NEWSLETTER

National Weather Association

No. 11 – 9 September 2011

NWA Engaged in Climate Change Education Project for Broadcasters

The National Weather Association (NWA) is working with several organizations and government agencies to explore ways to provide broadcasters with tools and resources to address climate and climate change questions. Longtime broadcaster Joe Witte was the catalyst for this National Science Foundation (NSF) funded project which is one of 15 such climate change education projects. The project is administered by George Mason University (GMU) and includes the NWA, American Meteorological Society (AMS), American Geophysical Union (AGU)?, National Oceanic and Atmospheric Administration (NOAA), National Center for Atmospheric Research (NCAR), the American Association of State Climatologists, Yale and Cornell Universities, and Climate Central.

Two surveys of NWA and AMS broadcasters have been conducted to identify the positions of broadcasters who are convinced, unconvinced or undecided regarding climate change. The latest survey conducted in January 2011 indicates that most broadcasters acknowledge that the climate is warming but are very divided as to the reasons. The respondents were divided into those who point to mostly human causes, a combination of human and natural factors, or mostly natural factors. Also identified were resources the broadcasters would like to have access to for answering climate and climate change questions.

To help fully explore the positions broadcasters hold regarding climate change and to provide an environment for open and constructive discussion rather than yelling, two workshops involving broadcasters have been organized. One was held at the AMS Broadcaster Conference in Oklahoma City in June and another one will be held at our Annual Meeting in Birmingham on Sunday, Oct. 16. Reports from the AMS workshop were overwhelmingly positive in that there was no attempt to change minds, just to have all discuss their positions and to learn those of others. Next steps for the project will be to more fully explore desired resources needed by broadcasters and then determine how to make them available.

The NWA is involved in the project to assist our broadcasters gather needed resources. This project will take no advocacy position regarding climate change and will insist on the use and development of only science based materials.

Steve Harned
Executive Director

President's Message – A Constructive Discussion on Climate Change

The historical mission of the National Weather Association is to support and promote excellence in operational meteorology and related activities. As such, it is part of the Association's mission not only to provide educational opportunities to its members, but also give them a voice in issues regarding the modern state of our science. Above, you will find details regarding the participation of the NWA and some of its members in a NSF funded climate change education study being administered by George Mason University.

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Inside This Edition

Evaluation of Improved Clear-air Turbulence Forecast Techniques at the NWS' Aviation Weather Center

Gary Ellrod, NWA Remote Sensing Committee
John Knox, Associate Professor, Dept. of Geography, University of Georgia

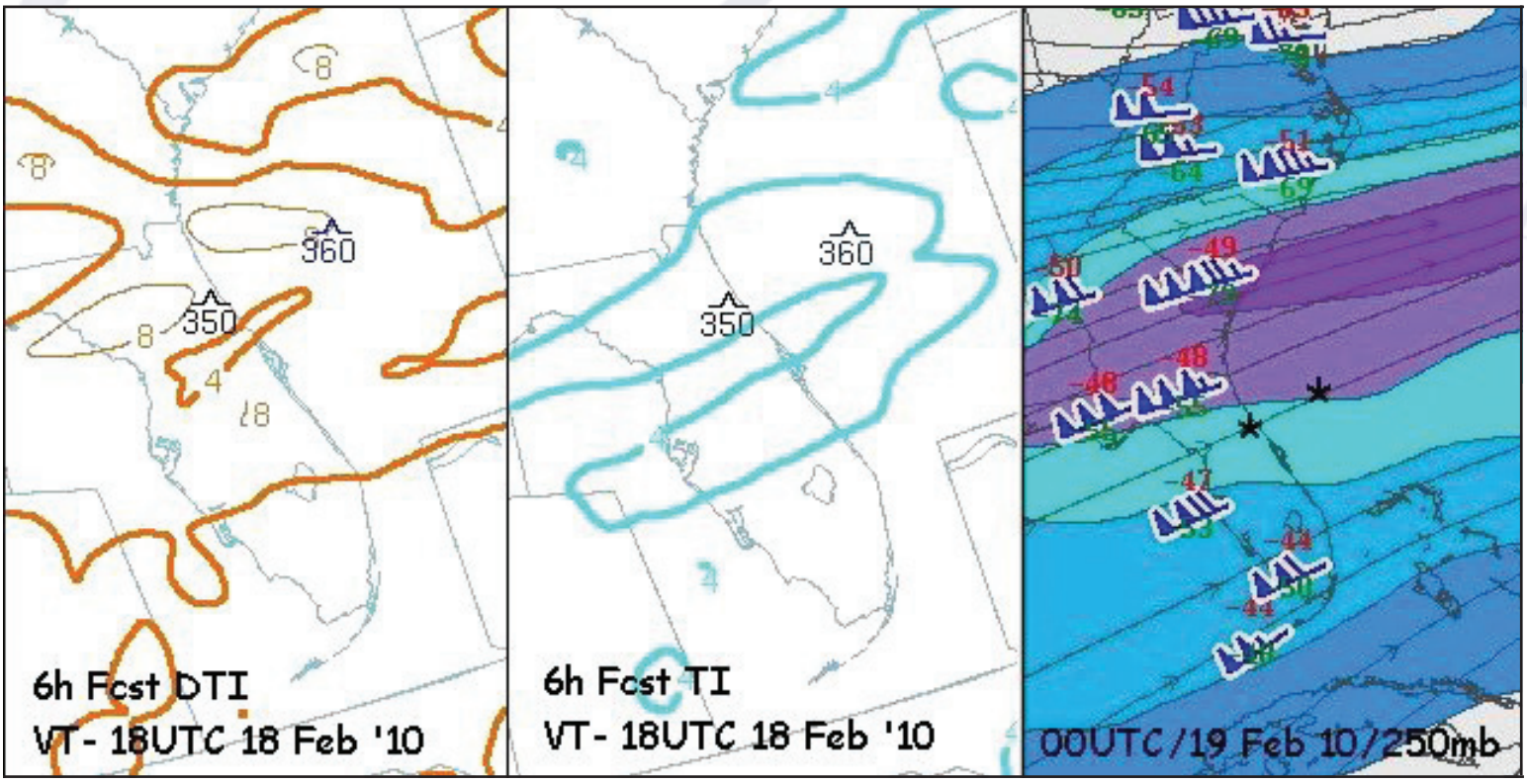
Clear-air turbulence (CAT), defined as in-flight bumpiness above 15,000 feet not attributed to convection, remains a serious forecast problem despite recent advances in prediction capability. Commercial airlines in the U.S. encounter severe turbulence an average of 5,000 times per year. Although fatalities are rare, on average 45 injuries are reported annually (Source: National Transportation Safety Board). Unbelted passengers and especially flight attendants are at risk of injuries caused by severe g-forces experienced during these encounters. Thus, there is a continued need to improve forecasting accuracy to provide advanced warnings to pilots for better in-flight safety.

We all need to remember that what we do does make a difference. This article highlights an evaluation of a new state-of-the-art clear-air turbulence prediction method to provide advanced warnings to pilots for better in-flight safety. This piece has been requested as part of a series of professional development articles highlighting important work presented orally or via poster at the 35th NWA Annual Meeting. I hope this challenges you to continually find ways to enhance what many of you are already doing—providing outstanding operational weather support to your customers.

Kenneth Carey, Chair
NWA Professional Development Committee

Recent collaboration between researchers and the NOAA/NWS Aviation Weather Center (AWC) in Kansas City has begun to test new state-of-the-art CAT prediction methods. First to be evaluated is a modification of the deformation-vertical shear index, also known as Turbulence Index (TI or the Ellrod-Knapp Index), now in operational use worldwide. The TI was modified by the addition of a divergence tendency term to improve the performance of the index near upper-level ridges or in advance of upper troughs (Ellrod and Knox 2010). Preliminary evaluations of this new diagnostic, referred to as Divergence-modified TI (DTI), using data from the Rapid Update Cycle-2, indicate that the skill of short range (six to 12 hour) forecasts of light-moderate or greater CAT was improved by nearly a third, with a slight increase in over-warning. Additional validation has recently been completed for Global Forecast System (GFS) and is underway for North American Mesoscale (NAM) model data. Since TI is also a component in the statistical Graphical Turbulence Guidance (GTG) used operationally by the NWS, the improvements in TI should also result in better performance of the GTG. The example in the figure below shows that DTI (left panel) highlighted an area of moderate CAT over and just offshore northeast Florida better than TI (middle panel). The

See CAT, page 3



Six-hour forecasts of DTI (left) and standard TI (center) for the 250-300mb layer, valid 1800 UTC February 18, 2010 from the RUC-2 model. The brown contours in the DTI panel and the cyan contours in the TI panel represent an index value of 4. The improved index, DTI, shows a higher risk of CAT (values > 8) in the vicinity of the moderate turbulence reports. The panel at right shows the 250mb winds valid 0000 UTC February 19 2010 (Source: Storm Prediction Center website).

CAT from page 2

turbulence reports occurred within the right entrance region of a 175-kt jet streak at 250mb whose core was centered just to the north (right panel).

A potentially ground-breaking forecast approach, using the Lighthill-Ford equations for spontaneous gravity wave generation, is scheduled to be tested in winter 2011-12. These theoretical equations, first used to study sound waves, then later shallow water waves in laboratory tank experiments, have been adapted for turbulence prediction at synoptic scales by Knox et al. (2008). A previous evaluation of this technique indicated that it may be possible to achieve the federal government's desired forecast accuracy of more than 80 percent probability of turbulence detection (PODy), along with a probability of null detection (PODn) greater than 85 percent.

The new CAT indices may become available to operational forecasters at AWC in winter 2011-12 by means of the Aviation Weather Testbed. Case studies will also be selected for use in online training by the Cooperative Program for Operational Meteorology, Education and Training (COMET), which is sponsoring this project.

References:

Ellrod, G. P., and J. A. Knox, 2010: Improvements to an Operational Clear Air Turbulence Diagnostic Index by Addition of a Divergence Trend Term, *Wea. Forecasting*, 25, 789-798.

Knox, J. A., D. W. McCann, and P. D. Williams, 2008: Application of the Lighthill-Ford theory of spontaneous imbalance to clear-air turbulence forecasting. *J. Atmos. Sci.*, 65, 3292-3304.

The NWA Welcomes Members Who Joined in August

Regular/Military/Retired

Wesley Browing
Daniel Cianca
Ronald Combs
John De Block
Jason Deese
Dr. Timothy Dowling
Robert Gardner
Angela Garner
Kelly Gould
Shaivius Greene
Jesse Gunkel
Ken Hart
Hashim Jackson
Daniel Lamb
Mary Lamm
Mike Linden
Julie Martin
Cody Matz
Ken Meehan
Dawn Myers
Andrew Nappi
Clark Payne
Sherri Pugh
John Reynolds
Brandon Robinson
Jason Rosco
Daniel Rothman
Andrea Schoettmer
Matias Sich
Peter Smith
Shane Smith
John Sumption
Andre Tarro
Billy Tate III
Alexander Titus
Marla Walter

Students

Justin Abbott
Francisco Alvarez
James Belanger
Bobby Cleveland
Brian Donegan
Jenny Frautschy
Pamela Gardner
Erica Gentsch
Laura Hartman
Eric Hout
Aaron Mayhew
John Orcutt
Scott Ozog
Zachary Pearce
Kailin Penfold
Samantha Quist
Christopher Radoumis
Alexander Rettof
Dustin Seog
Danielle Thorne
Camellia Tipton
Jonathan Wahl
Walter Walker
Anthony Weiss
Bethany Wubben

36th NWA Annual Meeting Oct. 15-20, 2011 Birmingham, Alabama

The End Game - From Research and Technology to Best Forecast and Response

The weekend of Oct. 15 - 16 is filled with a scholarship golf tournament and the Broadcasters Meteorology Workshop. General sessions — Oct. 17 to 20 — will consist of both oral and poster sessions targeting our theme.

Being a champion is not easy, in sports or in life. It takes not only a mastery of your chosen field, but also a passion, intensity, energy, focus and commitment that helps you achieve your very best. It is easy to lose that passion in the day to day routine of your job. Weather is unique in that nearly every person can tell why they got interested in it. A primary goal of the 2011 NWA Annual Meeting is to help all attendees find that original spark and connect to that passion in a fun and spirited environment of learning and networking.

And we hope you're continuing your stay to join the 7th Annual GOES Users' Conference from Oct. 20 - 21.

After a joint icebreaker reception on Wednesday evening, there will be a joint session on Thursday morning and concurrent sessions on Thursday afternoon. Highlighted on Thursday will be new operational capabilities to be provided by existing and future GOES satellites.

PRESIDENT from page 1

In 2011, it is beyond cliché to say that the discourse on climate change has become polarized. The din of name calling and finger pointing, especially in the national mainstream media, has become unbearable. Those who ascribe all global warming to anthropogenic causes are labeled mindless "environuts", and those who place all accountability for the same warming on natural causes are termed mindless "deniers." Very likely, the truth about earth's changing climate exists somewhere in between those extreme views. As a society, we are capable of so much better, and I believe that the NWA membership as a whole has done much better in ***educating itself while maintaining a healthy, critical scientific attitude***. It is precisely this broad-minded approach to climate change and all issues scientific that makes the NWA an exemplary scientific organization and thus an ideal participant in the GMU study.

Indeed, the larger Council and I believe that NWA participation in this study will help our membership in several ways, especially our broadcaster members. First, we hope that successful completion of this study will lead to broader access by our broadcaster members (primarily) to answers on issues regarding climate and climate change questions. Daily, they are on the forefront of answering the tough questions about climate and climate change from the public and others. Many are doing an exemplary job at it, but as an organization, we can do better to help educate them and, in turn, the public.

Second, no advocacy position is being taken by the NWA through our participation. I know a great many of our NWA members personally, and I know the spectrum of scientifically-informed views that exist among them regarding climate change. I don't know if there is a single advocacy statement on climate change that could be rendered and still represent the majority of the NWA membership; I find this level of critical thinking amongst working scientific professional refreshing.

Lastly, it is important to note that the NWA has been compensated for its participation. In 2011 and 2012, the NWA is receiving a stipend of $15, 000 per year to cover our overhead costs for participating. This is for our NWA Executive Director Steve Harned's time spent working with all five working groups of the project and serving on the advisory board. This depth of involvement by Mr. Harned ensures no advocacy positions of any kind are advanced on any front.

Patrick Market
NWA President

High Plains Chapter News

Tim Burke, Secretary

The High Plains NWA chapter held meetings over the summer in April and June, with a third meeting immediately after the first day of the 15th Annual High Plains Conference on Aug. 4.

Nine members attended the April lunch meeting, including one new member from the Hastings, Neb., NWS office. Chapter Vice President Al Pietrycha, the Science and Operations Officer (SOO) at the Goodland, Kan., NWS office, gave an informative presentation on his experience providing support to the oil pipeline rupture and subsequent spill into the Kalamazoo River in southwestern Michigan on July 26, 2010. Mr. Pietrycha showed how hectic this work can be, and made the points that one has to be a multi-tasker and be ready to be called to the job at any time and provide 24/7 support. The chapter continued to make progress in attaining not-for-profit status in April. They completed the first step of obtaining an employee identification number and are continuing to get the required IRS forms filed. Nicholas Humrich from O'Neill, Neb., was announced as this year's winner of the Jim Johnson Scholarship. Mr. Nicholas was home schooled and plans to attend the University of Nebraska at Lincoln in the fall, majoring in meteorology.

In June, Mr. Pietrycha oversaw the meeting of 10 members in the absence of President Chris Foltz (Goodland, Kan., NWS office), who was in Omaha providing operational support to the northern plains flooding. The business meeting was followed by a presentation from Aaron Johnson, the SOO for the Dodge City, Kan., NWS office, on the operational use of dual-pol radar products from the Vance Air Force Base, Okla. radar.

At both meetings, members focused on preparations for the 15th Annual High Plains Conference (HP15) held on Aug. 4-6 in Wichita, Kan., at the Marriot Hotel and co-hosted with the Wichita AMS/NWA Chapter. The group announced the featured speakers, planned a career fair for the evening of Aug. 4, and discussed the scholarship that will be awarded to one or more college students at HP15. Chapter members also discussed future conferences, and future chapter funds to support an annual conference. One suggestion was to change to an every-other-year format. After all the hard work and planning, HP15 was a huge success. There were nearly 60 in attendance, four keynote speakers and 28 conference speakers. The Friday night banquet presentation was "A Photographer's Journey: 20 Years of Storm Chasing," given by Jim Reed. No students entered our presentation contest, therefore no scholarships were awarded. Anyone with suggestions on how to recruit more college students to participate in our conference presentations is encouraged to send ideas to Christopher.Foltz@noaa.gov. The chapter is also looking for ideas to spice up future HP conferences. For conference info, go to www.highplains-amsnwa.org/ or directly to http://www.wichita-amsnwa.org/HPC.

There were 12 High Plains Chapter members and four members from the Wichita chapter present at the August meeting at the end of the first day of HP15. Mr. Foltz opened the meeting and complimented the Wichita chapter on doing such a fine job hosting the Conference. We were updated on our efforts to attain Not-for-Profit status: Mike Umscheid of the Dodge City, Kan., NWS office is almost ready to hand over the filing process to a local attorney. When the status is filed with the IRS, there will be a $400 charge.

Our chapter currently has 39 members. President Foltz encouraged each member to consider new methods to recruit more members into the chapter. Please pass on any recruiting ideas to him (email address above). The 16th Annual High Plains Conference will be held in Hastings, Neb., hosted by the Hastings NWS office. The next chapter meeting is planned for Oct. 12, and a teleconference meeting is tentatively set for Dec. 14.

Rolling with the Changes: The Spaceflight Meteorology Group's Loss is Southern Region's Gain

Contributed by Ron Trumbla, Public Affairs Officer, NWS Southern Region
Frank Brody, MIC, NWS Spaceflight Meteorology Group

The NWS Spaceflight Meteorology Group's (SMG) 30-year mission to support the National Aeronautics and Space Administration (NASA) space shuttle program came to an end with the successful touchdown of Space Shuttle Atlantis at Kennedy Space Center in Florida, in the pre-dawn hours of July 21, 2011. SMG provided dedicated weather decision support to NASA for each shuttle mission, starting with STS-1 in 1981 through STS-135 in July 2011. SMG has supported all NASA human spaceflight missions since the 1960s, with the Mercury, Gemini and Apollo programs.

(L to R) SMG forecasters Kurt Van Speybroeck, Tim Oram and Brian Hoeth monitor final shuttle mission at the Johnson Space Center (Photo courtesy of NASA).

"It has been a heck of a ride!" noted SMG Meteorologist-in-Charge Frank Brody. "It has been an honor and a challenge to support the NASA space shuttle program. We've been through some trying times, particularly with the Challenger and Columbia accidents. But each time, the Spaceflight Meteorology Group has made improvements in decision support to NASA, and has met the weather demands of the space program."

While NASA's future missions are still being developed, the next step is the test flight of Orion, also known as the Multi-Purpose Crew Vehicle, scheduled for late 2013. SMG will support this Orion flight test with forecasts for the vehicle's landing zone in the eastern Pacific Ocean. SMG will continue supporting Johnson Space Center's (JSC) International Space Station Mission Control Center and JSC Center Operations with forecasts for local hazardous weather, including tropical storms and hurricanes, and a unique (within the NWS) Lightning Advisory and Lightning Alert program.

While a smaller SMG team remains to support JSC in Houston, several experienced SMG forecasters will transfer to Southern Region Headquarters in Fort Worth, Texas to form a core group of Emergency Response Meteorologists. The transfer will launch an NWS pilot project designed to support key local, state and federal emergency managers and other decision makers charged with the protection of life during natural or accidental high-impact events.

The new team will replace the Regional Operation Center's (ROC) previous system of using rotating ROC duty officers to help provide operational support for the Southern Region's field offices, the Texas Department of Emergency Management and Federal Emergency Management Agency (FEMA) Regions IV and VI during those high-impact events; and serve as a source of information for the NWS Headquarters chain of command. The team will do all that and much more.

"This special group will help the National Weather Service turn to the next page on protection of life services to our partners and the public," said Bill Proenza, regional director, NWS Southern Region. "This project represents a vital restructuring of our resources towards providing immediate and strategic weather information to mitigate the loss of life and support the economic well-being of the nation during high-impact events."

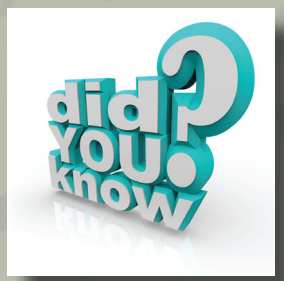
"They will also be reaching out to a wide range of federal partners, such as the Environmental Protection Agency, Nuclear Regulatory Commission, Federal Aviation Agency and Transportation Security Administration," said Tom Bradshaw, chief of the Southern Region's Meteorological Services Branch. "They will be trained in a number of specialized decision support areas, including tropical and severe weather impacts, fire weather, hazardous materials support and oil spill response."

The Southern Region Emergency Response effort is one of several pilot projects to be incorporated in a new NWS Strategic Plan designed to help meet those needs.

While the loss of such great meteorological expertise from the space program was difficult, the former SMG meteorologists' skills will be put to great use for the NWS and its decision support customers.

In December 1976. the National Weather Association hosted its first annual meeting at Andrews Air Force Base.

It was a two day event with 65 people in attendance. Sol Hirsch and Fran Holt both spoke at the event.



Three Rivers NWA Chapter Quarterly News January-March 2011
California University of Pennsylvania (Cal U)

Lindsay Rice, Vice President

In January, 13 student members traveled to Seattle, Wash., for the 91st AMS Annual Meeting. Three students presented their research during the student poster session, and we won third place for our chapter poster. The students also attended numerous sessions on various topics, and did a great deal of networking. They were able to meet with members from the NWS Pittsburgh office who are involved in our chapter, as well as students from other universities and many professionals. Our chapter also hosted an alumni social in downtown Seattle for current and former student members of the chapter.

Over the winter break, one of our student members, Cody Frick, visited his middle and high school as part of our Educational Outreach Committee and gave presentations on weather to a group of about 100 students. He answered weather questions, provided fun facts about weather and talked about our Storm Chase Field Experience class. In February, three of our members visited a local middle school where they gave six presentations to different age groups of students. They answered questions from the students, talked about natural hazards (also a class offered by our University) and discussed our meteorology program and Storm Chase Field Experience course. This was a great visit as we reached out to a large group of students.

Three Rivers members participating in Storm Fest, February 25 and 26 at the Carnegie Science Center (CSC) in Pittsburgh, Penn.

Chapter members began participating in the Weather Challenge hosted by the University of Oklahoma beginning in January. Our Mesoscale Meteorology and Advanced Synoptic Meteorology classes are required to participate, and all other students are encouraged to join. This is a great way for students to practice their forecasting skills and compete with other students at other institutions.

Student members participated in a fudge sale in December and January to raise funds for our annual educational outreach event, Storm Fest, raising approximately $180. Storm Fest took place on Feb. 25 and 26 at the Carnegie Science Center (CSC) in Pittsburgh, Pa. On the first day, a number of local schools attended as a field trip day. On the second day, we set a record for attendance with 3,123 people. There were 32 student-led educational booths with earth sciences related activities for kids of all ages. Nick Walker of The Weather Channel presented two entertaining singing weather shows to young students. Several news media stations and newspapers attended and interviewed some of our chapter members.

We had two speakers visit Cal U this semester. On Feb. 18, Dr. Chris Weiss gave a presentation on the Verification of the Origins of Rotation in Tornadoes Experiment 2 (VORTEX 2). The visit was a huge success with so many students interested in VORTEX 2. On March 24, Steve Zubrick (NWS Sterling, Va.) visited Cal U and gave a presentation on his experience working in the NWS Sterling office and diagnosed recent severe weather outbreaks and some MCS events that occurred around southwest Pennsylvania and the surrounding region.

Students from our chapter that are also members of the Earth Sciences Council at Cal U hosted a first annual Internship Fair on March 2. The Earth Sciences Council contains members from each Earth Science club and is run by the Earth Sciences Department staff. Each club invited a few organizations within their field to set up a table with information on their organization, including summer internship opportunities. Our chapter hosted Fred McMullen, the Warning Coordination Meteorologist from the NWS Pittsburgh office.

On March 30, student members participated in the annual Science Olympiad event that takes place at Cal U every March. Students from surrounding middle and high schools travel to Cal U and participate in various science-related activities. We volunteer to help with activities, registration, assessing event activities and parking around Cal U. On March 31, members of our chapter participated in the Advanced SKYWARN® training class administered by Charlie Woodrum at NWS Pittsburgh. This training is a pre-requisite for any students taking the Storm Chase Field Experience course in the summer.

To keep up with our chapter, visit our website at: http://sai.calu.edu/weather/web-content/index.asp.

The 36th National Weather Association Annual Meeting

We look forward to seeing you in Birmingham Oct. 15 to 20!

http://www.nwas.org/meetings/nwa2011/

NWA Sponsored Meetings

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

The 36th Annual Meeting will be held at the Wynfrey Hotel in Birmingham, Ala. www.nwas.org/meetings/nwa2011/

Oct. 20-21: 7th GOES Users' Conference

This conference will be held in the Wynfrey Hotel in Birmingham, Ala., with the first day being a joint meeting with the 36th Annual NWA Meeting. www.nwas.org/meetings/nwa2011/ and http://directreadout.noaa.gov/GUC_VII/

Jan. 14, 2012: Minnesota Storm Chasing Convention

This convention is being cosponsored by the NWA and many other organizations. It will be at the Best Western Kelly Inn – Plymouth, Minn. www.mnstormchasingconvention.com

Feb. 27 – March 1, 2012: 2nd National Flood Workshop

Organized by Weather Research Center (a private, non-profit education and research center) in Houston, Texas, it brings together agencies, emergency managers, academia and professionals from across the nation to encourage dialogue on various aspects of flooding. For more information, visit call Weather Research Center at 713-539-3076, visit www.nationalfloodworkshop.net or email wrc@wxresearch.org.

Other Meetings & Conferences

Oct. 3 - 5: Ice and Freezing Fog Workshop

Environment Canada will host a workshop on ice and freezing fog in St. John's, Newfoundland, Canada. http://collaboration.cmc.ec.gc.ca/science/arma/FRAM_2

Oct. 31 – Nov. 2: 15th Great Divide Weather Workshop

NWS Offices in Great Falls and Missoula will host this workshop. This year's theme is "Sharing Innovative Science and Service". www.wrh.noaa.gov/wrh/greatdivide/welcome.php

Jan. 22-26, 2012: 92nd Annual AMS Meeting

It will be in New Orleans, La. www.ametsoc.org/MEET/annual/

Jan. 22, 2012: AMS Short Course On Art & Science of Forensic Meteorology

New Orleans, La. Co-organizer is Steve Harned, NWA Executive Director. http://annual.ametsoc.org/2012/index.cfm/programs-and-events/short-courses/ams-short-course-on-the-art-science-of-forensic-meteorology

Exciting News from COMET

Greg Byrd, UCAR/COMET

A new version of the MetEd website was published in May. The redesigned interface has a clean new look and is designed to help users access modules and their personal information with ease. We're adding a "My MetEd" feature where you can more easily track your quiz scores, progress in distance learning courses, print completion certificates and add modules to a personal queue.

We have updated and published several modules, including some in new topic areas. Please read on for details of items that may be of the most interest to you.

- An updated version of our most popular satellite meteorology module: GOES Channel Selection - v2 contains updated imagery throughout and new information regarding GOES 13, 14 and 15
- Two new modules to help train storm spotters: Skywarn Spotter Convective Basics and Role of the Skywarn Spotter
- On the important subject of numerical weather prediction: Optimizing the Use of Model Data Products
- Two new modules about volcanic ash, a major aviation hazard: Volcanic Ash: Introduction and Volcanic Ash: Volcanism
- Something that has been all to relevant several times in the past couple of years: Volcanic Ash: Impacts to Aviation, Climate, Maritime Operations and Society

Other new and interesting topics include:

- Preparing to Evaluate NWP Models
- HYSPLIT Applications for Emergency Decision Support
- Sea Ice and Products and Services of the National Ice Center
- Flash Flood Processes: International Edition
- An entire collection of 13 different mountain-weather-related expert lectures

If you live in a coastal community you may be especially interested in these modules:

- Community Tsunami Preparedness
- Coastal Climate Change
- Flood Forecasting Case Study: International Edition

These materials are freely available to everyone, courtesy of our sponsors, NOAA's NWS and National Environmental Satellite, Data and Information Service (NESDIS) programs and European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), the Naval Meteorology and Oceanography Command and the Meteorological Service of Canada.

Registration is required to access the modules; it is free, easy and available in both English and Spanish. We welcome any comments, suggestions or feedback you have on these or any other training offerings available through the MetEd website. To access any of the above topics or articles, go to the Meted homepage at: www.meted.ucar.edu.

Seal of Approval: Bringing Weather Down to Earth

We regularly list members who have reveived their NWA Seal of Approval in our Newsletter; however, we have never explained why the seal exists. Here is the NWA Broadcast Meteorology Committee Purpose:

"The public deserves the most accurate and timely weather forecast and warning information, in terms they can understand, to take appropriate action. For quality of life and the safety of all, weathercasters and other media representatives should commit to provide and continually improve this service. The NWA Broadcast Meteorology Committee promotes the development of quality television and radio weathercasting among NWA members. Through the NWA Broadcaster Seal of Approval program, the NWA grants Seals of Approval to NWA member weathercasters in radio and television who meet or exceed the standards set by the NWA. The Broadcast Meteorology Committee, with the approval of the NWA Council, is responsible for the review and update of the Seal of Approval guidelines, qualifications, and procedures, to ensure the Seal remains credible and relevant. The NWA Broadcast Meteorology Committee also fosters a better relationship among weathercasters and the National Weather Service, and other government and private-sector meteorological entities."

Please go online for a list of Seal holders and information about qualifying for the NWA Seal: www.nwas.org/seal/.

Dates 2 Remember

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

Oct. 20-21: 7th GOES Users' Conference, Birmingham, Ala.

Oct. 31-Nov. 2: 15th Great Divide Weather Workshop, Bozeman, Mont.

Jan. 14, 2012: 2012 Minnesota Storm Chasing Convention, Plymouth, Miss.

Jan. 22-26, 2012: 92nd Annual AMS Meeting, New Orleans, La.

Jan. 22, 2012: AMS Short Course on Forensic Meteorology, New Orleans, La.

Feb. 27 – March 1, 2012: 2nd National Flood Workshop, Houston, Texas

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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: member.nwas.org.**

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

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