliminary agenda will be posted on the NWA website by early August for presenters to review.
- Students: complete the abstract submission form section regarding student awards. If you concur, your presentations will be reviewed by the NWA Weather Analysis and Forecasting Committee members. Monetary awards will be presented to the best oral presentations and posters in undergraduate and graduate student categories.

Contacts:

Annual Meeting Program Committee Chair: Randy Graham Science and Operations Officer National Weather Service Forecast Office Salt Lake City, UT annualmeeting@nwas.org

Broadcaster Workshop Program Chair: Mike Goldberg WTVR-TV Richmond, VA 23230 mgoldberg@wtvr.com

2014 NWA sponsored Annual Meetings, Conferences and Special Events

April 4-5: 12th Annual Southeast Severe Storms Symposium

Sponsored by the East Mississippi Chapter of NWA/AMS will be held in the Palmeiro Center on the Mississippi State University Campus.

April 26-27: USA Science & Engineering Festival

Free Expo will be held at the Walter E. Washington Convention Center in Washington, D.C.

Aug. 6-7: 16th Annual High Plains Conference

The High Plains Chapter of the AMS and NWA sponsor this event. Abstracts are being accepted. The conference also includes invited speakers. Students presenting have their registration fees waived and are eligible for awards.

Oct. 18-23: 39th NWA Annual Meeting

It will be held in Salt Lake City, Utah (#nwas14), at the downtown Sheraton Hotel. See page 6 for details.

Other Meetings, Conferences and Special Events

April 5: The 34th Annual Fermilab Tornado and Severe Weather Seminar

Tom Skilling, WGN-TV's chief meteorologist, will host the seminar at the Ramsey Auditorium, Fermilab National Accelerator complex in Batavia, Illinois.

April 5: Central Plains Severe Weather Symposium and Family Weatherfest

This annual event will run from 9 a.m. to 2 p.m. in Lincoln, Neb., bringing activities, experiments, exhibits, displays, speakers, storm spotter training and more.

April 7-10: International Weather Radar and Hydrology Symposium

Organized by the Environmental & Water Resources Institute of the American Society of Civil Engineers, it will be in the Washington, D.C. area.

April 9-13, 2014: National Tropical Weather Conference

The conference will bring the current director of the National Hurricane Center and three former directors together to discuss tropical systems and forecasting. Conference presentations will cover tropical systems, mitigation, forecasting, seasonal forecasting, and more. NWA Seal holders can receive CEUs for attending.

April 14-17: 2014 National Hurricane Conference

This annual conference will be held at the Hilton Orlando in Orlando, Fla.

May 6-8: Climate Prediction Applications Science Workshop (CPASW)

This annual workshop brings together a diverse group to share developments in research and applications of climate predictions for societal decision-making. Climate Information for Health, Energy and Transportation Interests is the theme.

May 11-16: 28th Annual Governor's Hurricane Conference

This conference will be held in Orlando and the theme is "Rethink Risk." Topics include the role of shelter transition teams, Florida's regional evacuation studies, urban search and rescue, social media, wind forecasting, private sector disaster response, and infamous Florida hurricanes.

May 28: 35th Anniversary Colloquium: Advances in Extratropical Cyclone Understanding and Prediction Since the 1979 Presidents' Day Storm

It will be held at National Oceanic and Atmospheric Administration's Center for Weather and Climate Prediction in College Park, Md.

Nov. 3–7: 27th Conference on Severe Local Storms

It will be at the Madison Concourse Hotel in Madison, Wis. The abstract submission deadline is July 1.

Nov. 19-21: 2014 FLASH Annual Conference – Resilience Revolution

The Federal Alliance for Safe Homes will hold this year's event in Orlando, Florida, discussing resilience through building codes and construction practices, policy, research, and communications.

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April 7-10: International Organized by the Envir Washington, D.C. area.

April 9-13, 2014: Nat' The conference will discuss tropical syst seasonal forecastin

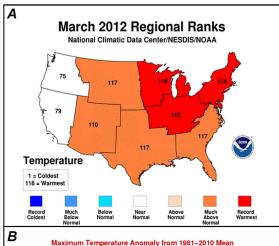
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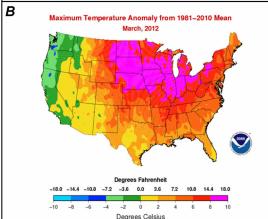
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Four New JOM Papers Added





Four papers have been published the NWA's Journal of Operational Meteorology (JOM) since our update in February, and more are being prepped for publication. Thank you to the JOM authors, reviewers and editors for continuing to make the JOM a success.

JOM 4:

The epic eastern North American warm episode of March 2012, by R. Grumm, J. M. Arnott, and J. Halblaub.

JOM 5:

Application of radiosonde ascent rate variations to detect atmospheric turbulence affecting aircraft, by W. H. Blackmore and R. D. Kardell.

JOM 6:

A GIS-based assessment of lake-effect snow warnings in Upstate New York, by K. D. Jaszka and D. A. Call.

JOM 7:

Total lightning observations and tools for the 20 May 2013 Moore, Oklahoma, tornadic supercell, by G. T. Stano, C. J. Schultz, L. D. Carey, D. R. MacGorman, and K. M Calhoun.

You can read the papers by logging on to the NWA Member Portal at member.nwas.org/ and clicking on JOM link under Additional Member Resources on the right. If you are interested in submitting a paper to JOM, go to www.nwas.org/jom/index.php for author information.

Figure at left is Figure 1 in JOM 4 showing the United States regional rankings of a) March 2012 temperatures and b) average maximum temperature anomalies for March 2012 (images from the National Climatic Data Center).

April 15: Applications due for NWA David Sankey Minority Scholarship

April 22: Earth Day www.earthday.org/

May 16: Applications due for the NWA Roderick A. Scofield and Broadcast Meteorology Scholarships

May 31: Abstract deadline for 2014 NWA Annual Meeting oral presentations

APORTANT DATES

June 1: Applications due for NWA Sol Hirsch Education Fund Grants

June 7: Abstract deadline for 2014 NWA Annual Meeting poster presentations NWA Newsletter (ISSN 0271-1044) Technical Editor: Winnie Crawford Editor and Publisher: Janice Bunting, Executive Director

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Submit newsletter items to nwanewsletter@nwas.org using the Instruction for Authors at http://www.nwas.org/newsletters/newsletter instructions.php.

Members receive the Newsletter on-line and access to an on-line 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.