



NEWSLETTER

**National Weather
Association**

NO. 10 – 10 OCTOBER 2010

The NWA, You and the Future of Operational Meteorology:

Part III – Enhancing Your Professional Potential

*How to get the most out of your National Weather Association membership;
first-hand experiences from a student, for students*

In the first two parts of this series (published in previous Newsletters), I addressed issues concerning job growth in the field of operational meteorology and suggested some ways in which the field will develop in the coming decade. Now, I turn to ways in which the National Weather Association can help reach individual career goals.



Students interacting with professional meteorologists at the 2009 Student Session.

To enhance your professional potential, I suggest student members and new members consider writing a journal article, networking, joining a committee, and attending — as well as contributing to — the annual meetings of the NWA.

- **Scientific writing.** Students should become a part of the dialogue surrounding the future of operational meteorology. All students should work on authoring a scientific paper which passes peer review into the Digest or Electronic Journal, and submit an abstract for a presentation at the annual meeting. While research and authoring

a paper can be grueling work, the conclusion and contribution to the field is often rewarding, especially if you are interested in the topic. Furthermore, name visibility is one way to assure a prosperous job search. The operational meteorology field is not particularly large. The Bureau of Labor Statistics (BLS) estimated there were only around 9,400 jobs in 2008, over a third of which were with the federal government.

- **Networking.** Since the field is relatively small, you never know when or how networking will pay dividends. It is important to network with your peers as well as professionals well established in the field. If you go to the NWA Annual Meeting, and I strongly recommend you do, the best places to do this are around the refreshments table between sessions, and especially



Jordan Gerth, article author

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Have any amazing winter weather photos?

Submit them to NWA for a chance to be on the cover of the next National Weather Digest.

Cover photos selected by the NWA Publications Committee.

DID YOU KNOW THE NWA IS ON FACEBOOK AND TWITTER?

NWA President's Message – A Sit Down with SPC's New Leader

The NWA 35th Annual Meeting in Tucson was a big success! This year's Program Committee, led by Erik Pytlak, did an astounding job! Tucson's highly organized and enthusiastic local program team included: Christopher Castro, Erin Christiansen, Michael Crimmins, Mike Goldberg - Broadcasters' Workshop Chair, Randy Graham, Ron Holle, Betsy Kling - Golf Outing and Raffle organizer, Ryan Knutsvig, Glenn Lader, Terry Lankford - aviation meteorology outreach, Patrick Market - Student Workshop Chair, Glen Sampson, Craig Shoemaker, Christopher Smallcomb, Theresa Fischer, Mindy Strickland and Tim Villaran.

The entire staff from the NWA home office in Raleigh (Steve Harned, Ruth Aiken and Margaret Baron) did a wonderful job facilitating the meeting. My thanks go to all who volunteered, including those who manned the registration desk — especially Ruth and Margaret, Richard Jones, Barrett Smith, Brad Herold, Cynthia Nelson and her husband Craig. My appreciation goes to all who served as session chairs and to those who ran the A/V equipment. Many of the presentations are available for you to review on our website (www.nwas.org).

And a big thanks to all who supported our Annual Meeting by funding specific events or providing generous donations for the Scholarship Raffle. They are:

- Baron Services, Inc. – Underwriter of the Broadcaster's Workshop and Golf Outing Sponsor
- Vaisala – Sponsor of the Ice Breaker at the Arizona State Museum and a special tour and dinner at Vaisala
- WSI Corporation – Golf Outing Sponsor
- Atlantic States Weather – Golf Outing Sponsor
- AccuWeather – Students from Penn State University
- Tempest Tours – Storm Chase Tour package for the Scholarship Raffle
- Gibson-Ridge Software – 1st NWA Corporate Sponsor
- Midland Radio – Weather Radios for the Scholarship Raffle
- Southwest Airlines – A roundtrip ticket donated to the Scholarship Raffle

Our four keynote speakers provided excellent presentations that fit this year's theme: *"Fire and Ice; Science and Society."* My thanks to Josh Rubenstein, KCBS-TV, Dr. Tom Swetnam, University of Arizona, Vickie Nadolski, NWS Western Region Director, and Dr. Louis Uccellini, National Centers for Environmental Prediction (NCEP) Director.

In addition, 12 NWA Charter Members attended this year's meeting proving that the NWA still resonates with the founding members. My thanks to you for attending.

Congratulations to all of this year's 2010 NWA Award winners! It was an honor to recognize you all in Tucson at the Awards Luncheon for your hard work and tireless efforts! Fred Glass, Chair of the Awards Committee, provided an excellent list of award winners.

I met many NWA members, both old friends and new ones. I wish I could have talked to everyone in person. I hope you all enjoyed the meeting and look forward to next year's meeting in Birmingham, Alabama.

And, a big thanks to the NWA Officers and Council members. These folks help keep the NWA running smoothly. In Tucson, they volunteered precious time to attend several council meetings during the week. Your effort in Tucson was much

appreciated!

The NWA Council in Tucson approved updates to the NWA Vision and Mission statements:

NWA Vision: *"Promoting excellence in operational meteorology to benefit society."*

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

The vision statement represents what we see ourselves doing ultimately. It states why we're here. The mission statement is reflective of our marching orders. It says we want to provide activities to NWA members that connect us with others in achieving our shared vision. By connecting with others (networking!), we can achieve more both personally and professionally.

As I noted in last month's newsletter, the Storm Prediction Center (SPC) has a new Director, Dr. Russ Schneider. I was glad to see Russ attend our meeting in Tucson and give one of the talks. Here's an interview I conducted with Russ that I hope will help you get to know him better.

Steve: Russ, tell us about your meteorology career.

Russ: I've had a lifelong fascination with weather. It traces back to major tornado outbreaks: 1965 (Palm Sunday) and 1967 (21 April), which both occurred near my childhood home in suburban Chicago. The fire was lit. I earned B.S., M.S. and Ph.D. degrees in Atmospheric Science from the University of Wisconsin at Madison. I began my National Weather Service career at NCEP's Environmental Modeling Center. I was the first Science and Operations Officer at the Hydrometeorological Prediction Center (HPC), and then served as the Storm Prediction Center Support Branch Chief for the past 13 years before becoming SPC's Director. The Support Branch is responsible for maintaining the SPC's leadership in science and technology in support of its national forecast mission and leads the collaborative scientific research efforts in the U.S. National Oceanic and Atmospheric Administration (NOAA) Hazardous Weather Testbed (HWT) forecast experiments.

Steve: What are some of the top challenges SPC faces in the coming decade?

Russ: The challenges for our community are multifaceted, but "Communicating Uncertainty" and "Completing the Forecast" are two that resonate with me. These efforts will require our community to better quantify uncertainty, particularly for high impact events. We must work with diverse partners to better communicate the uncertainty and risk in order to support optimal decisions and elicit proper response from society. This is not just a science challenge. This effort will challenge our internal community culture as well. Our community is up to the challenge.

Steve: Regarding tornado predictions, what is needed systemically to improve the accuracy of both tornado watches and convective outlooks?

Russ: Tornado prediction is a difficult problem and will likely be so for many years. Efforts to improve our fundamental

knowledge of tornado genesis, as recently explored in Vortex2, are certainly needed. Most important to forecast improvement are efforts to develop effective ensemble predictions systems at convective scales. This involves not only better numerical models, but also better observations, data assimilation, ensemble design, and information extraction tools for forecasters. This has been the focus in the HWT for several years. It is also a cornerstone for the longer term vision of the NWS' *Warn-on-Forecast* strategy. A key science challenge to improved convective forecasts is the need for improved prediction of convective initiation.

Steve: What is one project that SPC will undertake that you are particularly excited about?

Russ: That's a tough question. I'm proud of so many SPC projects. Although the coming year will primarily be a year of transition (including SPC moving towards use of AWIPS-2), we have a small project to explore the distribution of United States population to allow us to better quantify and communicate the likelihood of general societal impacts based on our probabilistic severe weather forecasts. In addition, we are continuing to build a large severe weather relational database to support innovative applied research, real time forecast tools, and unique post event verification (*note: SPC gave a poster and oral presentation on these efforts at the NWA 2010 Annual Meeting in Tucson*). The SPC will also make incremental improvements to our products and services this year, and as always, we will continue to share our new forecast tools with the community through our website and other avenues for dissemination.

Steve: What advice would you give rising meteorological students who want a career in severe storm (including winter) forecasting?

Russ: Whatever your interests, channel your passion to become the very best within your chosen path. This requires constant discipline and focus, and an awareness of our ever changing community environment. There's always room for passionate, dedicated and disciplined meteorologists, but our future will require us to broaden our sphere of interest and knowledge. "Completing the Forecast" [the National Research Council's report published in 2006] is a profound challenge for the community. It suggests combining meteorology with the social sciences, energy, transportation, agriculture or traditional business. Computer science, or statistics majors will have significant value within our community. Whatever your passion or approach, be the best at what you choose. This requires discipline and focus, and an awareness of our ever changing community environment.

Steve: What was the most challenging forecast you were ever involved with?

Russ: Every forecast is a challenge. Our entire community should be proud of our advances in prediction on behalf of society. We're one of the few sciences that have the knowledge and capacity to make forecasts on a routine basis, which then requires the courage to face criticism when we are wrong.

The strong nonlinear processes and short time scale for critical storm evolution makes tornado forecasting extremely difficult. The May 3, 1999, tornado outbreak is an event, like many others, that might look straightforward in hindsight, but was characterized by a rapid evolution in the host mesoscale environment and difficult questions about the timing and location of initial storm development. Once the first storm formed, the potential historic nature of the event rapidly became

clear. This event, 50 years after the first efforts at tornado forecasting, had a profound influence on my understanding of the forecast challenge. The question remains: what ingredients, likely beyond instability and shear, must be in balance to support a remarkable tornado outbreak like this one?

Steve: Should convective weather watches (severe/tornado) have increased lead times?

Russ: Improved information, including continued improvement in the accuracy and quantification of uncertainty in our severe weather forecasts at all time ranges will allow our community to provide dramatically improved severe weather services and alerts to the public. As we move toward a more continuous cascade of severe weather information for decision makers, we can support the diverse decisions that occur during these events throughout society. Our partners in the private, media and emergency management sectors are all key players in this information chain. The optimal time for issuance of the specific public call-to-action statement that we currently call a Watch is not well understood. This is why improved engagement with the social sciences and the diverse spectrum of our weather community is so important.

Steve: In five years, how do you envision SPC to evolve?

Russ: Given the resource and workload challenges we all face, it is difficult to describe our future services in specific terms, but several of our core directions are fairly clear. We see ourselves as both a direct service provider to the public through our partners in the private sector, media and emergency management, and a key enabler of improved services provided by both internal and external partners. We will work to strengthen these partnerships and interactions. The SPC will improve its probabilistic forecasts of severe and fire weather hazards for both short and extended time ranges to support improved decision information. We will work to better communicate this information in forms that our partners and the public can best use. The SPC will increase our focus on national and regional lightning forecasts for protection of life and property, including forecasts for dry thunderstorms capable of initiating new wildfires. Finally, we will continue to engage the research community in developing next generation forecast techniques and tools, and share these advances with the community.

Steve: Any final thoughts you'd like to share with our NWA members?

Russ: Thank you for the opportunity to contribute to the dialog of ideas with the National Weather Association. I also want to thank you for your leadership of this important community organization.

Any questions or comments, please feel free to send an email to me: President@nwas.org.



Dr. Russ Schneider

*Steve Zubrick
NWA President*

Announcing the 2010 Scholarship Winners...

Adam Del Rosso: NWA Broadcast Meteorology Scholarship

Adam Del Rosso of Pittsburgh, Penn., is awarded the 2010 NWA Broadcast Meteorology Scholarship. Adam is a senior at Penn State University.



One word seems to sum up Adam: “enthusiastic”. In addition to pursuing academic excellence (his overall GPA is 3.74 which includes a GPA in meteorology of 3.96), he is focused on excelling in the broadcast arena. He is in charge of the Campus Weather Service’s video division and participates in a daily weather show. He also forecasts for a website forecasting service. He spends time learning how to make the best use of graphics which is, of course, vital to a successful broadcast production. Adam strives to be a teacher and wants to use a career in broadcasting to help educate the public.

A faculty endorsement described Adam when he first arrived at Penn State as, “He was an enthusiastic young man who wanted to get involved in everything that our department has to offer. He dove in with excitement and ran with the opportunities he was provided.”

Endorsement of his great talents also arrived from the “real world”. A TV broadcaster at a Pittsburgh station where Adam interned in 2009 provided the following; “Adam’s abilities as a meteorologist and grasp of the technical aspects of the atmosphere far exceeded our expectation. His dedication and self motivation were always apparent in his work.”

The NWA Education Committee received 18 applications from outstanding students across the country for this annual scholarship award. Best wishes to all individuals who applied! Congratulations again to Adam Del Rosso!

Jason Davis: Dr. Roderick A. Scofield Scholarship in Meteorology

Jason Davis of Davenport, Iowa, is a senior at Valparaiso University and received the 2010 Dr. Roderick A. Scofield Scholarship in Meteorology.

Jason truly excels as a student. His overall GPA is a sterling 3.985 which includes a 4.00 in meteorology subjects. He is a NOAA Hollings Scholar and has received numerous academic recognitions during his college career. He is viewed by one faculty member as one of the top one or two students in his class. Although most interested in summertime convection and winter weather, he has shown a great interest in all aspects of the science.

It is noteworthy that he has been most active in NWA activities. Jason has served as treasurer and vice-president of the Northwest Indiana NWA Local Chapter and has helped organize the chapter’s Great Lakes Meteorology Conference for three years. He has been involved in several campus organizations both inside and outside of meteorology. He mentors freshmen students and volunteers for Meteorology Field Day where hundreds of local schoolchildren are exposed to several meteorological topics.

Jason plans to study for his Masters in Meteorology before focusing on becoming a forecaster or applied researcher, hopefully at the Storm Prediction Center.

The NWA Education Committee received 37 applications from outstanding students across the country for this annual scholarship award. Best wishes to all individuals who applied! Congratulations again to Jason Davis!



Ayrton Bryan: AccuWeather, Inc. Undergraduate Scholarship in Meteorology

Ayrton Bryan of Fayetteville, Ga., a sophomore at Texas A&M University is awarded the 2010 AccuWeather Inc., Undergraduate Scholarship in Meteorology.

Ayrton is a focused and talented sophomore who has already excelled in both the academic and extracurricular aspects of college life. During his freshman year, he carried a GPA of 4.00 in all subjects.

However, Ayrton is certainly not restricting his efforts and talents just to the classroom. He was invited to participate in undergraduate research involving two professors. It is most noteworthy that he traveled on his spring break early in 2010 to Seattle, Wash., to interact with a group at the University of Washington to further pursue his research in creating a climatology of concentric eyewalls using TRMM Precipitation Radar. In addition to pursuing a PhD in meteorology, Ayrton plans to minor in computer science and business.

Faculty members working with Ayrton are quick to praise his efforts. To quote one, "Ayrton Bryan is the top undergraduate 'total' freshman in our curriculum. *[Reference was provided in the spring of 2010]* His academic work is top notch, and his leadership and extracurricular activity is equally impressive."

The NWA Education Committee received 58 applications from outstanding students across the country for this annual scholarship award. Best wishes to all individuals who applied! Congratulations again to Ayrton Bryan!



Rosimar Rios-Berrios: David Sankey Minority Scholarship in Meteorology

Rosimar Rios-Berrios of Barranquitas, Puerto Rico, is a senior at the University of Puerto Rico at Mayaguez and is awarded the 2010 David Sankey Minority Scholarship in Meteorology. In addition to being an outstanding and focused student, she has demonstrated leadership as president of a youth cooperative.

Rosimar's academic credentials are unsurpassed. As a major in physics with a minor in meteorology, she has an overall GPA of 4.00. She plans to use her strong undergraduate credentials to pursue a Masters in Meteorology. Her list of scholarship and other awards is lengthy and most impressive.

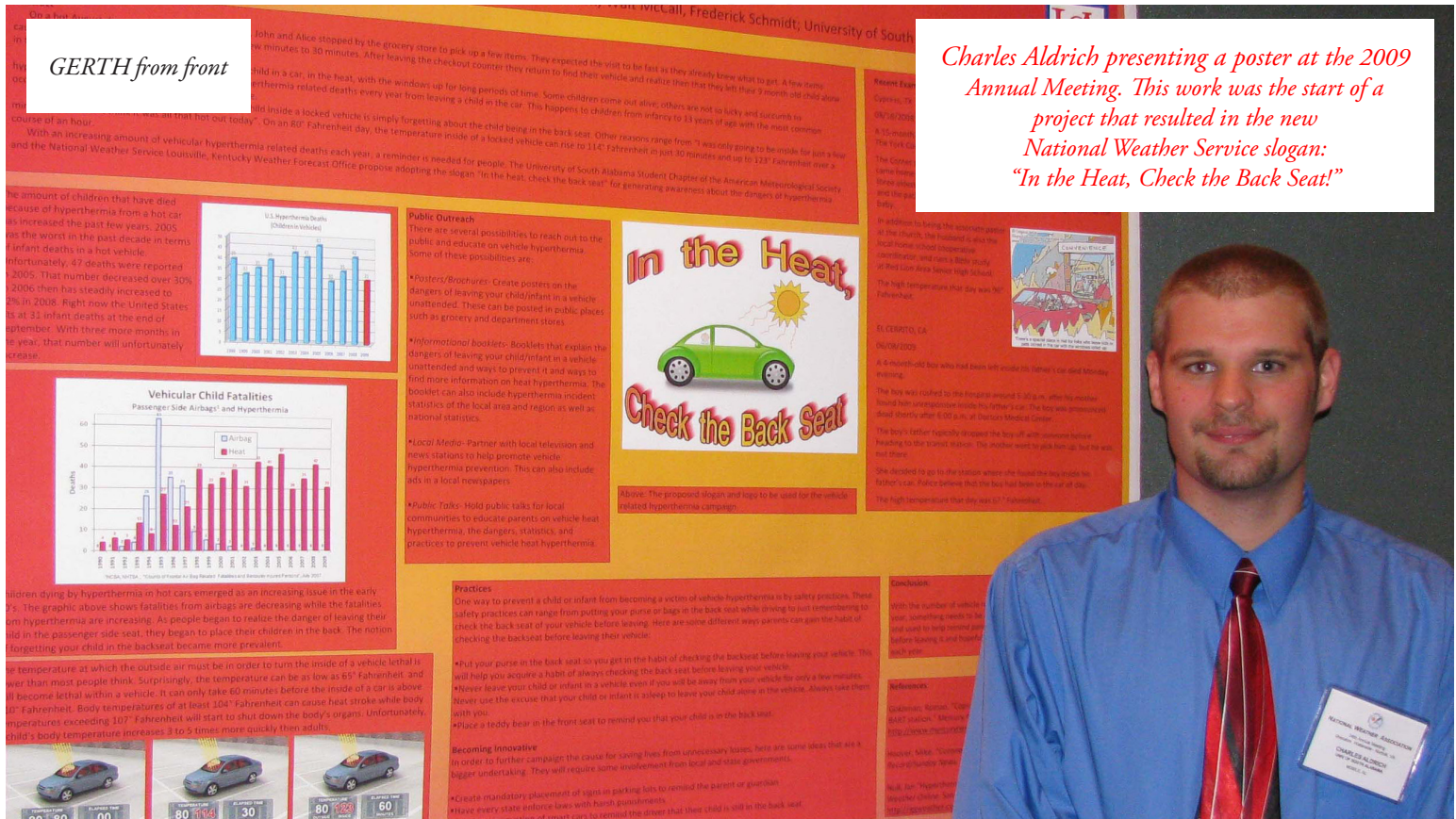
Rosimar was selected to participate in two significant summer opportunities with NOAA. The summer of 2009 was spent with NOAA/NWS Meteorological Development Laboratory (MDL) with the summer of 2010 being spent at NOAA's Hurricane Research Division in Miami. She distinguished herself during her short time at MDL and impressed both laboratory and office directors.

Her extracurricular activities include being an active member of the UPRM AMS Student Chapter, performing outreach activities, and publication of weather briefings on the Internet (Juracan TV). Her demonstrated leadership abilities outside of meteorology are most impressive. She helped establish and served as president of a community youth cooperative, Juvencoop, which, among other things, stressed the importance of starting a savings account at an early age.

The NWA Education Committee received 15 applications from outstanding students across the country for this annual scholarship award. Best wishes to all individuals who applied! Congratulations again to Rosimar Rios-Berrios!



Charles Aldrich presenting a poster at the 2009 Annual Meeting. This work was the start of a project that resulted in the new National Weather Service slogan: "In the Heat, Check the Back Seat!"



during the poster sessions. The breaks are as important, and possibly more important, than the session presentations for networking. If you cannot make it to an annual meeting, join or form a local chapter of the NWA to connect with fellow members of the operational meteorology community in your geographic vicinity.

- **Join a committee.** Another way to connect is to volunteer to serve on a committee. Many committees have a student representative and appreciate the first-person input on how to improve the student experience in that facet of the field. I have enjoyed my time serving on the NWA Professional Development Committee and getting to know and interact with some of the committee members at annual meetings, in other professional forums, and in the field. Committee activities benefit the NWA membership and can also enhance a curriculum vitae or resume, showing an ability to work in groups toward a common goal. Becoming a team player is a beneficial skill no matter your career path.
- **Attend and interact at annual meetings.** I have attended three annual meetings of the NWA, and it is clear that these meetings keep those who attend apprised of the latest developments in operational meteorology and performing their best in the field. Presenting research can also lead to connections with those working on similar projects. For me, networking and the opportunity to join a committee first came while I was at an annual meeting. The new NWA student sessions are a must for any student unsure of how to transition into a career after four years of college. Annual meetings and student sessions are chiefly about interacting with peers and colleagues.

Submitting an abstract for the poster session of the NWA student conference—if not the annual meeting — should be a priority for student members attending and seeking visibility. The experience that comes with preparing research and relaying conclusions in the form of a poster is an important skill for any future job, even those outside of research sector. Operational meteorologists of the future will be under increasing demand to develop new techniques which leverage our new computing systems and meet the needs of the customers. Making a revelation in the field requires that conclusions be synthesized into a short, effective medium such as a poster or short oral presentation. The NWA Professional Development Committee works to publish articles in the Newsletter and online regarding effective presentation authorship. The same guidelines may help craft a presentation for a course, a workgroup or future supervisor.

As a student, now is the time to think how you will beat the job market. As a NWA member, you have taken a good first step. But I implore students and other NWA members to make the most of the membership early on by attending NWA annual meetings, networking, joining a committee, and submitting an article to the *NWA Digest* or the *Electronic Journal of Meteorology*. Any successful job application must be ready to adapt to the dynamic and evolving field which is operational meteorology.

Let the NWA help your career pursuits. Let your career pursuits evolve the field.

To comment on this series, please e-mail me:

jordang@ssec.wisc.edu

Jordan Gerth
Professional Development Committee

2011 NWA Sponsored Annual Meetings & Conferences

**Please Vote
Members!**



The election period to vote for the 2011 NWA Council and Officers is approaching.

Ballots will arrive in mid-November.

You can vote either by mail or save a stamp and vote on-line!

Ballots are due Dec. 31, 2010

March 3-5: 2011 National Severe Weather Workshop

Cosponsored by the Central Oklahoma American Meteorological Society (AMS) and NWA Chapters, NOAA and others, this annual workshop will be in Norman, Okla. www.norman.noaa.gov/nsww

March 11-13: 36th Annual Northeastern Storm Conference

The Lyndon State College Chapter of the AMS and NWA will host this conference in Taunton, Mass.

<http://meteorology.lyndonstate.edu/ams/>

March 12: 2011 National Storm Conference

This free, annual event organized by The Texas Severe Storms Association will be at the Colleyville Center in Colleyville, Texas. The North Texas Chapter of the AMS/NWA is a sponsor.

www.tessa.org

March 31–April 2: 15th Annual Severe Storms & Doppler Radar Conference

Sponsored by the Central Iowa NWA Chapter, this annual event will be in Ankeny, Iowa. www.iowa-nwa.com/conference/

Aug. 4-6: 15th Annual High Plains Conference

Sponsored by the Wichita and High Plains Chapters of the AMS/NWA, this annual conference will be in Wichita, Kan.

www.wichita-amsnwa.org

Oct. 15-20: 36th National Weather Association Annual Meeting

It will be in Birmingham, Ala. www.nwas.org

Other Meetings & Conferences

Jan. 23–27: 91st Annual Meeting of the American Meteorological Society

It will be in Seattle, Wash. www.ametsoc.org/meet/annual/

March 9-10: Second Midwest Bow Echo Workshop

Cosponsored by the NWS and the Earth and Atmospheric Sciences Department at Saint Louis University, this workshop is free, but registration is desired. www.crh.noaa.gov/lxs/?n=bow_echo

March 15-16: 2011 Alaska Weather Symposium (AWS '11)

The Symposium will be at the University of Alaska Fairbanks. It will provide a forum for the exchange of operational and research information related to weather in the Alaska environment. Participation from academic, research, government, military and private sectors is encouraged.

<http://weather.arsc.edu/Events/AWS11/>

April 4-8: NOAA Satellite Direct Readout Conference

NOAA's National Environmental Satellite, Data and Information Service (NESDIS) will host this Conference in Miami, Fla. The conference is the follow-up to NOAA's successful 2008 Direct Readout Conference. The Theme of the 2011 conference is, "Real-Time Access for Real-Time Applications."

<http://directreadout.noaa.gov>

Did you know there's an NWA store? Buy clothing, mugs, buttons and other swag directly from www.nwas.org!





This photo was taken at midnight on Oct. 4 in Tucson, Arizona -- as if this amazing storm knew the 35th NWA Annual Meeting was there that week!

Visit the National Weather Association on Facebook for more photos from our annual meeting!

2011 Dates **2** Remember

Jan. 23-27: 91st American Meteorological Society Annual Meeting, Seattle, Wash.

March 3-5: 2011 National Severe Weather Workshop, Norman, Okla.

March 11-13: 36th Northeast Storm Conference, Taunton, Mass.

March 12: TESSA 2011 National Storm Conference, Colleyville, Texas

March 31-April 2: 15th Severe Storms & Doppler Radar Conference, Ankeny, Iowa

April 4-8: NOAA Satellite Direct Readout Conference, Miami, Fla.

Oct. 16-20: 36th National Weather Association Annual Meeting, Birmingham, Ala.

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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. Printed Newsletter subscriptions are available for \$25 per year plus extra shipping costs outside U.S. Single copies are \$3. **Address, phone number, email and affiliation changes can now be made online at the member portal.**

Promoting excellence in operational meteorology to benefit society.

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