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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
Fort Worth, Texas

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SOUTHERN TOPICS

Working Together To Save Lives

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REGIONAL DIRECTOR

Please join me in welcoming two new WFO MICs - new to their positions, at least, although not the region. **Bill Alexander** returns to the Southern Region as meteorologist-in-charge of WFO El Paso. Bill who began his NWS career as an intern at WSFO Fort Worth in 1982 replaces former MIC Max Blood who has transferred to WFO Tulsa. Over the following ten years Bill served as Warning Preparedness Meteorologist at WSFO Lubbock (now we call them WCMs), and he later was the first Regional WCM at Southern Region Headquarters. In 1992 he transferred to NWS Headquarters where he served in the Office of Meteorology as national program manager for Severe Local Storms and Flash Floods until 1999. Bill then joined the Alaska Region Headquarters staff as deputy chief of the Environmental Science and Services Division. In addition to his duties as supervisor of scientific services for the Alaska Region, Bill has served as the national volcanic ash program manager, regional aviation meteorologist and Alaska fire weather program manager. With that background Bill brings a wealth of experience and expertise to his new position that will help ensure a continuation of the best possible weather forecasting and warning services for West Texas. Welcome back, Bill.

I am also pleased to announce that **Armando Garza** is the new MIC at WFO Corpus Christi. For several years Armando has served as the MIC of the National Weather Service office at the FAA Academy in Oklahoma city. He also has been MIC at WFO San Diego and has served in the Pacific Region, as well as in Southern Region Headquarters. He has a wealth of knowledge and experience with tropical meteorology and the weather of South Texas. Armando will report to Corpus Christi later this month.



IFPS

IFPS SCIENCE STEERING TEAM. Late last year, a white paper originated by Western Region SOOs identified a number of scientific issues related to successfully integrating IFPS into NWS forecast operations. The paper was reviewed and endorsed by all regions and subsequently was the basis for a decision last March by the Science and Technology subcommittee of the NWS corporate board to establish an IFPS Science Steering Team (ISST), comprising primarily one or two SOOs from all regions. The team was charged initially with prioritizing and recommending courses of action to address the IFPS science issues raised in the white paper. Andy Patrick, SOO at WFO Corpus Christi, is the SR member of the ISST. The team went quickly to work. A summary of their activities is included as a [technical attachment](#) to this month's *Topics*.

They began their work in conjunction with a meeting of Western Region SOOs and DOHs in May at Salt Lake City. The focus of the WR SOO/DOH workshop, now with input from all regions via the ISST, was to further analyze the major points of the white paper ... in effect, to develop an expanded "white paper" which will help form the basis of the ISST's future work. A summary report from the SOO/DOH/ISST workshop has been provided to all SOOs for their comments and is available on the SST Web page at http://www.nws.noaa.gov/ost/ifps_sst/.

CLIMATE, WATER AND WEATHER DIVISION

METEOROLOGICAL SERVICES BRANCH

CWSU EARNS AVIATION SERVICES EXCELLENCE AWARD. CWSU Fort Worth earned the 2nd Quarter Southern Region Aviation Services Award, duplicating their feat in the 2nd quarter last year. The staff includes MIC Tom Amis and meteorologists James Ott, Charlie Hays and Doug Reno. They will keep the trophy for another year.

The CWSU continued superior performance in the development and implementation of the Tactical Convective Hazards Product (TCHP) for the Prototype Aviation Collaborative Effort (PACE). In collaboration with the NOAA Forecast Systems Lab they have been instrumental in the design, development and testing of the TCHP product Web page from April through June 2003. Significant accomplishments include:

- Development of system checks for the TCHP Web page, to monitor data accuracy and relevance to air traffic operations.
- The CWSU was responsible for gathering technical air traffic control data from the Fort Worth Center Traffic Management Team members for required content of the TCHP product. The FAA and FSL have relied heavily upon the CWSU team to evaluate and validate the TCHP for proper functionality in anticipation of deploying this product nationally to the ARTCC traffic management units.

- The TCHP consolidated several thunderstorm products into one easy to understand hazard product displayed in ARTCC/TMU-friendly map backgrounds. This successful test demonstrated the utility of NWS products to its air traffic customers and will increase the efficiency and safety of the National Airspace System with its deployment.

Congratulations to Tom, James, Charlie, and Doug.

WFO HOUSTON PROVIDES AVIATION OUTREACH. Robert Van Hoven provided an aviation weather safety talk last month to members of the Bay Area Aero Club based at Clover Field in Pearland, Texas. About 25 general aviation pilots attended. Topics discussed included low clouds and visibilities. After the session several pilots offered local familiarization flights for forecasters at WFO Houston/Galveston.

SOUTHERN REGION METEOROLOGISTS TRAIN AIR NATIONAL GUARD. Six Southern Region meteorologists provided weather training to the 165th Weather Flight (165 WF). WFO Fort Worth MIC Bill Bunting, CWSU Fort Worth MIC Tom Amis, SRH WCM Walt Zaleski, SRH Climate Branch chief Victor Murphy, WFO Fort Worth meteorologist Al Moller, and SRH Aviation/Fire Weather program manager Paul Witsaman gave weather training presentations to ten members of the 165 WF. The Kentucky Air National Guard unit from Louisville was participating in their annual training at the Carswell Joint Reserve Base in Fort Worth. Subject areas included: situation awareness, icing and turbulence forecasting, radar image interpretation, tropical weather forecasting, severe weather forecasting, and satellite photo interpretation. 165 WF Commander, LTC Jeff Peters stated, “ The NWS meteorologists provided world class training to our flight. The benefits will ensure the 165 WF maintains a standard of excellence in all we do for years to come.”

WFO CORPUS CHRISTI PROVIDES FIRE WEATHER OUTREACH. On July 30 WFO Corpus Christi senior forecaster Michael Buchanan gave a fire weather presentation at a summer burn workshop sponsored by the Welder Wildlife Refuge, the Grazing Lands Conservation Initiative, and the Natural Resources Conservation Service (NRCS). The workshop was held at the Welder Wildlife Refuge located just outside Sinton, Texas. The talk covered summer weather patterns in Texas and how they affect burning conditions. The talk also covered the many fire weather products and services the NWS produces on a daily basis. The internet as a source of fire weather information was also covered. There were about 45 participants from various local, state and federal land management agencies such as the Texas Parks and Wildlife, NRCS, U.S. Fish and Wildlife and the Texas Nature Conservancy.

CWSU FORT WORTH CONTINUES WITH PACE PROGRESS. CWSU Fort Worth completed its initial phase of Prototype Aviation Collaborative Effort testing and evaluation of the PACE Tactical Convective Hazards Product (TCHP) with the Fort Worth Air Traffic Control Center, Traffic Management Unit. In close collaboration with NOAA Forecast Systems Lab, members of the Fort Worth CWSU staff have been instrumental in the design, development, testing and training of the TCHP product Web page from January through June 2003.

So far the overall response from the TMU has been unanimous in their opinion that this type of display is useful to operations. Most of the TMU staff wants to use the TCHP in conjunction with the map backgrounds, display controls, and Traffic Situation Display (TSD) information found on other operational display systems. Several commented that integration of the 2-hr Convective Collaborative Forecast Product would be useful for tactical decisions involving transcontinental over flight traffic.

FSL will publish a more formal report of its findings within the next month. This work is expected to lay the future ground work for PACE TCHP refinements and additions such as icing, turbulence, ceiling and visibility forecasts.

MARINE

NOAA HAZMAT Course. WFO Houston/Galveston marine focal point Brian Kyle attended the “NOAA Science of Oil Spills Course” held in Seattle in March. This week-long course is designed for people needing information regarding oil spills, including oil/gas industry representatives and manufacturers, meteorologists, emergency managers, Coast Guard, spill responders, clean-up crews, biologists, etc. This is a portion of Brian’s trip report:

HAZMAT responds to about 110 events per year. Of those 110, a third come from the NWS Southern Region. Though only about 25% of the course was directly weather related, another 50% was very useful information giving a background of the different type of oils/fuels and their chemistry/characteristics, which is critical to know in determining how a specific spill behaves. For example, a gasoline spill may kill a decent amount of fish, but the spill itself usually evaporates fairly quickly leaving minimal long term effects. However, a heavier refined product will not evaporate nearly as much and could easily coat beaches, etc. and have a longer term effect. Another 25% was devoted to clean-up methods and biological impacts. I highly recommend the course to anyone interested, especially those with major shipping ports in their CWA.

TROPICAL SEASON OFF TO FAST START. Through the month of July, we have already seen four named tropical storms. Dating back to 1871, there have been only nine previous years in which four or more storms were named during this same period. Climatologically, the fourth named storm usually occurs on August 30. The current collaborative CPC/TPC Tropical Forecast, issued in May, calls for 11 to 15 named storms, six to nine hurricanes, and two to four major hurricanes. This compares to a climatological average of 10, 6, and 2. The next update of this forecast is scheduled for August 7.

LA NIÑA ON THE WANE. In mid-July, the Climate Prediction Center issued a press release, stating that the La Niña conditions forecast to develop by August 1 were not occurring, and that near normal temperatures were expected in the equatorial Pacific through the end of the year. The latest Pacific Sea Surface Temperature (SST) anomaly animation can be seen at:

http://www.cpc.noaa.gov/products/analysis_monitoring/enso_update/sstanim.html

RECORD RAINFALL CONTINUES IN THE SOUTHEAST. Numerous Local Climatological Data sites in the southeastern US continued abnormally wet in July. For the three-month period from May 1 to July 31, the cities of Birmingham, Anniston and Mobile, Alabama, and Columbus, Georgia reported the wettest May-July ever. In addition, Atlanta and Meridian, Mississippi had the third wettest such period in history. The period of record for many of these sites extends back into the late 1800s.

NOAA WEATHER RADIO

WFO Huntsville Celebrates Arab Broadcast. Last month, an NWR dedication ceremony was held at the Marshall County Commissioner chambers in Guntersville, Alabama. WNG-642 operates on a frequency of 162.525 MHz from the radio station towers of FUN 92.7 FM in Arab, Alabama. Broadcast audio covers the towns of Guntersville, Arab, Boaz, Albertville, and a number of other towns in northeast Alabama. County commission chairman Billy Cannon, FUN 92.7 FM DJs Susan McKinney and Michael St. John, assistant EMA director Anita McBurnett, and MIC John Gordon each spoke about the importance of NWR and how it will save lives in this potentially volatile weather region. The ceremony was also headlined on the local ABC TV evening news program.

WFO Mobile Receives Two for the Money. MIC Randy McKee and WCM Gary Beeler made presentations at the NWR dedication ceremonies for Greenville and Brewton, Alabama. They emphasized the importance of utilizing the SAME capability weather radios, explained the different NWR manufacturer types, and provided a specific NWR pamphlet for each community. The NWR equipment for these two Alabama sites was funded through the USDA - Rural Utilities Service grant process. Pioneer Electric Cooperative sponsored the grant for Greenville and provided free NWR radios to all schools in Butler County. In addition, they presented a special NWR to a family whose manufactured home was destroyed by a tornado last year. Fortunately the family escaped the warned-for tornado.

A number of local citizens and dignitaries attended the Brewton NWR dedication ceremony. The sheriff of Escambia County had worked closely with the NWS to improve the limited weather radio coverage in this area of Alabama. This dedication was held as part of Project Impact. A number of positive comments were received from the mayor of Brewton, the local chapter of the American Red Cross, area school officials, and other local government entities.

Comanche Electric COOP Spearheads NWR at Cisco, Texas. WFO Fort Worth MIC Bill Bunting and WCM Gary Woodall participated in the dedication ceremony for the Cisco, Texas weather radio transmitter. The Cisco transmitter was purchased and established with USDA - Rural Utilities Service grant funds. Thirty-one members of the emergency response and media community from Eastland and surrounding counties attended the ceremony. Speeches were presented by Eastland county judge Brad Stephenson and Ronnie Robinson from Comanche Electric Cooperative. The highlight of the ceremony was a special weather radio alarm test which activated according to plan in the middle of Gary's presentation. This illustrated to the group in real time, the importance of the warning alarm feature of NWR.

Special Needs NWR Available on the Web. Information regarding NWR that addresses the special needs of the deaf and hearing impaired community can be found at the following Web site: <http://www.nssl.noaa.gov/NWR/>. The site explains the special needs of the deaf and hard of hearing and provides information on how to view and download a number of NWR-related brochures.

Weather Radio Expansion. Two 1000-watt NWR transmitters were powered up and brought on-air at Marvell, Arkansas and Bartlesville, Oklahoma. Broadcast of the Marvell's station WNG-643 located in east-central Arkansas will originate from WFO Memphis through the use of the KVRN FM radio station tower. The second NWR station at Bartlesville will be housed at the One Net Tower in northeast Oklahoma through the generous contributions of the State of Oklahoma Board of Regents. Funds to purchase the NWR equipment for both of these sites was established through the USDA - Rural Utilities Service grant program. The addition of these two sites brings to 23 the number of NWR stations that have been brought on-air in Southern Region this fiscal year.

SEVERE WEATHER PREPAREDNESS & OUTREACH

Deep South Texas Gets Ready for Tropical Cyclones. WFO Brownsville SOO Kurt Vanspeybroeck and forecasters Carl McElroy and Ramon Sierra provided meteorological and outreach support to the City of Brownsville during their annual Hurricane Expo. The city of Brownsville hosted and partnered with NWS, the annual public hurricane expo as part of their outreach efforts to help mitigate the potential devastating impacts Deep South Texas would suffer from a hurricane or tropical storm. Kurt provided a hurricane briefing to the attendees and put a heavy emphasis on preparedness and safety tips. Carl and Ramon staffed the NWS outreach booth and interacted with hundreds of attendees interested in hurricane awareness.

Southern Region WFO Hosts Visit from Potential Future Scientists. WFO Tallahassee hosted a visit from the "Capital Area Youth Disaster College," a group of 60 teenage American Red Cross volunteers. The volunteers participated in meteorological briefings and activities provided by WCM Bob Goree and SOO Irv Watson. Also included in the three hour session was a visit to the Florida State University meteorology department, down the hall from the WFO.

EMERGENCY MANAGEMENT COORDINATION

StormReady

There were six additional StormReady recognitions in Southern Region during July. WFO Austin/San Antonio recognized the community of Lakeway, Texas as StormReady, WFO Tampa added Polk County, and WFO Lubbock added the community of Floydada, Texas, WFO Miami added both Broward and Palm Beach counties while WFO Shreveport added the community of Lufkin. The number of new StormReady sites in Southern Region has increased to a total of 38 for fiscal year 2003.

NWS Assists with Arkansas Disaster Relief Request and Declaration. WFO Little Rock WCM John Robinson assisted the Arkansas Department of Emergency Management with their federal disaster declaration application efforts, by writing a summary of the cumulative severe weather events to affect the state during May. The first 16 days of May brought severe thunderstorms, tornadoes and flash flooding to many parts of Arkansas, the worst concentration in nearly 30 years. The purpose of the request was to document the string of cumulative severe weather episodes that impacted Arkansas to help justify the federal declaration.

Significant Outreach Activity in South Louisiana. WFO New Orleans MIC Paul Trotter, SOO Mike Koziara and DAPM Gil Barton visited with local officials of St. Tammany Parish in extreme southeast Louisiana to better acquaint them with complexities of tropical cyclones and associated forecasts. Mike used the opportunity to meet first-hand with the new emergency manager for the St. Tammany Parish Office of Emergency Preparedness (OEP) and discuss any issues, questions or suggestions concerning local NWS operations. The proactive meeting, initiated by WFO New Orleans and attended by Kevin Davis, St. Tammany Parish president, Bill Oiler and OEP director, Rodney Hart, provided a greater understanding and appreciation for the complexities of the tropical cyclone threat and much improved line of communication between the local NWS and parish officials.

Louisiana Officials Learn About New 5-Day Hurricane Forecast. WFO Lake Charles MIC Steve Rinard and WCM Roger Erickson, were invited to provide a presentation on the new NHC 5-day hurricane forecast at the Louisiana Shelter Task Force meeting in Alexandria, Louisiana. Steve and Roger briefed 25 attentive Louisiana Office of Emergency Preparedness officials on the outlook for the 2003 hurricane season. They answered questions regarding the new 5-day forecasts and provided the group with suggestions on how to best format evacuation information requested for air play on Weather Radio.

U.S. Virgin Islands Emergency Managers. WFO San Juan WCM Rafael Mojica traveled to the U.S. Virgin Islands to conduct the FEMA NWS Hurricane Planning Course for 90 emergency managers and coordinators from St. Thomas and St. Croix. The course was sponsored by the U.S. Virgin Islands Emergency Management Agency and the FEMA Caribbean Division. The comprehensive and informative course was also attended by the local media of the Virgin Islands.

Train the Trainer in Puerto Rico. WFO San Juan WCM Rafael Mojica conducted a "train the trainer" three-hour session on hurricane preparedness for 60 employees of the Puerto Rico Emergency Management Agency training division. The attendees were provided with electronic presentations and background information to enable them to conduct preparedness talks in their respective communities. The program jointly provides the NWS and emergency management community with additional resources to collectively help mitigate the affects of tropical cyclones on the local population and their resources.

MEDIA/PUBLIC EXTERNAL SUPPORT

Interacting with Local Federal Executive Associations. During a recent discussion, WFO Birmingham MIC Ken Graham shared how much was learned by both the WFO staff and executives from other federal agencies in the Birmingham area when the latter visited the WFO for an orientation. Other federal agencies are essential partners in our mission, yet how many of their employees fully understand the remarkable accomplishments Southern Region field offices make on a daily basis? Ken summarizes his experiences in an [attachment](#) to this month's *Topics*.

WFO Tampa Bay Has Marine Weather Radio on the Air. As a pilot project, the "marine only" NOAA Weather Radio broadcasts, on a frequency of 162.450 MHz in Largo, Florida, are now on the air. The NWR marine only broadcast is a result of a partnership between the NWS office and NOAA's National Marine Fisheries Service which was looking for a way to get their message out to mariners and realized the advantage of working within the existing weather radio program. If all goes well, NMFS would like to expand this partnership to all coastal communities across the U.S.

Public Boasts about WFO Birmingham Web site. WFO Birmingham recently received kudos from the public regarding a visit to their NWS Web site. Nicol Smith of Hoover, Alabama wrote:

"I just want to commend you for a fantastic service this site provides to me and my family. The weather warning maps and local radar maps are easy to understand with the time of warning expiration listed in each county and the type of warnings color coded. I have lived here for seven years now and I'm still not sure where each county or city is located, so these maps are a great help to sight read when my husband is on the road and I and my children are home alone. Now as long as my power stays on for my lap top and James Spann's on the TV to keep us calm, we feel very safe and in good hands. Thank you so much."

Oil Refinery Gets Severe Weather Safety Message. WFO Lake Charles WCM Roger Erickson provided a lightning and hurricane safety presentation to over 500 contractors at the Citgo oil refinery in Lake Charles. The timely safety message, provided to workers during the heart of the Gulf of Mexico convective season, was designed in response to the large number of lightning related injuries over the past several years.

NWS Teams with Local Electric Co-op on Severe Weather Preparedness. WFO Lake Charles WCM Roger Erickson and forecaster Joe Rua staffed an NWS outreach booth at the first annual Beauregard Electric Co-Op open house. Between 50 and 75 residents visited the NWS booth to learn more about hurricanes and severe weather.

Middle Tennessee Ambulance Service Gets Skywarn Training. WFO Nashville WCM Jerry Orchanian provided comprehensive “basic” and “advanced” Skywarn spotter training courses to 25 attendees at the local ambulance service in Jamestown, Tennessee. Local DJ “Turk” Baz of radio station WDEB (FM 104) conducted a taped interview with Jerry regarding the vital role Skywarn spotters play in providing valuable ground truth reports to enhance the NWS warning program.

Gulf Coast WFO Spearheads Rip Current Awareness. WFO Mobile has been spearheading an effort to decrease the number of rip current related drownings in their county warning area. In the past five to ten years, more people have died from rip current drownings than any other weather related event in the CWA. The WFO has pulled together a truly broad spectrum of nearly 20 entities that represent or deal with public rescue, beaches, media, tourism, etc. to explore avenues on how to mitigate the rip current problem through collective outreach.

HYDROLOGIC SERVICES BRANCH

COE/NWS MEETING. Representatives from the NWS Southern Region, WFOs Atlanta, Mobile, and Birmingham, and NWSH met with officials from the Corps of Engineers Mobile District last month to discuss the reimbursable COOP Flood Control (FC) data network in Alabama and Georgia. Attending the meeting were HSB chief Ben Weiger, SR COOP program manager Mike Asmus, WFO Atlanta DAPM Frank Taylor, WFO Birmingham DAPM David Wilfing, WFO Mobile DAPM Gene Jacobi and hydrology focal point Keith Williams, Southeast RFC senior hydrologic forecaster Jonathan Atwell, and Andy Horvitz from NWSH. Presentations were made about the COOP modernization program, the IVROCS COOP data collection system developed in our region, and RFC products and services. Several collaborative projects were identified in association with the reimbursable COOP FC data network. Both agencies agreed to collaborate on future COOP award presentations and educational outreach workshops for COOP volunteers in this reimbursable COOP FC data network.

WFO ALBUQUERQUE GIVES DROUGHT PRESENTATION. Last month WFO Albuquerque MIC Charlie Liles made a special presentation on drought at the New Mexico Farm and Ranch Heritage Museum theater in Las Cruces. The presentation was one of an ongoing series of invited presentations surrounding the museum's current exhibit: "The Inside Story of the Roadside View: Agriculture in the Mesilla Valley." The New Mexico Farm and Ranch Heritage Museum is a state-of-the-art 47-acre facility under the New Mexico Office of Cultural Affairs that opened to the public in 1998.

SR RFC WEB TEAM EXPERIMENTAL PRODUCTS. The Southern Region RFC Web Team was formed to help standardize Web displays, make it easier for RFCs to share technology, and develop some region-wide graphics. The team implemented two suites of region-wide experimental products last April. These product suites include precipitation and flash flood guidance (FFG) information graphics. For both suites, a SR-wide graphic, graphics for each SR RFC, and graphics for each state are created and sent to the SR Web server. The suite of precipitation products includes: daily precipitation, the past 7 days of precipitation, the past 14 days precipitation, month-to-date precipitation, and year-to-date precipitation. For all of these products except the daily precipitation, the normal precipitation, departure from normal and percent of normal graphics are created. For each duration of FFG (1-, 3-, 6-, 12-, and 24-hour), graphics products are created.

The precipitation and FFG suites of graphics can be viewed at:
http://www.srh.noaa.gov/rfcshare/p_SR.php for precipitation
http://www.srh.noaa.gov/rfcshare/ffg_SR.php for FFG.

We encourage all offices to share this information with their external customers before September 30 so they can provide feedback on these experimental products. Users can provide feedback on the Web site. These experimental products and the feedback received will be reviewed at the end of September to see if there is sufficient interest to continue these products. Changes will occur based on customer feedback.

BACKUP HYDROLOGIC OPERATIONS. On Tuesday, July 15, WFO Memphis suspended local operations due to planned electrical maintenance. Service hydrologist Buzz Merchlewitz was detailed to WFO Little Rock to issue the hydro and aviation products. However, on Monday, WFO Nashville service hydrologist Mike Murphy and Buzz decided to exercise the secondary hydrologic service backup capability. So while Buzz was in Little Rock taking care of the Memphis aviation products, Mike issued all the Memphis hydrologic products from WFO Nashville using the backup feature available in RiverPro. Buzz was able to monitor the hydro products from Little Rock as Mike issued them. There were virtually no problems. The hydro products went out to the public in a seamless fashion. After it was done, Mike said, "next time, give him something hard to do!"

SCIENTIFIC SERVICES DIVISION

CSTAR REQUEST FOR PROPOSALS. The FY2004 Request for Proposals for the NWS Collaborative Science, Technology, and Applied Research (CSTAR) Program has been published. CSTAR fosters collaborative research among forecasters and researchers at universities, with the goal of contributing to improved forecasts and warnings. It is hoped to fund as many as four new CSTAR projects next fiscal year, with individual awards of up to \$125,000/year for each approved project. Projects may extend for three years. The deadline for universities to submit proposals in response to this latest RFP is October 23, 2003. Following the review and approval process, funding is expected to become available in April 2004. We encourage offices to discuss possibilities for projects with university contacts. More information can be obtained from SSD, or by contacting the NWSH Office of Science and Technology (samuel.contorno@noaa.gov).

NCAS COLLABORATION. The NOAA Center for Atmospheric Sciences (NCAS) is led by Howard University, in collaboration with three partners: Jackson State University, the University of Texas at El Paso and the University of Puerto Rico at Mayaguez. NCAS is part of NOAA's Educational Partnership Program with Minority Serving Institutions, a primary goal of which is to increase the number of qualified and well-trained graduates in the atmospheric sciences for career opportunities with NOAA and other federal agencies. NCAS aims to foster comprehensive academic and research training programs at the sponsored schools and capitalize on the strength of these university partners. All partners will contribute to training workshops and professional conferences, shared courses and seminars, outreach activities, student recruitment and mentoring, and will conduct and present NOAA related research.

In support of the above, WFO Jackson SOO Jeff Craven recently put his previous experience at the Storm Prediction Center to good use and provided seminars at Jackson State on the subject of local modeling and severe weather forecasting in the Southeast. At the mesoscale modeling workshop Jeff described severe weather parameters, proper use of parcels when calculating CAPE and LCL heights, and discussed boundary layer depth versus the most accurate mean layer parcel. His audience of faculty and students included about a dozen graduate students, many from Howard University.

EXTENSION SERVICE VISIT TO TAMPA. While on leave in Florida Dan Smith (SSD) visited WFO Tampa Bay Area on July 15, along with Lake County extension agent John Jackson and Larry Treadaway. The two are closely involved with FAWN (the Florida Agricultural Weather Network). FAWN sites are statewide and they have become an important part of a growing surface observation mesonet. FAWN data are used routinely in local models and daily operations at the Florida WFOs. The office visit provided the University of Florida staffers an opportunity to learn first-hand about IFPS and NDFD operations, and to understand how gridded forecast products can be utilized in their extension service programs. They were quick to realize the potential for applications of high resolution products, having a number of specific projects already in mind. Although rooted in agricultural services, the state extension service now supports customers with a broad range of weather-related interests, and they are a natural partner for our modernized NWS operations.

HURRICANE MODEL TELETRAINING. During August Bernard Meisner (SSD) will continue his series of teletraining sessions describing recent changes in the various guidance models used by, and products issued by, the TPC/NHC. This includes the Day 4 and Day 5 forecasts, and updates to the GFDL Hurricane Model and the hurricane ensembles. Following four sessions in July, the one-hour presentation will be repeated on the following dates and times:

Session 5:	Tuesday, August 5 th	10:00 - 11:00 a.m. CDT
Session 6:	Tuesday, August 5 th	2:00 - 3:00 p.m. CDT
Session 7:	Thursday, August 7 th	10:00 - 11:00 a.m. CDT
Session 8:	Thursday, August 7 th	2:00 - 3:00 p.m. CDT

Some familiarity with the models will be assumed. While not a prerequisite for the teletraining, Bernard has made available a set of recorded presentations covering each of the models and observing systems in greater detail. Links to the recorded sessions, with instructions, are available at: <http://www.srh.noaa.gov/ssd/Teletraining/Hurricanes>. If you are interested in participating in one or more of the live sessions, please notify Bernard which session(s) you would prefer. He will also provide instructions for downloading the live teletraining presentation.

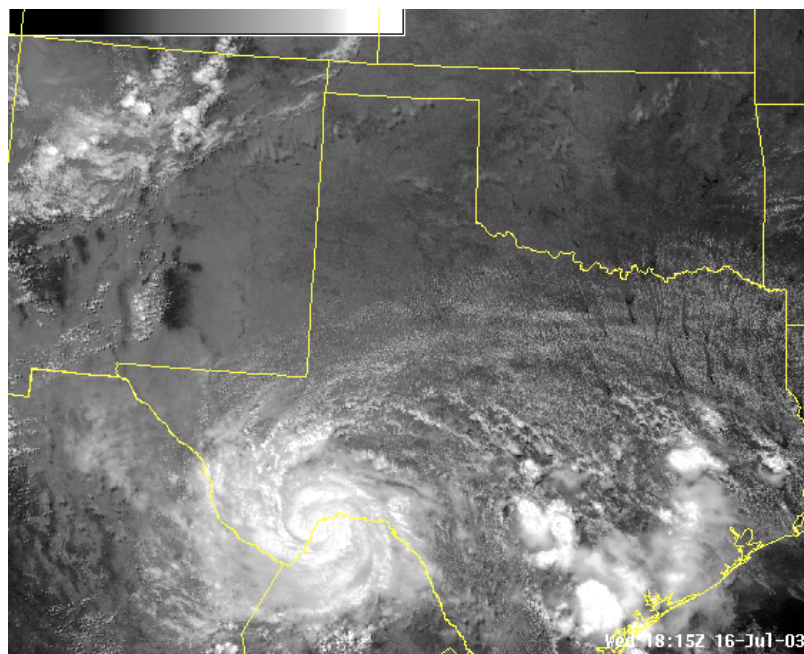
COMET PARTNERS STUDY DOWNBURSTS. On July 23rd Patrick Pyle and Scott Blair, students from the University of Louisiana at Monroe, visited WFO Shreveport as part of a COMET Partners Project on wet microburst storms. Dr. Paul Croft at ULM is the principal investigator. The students have compiled an extensive bibliographic reference list on microburst storms and from these references they have developed environmental parameters corresponding with microburst days. During their WFO visit, as part of their work to develop a conceptual model of a microburst producing storm, Patrick and Scott used the Weather Event Simulator and locally archived data to evaluate three such storms.

The next day the students visited WFO Jackson where they discussed their work collecting and analyzing case studies and looking closely at thermodynamic, kinematic and radar-related signatures. Jackson SOO (and former SPC forecaster) Jeff Craven shared results of two local research projects on summertime severe events in the Southeast which he has worked on in conjunction with Ashton Robinson Cook (current Jackson State University student and SCEP at the Storm Prediction Center). This COMET project involves several SR WFOs along with the SPC, and it should culminate in a presentation at an AMS conference in the near future.

CLAUDETTE WEB SITE. WFO Corpus Christi posted an informative Web site shortly after hurricane Claudette made landfall in their county warning area in mid-July. It features images from before, during and after the event, including many damage images from Victoria and Calhoun Counties in Texas, and images from operations inside the office during the storm. The site is at: <http://www.srh.noaa.gov/crp/stories/hurricane/claurette/claurette.html> and is best viewed with Internet Explorer.

SOUTHERN REGION OFFICES PROVIDE WES SUPPORT TO THE TROPICAL PREDICTION CENTER. This week forecasters and the hurricane specialists at the Tropical Prediction Center were interested in using their Weather Event Simulator (WES) to review the radar imagery of Hurricane Claudette. WFO Miami assisted in the configuration of the TPC's WES computer, which had recently experienced a hard drive failure, and also in the re-installation of the WES software. WFOs Corpus Christi and Houston used their AWIPS archive machines to make CD-ROMs with the AWIPS radar data and sent them to the TPC. Bernard Meisner (SSD) generated files containing the appropriate CRP and HGX localizations and necessary supporting directories so the folks at the TPC could quickly begin viewing the radar imagery.

PICTURE OF THE MONTH. When you think of West Texas, you don't often think about tropical storms, but this month's picture shows the two are not mutually exclusive! On July 16 the remnants of hurricane Claudette trekked across the WFO Midland CWFA, still maintaining tropical storm strength. Forecaster Todd Lindley reported that as the center of the storm crossed the Rio Grande about 30 miles southwest of Dryden, the Terrell County airport ASOS recorded a fastest two-minute wind of 44 mph (38 kt) at 1158 CST. The peak gust was 58 mph (50 kt). Some flash flood events were reported. In Terrell County water covered FM 2886 for a few miles. A report from the Big Bend indicated water over Hwy 385, 38 miles south of Marathon. Some slight damage was reported from a storm associated with the outermost band of convection. In the Davis Mountains a gust of 53 mph (46 kt) was recorded at 1220 CST at Mt. Locke. During the late evening and overnight high winds were also measured by the ASOS at Guadalupe Pass (5,500 ft). At The Bowl (7,755 ft), a second ASOS site in the Guadalupe Mountains, sustained winds reached 35 mph (30 kt) on the 2104 CST observation, with peak gusts of 70 mph (61 kt) on the 0104 CST observation on the 17th.



WSR-88D TRAINING. Enrollment is now open for the WSR-88D Distance Learning Operations Course (DLOC). The DLOC is taught via a combination of teletraining, Web-based instruction, and on-station training. Students will also attend one of the 3 ½ day DLOC workshops at the COMET classroom in Boulder during January and February 2004. Formal DLOC enrollment is available only to meteorologists and hydrologists, including interns, who have not previously completed DLOC or the in-residence version of the WSR-88D Operations Course, but local offices may utilize the distance learning materials associated with the DLOC to provide basic radar training for HMTs, term or student employees. Completion of the DLOC requires a significant time commitment from each student, estimated to be 116 hours (88 on-station hours and 28 workshop hours). With the concurrence of their supervisors hydrologists may elect to take a shortened version of the course (58 hours) that does not include system operations and control, convective weather systems, or the DLOC workshop. Full information regarding registration procedures has been provide to all offices.

WFO EVALUATES MODIS DATA. WFO Huntsville is now incorporating MODIS satellite imagery into their operations. MODIS (Moderate Resolution Imaging Spectroradiometer) sensors are carried onboard NASA's polar-orbiting satellites Terra (which passes from north to south across the equator in the morning) and Aqua (which passes south to north over the equator in the afternoon). The two satellites view the entire Earth's surface every 1-2 days, acquiring data in 36 spectral bands. In collaboration with Dr. Gary Jedlovec of the NASA/Global Hydrology and Climate Center in Huntsville, imagery from the MODIS instruments onboard the satellites is sent to the forecast office to be viewed within AWIPS. The data stream includes visible imagery at 250-meter resolution and 1-km resolution IR, water vapor and the nighttime "fog product" imagery. In addition to the high-resolution imagery, parameters derived from the MODIS data including cloud phase, cloud top pressure, total precipitable water, and lifted index are also being provided to the WFO. An evaluation is being conducted by the forecast staff to determine the value of these products and their usefulness in forecast and warning operations. For more about MODIS and to view sample products, go to NASA's Web site at <http://modis.gsfc.nasa.gov/>.

SPC VISITS MEMPHIS. Richard Thompson, one of the NCEP/Storm Prediction Center's lead severe weather forecasters, visited WFO Memphis in mid-July to provide seminars on SPC operations and diagnosis of supercell environments using RUC model proximity soundings.

CLIMATE TRAINING. A teletraining session titled "Navigating the Climate Prediction Center's Web site" will be offered several times this month on the following dates: August 14, 22, 25, 29

This climate training session will acquaint users with the format of the CPC Web site, highlight key features of the site, and discuss some popular products and how they could help local offices provide enhanced climate services to the public. The training is intended particularly for climate focal points, but all interested employees are welcome to join the sessions. For more information check the student guide at: <http://www.cira.colostate.edu/ramm/visit/climate.html>.

Register for the sessions by sending an email to: visit@comet.ucar.edu. To access the teletraining calendar go to: <http://www.cira.colostate.edu/ramm/visit/ecal.asp>.

NASA ROADSHOW. For over three years, researchers at NASA's Marshall Space Flight Center have been collaborating with NWS staff at WFO Huntsville and WFO Birmingham on ways of improving short-term forecasts and warnings. Efforts have centered on the use of unique NASA data sets, including total lightning products, polar-orbiting satellite imagery, and high-resolution model output. The work has begun to focus on ways of sharing these data effectively with other Southern Region offices, with an eye toward eventually making these products a national resource.

On July 10 several of the NASA researchers (Bill Lapenta, Gary Jedlovec, Bill McCaul and Richard Wohlman) accompanied WFO Huntsville SOO Tom Bradshaw and ITO Jason Burks on a visit to WFO Birmingham to provide a 90-minute seminar to the Birmingham staff. Each of the NASA visitors discussed a different aspect of the work they're doing as a team with the Huntsville NWS staff to improve short-term forecast products. The seminar was well received and generated considerable discussion. Prior to the visit, Jason worked with his Birmingham ITO counterpart Greg Machala to set up ingest of the NASA short-term forecast support products in the Birmingham AWIPS, so after the seminar the Birmingham forecasters were able to review live versions of the NASA products in their own operations area.

The NASA and WFO Huntsville collaborative partners hope to repeat this roadshow at a few other nearby WFOs later in the year. After only a little more than a year of operations, the WFO has already derived benefits from the unique data sets they've developed with the collocated NASA researchers, and the objective is to share this with as many other offices as possible.

PYTHON TRAINING. SSD has received three evaluation copies of "The Complete Python Training Course." This course, put together by the Deitel company, includes a textbook, audio CDs, python code CDs, additional examples via WWW, solution sets, and PowerPoint lecture slides. The evaluation copies are a first step in assessing the need for more copies, potentially one per site. There is also the potential that this course could be used as the framework upon which a follow-on residence or distance-learning course could be built, if necessary. Brian Motta, the Executive Producer for the IFPS Professional Development Series (PDS) from the NWS' Training Division, has recommended this course to meet stated training needs and has asked the regions to help him evaluate its utility. This course should be particularly useful for those active in writing text formatters, Smart Tools, and working with Web aspects of publishing products. One noted shortcoming may be its lack of in-depth coverage of numerical Python. If you are interested in evaluating this course, please contact Jack Settelmaier, SSD.

Python is the programming language that is the heart of the Graphical Forecast Editor (GFE), written by FSL, and is thus used on a daily basis by field forecasters to construct their digital forecast databases. Anyone active in writing Text Formatters, SmartTools, SmartInit, and GFE procedures, is at least familiar with the Python language. For more details on the specific course we are evaluating, please see the following two links:

http://www.informit.com/isapi/product_id~%7B14E4C51D-889B-490E-B966-C464360A55D6%7D/content/index.asp and <http://www.deitel.com/books/downloads.html#python>

KOREANS VISIT WFO BIRMINGHAM. Several officials associated with the Korean Meteorological Administration visited WFO Birmingham on July 29. They are in the process of acquiring a number of radars from Enterprise Electronics Corp., located in south Alabama. At the request of EEC and the international visitors, the WFO staff welcomed an opportunity to share information about our operational use of Doppler radar. Included in the group were the director and several members of the staff of the Remote Sensing Division of the Forecast Bureau, the director of research at Korea's Information Communication Corp., and several representatives from EEC. MIC Ken Graham welcomed the group and provided an overview of WFO radar operations. Kevin Pence (SOO) led an office tour, demonstrated use of radar data on AWIPS, and discussed quality control and ground truth. ESA John Peruzzo gave an overview of the Sun workstations and the RPG. Forecasters Darone Jones and Mark Linhares utilized the WES to review a severe weather event with the visitors. Dale Mitchell and Tom Miller discussed the RDA including the UPS, generator, and the dish. The visitors expressed fascination with National Weather Service operations, especially those during severe weather. The group was primarily concerned with quality control, precipitation estimates, radar maintenance, and data display options. The director explained their main concerns are typhoons, inland flooding, river flooding, winter storms, extreme cold, and extreme heat.

JOHN GRIFFITHS. We were sorry to learn that professor John Griffiths, a long-time faculty member of Texas A&M's meteorology department, passed away recently. Prof. Griffiths was a friend and teacher of many in the National Weather Service, both as faculty member and state climatologist. The compendium he edited in 1994, Handbook of Agricultural Meteorology, was provided to all Southern Region offices for reference. He will be missed by his former students and colleagues alike.

SYSTEMS OPERATIONS DIVISION

SYSTEMS INTEGRATION BRANCH

AWIPS. Operational Build 2 (OB2) was beta tested at four Southern Region sites and is scheduled for deployment the first week of August. It is important that all sites perform the pre-install portion well in advance of the install date to ensure WWA and WarnGen template concerns are addressed.

The contract for the new Linux workstations has been awarded to GTSI which will field IBM workstations. The current schedule for Operational Acceptance Test sites is for installation to begin the second week of August and run through September. National deployment is scheduled to begin in October and should be complete by the end of 2003.

The current plan is to ship all workstations to the offices with NGIT providing field modification kits containing all the necessary components to hook them up. Disposal of the HP workstations will be dealt with locally.

An upgrade to the Satellite Broadcast Network (SBN) is planned for August in preparation for adding more data onto the SBN. A hardware upgrade will allow compressed GOES East and GOES West data to be moved to the same channel allowing the addition of a second NWSTG channel labeled NWSTG2.

IT/SECURITY. We received and responded to a couple of Immediate Response Data Calls recently. One had to do with a major vulnerability in the Cisco routers operating system. Patches were downloaded and all SRH and field sites have been upgraded to meet the July 25 deadline. Another patch issued was for a vulnerability in the Windows 2000, XP and NT 4.0 O/S. This was issued by the Dept. of Homeland Security and forwarded by the NWS CIO's office. This patch was distributed and instructions were sent to the field to patch the servers. Response was due by COB August 1.

NEXRAD. A nice display of NWS teamwork was displayed recently when the WSR-88D at WFO Brownsville went down and the local maintenance staff, for various reasons, could not respond. When notified of the dilemma ESA Don Parkerson and ET Bill Harrison from WFO Corpus Christi immediately made plans to travel to Brownsville. When they arrived they were able to diagnose the radar problem and order necessary parts from NLSC. In all, it took Don and Bill two days (additional parts were needed) to bring the radar back to operational status. Our hats are off to both Don and Bill for their commitment to the NWS and for a job well done.

WFOs Atlanta and Morristown installed ORPG Build 4.0 in early July. So far, the testing has gone well and has not produced any major issues with the software build. Full deployment is still on schedule to begin in September.

ASOS. Work continues to restore power to the DCP at Shreveport. NWSH/OOS provided emergency funding to replace the shorted cable.

Successful installation of the latest test version of firmware 2.7B-5 at the Vero Beach, Florida ASOS has been completed and is being tested. This fix corrects the problem some ASOS sites have experienced with the FAA ADAS/ALDARS interface.

NWR. The NOAA Weather Radio program continues to move forward with the completion of two new installations during the month of July. The new NWR sites which recently went on the air and are currently in the test and acceptance stage are Marvell, Arkansas and Bartlesville, Oklahoma.

July's installations brings the number of NWR installs in the Southern Region to 25 for FY03.

After Hurricane Claudette came on shore the Victoria, Texas transmitter went off the air due to damage sustained during the storm. Repairs were quickly made and the transmitter was back on the air on July 22.

TELECOMMUNICATIONS. In the area of NWR, we have tested and accepted the circuits and ROAMS lines for Bartlesville and Woodward, Oklahoma; Marvel, Arkansas; and the transmitter at Dyersburg, Tennessee has been moved over to the new circuit and the old circuit will be disconnected. We have ordered the circuit for the St. Croix, Virgin Islands site and are monitoring its progress as well as other orders pending installation in the near future.

We are continuing to update the frequency database using the 5-year review process, along with the NWS Headquarters frequency managers. We have noticed that some of the proposals that were submitted previously had not been processed by NWSH and are reviewing to see what needs to be done to correct this issue. More than likely, we will have to resubmit the proposals for update.

We have been informed that, at this time, we cannot receive GETS cards for each field office. We will look into how we can request at least a number of GETS cards to share throughout the region, instead of having one for each individual office. This will allow us at least minimum access to emergency communications services, if needed.

We have ordered frame relay upgrades for WFOs Amarillo, Lubbock, Fort Worth, Tulsa, and Norman in support of the CRAFT project. These are the first of the sites to start ingesting radar data, and require more bandwidth for this purpose. The orders are being processed, and expect to be installed and completed by the end of this month.

We have ordered Bell South to move all of the comms lines at the Key West office from the terminal MUX that is more prone to flooding to a terminal MUX located on the second floor of the terminal annex building. This will ensure the reliability and the survivability of the comms at the Key West office during severe weather events. We hope to have all the lines moved by the end of this month.

OBSERVATIONS AND FACILITIES BRANCH

UPPER-AIR OBSERVATION PROGRAM. Southern Region's June upper air rankings were excellent with 16 of the 23 offices receiving scores above the national average. The national average in June was 288.53 out of a possible 300.00. The highest ranked Southern Region upper air site in June was WFO Jackson with a score of 298.11. Jackson's upper air staff has done an outstanding job over the past three months maintaining an average of 297.63.

Other offices showing remarkable performance include: Lake Charles with a June score of 297.28, Atlanta with a score of 293.90, Jacksonville with a score of 294.62 and Shreveport with a score of 293.67.

WFO Little Rock continues to hold onto its Southern Region lead with a 12 month average score of 294.31. Other offices with excellent 12 month averages include Corpus Christi, 293.22, Brownsville, 292.54, Del Rio, Texas, 292.14, Nashville, 292.10, Fort Worth, 291.55, Miami, 291.41, New Orleans, 290.99 and El Paso, with 290.34.

RADIOSONDE REPLACEMENT SYSTEM (RRS). WFO Corpus Christi DAPM Dave Davenport and ESA Don Parkerson, along with SRH program managers Alton Abernathy, Charlie Lake, and Mike Asmus attended the RRS Deployment Planning meeting at the Sterling Test Center last month. Corpus Christi is an Operational Acceptance Test (OAT) site for the new RRS equipment. The DAPM and ESA will participate in the performance evaluation of the new equipment in the initial stages of deployment.

Important agenda items such as deployment planning, site installation plan for OAT sites, facility readiness checklist, MicorART removal/disposal, data continuity and initial deployment schedules were discussed. Actions items from previous RRS deployment meetings were reviewed and closed with several new actions items identified.

Southern Region upper air program manager also received the first draft of the RRS Operator Training Guide. This training guide was distributed to four SR DAPMs, Tom Tarlton, Jimmy Russell, James Maxwell, and Ralph Troutman, for comments. Comments were due August 1.

INTERAGENCY MEETING. An interagency meeting between the National Weather Service and the Mobile District Office of the Corps of Engineers was held on July 22. The meeting focused on NWS data acquisition procedures and methods used to disseminate the data within the agency and to our partners.

MIC/HIC SAFETY RESPONSIBILITIES. As part of an effort to support and inform Southern Region MICs and HICs about their responsibilities outlined in the NWS Safety Manual (NWSM 50-1115), each of the 32 sections is being sorted for references to all MICs and HICs responsibilities. This summary will be available for distribution in early August.

PC-ROSA FAILURE. The PC-ROSA data ingest computer at WFO San Angelo suffered a catastrophic hardware failure and, with the availability of the new Interactive Voice-Remote Observation Collection System (IV-ROCS), the decision was made not to repair the system. The San Angelo PC-ROSA was one of four computer systems used in SR to collect near real-time data from the volunteer observers. With the introduction of IV-ROCS and WxCoder II, it was determined the remaining three PC-ROSA systems are able to handle the load. Two additional PC-ROSA systems will be decommissioned over the next several months as more observers transition to the modernized data collection systems.

WFO SHREVEPORT WASTEWATER INVESTIGATION. Investigative work continues to determine the cause of the low pH values in the WFO Shreveport wastewater treatment system. A site visit by a sewage consultant did not result in any conclusive source of contamination, however, we learned that the state wastewater permit does not require sampling for fecal coliforms, total suspended solids, biological oxygen demand, pH, and total flow as long as the treated effluent remains on the property via the sprinkler system.

The pH value is required by the permit to be between 6.0 and 9.0, however, in recent readings it has been less than 3.0. With pH being a logarithmic function, this means the wastewater is more than 10,000 times as acidic as the city water supply. The manufacturer of the treatment plant said the aerobic microorganisms should not be able to survive at this pH level, however, no odors are evident at the treatment plant that would indicate it is no longer functional and all other readings are normal except for pH.

The sewage consultant feels there may be foreign substances such as cleaning agents in the treatment plant. Efforts by the local staff were made earlier this spring to identify and eliminate all substances that may be lowering the pH. The U.S. Public Health Service will now sample and analyze the effluent to determine the chemical and biological constituents. Once the source of the low pH is identified, the treatment plant can be pumped, cleaned and restarted.

MIAMI SEWAGE PUMP FAILURE. One of two sewage pumps failed at the TPC/WFO Miami lift station and will be removed and replaced by the maintenance contractor. The failure was detected during the monthly meter readings for the sewage pump timers to determine effluent flow to the Dade County Environmental Resources Management (DERM) system. These values are reported to DERM on an annual basis as part of the submittal for the TPC/WFO permit renewal.

WIRE WEIGHT SAFETY SURVEY. The physical survey for safety guardrail heights at Southern Region wire weight sites is nearing completion. At present, about 40 sites have been designated as primary sites for purposes of stream flow data. This remains a concern since NOAA-OGC has found that low guardrail heights are a violation of OSHA regulations, which effectively prevents NWS employees from accessing these sites unless the sites can be moved, modified, or abandoned.

GALVESTON COUNTY EMERGENCY MANAGEMENT FACILITY (GCEMF). The Galveston County Emergency Management Facility (GCEMF) 90% design drawings have been reviewed and comments have been incorporated. A design review meeting was scheduled in Galveston on August 04. Most, if not all, of the Galveston County Commissioners will attend the first part of the meeting.

Currently the project is scheduled to begin in October/November 2003 with completion in November/December 2004. Move in and operations from the new facility should commence in February 2005. The estimated cost of the facility is \$5.24M. Galveston County needs approximately \$2.1M to complete the facility as designed. Galveston County has asked the Texas Department of Public Safety Division of Emergency Management for help and recommendations for any amount justifiable under the FEMA supplemental program which recently allocated \$50 million nationwide for the EOC program. A decision is expected from the Department of Public Safety soon. In either case the project will move forward as scheduled.

ADMINISTRATIVE MANAGEMENT DIVISION

DIVERSITY/EEO AND COMMUNITY OUTREACH ACTIVITIES

WFO MIAMI. MIC Rusty Pfof and SOO Pablo Santos, along with TPC's Eric Blake, participated as judges in the NAACP's Afro-Academic, Cultural, Technological and Scientific Olympics (ACT-SO) event at the Miami Beach Convention Center. Winners from more than 45 cities were chosen in 25 categories over two days of competition. ACT-SO was part of the 94th annual NAACP convention in Miami Beach July 10-15. Rusty and Pablo were judges in the Physics-energy category and Eric was a judge in the Physics-general category.

WFO SAN JUAN. WFO San Juan WCM Rafael Mojica conducted hurricane preparedness talks for members of the San Juan Exchange Club, and for staff of the San Juan Medical Center Pediatric Hospital.

TEACHERS TAKE A LESSON ABOUT TROPICAL CYCLONES FROM THE PROS. WFO San Juan WCM Rafael Mojica conducted a two-hour weather session on tropical cyclones for a group of 25 K-12 teachers from the NASA Sun and Earth Master Teacher Leadership Program. The activity was sponsored by the University of Puerto Rico Engineering School, as part of a one week workshop, directed toward teachers from the Northeast U.S. The morning presentation was followed by an afternoon tour of WFO San Juan led by SOO Rachel Gross and HMT Bob Cari. The mission of the NASA Sun and Earth Master Teacher Leadership program is to increase science literacy and steward Sun-Earth connection science resources for the classroom.

SOUTHERN REGION WORKFORCE TRANSACTIONS			
<u>July 1-31, 2003</u>			
<u>Southern Region Losses</u>			
<u>Name</u>	<u>From (Office)</u>	<u>Action/Transfer</u>	<u>From Title/Grade</u>
Terrence Lebo, Jr.	WFO LCH	Transfer to ER	Met Intern, GS-7
Robert McFall	WFO EPZ	Transfer to WR	ESA, GS-13
Teresa DeLand	FAA OKC	Transfer to Tinker AFB	ASA, GS-7

Southern Region Gains			
<u>Name</u>	<u>To (Office)</u>	<u>Action/Transfer</u>	<u>To Title/Grade</u>
William O. Alexander	WFO EPZ	Transfer from AR	MIC, GS-14
Mark Love	RFC ALR	Transfer from ER	Hydrologist, GS-12
Mary J. Black	WFO MRX	Transfer from WR	Forecaster, GS-12
Jody A. Holliday	WFO EYW	New Hire	ASA, GS-5
Amie Browne	WFO LZK	New Hire	SCEP, GS-4

Within Region Transfers/Actions			
<u>Name</u>	<u>To (Office)</u>	<u>Action/Transfer</u>	<u>To Title/Grade</u>
Sherrill Dean Hutsell	CWSU ZJX	Transfer from WFO FFC	Forecaster, GS-12
Mark Conder	WFO LUB	Promotion from LUB	Forecaster, GS-7
Paul Close	WFO TBW	Promotion from TBW	Senior Forecaster, GS-13