

NEWSLETTER

National Weather Association

NO. 07 – 10 OCTOBER 2007

New NWA Web Page Design Launched October 1st

The NWA is pleased to announce the completion of our updated main page on the NWA Web site. The goals of the redesign were to provide a fresh look to our home page and easy-to-use navigation for the site. We have tried to keep the download size small while still maintaining the ability to deliver the quality content that has been featured on our site in the past.

To improve the navigation, a vertical menu has been added to the left side of the page in addition to a horizontal menu at the top. The Council wanted the NWA Broadcasters Seal information to be prominently displayed on the page with a link to detailed information on this key NWA program. You will now see the NWA Broadcasters Seal in the top banner, in addition to the "Broadcasters Seal" area that contains a link to a Web page providing



seal information. "Headlines" will provide a quick summary and links to the "Hot Topics" that the NWA has featured in the past. The "Jobs" page has consistently been the most viewed page on the NWA Web site so it is prominently displayed on the new page. Finally, prospective individual and corporate members can quickly access pages to join the association or learn more

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Barry Lee Myers Named CEO of AccuWeather

Founder and President Dr. Joel N. Myers' Role Expands

On September 14, AccuWeather, Inc., announced that Dr. Barry Lee Myers had been named Chief Executive Officer. As CEO, Barry Lee Myers assumes direct responsibility for the company's rapidly growing New Media initiatives in the wired and mobile web, as well as for the company's 24x7 Local AccuWeather Channel, which appears on digital cable in major markets nationwide. The company's CFO and Office of Legal Services also report to him. Barry Myers has already

communicated an agenda for accelerating the company's strong growth path.

In announcing the promotion, Dr. Joel N. Myers, AccuWeather Founder, Chairman and President, said, "Barry has played a key role in our company's growth and also in our New Media initiatives since their inception. His promotion will ensure that these key areas continue to benefit from his insight and leadership and that the entire company has on-going strong leadership in this era of exciting new

Continued page 6

 **CHECK OUT OUR
NEW ONLINE
LOOK!**

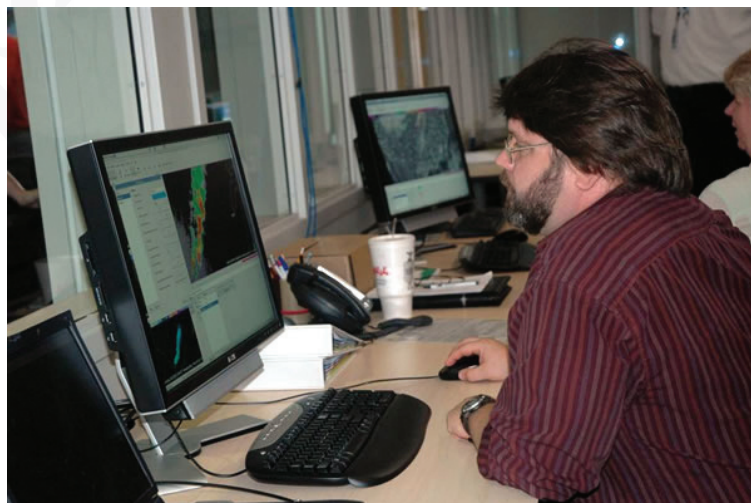
WWW.NWAS.ORG

Second NWS Severe Weather Warning Technology Workshop Summary

On July 10 - 12, 2007, the National Severe Storms Laboratory, the National Weather Service (NWS) Meteorological Development Laboratory, and the NWS Warning Decision Training Branch sponsored the Second Workshop of Severe Weather Technology for NWS Warning Decision Making at the new National Weather Center in Norman, OK. The workshop gathered NWS field meteorologists, researchers, technology development specialists, training scientists, and National Oceanic and Atmospheric Administration (NOAA) management to discuss warning decision making technologies for severe weather (wind, hail, tornado, flash floods, and lightning).

Our primary objectives were 1) to identify potential pathways to evolve severe weather warning decision making and technologies, and 2) to provide suggestions for the evolution of the Experimental Warning Program (EWP) of the Hazardous Weather Testbed (see photo). Participants reviewed the “state of the science and technology” of NWS severe weather warning assistance tools (e.g., AWIPS, WES, SCAN, ORPG), and gained operational feedback from the field meteorologists (the “user group”).

Breakout sessions and discussions were held to identify gaps in the present methodologies and technologies, to discuss the near-term and long-term future trends in research and development (R&D), and for field forecasters and R&D scientists to help pave the direction for new technological advances. The workshop established the current state of forecaster needs for improvement in warning decision making and evaluated new technologies and operational concepts in the context of these needs. Results of the workshop will illustrate the state of current warning decision making in the NWS and provide insight into some of the potential directions for future NWS products and



David Sharp (NWS WFO Melbourne, FL) participating in the Hazardous Weather Testbed's Experimental Warning Program (HWT/EWP) during the spring 2007.

services. The ultimate goal of this and future workshops is to develop an open, innovative, and regularly meeting group that aggressively evaluates new technologies and ideas to improve all facets of NWS warning decision making and significant weather-impacted event operations. One intended benefit of the workshops is to help requirements groups with understanding the latest technologies that can be used in addressing strategic planning for the NWS and NOAA.

— Greg Stumpf, CIMMS/NWS/MDL
Michael Magsig, NWS/WDTB
Travis Smith, CIMMS/NSSL
David Andra, NWS WFO Norman, OK

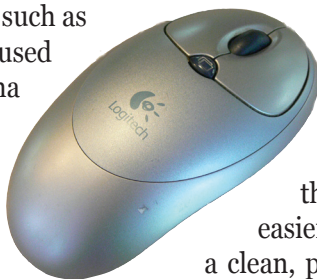
For more information about this workshop:
www.weather.gov/mdl/dab/SevereWorkshop2/SevereWorkshop2.htm

Web site continued from front

about it through the top item on the vertical menu, or through the link in the Membership area of the page.

In trying to add a little more color to the page, we have added a main image to highlight significant NWA events such as the Annual Meeting. In addition, the image can be used to display photos of interesting weather phenomena submitted by members. Get your cameras ready!

The image in the “Featured Area” section will also be updated to reflect the current topic of the Featured Area, giving us a way to highlight work being done by a committee, spotlight an aspect of the NWA or discuss a special weather topic.



The NWA leadership (President, Council, Executive Director, etc.) can communicate the latest news or information through the “Council’s Corner.” This section will initially feature the monthly President’s Message from the newsletter. However, the content in this area can expand or evolve to more interactive content such as a blog.

You will begin to see this basic design used on other NWA pages. Using a consistent look and feel for the pages throughout the site will provide our visitors an easier way to search our site. It will also give our Web site a clean, professional appearance. While some pages have been updated, others will join with our new look in the near future.

— Tim Oram, IT Committee Chair

Storm-Based Warnings

National Oceanic and Atmospheric Administration's National Weather Service began issuing more geographically specific warnings for tornadoes, severe thunderstorms, floods, and marine hazards on October 1, 2007. The new "storm-based warnings" will allow forecasters to pinpoint the specific area where the threats are highest, reducing the area warned by as much as 70 percent when compared to today's county-by-county system.

Storm-based warnings are displayed graphically and are extremely adaptable to cell phones, PDAs and the Web. The Emergency Alert System is geared toward counties and NOAA Weather Radio All Hazards will still alarm if there is a warning anywhere in the county. However, text and audio messages will provide more specific information about where in the county the storm is, and the direction the storm is moving. Storm-based warnings will reference landmarks such as highways, shopping centers, and parks, and will use directional delimiters to indicate county location.

– NOAA Public Affairs

NWA Local Chapter News

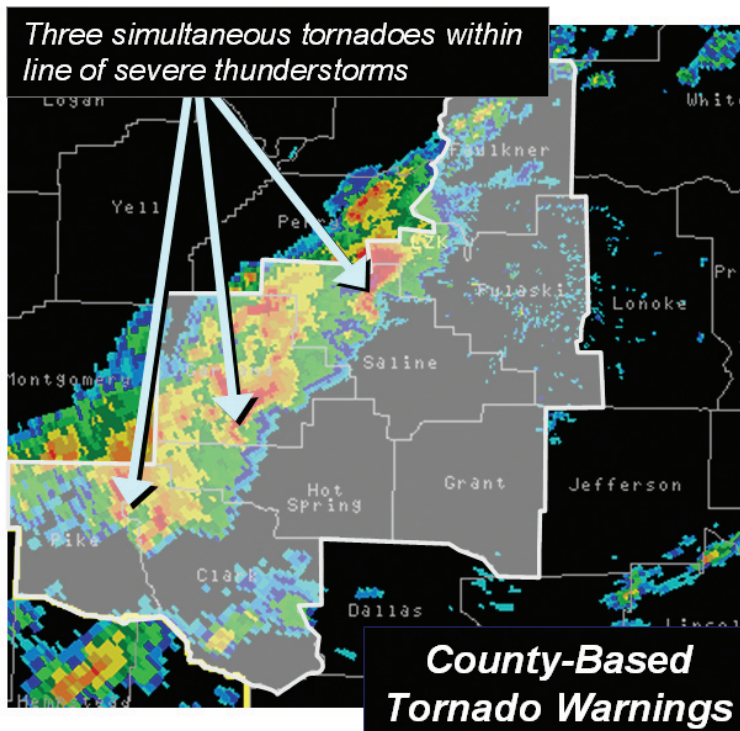
In August, the University of Missouri Meteorology Club held its first meeting. Among the topics discussed were the benefits of joining the National Weather Association and an introduction of the new officers.

Colleen Heck – President
Cody Fritz – Vice President
Kait Parker – Treasurer
Madison Burnett – Secretary
Hallie Shulman – Activities
Eric Holt – SNR Rep
Ben Herzog – CAFNR Rep

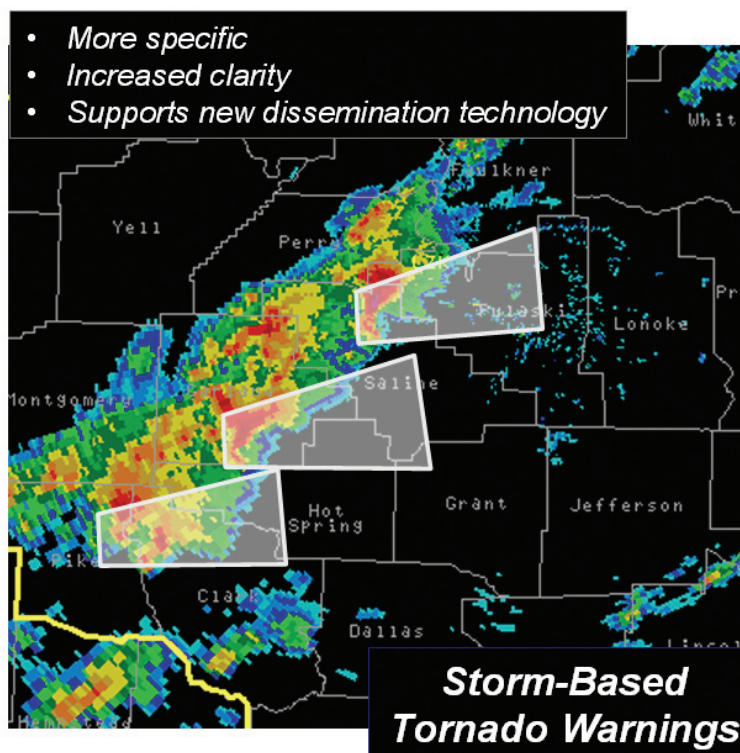
Fundraising opportunities such as working football game concession stands, highway clean up and helping with the KMBZ weather calendar were talked about.

Also, the Storm Chase Team, Chi Epsilon Pi and the new Campus Weather Service (CWS) introduced themselves and their missions. The CWS explained its goals of making Mizzou a StormReady campus, creating a calendar and almanac, and getting the Web site up and running with taped broadcast forecasts.

– Madison Burnett, Secretary



8 counties under warning
Almost 1 million people warned

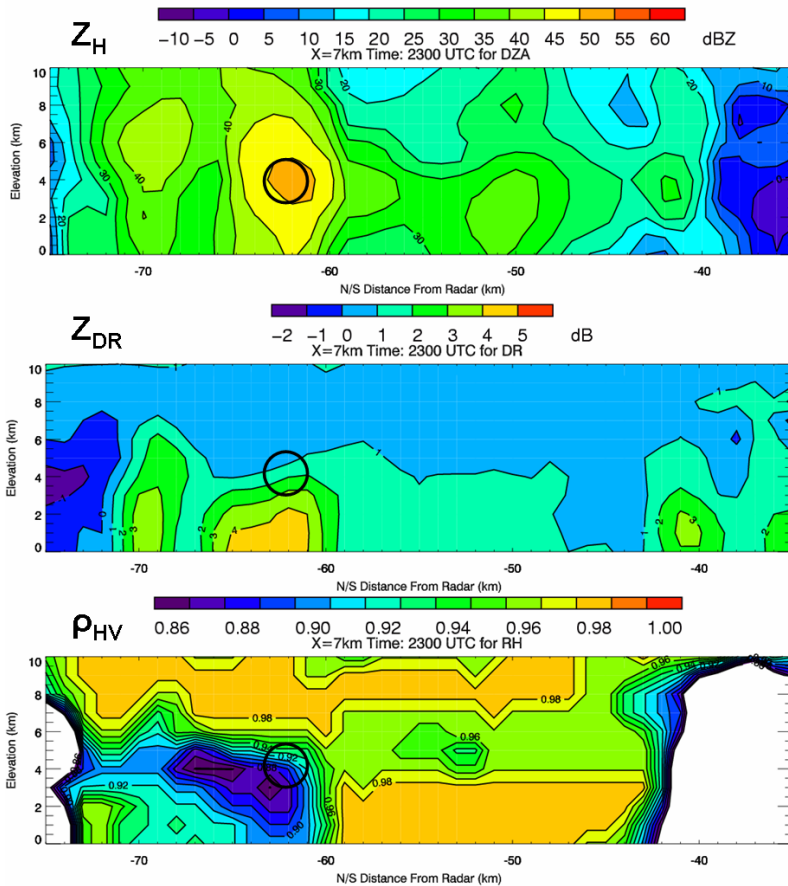


70% less area covered
~600,000 fewer people warned

Graphic courtesy of NOAA

Dual-Polarimetric Radar

Dual-polarimetric radars have been available to the meteorological research community in a number of forms for decades. During the last few years, these radars have also made a limited appearance in the broadcast sector. In the near future, the National Weather Service will upgrade the NEXRAD national radar network to include dual-polarimetric (dual-pol) capabilities. The difference between the current horizontally polarized NEXRAD radars and dual-pol radars is the addition of a vertically polarized signal in dual-pol systems. With both the vertical and horizontal pulses, these radars are better able to determine hydrometeors' type, shape and size than the current NEXRAD system. Enhanced characterization of hydrometeors' shape and size allows dual-pol radars to compute more accurate rainfall rates and to discriminate more reliably the presence of liquid and/or frozen precipitation.



Example of Z_H (top), Z_{DR} (middle), and ρ_{HV} (bottom) cross sections through a hail producing storm using data from ARMOR. On 17 August 2007 at 2301 UTC, golf ball size hail (estimated 1.75in.) was reported 1 mile SW of Hanceville, AL. The x-axis represents the distance south of the ARMOR while the X distance in the title of the image represents the distance east of ARMOR. The 50+ dBZ core between 3 and 5 km at about -60 to -63 km (area circled) south of ARMOR coincides with lower ZDR values (below 2 dB) as well as low ρ_{HV} values (below 0.91). This suggests that there is possible hail between 3 and 5 km and a mixture of melting hail, hail, and rain near the surface where ZDR values are large (~4 dB) and ρ_{HV} values are still below 0.91. This is confirmed when hail was reported at the surface near the time of this volume scan.

The enhanced quantitative precipitation estimation capabilities of dual-pol radar are accomplished through combined use of standard dual-pol variables including:

Z_H —Horizontal Reflectivity. This is the same as the reflectivity in the current NEXRAD system.

Z_{DR} —Differential Reflectivity. The ratio of the backscattered horizontal to vertical power returns. Z_{DR} values typically range from around 0 to 5+ dB. Z_{DR} values close to zero represent spherical hydrometeors such as hail while larger values are likely large, more oblate rain drops.

ρ_{HV} —Correlation Coefficient.

The correlation between the reflected horizontal and vertical power returns. ρ_{HV} is measured on a scale from 0 to 1 with values above 0.96-0.98 indicating hydrometeors with consistent size, shape, orientation and/or phase and values below 0.96 indicating a mixture of these within the sampled volume. Very large hail and non-precipitation echoes often indicate values of ρ_{HV} below 0.8. Large depressions in the correlation coefficient are also a good indicator for mixtures of liquid and frozen hydrometeors (e.g., snow and rain) in winter situations and in radar bright-bands.

Φ_{DP} —Differential Phase. This is the measured difference in phase shift between horizontal and vertical polarized pulses. When the range-integrated horizontal phase shift is larger than vertical then Φ_{DP} is positive, similar to Z_{DR} . Φ_{DP} is largely immune to attenuation effects of hail and other more spherical scatterers since these targets produce approximately the same phase shift in both the horizontal and vertical.

K_{DP} —Specific Differential Phase. K_{DP} is the range derivative of Φ_{DP} , and therefore is not directly measured by the radar. Increases in K_{DP} (high values are > 2 °/km), imply the presence of significant amounts of liquid water and/or highly oriented (i.e., oblate) shapes. K_{DP} is a very good estimator for rainfall because it is also immune to attenuation.

The most important applications of dual-pol radar for operations include improved accuracy of precipitation estimation and the generation of hydrometeor identification (HID) products. Both of these applications are facilitated by



University of Alabama - Huntsville/WHNT Advanced Radar for Meteorological and Operational Research (ARMOR) Dual-Polarimetric Radar. Photo courtesy of UAH.

R-I-P TWEB Route Forecasts

combining the information present in individual dual-polarimetric variables. As an example, consider the radar range-height displays of reflectivity (etc.) depicted to the left. Areas that have high Z_H values but low Z_{DR} values in the 50+ dBZ core between 3 and 5 km are suspected to be regions of hail. The hail subsequently begins to melt below the 3 km level and produces excessively large Z_{DR} in the core near the surface (where ρ_{HV} exhibited values of below 0.91 also indicated a mixture of large hail and rain). Other examples include regions of high K_{DP} and high Z_H values (not shown) which imply the presence of large amounts of liquid water (and large rain rates) in the analyzed volume.

Through the combined use of dual-pol variables, forecasters will realize an improved ability to discriminate areas of heavy rainfall rate and thus the potential for flash flooding. They will also be better able to detect echo regions with hail and to pinpoint regions of mixed-phase precipitation within radar echoes.

— Remote Sensing Committee

FOR MORE ON
DUAL-POLS

University of Alabama – Huntsville:

www.nsstc.uah.edu/ARMOR/

NOAA National Severe Storms Lab:

www.nssl.noaa.gov/research/radar/dualpol.php

NOAA Warning Decision Training Branch:

www.wdtb.noaa.gov/modules/dualpol/index.htm

September 30 marked the end of an era in aviation forecast products. The Federal Aviation Administration (FAA) has determined that TWEB (Transcribe Weather Broadcast) Route Forecasts are no longer necessary, and the National Oceanic and Atmospheric Administration/National Weather Service, except in Alaska, will discontinue the product.

TWEB route forecasts were developed in the 1960s as scripts for the FAA's Transcribed Weather Broadcasts and Pilots Automatic Telephone Weather Answering Service (PATWAS). TWEBs were broadcast over low-frequency radio beacons (NDB) and very high frequency omnidirectional radio ranges (VOR). In the '80s and '90s, the FAA's Automated Flight Service Stations often used TWEBs for the synopsis and enroute forecast portion of the Telephone Information Briefing Service (TIBS). These forecasts were also used during Flight Service Station (FSS) weather briefings prior to the automation of the FSS. For a short time during the 1980s, TWEBs were available via touch-tone phone. TWEBs were never provided by FAA sponsored Direct User Access Terminals (DUATs). With the expansion of the Internet, TWEBs were available on NWS Web sites.

TWEBs provided more precise timing and detail than was normally available in the Area Forecast (FA). They generally contained additional specific information on visibility, surface winds, and local conditions. Because of this, many FSS briefers used TWEB forecasts almost exclusively—especially in the western states.

— Aviation Meteorology Committee

Storm Flags Return to Selected Coast Guard Stations

According to a U.S. Coast Guard press release, the U.S. Coast Guard re-established a Coastal Warning Display (Storm Flag) program at selected Coast Guard boat stations throughout the country on June 1, 2007, to warn the public of approaching storm conditions. Selected boat stations will hoist display flags to warn of small craft advisories, gale warnings, storm warnings and hurricane warnings.

The flags do not replace information or warnings obtained from government or commercial forecasters; their goal is to provide another alerting system for coastal communities. Officials still encourage people to tune to their local weather source to receive vital information in threatening weather situations.

Coast Guard stations participated in the National Weather Service's official Coastal Warning Display program for over 100 years along with yacht clubs and marinas until it was discontinued in 1989.

To learn more about this program visit
www.piersystem.com/go/doc/786/159255/
or www.weather.gov/om/marine/cwd.htm.



Executive Director Fielding Lewis Tyler of The Old Coast Guard Station at Virginia Beach, VA, prepares to hoist a storm warning flag. Photo by Bill Bunting.

AccuWeather continued from front

technological and business opportunities. At the same time, this change will allow me personally to focus more on the identification of entrepreneurial opportunities and the articulation of the strategic vision for AccuWeather's long-term future."

Joel Myers will continue to serve as Chairman of the Board and active President. The company's sales and marketing functions will continue to report to him, with assistance from the new CEO.

“Barry has played a key role in our company's growth and also in our New Media initiatives since their inception.”

— Joel N. Myers
Founder of AccuWeather, Inc.

"AccuWeather's 45 years of business growth stem in large measure from our continuous focus on meeting customer needs with solutions that deliver unmatched value. My personal involvement with strategic partners, key customers, and our customer-facing sales and marketing functions will help to ensure that our future strategies are equally well positioned for our customers and the marketplace," Joel Myers said.

Barry Myers has been an integral part and leading force of AccuWeather executive management since shortly after the company's founding and has most recently served as the company's Executive Vice President and General Counsel. He has been responsible for directing the strategic initiatives of the company and developing many of the company's acquisitions, major business relationships, and ground-breaking opportunities, including the Local AccuWeather Channel, now on the air in over thirty markets following its launch just over a year ago. Over the past two years he has been providing increased overall corporate leadership.

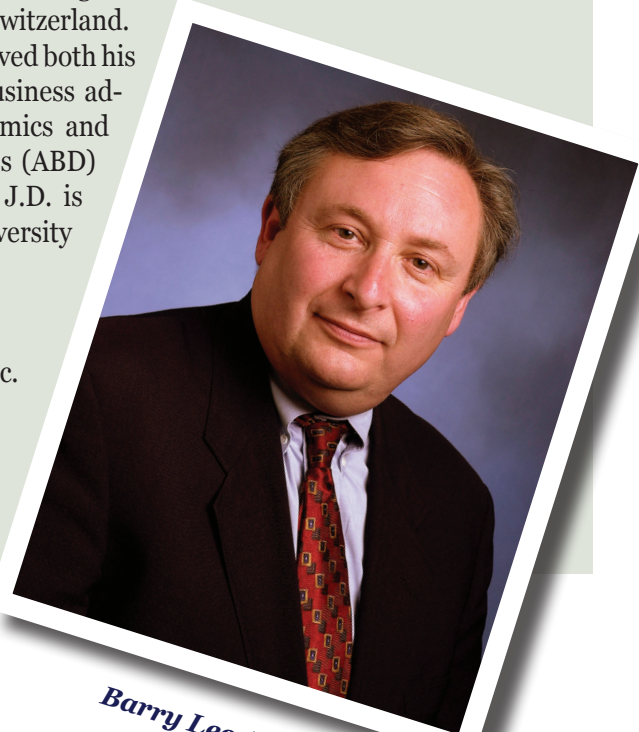
Prior to joining AccuWeather in a full-time role, Barry Myers served for 18 years on the Graduate School faculty at Penn State as a member of its nationally recognized Smeal College of Business. Since 1990, he has been a member of the Board of Directors of the Commercial Weather Services Association, the weather industry's trade association, serving as the industry's chief federal-relations officer. Barry Lee Myers is recognized as an expert in weather information exchange and public/private relationships in the weather field. He also has served as advisor to the Director of the U.S. National Weather Service at the U.N.'s World Meteorological Organization Meetings in Geneva, Switzerland.

Barry Myers received both his bachelor of science in business administration and economics and his master's in business (ABD) from Penn State. His J.D. is from the Boston University School of Law.

— Provided by
AccuWeather, Inc.



Joel N. Myers



Barry Lee Myers

Professional Development Opportunities

- **Northeast Regional Operational Workshop (NROW): November 7 - 8**

The ninth NROW will be at the Center for Environmental Science and Technology Management Auditorium, 251 Fuller Road, Albany, NY, on the University at Albany Campus. It is co-sponsored by the National Weather Service Office at Albany, NY, and the Department of Earth and Atmospheric Sciences, University at Albany. The abstract submission and registration deadlines have passed. Details are online at www.erh.noaa.gov/aly/NROW/nrow9.htm.

- **American Meteorological Society (AMS) Annual Meeting: January 20-24, 2008**

The 88th AMS Annual Meeting will be at the Ernest N. Morial Convention Center in New Orleans, LA. The NWA will co-sponsor a number of the conferences within the Annual Meeting including *the First Industrial Meteorology* and *Certified Consulting Meteorologist Colloquium*. Details are at www.ametsoc.org/meet/annual/index.html.

- **Geostationary Operational Environmental Satellite (GOES) Users' Conference: January 23 - 24, 2008**

The Fifth GOES Users' Conference is scheduled as part of the 88th Annual AMS Meeting in New Orleans, LA. The conference is co-organized by the NOAA and the AMS, with support from the National Weather Association. Objectives are to: seek ways/define methodologies to ensure user readiness; continue to improve communication between NOAA and the GOES user communities; inform users on the status of the GOES-R constellation, instruments and operations; and promote understanding for the various applications of data and products from the GOES-R series. It will include speaker presentations, poster sessions and an opportunity for user feedback.

- **National Severe Weather Workshop: March 6-8, 2008**

The 2008 Workshop will be held in Norman, OK, and the theme is "From Readiness to Recovery." It will include presentations and "The Scenario," which is a workshop where participants to step out of their normal role and take part in a simulated emergency. Watch the Web site www.norman.noaa.gov/nsw2008 for more information, or send an email to Greg Carbin at gregory.carbin@noaa.gov or Linda Crank at Linda.crank@noaa.gov.

- **National Storm Conference: March 8, 2008**

This year's conference, a collaboration between Texas Severe Storms Association (TESSA) and the NOAA/National Weather Service in Fort Worth, Texas, will be at the Colleyville Center in Colleyville, Texas. Also sponsoring is the North Texas Chapter of the AMS/NWA. Presentation topics include severe weather safety, storm spotter training and in-depth discussions on supercell and tornado meteorology. The third annual Super Storm Spotter Session – presented by Fort Worth NWS Warning Coordination Meteorologist Gary Woodall – will provide the highest level of training available to storm spotters anywhere in the country. Details available at www.tessa.org.

- **Northeastern Storm Conference: March 14 - 16, 2008**

The 33rd Annual Northeastern Storm Conference will be in Springfield, MA. It is sponsored by the Lyndon State College Student Chapter of the AMS and NWA. Monitor the following Web site for more information: apollo.lsc.vsc.edu/ams/index.html.

- **Southeast Severe Storms Symposium: April 4-5, 2008**

The Seventh Annual Southeast Severe Storms Symposium will be held at Mississippi State University. It is sponsored by the East Mississippi Chapter of the NWA/AMS. The call for papers has been announced and abstracts will be accepted through March 1, 2008. Go to www.msstate.edu/org/nwa or call (662)-325-3915 for more information.

- **NWA Annual Meeting: October 11 - 16, 2008**

The 33rd NWA Annual Meeting will be at the Galt House Hotel and Suites (www.galthouse.com) on the waterfront in Louisville, KY. Details will be posted at www.nwas.org as plans develop.



Downtown Fort Worth

In Memoriam

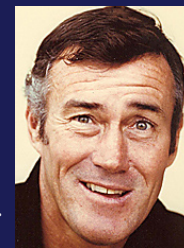
Lt Col USAF (Ret) Henry W. “Hank” Brandli, Satellite Meteorologist and charter member of the National Weather Association passed away Wednesday September 26, in Melbourne, FL, of a heart attack no doubt associated with a long time battle with Multiple Sclerosis. He retired from the USAF as a Lieutenant Colonel in 1976 (due to Multiple Sclerosis). Since his retirement, he had been a consultant, instructor, and writer for a number of organizations including Harris Corporation, ERT, Swedish Air Force, TAS Lockheed and has written over 400 technical and free lance articles (too many to mention), including the USAF’s first book on “Satellite Meteorology”.

Hank received a Bachelor’s degree cum laude in Mechanical Engineering from Tufts University and two Master’s degrees from MIT in Meteorology and Aeronautics/Astronautics. He was the first chairman of the Satellite Meteorology Committee of the NWA and held that position for nearly 20 years. He also served as NWA

councilor (1988-89), and received the only NWA Special Appreciation Award ever presented in 1996.

Hank was the local “Weatherman”. During Hurricane season the phone would ring off the hook, even surfers knew to “Ask Hank”. He had a great sense of humor and was always the life of the party. He educated everyone through satellite images. Hank loved golf and all sports and was an accomplished basketball player. He was captain of the team at Boston Latin High School. He will be sorely missed!

Hank is survived by wife Eleanor, and previous wife Bernadette, brother Paul and sister Donna. Children include: Elizabeth, Matthew and Pamela, Brian and Catherine and six grandchildren. He was preceded in death by oldest son Mark.



Dates 2 Remember

Nov. 4: Daylight Saving Time ends

Nov. 7 – 8: Ninth Northeast Regional Operational Workshop, Albany NY

Jan. 20 – 24: 88th American Meteorological Society Annual Meeting, New Orleans, LA

Jan. 23 – 24: Fifth GOES Users’ Conference, New Orleans, LA

For more Professional Development Opportunities, see page 7 or go online and visit:
www.nwas.org/meetings/meetings.html.

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Submit newsletter items directly to the NWA office or to nwanewsletter@nwas.org. Material received by the 25th will be considered for the next month’s issue.

Members receive the Newsletter and *National Weather Digest* as part of their regular, student or corporate membership privileges. Newsletter subscriptions are available for \$18 per year plus extra shipping costs outside U.S. Single copies are \$1.50. Please contact the NWA office with address changes.

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