NEWSLETTER

National Weather Association

No. 07 – 12 December 2007

President's December '07 Message

Much to my amazement, the year 2007 has flown by, and I am now writing my last Newsletter message as President of the National Weather Association. It has been a great year with many accomplishments as an association: from our new Web site, to the new Newsletter, to the outstanding 32nd Annual Meeting in Reno, we have had many successes that have reaffirmed our position as the preeminent association for operational meteorology.

Serving as president of our association for the last year has emphasized to me the importance of the volunteer in our organization. None of the great strides that we have made in the last year would have happened without the diligent work of people who have made the commitment to provide their skills and time to this association. In nearly all cases, there is no compensation for these individuals' work other than the knowledge that they are contributing to improving the larger operational meteorology community through their efforts. While I will certainly not be able to thank everyone who has contributed

Continued page 5

Kirk Lombardy and President Alan Gerard waiting for their tee time at the Reno Golf Outing during the Annual Meeting.

Inside This Edition

Eight New NWA Weathercaster Seals of Approval Awarded

Eight members were awarded the NWA Weathercaster Seal of Approval from June to November. The names of those awarded the Seal follow. *Congratulations to each of you!*

The Seal certification number format (yymm###) includes the last two digits of the approval year and two digits for the approval month followed by a successive number (numbers began with 101). To view the entire list NWA Weathercaster Sealholders, or to learn more about applying for the NWA Weathercasters Seal of Approval, go to www.nwas.org/seal-holders.html.

0706944 — Brett Cummins, KARK 4, Little Rock, AK

0706945 — Benjamin A. Peine, WAGT-TV, Augusta, GA

0707946 — Brian S. Goode, WCIV-TV, Charleston, SC

0707947 — Adam Stiles, KION-TV, Monterey, CA

0707948 — Brooks A. Garner, WIS-TV, Columbia, SC

0710949 — Justin Fujioka, KITV 4 News, Honolulu, HI

0711950 — Michelle Muscatello, WPRI/WNAC TV, Providence, RI

0712951 — Julie Wunder, WLOS-TV, Asheville, NC

This laughing bird was one of many feathered friends that taunted golfers as they hit tee shots on holes six and seven at the D'Andrea Golf Course in Reno.

Visual Flood Hazard Graphics

The National Weather Service (NWS) is enhancing the communication of flood risk and impacts through the use of Advanced Hydrologic Prediction Service (AHPS) flood inundation maps. Developed in partnership with other government agencies, these flood inundation maps provide information on the spatial extent and depth of flood waters in the vicinity of NWS river forecast locations. Combined with river observations and NWS river forecasts, inundation maps provide decision-makers additional information needed to better mitigate the impacts of flooding and build more resilient communities.

Effective Monday October 22, 2007, NWS, in collaboration with the National Ocean Service's Coastal Services Center (CSC), implemented the first series of operational AHPS flood inundation map libraries.

Following the devastating floods caused by Hurricane Floyd (1999), the State of North Carolina worked with Federal Emergency Management Agency (FEMA) and assumed responsibility for the National Flood Insurance Program (NFIP) maps for all North Carolina communities. The North Carolina Floodplain Mapping Program (NCFMP) has been tasked to coordinate statewide flood hazard studies and prepare the most up-to-date "seamless" statewide Digital Flood Insurance Rate Maps (DFIRMS), using updated flood hazard data, new topographic data, and aerial imagery. This resource was invaluable to NWS efforts in creating these flood inundation map libraries. The U.S. Geological Survey (USGS) also provided valuable assistance and performed some of the preliminary mapping.

The existing partnership with CSC, FEMA, USGS and NCFMP has made it possible for the NWS to create flood inundation libraries for the following locations in North Carolina:

Williamston – On the Roanoke River
Tar River – On the Tar River
Louisburg – On the Tar River
Tarboro – On the Tar River
Enfield – On Fishing Creek
Greenville – On the Tar River
Clayton – On the Neuse River
Smithfield – On the Neuse River
Goldsboro – On the Neuse River
Kinston – On the Neuse River
Hookerton – On Contentnea Creek
Haw River – On the Haw River
Bynum – On the Haw River
Manchester – On the Lower Little River
Chinquapin – On the Northeast Cape Fear River
Burgaw – On the Northeast Cape Fear River

Related Resources

AHPS Web site:
www.weather.gov/ahps/

Links to flood inundation map libraries for the locations listed in the article:
www.weather.gov/ahps/inundation.php

User's guide for the flood inundation map web interface:
http://newweb.erh.noaa.gov/ahps2/inundation/inundation_mapping_user_guide.pdf

For more information, contact Victor Hom, NWS National Inundation Mapping Services Leader at (301) 713-0006 ext. 173 or via email at victor.hom@noaa.gov.

These inundation map libraries are accessible via the Internet. Users can display flood inundation maps for forecast river levels ranging from minor flooding through the largest observed flood on record. These flood inundation maps and associated geospatial data (e.g., shapefiles) are accessible through the AHPS Web site at www.weather.gov/ahps/. (See picture on facing page of the AHPS Flood Inundation Mapping Interface.)

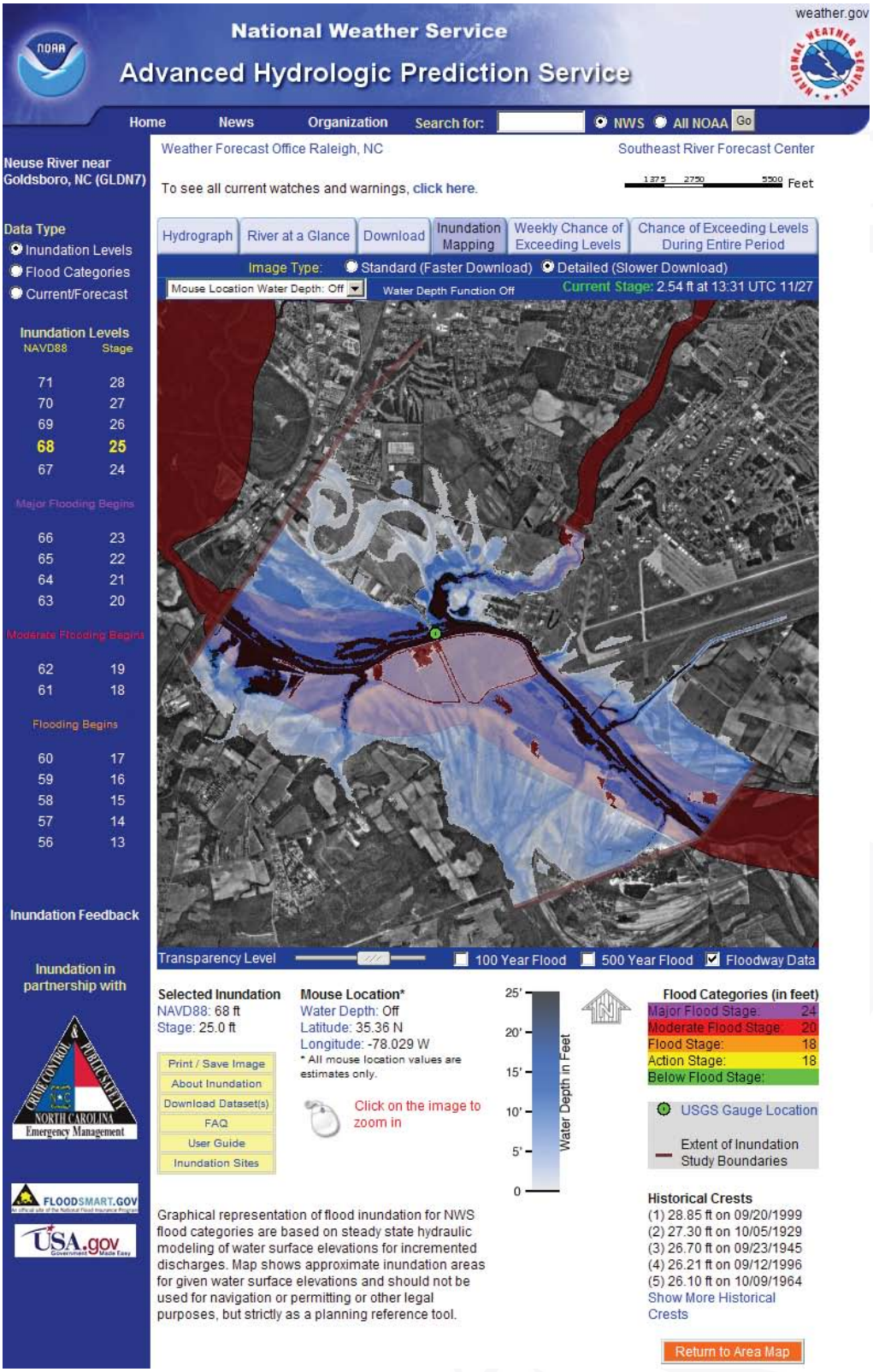
Hurricane Katrina (2005) exposed the vulnerability of other coastal states, besides North Carolina, to hurricanes and flooding. The NWS is in the process of creating additional flood inundation map libraries at 35 locations in four Gulf States to ensure that communities and property owners have accurate, up-to-date information about the flood risk. The majority of these new map libraries will be available before the next hurricane season.

NWS is vigorously building coalitions with emergency and floodplain managers to implement this new valuable, cost-effective hazard visualization and communication technique.

By Glenn Austin
Chief, NWS
Hydrologic Services
Division

North Carolina's Cape Fear River with calmer water.

Inundation maps provide decision-makers additional information needed to better mitigate the impacts of flooding and build more resilient communities.



Advanced Hydrologic Prediction Service's flood inundation mapping interface. Users can display flood inundation maps for forecast river levels ranging from minor flooding through the largest observed flood on record.

NWA Chapter News: University of Missouri

During the September meeting of the Mizzou Meteorology Club, KSNT morning meteorologist Tom Hagen came to speak about getting a broadcasting job. He addressed what classes he gained the most from, what internships really helped him and what a day in the life of morning meteorologist is like. He explained how his forecasts work, what qualities are needed to work in the broadcast field and how to make an effective resume tape. He addressed the market sizes for a variety of stations and which ones are most attainable directly out of college. He then showed his first on-air broadcast and his most recent broadcast, while narrating the good and bad in each.

During the meeting, the Campus Weather Service also updated everyone on its various projects and encouraged the club to vote on its acceptance as a part of the club. Also, club members started working the Mizzou football game concession stands and participated in a highway clean-up in September.

During the October meeting, we unanimously voted to amend our by-laws to allot money for the Campus Weather Service and the Storm Chase Team upon their participation in club fundraising activities. Dr. Neil Fox gave a presentation on atmospheric science classes, undergraduate research, internships and scholarship opportunities.

Madison Burnett
Secretary

Routinely Available Snow and Ice Products

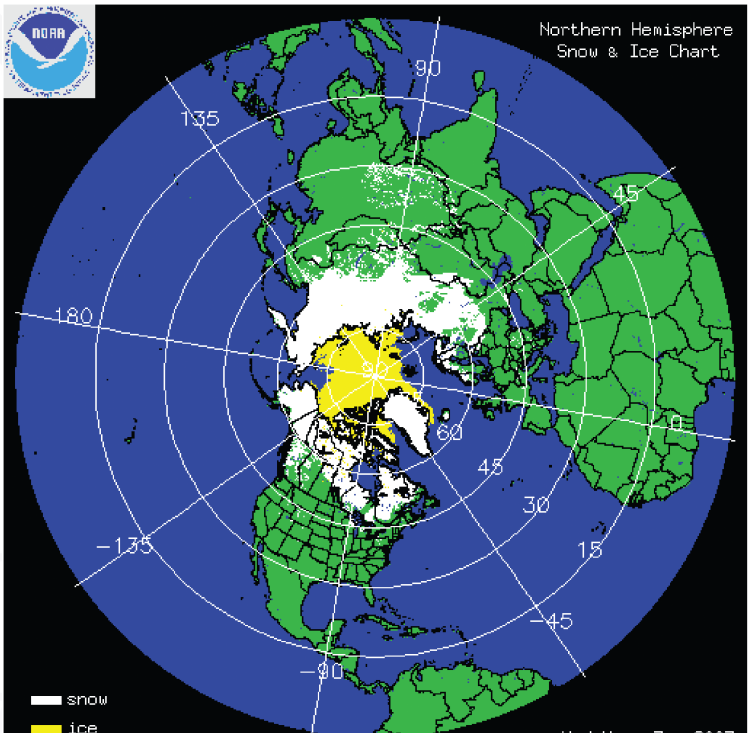
Snow and sea/lake ice information are extremely important in a number of operational weather and climate applications. For example, accurate snow cover information ingested into Numerical Weather Prediction (NWP) models has been shown to improve the forecast track of storm systems affecting the United States. Also, proper charting of lake and ocean ice improves maritime commerce and transportation of goods. Over the western United States, the extent and water content of the snow pack is crucial for water resource management. Finally, long-term records of the global snow and ice pack contribute to our understanding of climatic trends, an extremely newsworthy item over the past few years. This article describes some of the more readily available snow and ice products that are generated by various agencies in the U.S.

The Satellite Analysis Branch (SAB) of the Satellite Services Division (SSD) of NOAA's Satellite and Information Service prepares a Daily Northern Hemisphere snow and ice chart. This chart, prepared by satellite analysts on a polar stereographic projection through an interactive processing system, provides information on the areal coverage of snow and ice. Visible imagery from NOAA's Polar-orbiting Operational Environmental Satellites (POES) and Geostationary Operational Environmental Satellites (GOES) are the primary data used for the analysis of this snow and ice cover product. Low resolution visible data from POES are used and whenever possible, are augmented by POES visible high resolution imagery and visible GOES, Geostationary Meteorological Satellite (GMS), and Meteosat data.

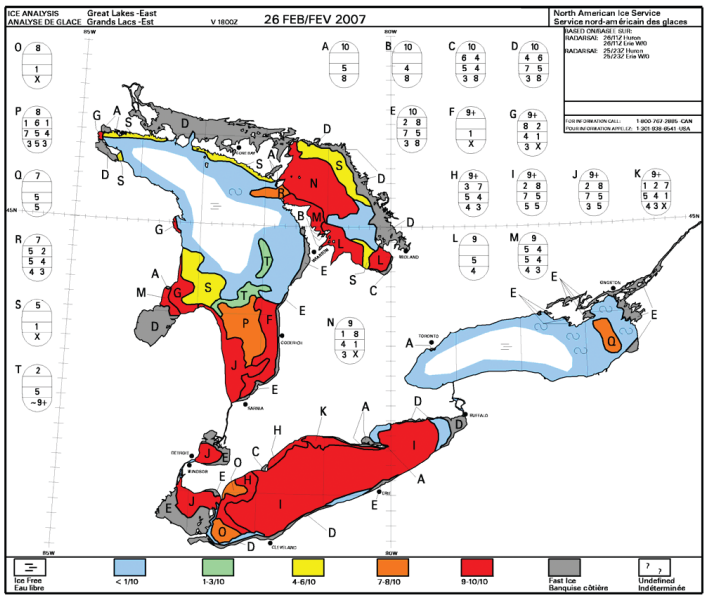
In addition, ground weather observations and various Defense Meteorological Satellite Program (DMSP) microwave products are incorporated into the daily snow and ice chart (online at www.ssd.noaa.gov/PS/SNOW/), and an example is provided in the top figure to the right. The SAB originally produced a weekly snow cover chart as early as the 1960s and as such, it's one of the longest standing satellite products. These data have proven to be useful in climatic studies.

The National Operational Hydrologic Remote Sensing Center (NOHRSC) of NOAA's National Weather Service provides comprehensive snow observations, analyses, data sets and map products for the nation. These are generated from a combination of satellite, aircraft, in-situ and model analyses. The focus of the NOHRSC products is for hydrological applications. More information can be found at www.nohrsc.noaa.gov.

The National Ice Center (NIC) is a federal agency that brings together the Navy, NOAA, and the U.S. Coast Guard (USCG) to support coastal and marine sea ice operations and research. The NIC provides specialized



SAB Northern Hemisphere snow and ice chart for 7 November 2007.



NIC's Eastern Great Lakes ice analysis for 26 February 2007. The various colors represent the fractional coverage of ice (in tenths) in that portion of the lake.

strategic and tactical ice products to support operational needs of the U.S. government. NIC is the only national operational ice service in the world that monitors sea ice in both the Arctic and Antarctic, as well as in other bodies of water, such as the Great Lakes. The Center uses multiple sources of satellite and *in-situ* observations as well as NWP and ocean-sea ice model forecasts to

produce sea ice analyses. Parameters of interest include sea and lake ice extent, concentration and thickness, along with calving icebergs and ice shelves monitoring. The bottom graphic to the left shows an example of NIC's eastern Great Lakes ice analysis product. Additional details about NIC products are online at www.natice.noaa.gov.

The National Snow and Ice Data Center (NSIDC), jointly funded by several U.S. agencies, supports research into the world's snow, ice, glacier, frozen ground and climate interactions that make up Earth's cryosphere. NSIDC researchers use both satellite and ground measurements as the foundation for their scientific work. NSIDC manages and distributes scientific data, creates tools for data access, supports data users, performs scientific research, and educates the public about the cryosphere. NSIDC has led the field of cryospheric data management since 1976. They are part of the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado at Boulder.

More detail on the excellent research and data available at NSIDC can be found at www.nsidc.org. Recently, NSIDC's monitoring of the shrinking Arctic sea ice — a major concern in our present global climate change scenario — indicates that although the annual cycle of sea ice remains fairly consistent, the magnitude of the areal extent of ice appears to be diminishing, apparently due to warming Arctic Ocean temperatures, which delays the onset of freezing in the fall.

Ralph Ferraro
Remote Sensing Committee

Eleanor Vallier-Talbot celebrates one of her NWA Scholarship Raffle wins from the NWA Annual Meeting.

President's Message from front

this last year, I would like to use this final President's Message to do what I can to thank those who have made the last year such a success.

First off, I thank the members of the Council for their work. Their continued support for new initiatives while continuing to ensure the future stability of the organization has been a primary reason for the NWA's move forward in recent years. Most of the work done on our new initiatives has been provided by the committees, and I would like to show my appreciation to the committee chairs and their members for all of the effort that has been given in the last year. Special thanks goes to the IT Committee for their outstanding work on the new Web page, the Publications Committee for their work on the improved publications, and the Annual Meeting Program Committee for their efforts to make the Reno meeting such a success.

Finally, I would like to thank each and every member of the organization for their membership, their support and their input over the last year. Dues renewal forms were just recently sent out, and each of them has an area for members to indicate their interest in serving on committees or in other capacities. The NWA staff keeps this information on file, and the list of people who have volunteered is provided to committee chairs to help them fill vacant positions when they arise. While you may not be contacted immediately, I encourage you to indicate your interest in areas to become more involved. Volunteers truly are the lifeblood of this organization, and without them, nothing happens.

I would also like to thank those of you who have e-mailed me over the last year with suggestions, input and encouragement. These e-mails were all carefully read, and the input in them does really make a difference. As an example, several months ago longtime member Bob Robinson e-mailed me with suggestions for increasing student involvement in the NWA including the addition of a student member on the Council. As you know, the Council made this a reality with the addition of Elise Johnson as an ex officio Council member. I again thank Bob for his outstanding input, and encourage all of you to make your voices heard. The NWA will soon be under the outstanding leadership of incoming president Dr. John Scala, and I know he will appreciate hearing from you.

Last but not least, I would like to thank the staff of the NWA for their support over the last year. Executive Director Steve Harned, Assistant Executive Director Cynthia Nelson, Executive Director Emeritus Kevin Lavin, Newsletter Editor Janice Bunting, and NWA Assistant Ruth Aiken, have all made this year not only rewarding but fun. The NWA is a special organization, and our staff is a big reason why.

Thanks again to all of you - I look forward to another great year for the NWA in 2008 and to seeing you at the Annual Meeting in Louisville!

Alan Gerard
President

National Symposium on the Latest Developments in Multifunction Phased Array Radar

Multifunction phased array radar (MPAR), a promising technology that has the potential to scan the atmosphere more than five times faster and with higher spatial resolution than present systems, was the focus of a symposium held 10-12 October 2007 at the National Weather Center in Norman, OK. A pre-prototype of this type of radar is part of the National Weather Radar Testbed operated by NOAA's National Severe Storms Laboratory (NSSL). Researchers are currently testing the technology and preliminary results indicate the radar's rapid scanning capability will greatly improve decision support tools in a variety of hazardous weather situations (examples available at www.cimms.ou.edu/~heinsel).

Hosted by NSSL, the symposium was sponsored by the Office of Science and Technology Policy, Committee on Environment and Natural Resources, Subcommittee on Disaster Reduction, and the Office of the Federal Coordinator for Meteorology (OFCM).

"The symposium aims to advance the state of MPAR research and development and to further document the needs of the radar user community," said Samuel P. Williamson, federal coordinator for meteorology. The agenda included formal presentations, senior-level panel discussions and exhibits of the latest phased array radar technology.

The capability of MPAR to provide weather and aircraft surveillance simultaneously makes this technology an attractive choice for replacing legacy radar systems. The Federal Aviation Administration (FAA) is interested in MPAR technology to provide weather and backup aircraft tracking information near major commercial airports. Mary Glackin, Deputy Under Secretary of Commerce for Oceans and Atmosphere noted, "Phased array radar has the potential to be the next and most significant technological advancement to improve our nation's essential weather, aviation, defense, and homeland security services."

The symposium also highlighted the social and economic benefits from MPAR risk reduction research. In particular, the need to improve peoples' capacity to adapt when exposed to weather-related hazards was discussed. The impacts of the weather on people and the economy (e.g., agriculture and energy resources) are escalating owing to exponential growth of the United States population along our coasts and in regions with limited water resources. The effective use of MPAR technology has the potential to address these issues by increasing lead-time and reducing the uncertainty of forecasts and warnings.

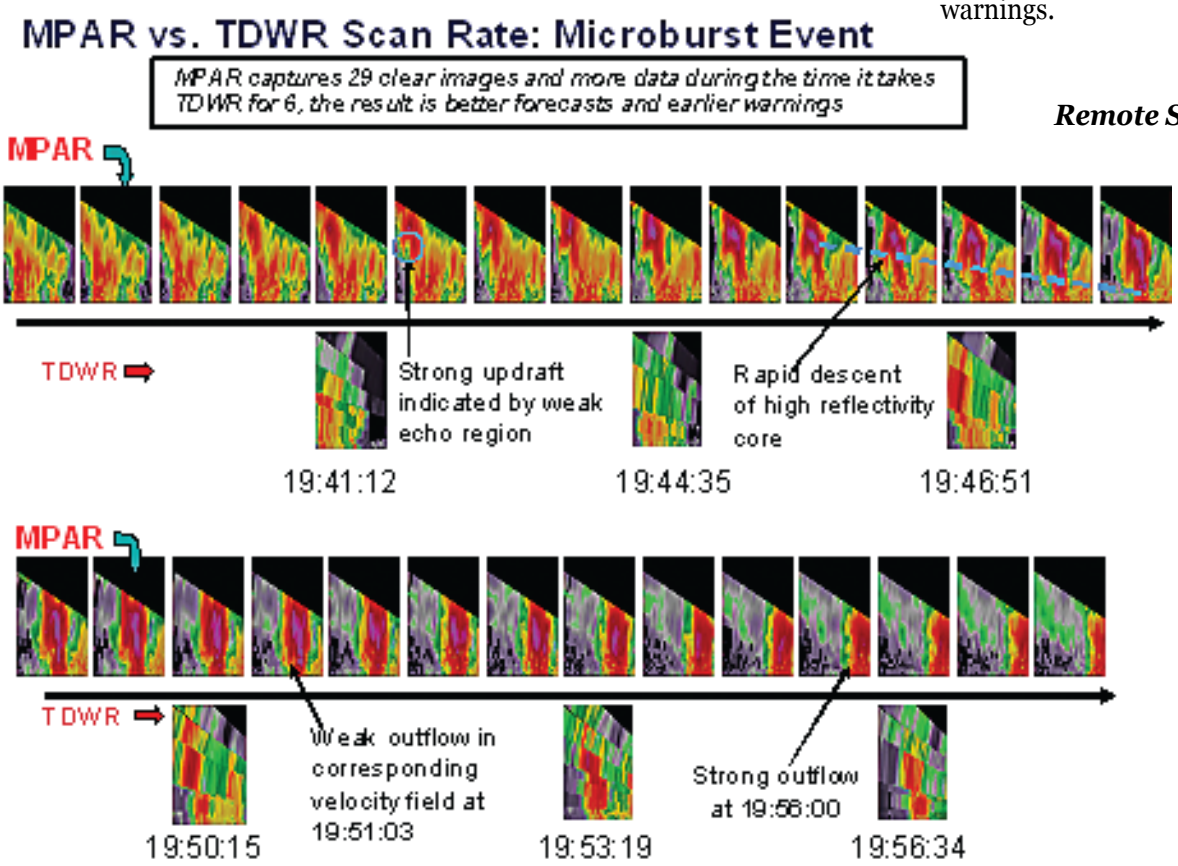
Online MPAR Resources

Symposium information
www.ofcm.gov/mpar-symposium/

NOAA National Severe Storms Laboratory
www.nssl.noaa.gov

Office of the Federal Coordinator for Meteorology
www.ofcm.gov

Pam Heinselman
Remote Sensing Committee



Professional Development Opportunities in 2008

88th American Meteorological Society (AMS) Annual Meeting: Jan. 20-24

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 at www.ametsoc.org/meet/annual/.

Fifth Geostationary Operational Environmental Satellite (GOES) Users' Conference: January 23 - 24

Scheduled as part of the 88th Annual AMS Meeting, it is co-organized by the National Oceanic and Atmospheric Administration (NOAA) and the AMS, with support from the NWA. 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 products from the GOES-R series. Details at www.ametsoc.org/MEET/annual/.

National Severe Weather Workshop 2008: March 6-8

The workshop will be at the National Center for Employee Development in Norman, OK, and the theme is *From Readiness to Recovery*. It will include presentations and "The Scenario," a workshop where participants step out of their normal role and take part in a simulated emergency. Go to www.norman.noaa.gov/nsww2008 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

A collaboration between Texas Severe Storms Association (TESSA) and the NOAA/National Weather Service in Fort Worth, Texas, it 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.

33rd Annual Northeastern Storm Conference: March 14 - 16

Sponsored by the Lyndon State College Student Chapter of the AMS and NWA, this conference will be in Springfield, MA. Abstracts must be submitted by Jan. 15. Details online at apollo.lsc.vsc.edu/ams/.

12th Annual Severe Storms and Doppler Radar Conference: March 27 – 29

Scheduled for West Des Moines, IA, this conference is sponsored by the Central Iowa Chapter of the NWA. Those interested in giving a presentation at the conference should submit their talk to the conference contact Bill Gallus (wgallus@iastate.edu). The chapter will also accept applications for the 2008 Pam Daale Scholarship until Feb. 8. Learn more at www.iowa-nwa.com.

2008 National Hurricane Conference: March 31 – April 4

The conference will be held at The Rosen Centre Hotel in Orlando, FL. This is the nation's forum for education and professional training in hurricane preparedness. Register by Feb. 15 to receive a $50 discount. More information at www.hurricanemeeting.com or call 850-906-9224.

Seventh Annual Southeast Severe Storms Symposium: April 4-5

Held at Mississippi State University, the symposium is sponsored by the East Mississippi Chapter of the NWA/AMS. Abstracts will be accepted through March 1. More at www.msstate.edu/org/nwa/symposium.

Sixth Annual Great Lakes Meteorology Conference: April 5

Scheduled for Valparaiso, IN, you may find details at www.valpo.edu/organization/nwa/index.html.

NWA Annual Meeting: October 11 - 16

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.

2008 Golf Outing Proximity Winners (l-r) Matt Zaffino, Brad Panovich, Event Organizer Betsy Kling, Bruce Kalinowski and Matt McGrath.

Dates 2 Remember

Jan. 15: Northeastern Storm Conference abstracts due

Jan. 20 - 24: American Meteorological Society (AMS) Annual Meeting, New Orleans, LA

Jan. 23 - 24: Geostationary Operational Environmental Satellite (GOES) Users' Conference, New Orleans, LA

Feb. 8: 2008 Pam Daale Scholarship applications due

March 1: Southeast Severe Storms Symposium abstracts due

March 27 – 29: Severe Storms and Doppler Radar Conference, West Des Moines, IA

For more information on these and other Professional Development Opportunities see page 7 or visit www.nwas.org/meetings/meetings.html.

NWA Newsletter (ISSN 0271-1044)
Contributing Editor: Janice Bunting
Editor and Publisher: Steve Harned, Executive Director

Published monthly by the National Weather Association 228 West Millbrook Road, Raleigh, NC (USA) 27609-4304; Tel/FAX (919) 845-1546; exdir@nwas.org; www.nwas.org.

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.

National Weather Association
228 W. Millbrook Rd.
Raleigh, NC 27609-4304

Supporting and promoting excellence in operational meteorology and related activities since 1975.