

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

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Newsletter APRIL

2014

Satellite Loop Innovator Walter Bohan

Summary of a Chicago Tribune article ~ by Graydon Megan

Walter Bohan, NWA charter member, died of natural causes on April 8 at the age of 91. He was also a fellow of the American Meteorological Society.

He was drafted into the Navy in 1944 where he assisted instructors at the Naval Academy prepare weather map analysis materials for classroom use. After the war he attended the University of Chicago, where he received bachelor's and master's degrees in science while working as a researcher and analyst on models and simulations of the atmosphere.

In 1962, he and two associates formed a corporation to develop and submit proposals to the government for studies in meteorological satellite imagery interpretation for weather analysis and forecasting. Two years later he formed the Walter A. Bohan Co. to continue that work.

Walter became a leader in satellite meteorology in the 1960s and 70s as he taught others in the field how to interpret and use the large quantities of data being generated by weather satellites just coming into widespread use. He was also instrumental in developing satellite image loops that allowed him to look at severe storms in great detail as they developed and to look at the global extent of larger scale weather patterns. Some movies he created are mentioned in the National Weather Digest article "Weather Movies" by Edward Brotak in 1982.

His work in developing these loops made them useful to operational forecasters then and now.

Remembering QPF Pioneer Vern Bohl

Wes Junker

Vern Bohl, a charter member of the NWA and retired forecaster with National Meteorological Center (NMC), passed away April 11. I had the pleasure of working with and learning from Vern early in my career. It is difficult to portray how important

Vern's role was in the development of quantitative precipitation forecasting and how easy it was to work with him in just a few paragraphs. He was a true professional and was a terrific role model for younger forecasters. I certainly learned a lot from him.

Vern was born in 1928 in Richland Township, Gasconade County, Mo. After graduating from high school, he entered the Army on September 30, 1946, and served in Japan as part of the occupational force. He



was awarded the Army of Occupation Medal Japan and the World War II Victory Medal, and was honorably discharged January 12, 1948. He then went on to pursue his love of meteorology and realize his dream of attending college, the first in his family to do so.

Vern graduated from Saint Louis University with a B.S. in meteorology in 1952. He began his career with the Weather Corporation of America in St. Louis, Mo., where he worked for four years. He crossed over to the public sector joining the NWS and NMC in 1956. During major snowstorms Vern would sometimes jump from desk to desk making sure all the NMC forecast products were disseminated to users.

He and Jerry Larue were tasked with looking into the feasibility of using numerical models and current forecast techniques to predict quantitative precipitation in 1959. Based on their findings, a unit was formed to forecast precipitation amounts. The unit ended up expanding into a branch that was tasked with forecasting rain and snowfall amounts that could be used as a forecast tool by NWS forecasters across the country. The unit was the precursor of what now is NCEP's Weather Prediction Center. In 1980, Vern won the AMS Award for Outstanding Service by a Weather Forecaster "for a continuing record of superior quantitative precipitation forecasting

See VERN, p. 8

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Saving Lives and Livelihoods

Jeff Craven, NWA President

After living through the coldest winter in three decades in southern Wisconsin it is difficult to imagine that thunderstorms, flooding rains, and the peak of severe weather are just around the corner. However, as is typical, we have already seen several rounds of severe weather. All across the U.S., operational meteorologists are performing critical services before, during, and after severe convective weather events. In just a couple of months hurricane season will start, bringing its own brand of severe weather. Ahead of these severe weather seasons, we are helping promote a Weather-Ready Nation by giving valuable notice so that everyone can stay safe and protect themselves, their families, their coworkers, and their belongings. The NWA became a Weather-Ready Nation AmbassadorTM because our goal is "Connecting operational meteorologists in pursuit of excellence in weather forecasting, communication, and service."

How do we know we are doing a good job? On average, in the past 10 years (2003-2012), there were 640 weather-related deaths per year in the U.S. Of those, 271 were caused by thunderstorm-related hazards like lightning, tornadoes, floods, and damaging winds. So if there are less than 640 deaths in 2014, does that mean we were successful? Or, were we lucky because the storms missed populated areas, or we had a quieter than normal severe weather season? I believe it is hard to know either way using objective measures like this.

We do know that the population of the U.S. has nearly doubled in the past 60 years. During that same

time, weather-related deaths have not doubled. Lightning-related fatalities were routinely over 100 per year until 1974, and have not exceeded that

number since. They have dropped to a 30 year average of 52 and a 10 year average of 35. However, our goal should be a continued decrease in weather-related deaths until we eventually reach zero. That is a lofty goal, but certainly something we should strive for. The shock of having 1,016 hurricane deaths as recently as 2005 and 553 tornado fatalities in 2011 should be a reminder of how vulnerable we are



and how critical our service to the nation is. Many of us did not believe we could see numbers like this ever again on our watch.

Our goal, as the weather enterprise, should be to work together to do everything we can to avoid numbers like that in the future. This effort involves investments in technology, forecast precision, preparedness, and risk communication. I urge all of us in the NWA and in our professional capacities to do our part towards achieving this goal during this thunderstorm and hurricane season.



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 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 GrantOpen until [uly 1



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

The Broadcast Meteorology scholarship is 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

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

Three Rivers NWA Chapter Quarterly News

January-March 2014

California University of Pennsylvania (Cal U)
<u>sai.calu.edu/weather</u>
John Troutman, Secretary

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

CONFERENCES:

On February 1–2, nine chapter members represented the Southwest Pennsylvania Chapter of the AMS at the 13th Annual AMS Student Conference in Atlanta, Ga. Members enjoyed numerous sessions, such as Extreme Weather Events and Conversations with Professionals, and a panel discussion titled Understanding Sectors within Meteorology. They also attended the Career Fair and Graduate School Reception.

From February 3–6, these same nine chapter members attended the 94th AMS Annual Meeting. Throughout the week, members attended student and professional poster sessions, various conferences and symposia, and visited the AMS exhibits. Five of our chapter's officers attended the Officer's Breakfast on February 4 and were recognized with the Chapter Honor Roll.

Chapter members and other volunteers at StormFest.

Throughout the week, our members made valuable contacts and established relationships with professionals and students within their specific field of interest.

STORMFEST:

Cal U's Seventh Annual StormFest was held on February 21 and 22. StormFest is an educational outreach event put on by the Three Rivers NWA

Chapter geared toward teaching children and their families about meteorology and earth sciences through hands-on activities. The event took place at the Carnegie Science Center in Pittsburgh, Pa. On Friday, there were 14 activities staffed by around 30 volunteers from the chapter. Many children came to visit on school field trips. This year, StormFest took part in Carnegie Science Center's 21+ Night where adults were able to learn and enjoy the activities. The main event was on Saturday, February 22, featuring 34 activities with over 60 volunteers. The volunteers were students from our chapter, Ohio University, the Cal U Geology club, the Cal U GIS club, the Cal U Parks and Recreation club, and Alpha Sigma Tau sorority. Saturday's event also featured Meteorologist Nick Walker from The Weather Channel who performed two "Weather Dude" shows. Nick signed autographs and engaged with the public. The Pittsburgh NWS volunteered on Saturday with an activity geared toward weather safety. Dennis Bowman, a broadcast meteorologist from Pittsburgh's KDKA-TV, had a table set up with a home-made tornado machine. Attendees both days had the chance to complete a certain number of activities to earn a free StormFest t-shirt. There were over 5,100 attendees between Friday and Saturday. This was another successful year for the event.

EDUCATIONAL OUTREACH:

On January 16, chapter member Joshua Gebauer visited Elk County Catholic High School in St. Marys, Pa., for an education outreach event. He talked to an environmental science class about climate change and how a changing climate will affect the environment. At the end of his talk, the students were able to ask questions; a large number of the questions asked related to the recent frigid temperatures and the polar vortex.

On February 28, chapter members Jason Dohoda and Brittany Kusniar traveled to Lafayette Middle School to give a presentation titled "Natural Hazards" to their seventh-grade science classes. Topics covered included tsunamis, blizzards, hurricanes, and tornadoes. The students participated in activities to show the formation of tsunamis and rotation of tornadoes. Additionally, different video clips from both documentaries and Hollywood movies were used to show real-life examples of disasters.

COLLOQUIA SERIES:

Two speakers gave presentations in our colloquia series during March. Both were open to the university and the public. The first was Dr. Charles "Chuck" A. Doswell whose presentation was titled "Becoming an Atmospheric Professional." Dr. Doswell spoke about the importance of education and preparing oneself for a professional career in the atmospheric science field. He described the skill sets he believes are needed to become a successful professional within this career field. The second speaker was Dr. Karen Kosiba, an atmospheric scientist from the Center for Severe Weather Research (CSWR) in Boulder, Co. Her presentation, titled "Fine-Scale Studies of Tornadoes, Hurricanes, Lake-Effect Snow, and Other Phenomena with DOWs," described her research and work in numerous field projects studying atmospheric phenomena with Doppler on Wheels mobile radars.

INTERNSHIPS/RESEARCH:

We continued having summer internship presentations at our first two chapter meetings of the spring semester.

The first presentation was given by Matthew Hladio who was a weather intern last summer for KDKA-TV in Pittsburgh, Pa., working the morning shift two days a week. Matthew was responsible for helping create the forecast for the greater Pittsburgh area. He operated the station's radar, updated the show graphics, and was able to participate in two severe weather coverage events on June 13 and July 10. Matthew also practiced his broadcasting skills in front of the blue screen in the studio and made a video recording of a complete broadcast, which he can now include with his resume.

The second was by Matthew Riddle on his internship with WTAJ-TV in Altoona, Pa. working the afternoon and evening shift two days a week. He was responsible for helping create the five-day forecast for central Pennsylvania and updating the information and graphics for each broadcast. He also completed small research projects and created a climate database for Altoona.

NEW JOM PAPERS

Two papers have been published the NWA's Journal of Operational Meteorology (JOM) since our update in March, 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 8: A tool to predict the probability of summer severe weather in east-central Florida, by W. Bauman and W. Roeder.

JOM 9: Reflectivity vortex hole in a tornadic supercell, by C. Schultz.

You can read the papers by logging on to the <u>NWA Member Portal</u> and clicking on JOM link under Additional Member Resources on the right. <u>Click for information about submitting a paper to IOM.</u>

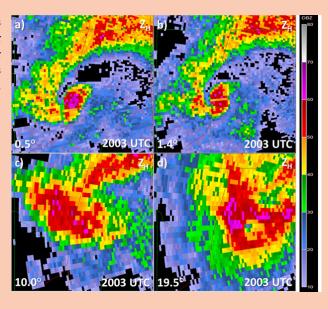


Figure 6 in JOM 9 showing images of reflectivity from the Norman, Okla., WSR-88D at 2003 UTC May 20, 2013, the Newcastle-Moore tornado, at (a) 0.5°, (b) 1.5°, (c) 10.0°, and (d) 19.5° where the vortex hole is evident. The spatial extent for all columns along the x axis is 16.5 km (8.9 n mi) and for the y axis is 14.3 km (7.7 n mi).

New NWA Members in March 2014

Regular/Military/Retired

Robert Myers
Joseph B. Adair
Andrew Latto
Brian E. Smith
Tera K. Clark
Jay M. Farlow
Kyle Gollegly
Gary Hall
David B. Spiegler
David J. Wolter
Robert Payne
Michael Berry
Ken Hall
Connie S. Ritter

<u>Student</u> Valeria Benson-Lira

Rachel Bobyak
Corey Fellabaum
Joseph Ghianni
Tracy Hinson
Kayla Jordan
Kenneth Lee
James Luehrs
Matthew C. Malphurs
Ryan Uthoff
Michael Yalch
Star Derry
Griffin W. Jones
Scott Martin
Jordan M. Overton
Kevin C. Shive

Spring Quarterly Announcement from COMET

Wendy Schreiber-Abshire COMET Sr. Project Manager/Meteorologist

Please read on for highlights about the most recent MetEd publications. New training materials this quarter cover a diverse set of topics, too diverse to list them all here. Read the lesson topics and titles then follow the links of most interest to you to find more information about each release. Currently, these materials are freely available to everyone, courtesy of our many sponsors. Enjoy!

In addition to the list below, we've also updated our very popular <u>Skew-T Log P lesson</u> to be easier to use and navigate.

New Publications (click titles to view):

Climate and Hydrology:

An Introduction to the Downscaled Climate and Hydrology Projections Website Climate Variability and Change Lectures, July 2013

Satellite Meteorology:

How Satellite Observations Impact NWP

Satellite Feature Identification: Conveyor Belts

Basics of Visible and Infrared Remote Sensing

Weather Observing, Aviation, Electromagnetic Propagation, and Oil Spill Detection:

Weather Observing Fundamentals

Writing TAFs for Ceilings and Visibility, 2nd Ed.

Introduction to Electromagnetic and Electro-Optic Propagation

Introduction to Observing Oil from Helicopters and Planes

Six New Spanish-Language Publications:

Dominio del diagrama oblicuo T- log p

Niebla tropical: breve estudio de la niebla que afecta a la aviación en Guyana

La radiación nocturna y la velocidad de enfriamiento de la baja atmósfera

Temas de meteorología dinámica: la fuerza del gradiente de presión

Una matriz de tormentas convectivas: relaciones de dependencia entre empuje hidrostático y cizalladura

Una matriz de sistemas convectivos de mesoescala (SCM)

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:

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





Rewarding Excellence

NWA Annual Awards provide an opportunity to recognize some of the amazing things being done by NWA members and the public. There are a variety of awards for individual and group specific achievements, outreach and education, applied science, leadership, public service, and aviation. Award winners will be announced and recognized at the 2014 Annual Awards Luncheon held Wednesday Oct. 22 in conjunction with the NWA 39th Annual Meeting in Salt Lake City, Utah.

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.

Go to the <u>NWA Annual Awards web page</u> for nomination forms and instructions!



(http://nwas.org/awards/index.php

2014 NWA sponsored Annual Meetings, Conferences and Special Events (click titles to view websites)

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. The deadline for abstract submissions for oral presentations is May 31, and the abstract deadline for poster presentations is June 7. See page 6 for details.

Other Meetings, Conferences and Special Events

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.

Tornado Super Outbreak 40th Anniversary

This year marks the 40th anniversary of the April 3-4, 1974, Super Outbreak. It was one of the deadliest U.S. tornado outbreaks with over 145 tornadoes occurring in 13 states over an 18-hour period. Over 300 people were killed and more than 5,000 injured. Tornadoes occurred from southern Mississippi to Illinois, Michigan, Ohio, and Virginia.

This memorial wreath was placed at the April 3, 1974, memorial at the Meade County, Ky., Courthouse earlier this month to commemorate the event.

Midland Radio of Kansas City donated the wreath.

Super Outbreak links:

April 3-4, 1974, Super Outbreak from NWS Memphis, Tenn.

The Super Outbreak of April 3-4, 1974 from NWA Wilmington, Ohio

40th Anniversary of 1974 Tornado Super Outbreak Facebook page



Photo credit: Ron Dodson, Director Meade County Emergency Management Agency

VERN from p. 1

that sets a standard among his peers, and his timely forecast of the very heavy precipitation to be expected from the major New England snowstorms in February 1978." Vern also published an article in the National Weather Digest on using climatological thickness to forecast the location of the axis of 1 inch or greater precipitation

After a distinguished career, Vern retired from the NWS in 1986. Vern was charter member of the NWA joining in 1977 and was a member through 2013 when his health started to fail. He will be missed by all who knew him, but his legacy will live on.

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

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

June 7: Abstract deadline for 2014 NWA Annual Meeting poster presentations

August 5: Nomination deadline for 2014 NWA Annual Awards 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.

MIPORTANT DATIES