NEWSLETTER

National Weather Association

NO. 08 – 11 NOVEMBER 2008

U.S. election boasts historical voter turnout! Will NWA have the same bragging rights?

Traditionally, only a fraction of NWA members vote for officers and councilors. We want to change that trend this year so we've provided members with these options for filling the 2009 offices:

EARLY VOTING
Ballots were mailed out a month early this year!

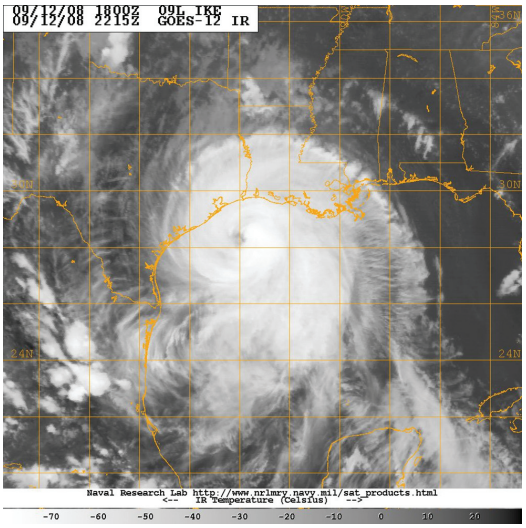
ONE STOP VOTING/MEMBERSHIP
Go to www.nwa-registration.org/nationaldues.shtml and update your membership when you cast your vote!

See page 3 for the entire listing of candidates for 2009 offices.

GET OUT THE NWA VOTE

A New Satellite Constellation — Leveraging NPOESS and GOES-R

Syn•er•gy [fr. Gk. *synergos* working together]: combined action or operation



GOES-12 IR image of Hurricane Ike on 12 September 2008 just hours before making landfall at Galveston, Texas. Image credit: NRL www.nrlmry.navy.mil/TC.html.

Since the mid-1970s, the National Oceanic and Atmospheric Administration (NOAA) has operated a fleet of low-Earth orbit (LEO) and geostationary Earth orbit (GEO) meteorological satellites to monitor the weather and climate of the Earth and provide data to support short to medium-range weather forecasts and severe weather warnings. Both LEO and GEO satellites are necessary for weather forecasting because they provide independent but highly synergistic and complementary capabilities and data. NOAA's Polar-orbiting Operational Environmental Satellites (POES) and their Department of Defense (DoD) counterparts, the Defense Meteorological Satellite Program (DMSP) spacecraft, fly in polar, sun-synchronous LEO. These satellites collect repeatable, quantitative atmospheric, near-Earth space environment, terrestrial, and oceanic data - primarily to initialize and update global and regional short to medium-range numerical weather prediction (NWP) models. NOAA's Geostationary Operational

Continued page 4

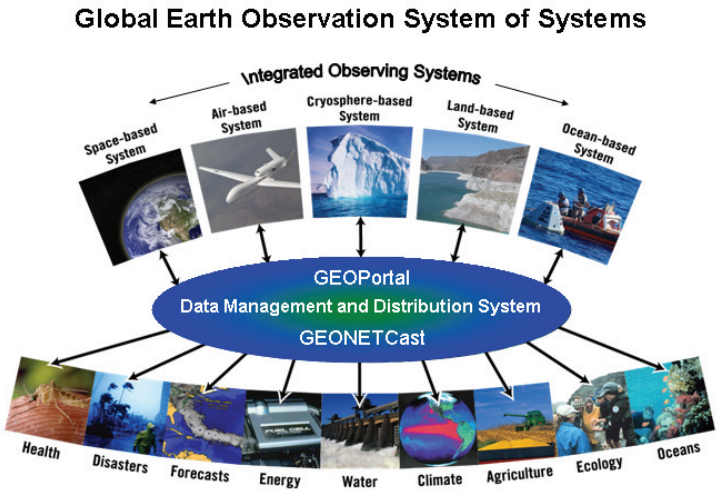
Inside This Edition

GEOSS: Maximizing the Value of Satellite Remote Sensing for Societal Benefits

Each year weather and climate related natural hazards cause thousands of fatalities and tens of billions of dollars in economic losses worldwide. Hurricanes, typhoons, and mid-latitude storms are highly visible to the public. Frequently these severe storms cause significant loss of life and property. In 2005, the Gulf coast of the United States suffered through two devastating Category 5 hurricanes, Katrina and Rita, which killed nearly 2,000 people and caused property losses of between $70 and $130 billion. In May 2008, another devastating tropical cyclone in the Indian Ocean killed over 78,000 people in Myanmar. At the other extreme, extended periods of drought can also inflict tremendous losses. In 1988, dry conditions in the Midwest caused an estimated $40 billion in crop damage. Continuing drought conditions in the southwest United States have seriously depleted water resources in the Colorado and Rio Grande River basins, impacting agriculture as well as interstate and international relations. Recent drought has also contributed to massive wildfires in southern California. Statistics compiled by insurance companies for the past 50 years show that major natural disasters around the world have caused economic losses of nearly $1 trillion. Global environmental observing systems that support better warnings and preparedness can reduce this loss of life and property due to natural disasters.

Today many thousands of individual instruments, data collection systems, and data distribution systems are in constant use for diverse purposes around the world, but these systems usually are operated independently without even local or regional connectivity. Users at many levels – farmers making crop choices, emergency managers planning evacuation routes, nations battling drought and disease, the public checking daily weather reports – all take advantage of available data from satellite remote sensing, aerial surveys, land or ocean-based in situ monitoring systems, and a vast array of socio-economic information to make important decisions. However, the Earth observation data being collected are just a fraction of what could be put to use in every region of the world, if the data collection and distribution systems were interconnected globally to provide easy access and user friendly information.

Since 2003, the Group on Earth Observations (or GEO), that now includes 74 governments and the European Commission, has been coordinating international efforts to build a Global Earth Observation System of Systems (GEOSS). This emerging global, public infrastructure is beginning to interconnect a diverse and growing array of instruments and systems for monitoring and forecasting changes in the global environment. GEOSS will link together existing and planned observing systems around the world and support the development of new systems where gaps currently exist. Common technical standards are being adopted so that data from the thousands of different instruments and systems can be combined into coherent data sets and accessed in near real-time for use by decision makers.



GEOSS is simultaneously addressing nine areas of critical importance to society. The goal of GEOSS is to empower the international community to: improve weather forecasts, protect itself against natural and human-induced disasters, respond to climate change and its impacts, safeguard water resources, understand the environmental sources of health hazards, manage energy resources, manage ecosystems, promote sustainable agriculture, and conserve biodiversity. GEOSS is using a cross-cutting approach to address interrelated issues, thereby avoiding unnecessary duplication, encouraging synergies between systems, and ensuring substantial economic, societal, and environmental benefits.

Satellite remote sensing systems are an important component of the emerging GEOSS. Since the mid-1980's, the Committee on Earth Observation Satellites (CEOS), which is one of 51 Participating Organizations in GEOSS, has fostered cooperation among international satellite operators and programs. CEOS has helped lay the groundwork for the satellite remote sensing component of GEOSS by identifying gaps in remote sensing coverage and providing high-resolution satellite data free of charge to nations in the midst of national disasters. Operational and research polar-orbiting satellites along with operational geostationary satellites provide cost-effective, continuous global coverage of critical environmental information, such as storms, pollutants, ocean surface temperatures, precipitation, soil moisture, snow and ice cover, and vegetation health. Within the U.S., NOAA's Polar-orbiting Operational Environmental Satellites (POES) and Geostationary Operational Environmental Satellites (GOES) are already contributing data to the emerging GEOSS. By the time that the National Polar-orbiting Operational Environmental Satellite System (NPOESS) and GOES-R are launched in the next decade, the GEOSS infrastructure will be well poised to accept and use the improved global environmental data from these new systems.

As part of the "backbone" of the U.S. contribution to GEOSS, NPOESS and GOES-R will provide an unprecedented ability to accurately monitor Earth and its processes across a broad range of temporal, spatial, and spectral scales. Certainly members of the National Weather Association should be aware of the expected contributions of measurements from NPOESS and GOES-R to improvements in numerical weather prediction and weather nowcasting and forecasting. Moreover, these new systems will allow us to address all nine GEOSS societal areas with fidelity equal to that for weather forecasting. For example, improvements in visible, infrared, and microwave imaging will allow us to better map and monitor spatial patterns and seasonal and inter-annual variability in global vegetation and monitor crop stress, deforestation, and desertification globally. The information provided will play a crucial role in decisions affecting agriculture, trade policy, and international food aid.

GEOSS appears to have already affected international satellite remote sensing programs. China, India, Japan, Russia, and the Europeans, through their Global Monitoring for Environment and Security

See "Value" page 6

Newest NWA Corporate Members

The National Weather Association to welcomes our newest corporate members:

California University of Pennsylvania
California, Penn.

IPS Meteostar, Inc.
Englewood, Colo.

Corporate members, through their Points of Contact (POC), receive *National Weather Digests*, NWA monthly Newsletters, reduced registration and exhibit fees at the NWA Annual Meetings and reduced prices for NWA Monographs and Publications. Corporate members receive precedence for advertising space in NWA publications and for exhibit space at NWA annual meetings. They are listed in each National Weather Digest issue and are listed on the NWA Web site.

2009 NWA Ballot for Officers and Councilors

President-Elect
Bruce Thomas
Midland Radio Inc., Kansas City, Mo.

Steven Zubrick
NOAA/NWS Forecast Office, Sterling, Va.

Vice President
Ralph Ferraro
ESSIC/CICS University of Maryland
NOAA/NESDIS, College Park, Md.

Dr. Patrick Market
University of Missouri at Columbia
Dept of Soil, Environmental & Atmospheric Sciences
Columbia, Mo.

Treasurer
Jeff Craven
NOAA/NWS Forecast Office, Sullivan, Wis.

Bradford Herold
NOAA/NWS Forecast Office, Indianapolis, Ind.

Secretary
No election this year. Secretary on ballot every odd year for two-year terms.

Councilor
David Billingsley
NOAA/NWS Southern Region Headquarters, Fort Worth, Texas

Kenneth Carey
Noblis Center for Science and Technology, Falls Church, Va.

Councilor (continued)
Dr. Richard Dixon
Texas State University, San Marcos, Texas

John Gordon
NOAA/NWS Forecast Office, Louisville, Ky.

Jacqui Jeras
CNN, Atlanta, Ga.

Dr. Anthony Lupo
University of Missouri at Columbia
Dept of Soil, Environmental & Atmospheric Sciences
Columbia, Mo.

Bernard Meisner
NOAA/NWS Southern Region Headquarters, Fort Worth, Texas

Erik Pytlak
NOAA/NWS Forecast Office, Tucson, Ariz.

Nezette Rydell
NOAA/NWS Forecast Office, Brownsville, Texas

Wendy Schreiber-Abshire
UCAR/COMET, Boulder, Colo.

Look for your ballot in the mail or vote at: www.nwa-registration.org/nationaldues.shtml

PRESIDENT'S MESSAGE

This month's edition of the NWA *Newsletter* focuses on the annual election of officers. The outcome of the national election will have been decided by the time this issue arrives; however, the same cannot be said for the results of the NWA's electoral process. Each member in our organization plays an essential role in the decision-making of the Council as well as the future direction of the NWA by participating in the annual election. The next President Elect, Vice President, Treasurer and Councilors will be tasked with maintaining an unblemished record of stewardship, continuity of purpose and dedication to our vision of promoting excellence in operational meteorology.

I cannot overstate the influence you exert by participating in the annual election. Less than 30 percent of our members voted in the 2007 election leading to several extremely close races. Consequently, one of my goals as president is to encourage a greater participation in this year's election. This effort began at the annual meeting in Louisville with the posting of pictures of the 2008 nominees. Attendees were provided the opportunity to place a name with a face, and perhaps even engage a nominee in discussion. The second step in promoting more involvement is to make this year's ballot available at an earlier date. It will arrive shortly with your dues statement and accompanied by professional bios of the candidates. Please read them carefully and VOTE!

I extend my thanks to all our members for their support and encouragement. I especially want to acknowledge our officers, the Council and those who serve on NWA committees. It has been my privilege to serve this great organization with you. As always, I am just a click away at President@nwas.org.

John Scala
President

GOES-R continued from front

Environmental Satellites (GOES) maintain position in GEO taking nearly continuous "snapshots" of weather systems over the CONUS and major portions of the central and western Atlantic Ocean and the eastern and central Pacific Ocean. GOES data are used for both qualitative and quantitative image analysis to support nowcasting, short-term forecasting, and severe weather warnings and are assimilated into global and regional NWP models.

To meet future needs for space-based, remotely-sensed data to improve weather, hydrologic and climate services to the nation, NOAA and its partner agencies are embarked on a decadal effort to build and fly the next generation of LEO and GEO operational environmental satellites that will replace the heritage POES, DMSP, and GOES systems. The National Polar-orbiting Operational Environmental Satellite System (NPOESS) will replace POES and DMSP beginning in 2013 and the Geostationary Operational Environmental Satellite-R series (GOES-R) is planned for launch in approximately 2015 to replace the current series of GOES. NPOESS and GOES-R will carry similar, advanced-technology, high-resolution visible/infrared imagers to provide the weather forecasting community with highly complementary data. NPOESS will carry a 22-band (29 counting seven dual-gain bands) Visible/Infrared Imager Radiometer Suite (VIIRS) that will be radiometrically calibrated and consistent on successive VIIRS instruments to provide complete daily global coverage over the visible, short/medium-infrared, and long-wave infrared spectrum at horizontal spatial resolutions of 370 m and 740 m at nadir. The GOES-R Advanced Baseline Imager (ABI) will be a state-of-the-art, 16-channel imager covering 6 visible to near-Infrared (IR) bands and 10 IR bands. Spatial resolutions are band dependent: 0.5 km at nadir for broadband visible; 1.0 km for near IR; and 2.0 km for IR. VIIRS and ABI will be used to generate products such as high resolution cloud imagery, cloud properties, low level clouds and fog, clear-sky radiances, Atmospheric Motion Vectors (AMVs), Quantitative Precipitation Estimates (QPEs), land and sea surface temperatures, snow cover, sea ice, vegetation and land surface types. VIIRS and ABI will also be used to detect and characterize atmospheric aerosols, volcanic ash, and fires. These next generation satellites will also carry other advanced-technology instruments unique to each system that will enhance the synergy between NPOESS and GOES-R, helping to build a "system of systems." These sensors will be used to profile the atmosphere, observe and image atmospheric, terrestrial, and oceanic phenomena, monitor the Earth's radiation budget and climate, and probe the near-Earth space environment.

In the next decade, GOES-R and NPOESS will be the principal U.S. operational, space-based observing systems for monitoring climate variability. GOES-R and NPOESS, flying in controlled, stable orbits, will both carry well-calibrated instruments suitable for long-term monitoring of essential climate variables including sea and land surface temperature, water vapor, cloud properties, ozone, aerosols and winds. Cross-calibration of similar instruments on GOES-R and NPOESS (i.e., ABI and VIIRS) will facilitate the production of consistent and reliable climate data records for these types of variables based on measurements from both systems.

The potential benefits of leveraging the capabilities of NPOESS and GOES-R are apparent even as the instruments for the new satellites are being developed. Approximately half of the channels on VIIRS will be identical to or will be closely matched to similar channels on ABI. The horizontal resolution of imagery from VIIRS and ABI will be much more closely matched than can be achieved currently between imagery from POES and GOES. The radiometric calibration and accuracy of ABI will be significantly better than the heritage imager on GOES, permitting routine cross-calibration of visible/infrared imagery and radiance data between ABI and VIIRS. Consistency of radiometric measurements between NPOESS and GOES-R instruments will help improve present NWP weather forecasting capabilities and potentially allow forecasters to extend the range of severe storm forecasts for the United States. GOES-R and NPOESS will continue to provide most of the data that are assimilated into NWP models and will provide timely measurements needed to derive and predict critical quantitative weather products.

Data from complementary instruments on NPOESS and GOES-R will provide opportunities to improve existing products and to derive new products that cannot be generated from a single system. For example, combining cloud imagery from ABI and VIIRS with sounding data from the Cross-track Infrared Sounder (CrIS) on NPOESS may result in better assignment of heights for GOES-R derived AMVs. The combination of IR data from VIIRS and ABI with microwave data from the Microwave Imager/Sounder (MIS) and Advanced Technology Microwave Sounder (ATMS) that will be flown on NPOESS will result in improved global, regional and local scale SST products.

Exploiting the synergies between NPOESS and GOES-R will require faster delivery of data and skillful combination of data from complementary instruments on the two systems. The ABI on GOES-R will be capable of scanning the Full Disk (FD) in approximately 5 minutes, a major improvement that will facilitate more rapid imaging of severe weather systems that often evolve quickly. The NPOESS SafetyNet™ ground system will deliver 77% of the global data within 15 minutes and 95% of the data within 28 minutes from the time of on-orbit collection, a data latency that approaches the current GOES system and a dramatic improvement in data latency compared to the heritage POES and DMSP systems. Faster delivery of data will facilitate greater use of NPOESS and GOES-R data at regional and local weather forecast offices. These more rapid updates from GOES-R and NPOESS will provide critical information leading to longer lead times on warnings and advisories, thus saving lives and property and reducing costs.

Products from both GEO and LEO satellites can be invaluable for monitoring the intensity of tropical cyclones. Forecaster confidence can be enhanced by using both systems together and exploiting data from instruments on one system that aren't on the counterpart. The potential benefits of the synergy between NPOESS and GOES-R are highlighted well in a recent example of data acquired from heritage GOES and POES systems during the recent landfall of Hurricane Ike on the Texas coast.

As Hurricane Ike approached Texas, it appeared that the storm was starting to strengthen after two days of near constant intensity, based on the redevelopment of a pronounced eye as shown in the GOES-12 IR image in Figure 1 (front cover of newsletter). But with the prospect of massive evacuation orders looming, forecasters needed to be confident of their assessment. The Advanced Microwave Sounding Unit (AMSU-A) on NOAA-15 has special temperature sensing channels that can be imaged to reveal warm anomalies aloft that are characteristic of tropical cyclones. In general, the higher the temperature aloft the more intense the hurricane will be. As shown in Figure 2, the AMSU-A image of Hurricane Ike acquired just prior to landfall in Texas reveals pronounced warming compared to AMSU-A data from an earlier pass. This information helped confirm the strengthening trend observed from the GOES-12 IR image. Imagery from NOAA-15 AMSU-B strengthens the case for intensification even further. This microwave channel shows cloud

and precipitation features near the surface. The image in Figure 3a acquired at about 1100 UTC on September 12, 2008 shows an eyewall that is only partially wrapped around the center. Twelve hours later the wraparound is more complete (Figure 3b), increasing forecaster confidence in the intensification of Ike just before making landfall. The preliminary post-storm analysis indicates that Hurricane Ike strengthened by about 10 knots in its final approach to landfall. This would confirm the effectiveness of the remotely-sensed data. Efforts are underway to combine the attributes of these images into an objective, automated algorithm that estimates hurricane intensity. The method, called SATCON (SATellite CONsensus), statistically blends information from IR, AMSU-A, and AMSU-B to derive a consensus estimate of hurricane maximum wind and minimum pressure. For more information see: http://cimss.ssec.wisc.edu/tropic2/real-time/satcon/.

Together, NPOESS and GOES-R will serve as the basis of the United States contribution to build the Global Earth Observation System of Systems (GEOSS). A global network of observing systems will allow scientists to improve weather forecasts, predict energy needs months in advance, monitor forest fires and volcanic ash, issue timely warnings of air quality effects, and anticipate outbreaks of environment-related diseases. The return on investments in NPOESS and GOES-R will benefit the general public in the U. S. and the international community for decades to come.

For an expanded version of this article including more information on NPOESS and GOES-R instruments and their capabilities, visit: www.nwas.org/committees/rs/train.html.

Craig Nelson, Tom Lee and Jim Gurka,
NWA Remote Sensing Committee
Chris Velden, CIMSS, University of Wisconsin

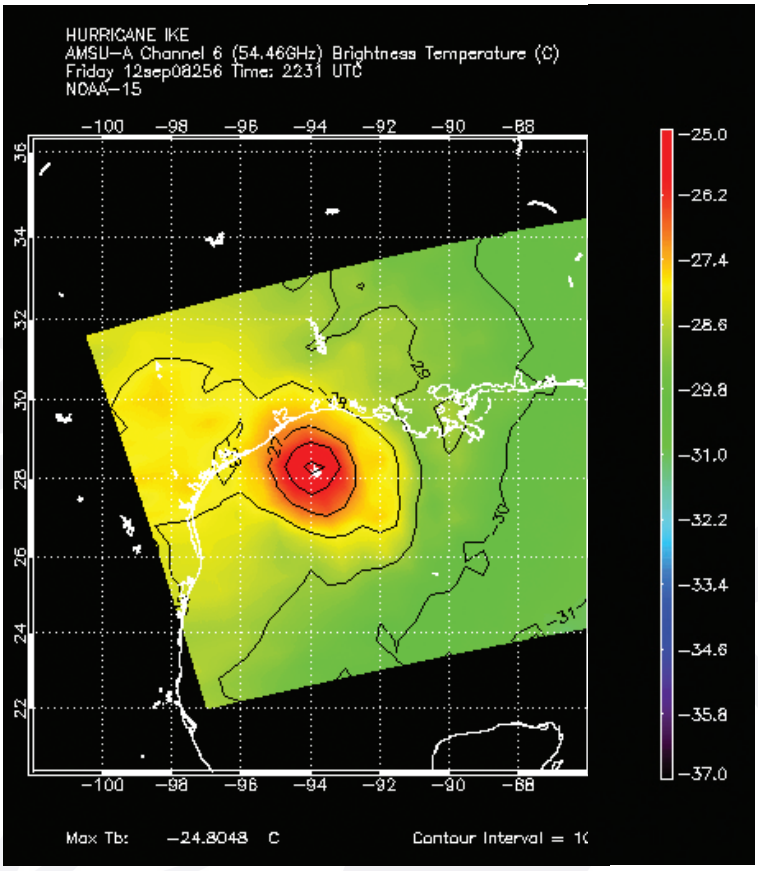
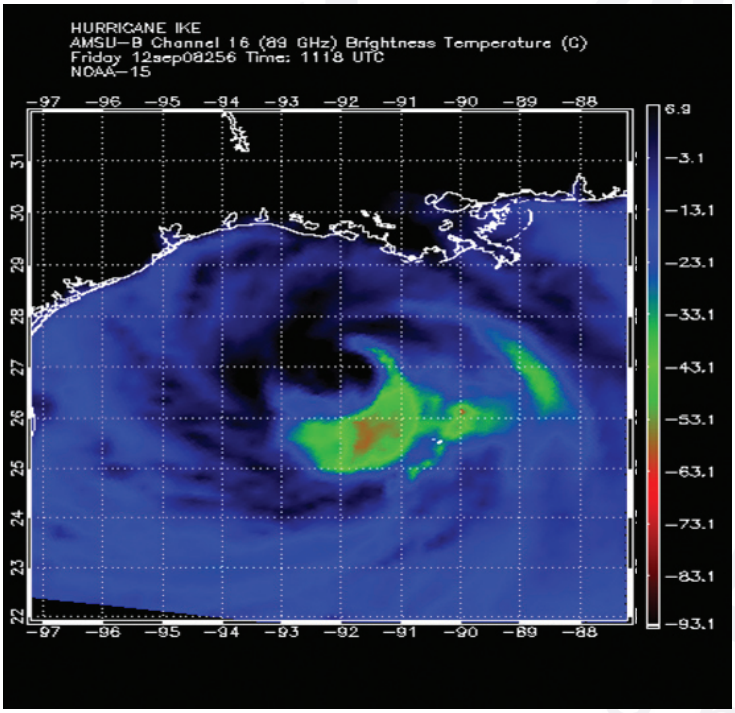


Figure 2. NOAA-15 AMSU-A Channel 6 (54.46 GHz, ~350 hPa), Brightness Temperature taken on 12 September 2008 reveals pronounced warming with a maximum value of -24.8 C or about 1.5 C of warming in 24 hours compared to an earlier pass.
Image credit: University of Wisconsin CIMSS http://amsu.ssec.wisc.edu.



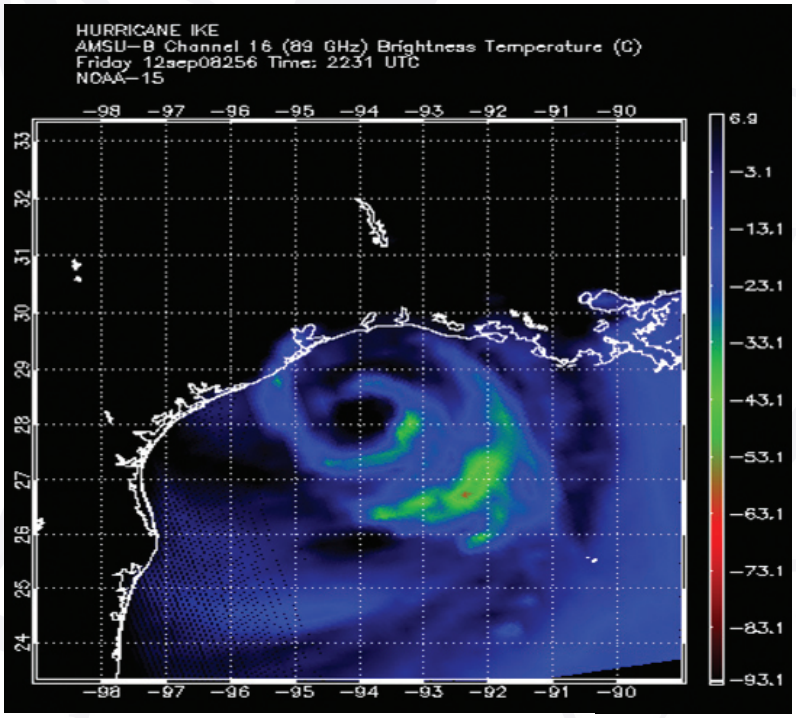
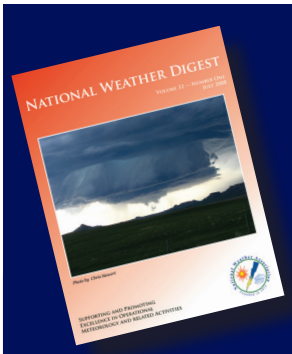


Figure 3. NOAA-15 AMSU-B Channel 16 (89 GHz), Brightness Temperature taken on 12 September 2008 at 1118 UTC (on left) and 2231 UTC (on right).
Image credit: University of Wisconsin CIMSS http://amsu.ssec.wisc.edu.



National Weather Digest
Volume 32, Number 2

Coming Soon!

The Influence of Previous Experience of Tornadoes on Residents' Severe Weather Preparedness: A Comparative Study of Abilene, Texas and Huntsville, Alabama *(by Andrew Pennell)*

Seasonal Temperature and Precipitation Dependencies in Southeast Alaska *(by Amy E. Schnetzler and Carl F. Dierking)*

The Interannual Variability of Hurricane Activity in the Atlantic and East Pacific Regions *(by Anthony R. Lupo, Tamara K. Latham, Trenton H. Magill, Joseph V. Clark, Christopher J. Melick and Patrick S. Market)*

The Historic Christmas 2004 South Texas Snow Event: Diagnosis of the Heavy Snow Band *(by Ronald F. Morales Jr.)*

Annual and Seasonal Tropospheric Temperature Trend Comparisons of Radiosonde and Reanalysis Data at Regional Scales *(by Christopher A. Davey, Roger A. Pielke Sr. and Thomas N. Chase)*

Using the Thermal Wind Relationship to Improve Offshore and Coastal Forecasts of Extratropical Cyclone Surface Winds *(by James B. Truitt)*

Value continued from page 2

(GMES) initiative, are planning or preparing to launch their next generation geostationary and polar-orbiting environmental satellite systems. GEOSS will help promote the inter-calibration of current and future U.S. satellite measurements with other international environmental satellite systems to allow the combined capabilities of these systems to benefit a greater portion of the world's population. For many of the GEOSS nine societal areas, these systems will become part of a "global early warning system." GEOSS is also having a marked impact on the "free and open exchange" of data among the international community. Notably the European Space Agency (ESA) and the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) have recently relaxed their restrictions on the release of satellite data to non-member state organizations. Indeed access to and the exchange of environmental data is fundamental to GEOSS.

GEOSS will be a global network of content providers, similar to the Internet that will provide decision-support tools to a wide variety of users who will be able to access an extraordinary range of environmental information. Users will be able to access data through the "GEOPortal" or via "GEONETCast." The GEOPortal is a single Internet access point that connects users seeking data, imagery and analytical software packages relevant to all parts of the globe to existing data bases and portals. The GEO has initiated a year-long test and evaluation phase for GEOPortal and is soliciting users to test and provide feedback on three candidate GEOPortal systems. Users who want to participate in this test phase may access the portals at: www.earthobservations.org/gci_gp.shtml.

For users with limited or no access to the Internet, similar GEOSS information is available via the GEONETCast network of telecommunication satellites. GEONETCast is a near real-time, global network of satellite-based data dissemination systems designed to distribute space-based, air-borne and in situ data, metadata and products. GEONETCast is led by EUMETSAT, the U.S., China, and the World Meteorological Organization (WMO). The European (EUMETCast) and Chinese (FengYunCast) components of GEONETCast are currently operating. NOAA is planning a future broadcast service called "GEONETCast-Americas" that will cover the Americas.

The following products and services are being made available to the GEONETCast user community:

- Meteosat image data
- GOES East and West image data
- Land and Ocean Sea Ice Satellite Application Facility (SAF) products
- EUMETSAT meteorological products
- NOAA-NESDIS meteorological products
- NOAA-NESDIS Ocean color and sea surface temperature products
- VEGETATION products from VITO Belgium
- MODIS Ocean color products China Meteorological Administration (CMA) FY2C satellite images
- CMA FY2C meteorological products

From land to sea, to wind, rain and drought, improved global monitoring of the Earth will benefit the world's people and provide valuable information about our dynamic and changing environment. Sustained measurements of the Earth system that will be available through GEOSS will assist in essential tasks such as improving weather forecasts, assessing disasters, monitoring crops and climate, managing marine resources, and determining environmental change.

Craig Nelson
Remote Sensing Committee

More on GEOSS

www.earthobservations.org
www.noaa.gov/eos.html
http://usgeo.gov/
www.epa.gov/geoss/

More on GEONETCast

www.eumetsat.int/home/Main/What_We_Do/Technical_Cooperations/GEONETCast/index.htm?l=en

Professional Development Opportunities

Next Generation Warning Services Workshop: Dec. 2 – 4
Hosted by the University of Oklahoma and NOAA's NWS, the workshop brings together technical and operations experts from the private weather enterprise, the broadcast media, emergency managers and academia to determine needs for accurate, accessible, and timely watch, warning and advisory services from the NWS . (Register at http://apps.weather.gov/partners/index.php)

8th NOAA Satellite Direct Readout Conference: December 8-12, 2008
Hosted by NOAA at the Hilton Miami Airport Hotel in Miami, Fla. The direct readout from meteorological and environmental satellites as well as to NOAA satellites and programs will be discussed. (http://directreadout.noaa.gov/miami08/)

89th AMS Annual Meeting: January 11-15, 2009
The meeting will be held at the Phoenix Civic Plaza Convention Center in Phoenix, Ariz. (www.ametsoc.org/MEET/annual/)

9th Annual National Severe Weather Workshop: March 5 – 7, 2009
Contribute to the design and planning of this Normal, Okla., workshop through the first National Severe Weather Workshop survey. Online for a limited time at https://www.surveymonkey.com/s.aspx?sm=cbcttdbgCU60u9EieQO1_2fQ_3d_3d.

34th Annual Northeastern Storm Conference: March 6 – 8, 2009
Dr. Howard Bluestein is the banquet speaker; Wendy Abshire will speak at the Ice Breaker. Sponsored by the Lyndon State College AMS/NWA Chapter, conference details at http://apollo-dev.lsc.vsc.edu/ams/index.php?page=nesc.

2009 Alaska Weather Symposium: March 10 – 12, 2009
This symposium will be held in Fairbanks, Alaska. (http://weather.arsc.edu/Events/ASW09)

2009 TESSA National Storm Conference: March 14, 2009
Free to the public, it include the third annual Super Storm Spotter Session (providing the nation's highest level of training available to storm spotters) presented by Ft. Worth NWS Warning Coordination Meteorologist Gary Woodall. (www.tessa.org)

7th Annual Climate Predication Applications Science Workshop: March 24-27, 2009
This workshop will be at the National Weather Center in Norman, Okla. For more, visit http://climate.ok.gov/cpasw/ or call Diane Perfect at (301) 713-1970 ext. 132.

The 2009 Southeast Severe Storms Symposium: March 27-28, 2009
Sponsored by the East Mississippi Chapter of the NWA and AMS. (www.msstate.edu/org/nwa/sympos.shtml)

7th Annual Great Lakes Meteorology Conference: March 28, 2009
Sponsored by the Valparaiso University AMS/NWA Chapter, it will be at Strongbows Inn in Valparaiso, Ind. Dr. Tim Marshall from Haag Engineering is the keynote speaker. Abstracts due Feb. 8, 2009. (www.valpo.edu/organization/nwa/)

13th Annual Severe Storms and Doppler Radar Conference: Tentatively scheduled April 2 – 4, 2009
Sponsored by the Central Iowa Chapter of the NWA. (www.iowa-nwa.com)

13th Annual Northern Plains Weather Workshop: April 7 – 8, 2009
Sponsored by the NWS and the SD School of Mines and Technology, it will be in Rapid City, S.D. Subjects include VORTEX2, dual-polarization radar and incident support meteorology. Abstracts due March 1, 2009. (www.ias.sdsmt.edu/NPWorkshop/)

23rd AMS Conference on Weather Analysis and Forecasting/19th AMS Conference on Numerical Weather Prediction: June 1 – 5, 2009
Sponsored by the AMS and NWA; organized by the AMS Committee on Weather Analysis and Forecasting with assistance from the NWA Committee on Weather Analysis and Forecasting. The conference will be in Omaha, Neb. Abstracts due Jan. 29, 2009. (www.ametsoc.org/MEET/ann/callforpapers.html)

Inland Impacts of Tropical Cyclones Conference: June 10 – 12, 2009
Hosted by the Metro Atlanta NWA/AMS Chapter, it will be at the Westin Peachtree Plaza in Atlanta, Ga. Oral presentations are solicited around the broad theme of the inland impacts of tropical cyclones. Please submit abstracts electronically to the science committee chairperson: Rob Handel at robert.handel@noaa.gov. Abstracts due Feb. 6, 2009. Contact program chairperson Trisha Palmer (trisha.palmer@noaa.gov) or visit www.ametsoc.org/chapters/atlanta/iitc.htm for more.

34th NWA Annual Meeting: Oct. 17 – 22, 2009
The Meeting will be at the Sheraton Waterside Hotel in Norfolk, Va. Details will be online once available.

Member News: Kristine Kahanek Releases Children's Book

Kristine Kahanek, a NWA Broadcast Sealholder and former NWA Councilor recently released her first children's book "*Katie and the Magic Umbrella*."

In this charming story, guardian angel Katie helps the children she protects better understand thunderstorms so they can overcome their fears. Kristine's book is wonderfully illustrated and includes a glossary of weather terms as well as a "Let's Talk About It!" section with discussion questions and answers.

A popular television meteorologist in the Dallas/Fort Worth Texas market, Kristine was approached by parents wanting suggestions to calm the fears of their children when thunderstorms and tornadoes threatened. The book is a tribute to Kristine's own children, especially the baby daughter Katherine who she and her husband lost eight months into the pregnancy.

"*Katie and the Magic Umbrella*" is available at most major booksellers nationwide.

www.katieandthemagicumbrella.com

Dates 2 Remember

Dec. 2 – 4: Next Generation Warning Services Workshop, Norman, Okla.

Dec. 8 – 12: 8th NOAA Satellite Direct Readout Conference, Miami, Fla.

Jan. 11 – 15: 89th AMS Annual Meeting, Phoenix, Ariz.

March 5 – 7: 9th Annual National Severe Weather Workshop

March 6 – 8: 34th Annual Northeastern Storm Conference

March 14: TESSA National Storm Conference

March 27 – 28: 2009 Southeast Severe Storms Symposium

March 28: 7th Annual Great Lakes Meteorology Conference

See page 7 or www. nwas.org/events.php for details on these and additional Professional Development Opportunities!

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