

AOML

Keynotes

May-June 2010

Atlantic Oceanographic and Meteorological Laboratory

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"The main uncertainty in this outlook is how much above normal the season will be. Whether we approach the high end of the predicted ranges depends partly on La Niña developing this summer. At present we are in a neutral state, but conditions are becoming increasingly favorable for La Niña to develop."

Dr. Gerry Bell
Climate Prediction Center
NOAA Hurricane Prediction Team Leader

"If this outlook holds true, this season could be one of the more active on record. The greater likelihood of storms brings an increased risk of a landfall. In short, we urge everyone to be prepared."

Dr. Jane Lubchenco
NOAA Administrator and
Undersecretary of Commerce for
Oceans and Atmosphere

"As hurricane season approaches, FEMA is continuing its outreach to state and local officials in Florida and all coastal states on preparedness and response, but we can only be as prepared as the public—that's why it's important that everyone take steps now to prepare for severe weather and to help keep their family safe. The bottom line is that FEMA is only one part of the nation's emergency management team. It takes all levels of government, the private sector, non-profits, and the public working together to make our communities better prepared and more secure."

Mr. Craig Fugate, Administrator
Federal Emergency
Management Agency

AOML's Hurricane FAQ (frequently asked questions) web page can be viewed at www.aoml.noaa.gov/hrd/tcfaq/tcfaqHED.html.

NOAA Anticipates Active Atlantic Hurricane Season for 2010

NOAA released its outlook for the 2010 Atlantic hurricane season on May 27th, advising coastal communities to prepare for the possibility of an active to extremely active year. The outlook indicates that there is an 85% probability that 2010 will be an above-average season due to a combination of environmental factors that favor tropical cyclone activity. This probability is one of the highest ever issued by NOAA in May. The outlook also indicates that only a 10% chance exists for the season to be average, with a 5% chance for a below-average season.

Forecasters predict 14 to 23 named storms could potentially develop during the six-month long season, which began June 1st and ends November 30th. Of these storms, 8 to 14 are likely to strengthen into hurricanes with winds above 74 mph and 3 to 7 are likely to become major hurricanes with sustained winds above 110 mph (categories 3, 4, and 5 on the Saffir-Simpson hurricane scale). An average season typically produces 11 named storms, 6 hurricanes, and 2 major hurricanes.

An additional indicator that 2010 will be an active year is NOAA's accumulated cycle energy (ACE) index, which measures total seasonal activity based on the strength and duration of named storms and hurricanes. The ACE range for 2010 is estimated to be 155-270% of the median value. An ACE value of 100% corresponds with an average season, while a value above 117% indicates an above-average season. ACE values greater than 175% are indicative of hyperactive conditions.

Several environmental factors—the tropical multi-decadal signal, El Niño neutral or La Niña conditions in the Pacific, and exceptionally warm sea (cont. on page 2)



GOES satellite image of Hurricane Wilma, the Atlantic's most intense hurricane, on October 21, 2005. The 2010 Atlantic hurricane season could potentially rival the recordbreaking level of tropical cyclone activity observed during the hyperactive 2005 season.

2010 Atlantic Storm Names

Alex	Danielle	Gaston	Julia	Matthew	Paula	Tomas
Bonnie	Earl	Hermine	Karl	Nicole	Richard	Virginie
Colin	Fiona	Igor	Lisa	Otto	Shary	Whitney

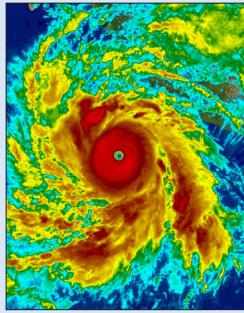


AOML is an environmental research laboratory of NOAA's Office of Oceanic and Atmospheric Research located on Virginia Key in Miami, Florida



Know the Plan

AOML's Hurricane Preparedness and Recovery Plan provides



a course of action to secure the grounds and facility for severe weather. The Plan requires the cooperation and support of all staff members and can be viewed at <http://nuwave/intrapdf/hurricaneInfo/hurrprep2010.pdf>. Should a tropical storm or hurricane threaten south Florida, the Plan is implemented.

The following Coordination Team members are tasked with leading the effort to carry out the Plan during both preparatory and recovery phases for their respective Division or group. Staff are tasked with assisting team members in fulfilling their duties, as well as preparing and securing their individual offices and work areas.

Computer Networks and Services

- Robert Kohler
- Thomas Heeb

Hurricane Research Division

- Neal Dorst
- Shirley Murillo
- Joseph Griffin (alternate)

Ocean Chemistry Division

- Thomas Carsey
- Jules Craynock
- Michael Shoemaker
- Joseph Bishop (alternate)

Office of the Director

- Gregory Banes
- Hector Casanova
- Manuel Fraga (alternate)

Physical Oceanography Division

- Robert Roddy
- Ulises Rivero
- Pedro Pena (alternate)

Emergency contact information cards for 2010 are available at the receptionist's desk in the lobby

(continued from page 1)

surface temperatures in the tropical Atlantic Ocean and Caribbean Sea—are all critical parameters contributing to this season's hurricane outlook. Climatic conditions continue to support the ongoing active phase of the tropical multi-decadal signal, which is believed to have contributed to increased levels of hurricane activity since 1995. El Niño neutral or La Niña conditions in the Pacific reduce the level of vertical wind shear in the Atlantic, enabling storms that develop in 2010 to strengthen rather than be blown apart. Record high sea surface temperatures, almost 4°F above average, in the area of the Atlantic where storms most often form will also aid 2010 storms in developing.

Type of Activity	NOAA 2010 Outlook	Average Season
Tropical Storms	14-23	11
Hurricanes	8-14	6
Major Hurricanes	3-7	2
ACE (% Median)	155-270%	100%

NOAA cautions that the outlook provides the public with only a general guide to the expected overall activity for the upcoming hurricane season. It is not a seasonal hurricane landfall forecast, and it does not imply levels of activity for any particular region. The majority of storm activity typically occurs from August through October, the peak months of the Atlantic hurricane season. NOAA will reassess climatic conditions in early August and issue an updated forecast for the Atlantic basin at that time.

The 2010 hurricane forecast team consists of scientists with NOAA's Climate Prediction Center, National Hurricane Center, and Hurricane Research Division (HRD) of AOML. Stanley Goldenberg, a meteorologist with HRD, has been a member of NOAA's seasonal hurricane forecast team since its inception in 1998.

Tropical Cyclone Forecast Improvements for 2010

Due to improvements in technology and track forecasting skill, the National Hurricane Center (NHC) will implement the following changes during the 2010 Atlantic hurricane season:

- **Smaller cone of uncertainty**—The cone of uncertainty that appears on the NHC web site as a means of tracking the path of a tropical depression, tropical storm, or hurricane will now be a bit smaller. For example, the part of the track forecast cone that reflects a storm's potential position five days out will now be 655 miles wide (about 695 miles wide in 2009). The part reflecting a storm's position four days out will be 506 miles wide (529 miles wide in 2009). For three days out, the cone's diameter will be 370 miles wide (384 miles in 2009).

- **Greater lead time for watches and warnings**—Watches and warnings for tropical storms and hurricanes will be issued 12 hours earlier than in previous years to provide coastal communities with a bit more time to prepare for severe weather. Tropical storm/hurricane watches will now be issued 48 hours in advance, while tropical storm/hurricane warnings will now be issued 36 hours in advance.

- **New hurricane wind scale**—The new hurricane wind scale keeps the same wind speed ranges as the original Saffir-Simpson Scale for each of the five hurricane categories, but no longer ties specific storm surge and flooding effects to each category. These changes were made because storm surge values and associated flooding are dependent on a combination of the storm's intensity, size, motion, and barometric pressure, as well as the depth of the nearshore waters and local topographical features. As a result, storm surge values can be significantly outside the ranges suggested in the original scale. Storm surge forecasts, however, will continue to be included in hurricane advisories and statements issued by NHC and local National Weather Service forecast offices. The updated scale can be viewed at www.nhc.noaa.gov/pdf/sshws_table.pdf.

AOML Director Bob Atlas, along with Ocean Chemistry Division Director Michelle Wood, participated in a local gathering of scientists, lawmakers, entrepreneurs, and concerned citizens on May 17th to discuss the possible impacts to south Florida of the Deepwater Horizon oil spill. The roundtable discussion was hosted by Florida Congresswoman Ileana Ros-Lehtinen (R-FL-18), whose district includes the Florida Keys, the Florida Keys National Marine Sanctuary, and Biscayne Bay National Park.



AOML Director Bob Atlas addresses participants at Florida Congresswoman Ileana Ros-Lehtinen's roundtable forum at the University of Miami's Rosenstiel School on May 17th to discuss the Deepwater Horizon oil spill.

In addition to the oil spill's potential environmental and ecological impacts, South Florida's economy is tied to the ocean through tourism, fishing, diving, and boating activities. Of prime concern has been the possibility that oil could become entrained in the Loop Current, located in the Gulf of Mexico, which feeds into the powerful Gulf Stream Current. Transport of the oil via the Loop Current could potentially foul both Florida's western and eastern shores, as well as impact the coral reefs of the Florida Keys, one of the largest reef tracts in the world.

Atlas, Michelle Wood, Christopher Kelble, and Gustavo Goni also participated in Ros-Lehtinen's teletown hall meeting about the Gulf oil spill on May 26th. They were joined by representatives from the U.S. Coast Guard, BP, National Park Service, scientists from local universities, and a number of other agencies and organizations. NOAA-relevant questions included concerns about whether the oil would impact Florida Bay and its effects on the Florida Keys.

AOML Supports NOAA's Oil Spill Response Efforts

Millions of gallons of crude oil have been entering the Gulf of Mexico following the unexpected explosion of the Deepwater Horizon oil rig on April 20th and its subsequent sinking. To date, efforts to stem the flow of oil have been unsuccessful, and countless marine and wildlife species, as well as marine and coastal ecosystems, have become imperiled.

AOML researchers have been actively involved in NOAA's response to monitor and characterize the environmental disaster by participating in the following activities:

- A cruise aboard the NOAA Ship *Gordon Gunter* to map and define the oil plume near the Deepwater Horizon spill site and adjacent areas using a crude oil fluorometer and a CDOM (color dissolved organic matter) fluorometer to detect the presence or absence of oil in both the near and far fields.

- A cruise aboard the RV *Walton Smith* to assess environmental conditions in the Florida Keys Reef Tract, Florida Bay, and west Florida shelf using a suite of sensors (including a crude oil fluorometer) to establish baseline concentrations of oil in the water before discernible impacts from the Deepwater Horizon oil spill occur.

- A cruise aboard the RV *Walton Smith* to survey the central Gulf of Mexico and Loop Current to investigate oil and tar balls in the convergence zone between them. Oil was found and confirmed to be from the Deepwater Horizon site. Satellite-tracked surface drifting buoys were deployed in these areas to monitor surface water movement.

- Numerous townhall meetings and teleconference calls with congressional representatives, NOAA leadership, other NOAA line offices, academic colleagues, and emergency/environmental managers to discuss and share knowledge and expertise related to various aspects of NOAA's response to the oil spill.

- Creation of a web site dedicated to AOML's ongoing monitoring and data-gathering efforts of conditions in the Gulf of Mexico during the spill, which can be accessed at www.aoml.noaa.gov/phod/dhos/index.php.

- A workshop organized in conjunction with researchers from NOAA's Southeast Fisheries Science Center. The first of a series of monthly workshops to exchange knowledge and strategies for improving monitoring activities of ocean conditions in the Gulf of Mexico in support of the Deepwater Horizon oil spill monitoring and mitigation efforts will be held on July 1st-2nd. Participants include members of the scientific and operational communities, government and university laboratories, and private industry who are currently gathering observations, creating products, and/or performing analyses.

- A cruise aboard the NOAA Ship *Nancy Foster* to monitor the connectivity between the Loop Current in the Gulf of Mexico and the Loop Current Eddy Franklin. Eddy Franklin is the nickname for a clockwise eddy that has broken off from the northern end of the Loop Current that is currently preventing the Deepwater Horizon oil from entering the Loop Current. During the cruise, the surface and subsurface waters in the eastern and northern parts of the eddy will also be sampled and monitored.



Top: Nelson Melo of AOML, along with Tom Lee of the University of Miami's Rosenstiel School, prepare to deploy a satellite-tracked drifting buoy in Gulf waters to monitor ocean surface currents. **Bottom:** Oil from the Deepwater Horizon spill floats in the Gulf of Mexico as observed by AOML researchers during a recent cruise aboard the RV *Walton Smith*.

AOML Welcomes NOAA Leadership



Photos by Evan Forde

AOML Director Dr. Bob Atlas and staff were pleased to welcome Dr. Jane Lubchenco, NOAA Administrator and the Undersecretary of Commerce for Oceans and Atmosphere, and Craig McLean, Acting Administrator for NOAA's Office of Oceanic and Atmospheric Research, on June 22nd. Lubchenco and McLean chatted with staff and then were given a tour of the AOML facility. Visits with principle investigators from the Hurricane Research, Ocean Chemistry, and Physical Oceanography Divisions enabled them to learn more about AOML's science programs and how AOML's research is contributing to NOAA's Gulf of Mexico oil spill response efforts. Additional photos of the event can be viewed at <ftp://ftp.aoml.noaa.gov/pub/ocd/carsey/Lubchenco/>.

MV Oleander Wins NOAA Environmental Hero Award

The MV *Oleander*, a cargo ship that has gathered oceanographic data for more than 25 years on behalf of the Ship of Opportunity Program (SOOP), is the recipient of a 2010 NOAA Environmental Hero Award. The award is presented annually to individuals and/or organizations that volunteer their services to help NOAA fulfill its mission.

Owned by the Bermuda Container Line, the MV *Oleander* completes a weekly transect between Port Elizabeth, New Jersey and Hamilton, Bermuda. Along each transect, onboard instruments gather surface carbon dioxide, upper ocean temperature, sea surface salinity, and ocean current data. These observations are used in



climate and ocean dynamics research, determination of boundary regions in ocean currents, and as input for climate and weather forecast models.

Researchers with AOML's Physical Oceanography and Ocean Chemistry Divisions participate in the data-collection efforts aboard the MV *Oleander*, as do colleagues with the University of Rhode Island, NOAA's Northeast Fisheries Science Center, and Stony Brook State University of New York. Additionally, NOAA staff and volunteers have ridden gratis aboard the MV *Oleander* on more than 450 cruises to monitor the instruments and evaluate data.

The award will be presented to the captain and crew of the MV *Oleander* in July in recognition of their long-term support and vital contributions to the SOOP program, as well as the significant savings to NOAA.

NOAA Leadership Meets with Congresswoman in Miami

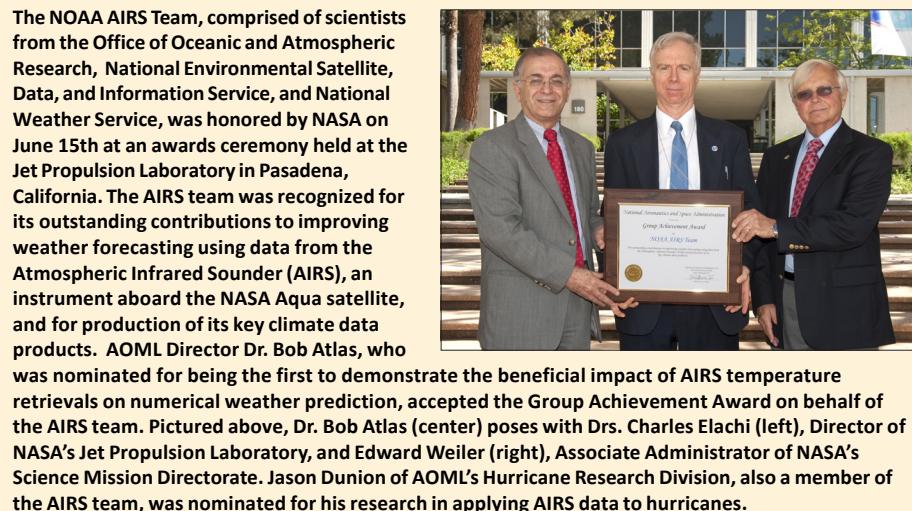


NOAA leaders met with south Florida Congresswoman Ileana Ros-Lehtinen on June 22nd at a local Miami restaurant. Pictured from left to right are (front row): Dr. Ed Rappaport (National Hurricane Center), Dr. Jane Lubchenco (NOAA Administrator), Congresswoman Ileana Ros-Lehtinen, Craig McLean (Acting Administrator, Office of Oceanic and Atmospheric Research), AOML Director Dr. Bob Atlas, and Dr. Pablo Santos (Meteorologist in Charge, South Florida Weather Forecast Office). Back Row: Sean Morton (Acting Superintendent, Florida Keys National Marine Sanctuary) and Dr. Bonnie Ponwith (Director, Southeast Fisheries Science Center).

NOAA administrator Dr. Jane Lubchenco and Craig McLean, Acting Administrator for NOAA's Office of Oceanic and Atmospheric Research, along with south Florida NOAA leaders, met with Congressional representative Ileana Ros-Lehtinen (R) on June 22nd. Ros-Lehtinen represents Florida's 18th Congressional District, which stretches from Little Havana in Miami all the way south to Key West.

Over lunch at a local Miami restaurant, conversation focused on the Deepwater Horizon oil spill in the Gulf of Mexico and the forecast for the 2010 Atlantic hurricane season. Ros-Lehtinen expressed concern for the oil spill's possible impacts upon Florida's beaches, coral reefs, and coastal ecosystems, as well as concern for a hurricane season that could potentially rival the recordbreaking season of 2005.

AOML Director Dr. Bob Atlas spoke of the Laboratory's contributions in assisting NOAA characterize and track the oil. AOML scientists have participated in several research cruises in the Gulf of Mexico and Florida Bay to gather surface and subsurface data. AOML has also aided NOAA's response efforts by monitoring ocean surface currents in the Gulf via satellite-tracked surface drifting buoys (see page 2 for additional information regarding AOML's oil spill activities).



Michael Shoemaker of the Ocean Chemistry Division's Coral Health and Monitoring Program traveled to Saipan in April to ensure that a 38-foot pylon and the associated equipment for a new Coral Reef Early Warning System (CREWS) station reached their destination safely. While in Saipan, Shoemaker partially assembled the station pylon, as well as the station's electronic components, in anticipation of their transport to Laolao Bay. On June 24th, the station's bottom plate was installed in Laolao Bay following a site survey conducted to select the best location for the new CREWS station.



Michael Shoemaker of the Ocean Chemistry Division's Coral Health and Monitoring Program at the commercial port in Saipan with the partially constructed pylon of a new Coral Reef Early Warning System (CREWS) station.

CREWS stations gather near real-time data to monitor and assess the health of coral reefs and, together with data from other in-situ networks, satellites, and radar data, form the basis of the Integrated Coral Observing Network (ICON) at AOML. Progress on the project, including photographs of the area and its reefs, can be viewed as they become available at <http://llbp7-log.blogspot.com/>.

AOML volunteered its first-floor conference room for use by the U.S. Census Bureau on April 27-30th. During the four-day period, local Miami census workers underwent training to complete the remaining 2010 census work in the Miami area, i.e., personally visiting those who did not submit their census forms via U.S. Mail. An additional training session for census workers will be held at AOML on July 19-23rd.

SAMOC3 Workshop Convenes in Brazil

The third workshop for the South Atlantic Meridional Overturning Circulation program (SAMOC3) was held in Rio de Janeiro, Brazil on May 11-13, 2010. The meeting was hosted by Dr. Edmo Campos of the University of Sao Paulo at the Brazilian Navy's Diretoria de Hidrografia e Navegação and was chaired by Drs. Silvia Garzoli of AOML, Sabrina Speich of IFREMER, France, and Alberto Piola of the Argentinian Servicio de Hidrografía Naval.

International experts gathered to design an observational program for the Meridional Overturning Circulation (MOC) in the South Atlantic. Participants discussed how the present observation systems may contribute to estimating the meridional and inter-basin fluxes of mass, heat, and salt; how the existing observational array ought to be upgraded to better capture these fluxes and their variability; and how to transition from the initial observational array to a long-term sustained program.

The need for long-term sustained observations in the South Atlantic was established. Theoretical model results on the stability of the MOC, as well as products of numerical models, were discussed and analyzed to determine the optimal latitude to observe the MOC. Based on the results of these models, it was proposed to instrument and sustain a zonal trans-basin South Atlantic line that will allow for the observation, quantification, and attribution of heat, salt, and mass fluxes and their changes at a nominal latitude of 35°S.



Participants at the recent SAMOC3 meeting in Brazil included experts from Argentina, Brazil, France, the Netherlands, Russia, South Africa, the United Kingdom, Uruguay, and the United States.

The main in-situ array will consist of short moorings on and inshore of the continental shelf break and a mixed array of tall dynamic height moorings and pressure-equipped inverted echo sounders in the interior close to both boundaries. Moored instruments will be deployed with a higher spatial density near the boundaries to measure the deep-water export in collaboration with existing arrays in the Drake Passage and south of Africa. The proposed array will also allow for monitoring of Agulhas ring shedding and the fate of these rings as they enter the Atlantic due to their potentially crucial role in the meridional salt transport.

The crucial role that hydrographic observations in the region can play in support of these moored observations was also discussed. It was also proposed to conduct an east-west trans-Atlantic hydrographic survey, nominally along 35°S, that included biogeochemical and geochemical observations.

Agreements for sharing resources were made, particularly ship-time, from countries at the margins of the basin, as well as from countries with ongoing research operations in the South Atlantic. In particular, ships from Argentina, Brazil, Russia, and South Africa were proposed for the program. A SAMOC Data Management Plan will be developed that describes the management of data and metadata within the SAMOC Program.



For information about hurricane evacuation centers, hurricane-ready gas stations and grocery stores, tracking maps, and hurricane preparedness guides for Broward, Miami-Dade, Monroe, and Palm Beach counties, visit AOML's Intranet web site at http://nuwave/hurricane_information.html.

Farewell

Carlos Fonseca, a CIMAS research associate with AOML's Physical Oceanography Division, resigned in May to return to his native Brazil. Fonseca has accepted a contractor position with Petrobras, an oil company, to lead its field program for environmental compliance. During Fonseca's eight years at AOML, he processed expendable bathy-thermograph (XBT) and conductivity-temperature-depth (CTD) data obtained from research and high density XBT cruises in support of research to observe the meridional mass and transport of heat in the subtropical Atlantic Ocean.



Welcome Aboard

Lisa Bucci joined the staff of AOML's Hurricane Research Division in May as a SAIC scientific programmer. She will work with AOML Director Dr. Bob Atlas and the Hurricane Research Division's Modeling and Data Assimilation teams on the development of a regional Observing System Simulation Experiment (OSSE) capability that will be integrated into NASA's Sensor Web project. The OSSE will study the potential effects of proposed satellite observations (such as a space-based wind lidar) on hurricane track and intensity forecasting. Bucci recently completed her M.S. degree in meteorology under the supervision of Dr. T.N. Krishnamurti at Florida State University's Department of Earth, Ocean, and Atmospheric Sciences.



It's a Boy!

Pedro Peña, a physical scientist with AOML's Physical Oceanography Division, and his wife Irune are the proud parents of their first child, a son. Mikel Peña was born in Miami on May 7th and weighed in at 8 lbs. Mikel and his parents are all healthy, happy, and doing well.



Please Recycle!

Congratulations

Evan Forde, an AOML oceanographer, was recognized by the School Board of Miami-Dade County, Florida during its April 14th meeting. The School Board issued a proclamation honoring Forde's contributions to the students of Miami-Dade County, citing his ongoing efforts to enhance public education throughout the community. Forde was commended for having spoken to more than 30,000 school children during his career, as well as having created and taught a curriculum for under-achieving youth in south Florida called the Oceanographic Curriculum Empowering Achievement in Natural Sciences (OCEANS). The School Board also recognized Forde's 36-year career as a NOAA scientist and enumerated some of the pioneering events that have highlighted his career as one of a small number of African-American oceanographers in the United States.



Additionally, Forde was appointed to the National Science Foundation's (NSF) 2010 Committee of Visitors that met in Arlington, Virginia on May 24-26th to review its Geoscience Education and Diversity portfolio programs and proposals for 2007-2010. Based on their findings, the Committee of Visitors made recommendations that will affect the nature of future proposal solicitations and how newly received proposals will be evaluated and ranked. Forde was the only government scientist selected to sit on the 2010 panel.

Silvia Garzoli, AOML's Chief Scientist, was recognized by the South Florida Federal Executive Board in May as the 2010 Scientific Employee of the Year. Garzoli is an internationally-renowned oceanographer and leader in the oceanographic science community. She was recognized for the impact of her outstanding research and dynamic leadership at national and international science conferences, workshops, and strategic planning sessions. Garzoli's contributions to NOAA's ocean and climate-related policies, development of NOAA's new Climate Service, and dedication to mentoring young scientists through the MPOWIR (Mentoring Physical Oceanography Women to Increase Retention) Steering Team were also acknowledged.



Elizabeth Forteza of AOML's Physical Oceanography Division was awarded a Master of Arts degree in May from the Division of Marine Affairs and Policy at the University of Miami's Rosenstiel School of Marine and Atmospheric Science. Her thesis, entitled *Analysis of Governance in Coiba National Park in Panama*, contributes to the ongoing analysis, discussion, and accomplishment of the Management Plan of Coiba National Park, which is located off the Pacific coast of Panama and was declared a UNESCO World Heritage Site in 2005. Forteza has worked as a University of Miami CIMAS research associate with the Physical Oceanography Division's U.S. Argo Real-Time Data Processing Group since 2001.



Robert Molinari, a former NOAA Senior Scientist, former director of AOML's Physical Oceanography Division, and long-time oceanographer at AOML has been selected to lead the International CLIVAR Project Office (ICPO) in Southampton, England. Molinari will serve as the ICPO director for a period of 2½ years beginning in September 2010; he inherits the position from Dr. Howard Cattle. The CLIVAR (Climate Variability and Predictability) program is dedicated to improving the understanding and skill in predicting climate variability on seasonal to centennial and longer time scales. Molinari was a member of the Scientific Working Group that first met in 1993 to formulate the plan for the CLIVAR program, which was implemented in 1995.



Travel

Bob Atlas co-hosted the Second U.S. Weather Research Project Testbed Workshop in Boulder, Colorado on May 3-5th; attended NOAA's seventh annual Senior Executive Service Summit in Lansdown, Virginia on June 2-4th; and visited NASA's Jet Propulsion Laboratory in Pasadena, California on June 15, 2010 to accept a NASA Group Achievement Award on behalf of the NOAA AIRS Team.

Molly Baringer and Joaquin Trinanes attended the annual meeting of the Global Temperature-Salinity Profile Program (GTSPP) in Oostende, Belgium on May 5-7, 2010.

Sim Aberson, Joseph Cione, Sundaraman Gopalakrishnan, John Kaplan, Frank Marks, Shirley Murillo, Paul Reasor, Robert Rogers, Tomislava Vukicevic, and Chunzai Wang attended the American Meteorological Society's Conference on Hurricanes and Tropical Meteorology in Tucson, Arizona on May 10-14, 2010.

Molly Baringer, Shengfu Dong, Silvia Garzoli, Christopher Meinen, and Renellys Perez attended and made presentations at the Third South Atlantic Meridional Overturning Circulation (SAMOC3) meeting in Rio de Janeiro, Brazil on May 11-13, 2010.

Rick Lumpkin attended the Observations for Climate Services Conference in Boulder, Colorado on May 17-21, 2010.

Kelly Goodwin attended the 110th General Meeting of the American Society for Microbiology in San Diego, California on May 23-27, 2010.

Evan Forde served as a member of the National Science Foundation's (NSF) 2010 Committee of Visitors that met to review NSF's Geoscience Education and Diversity program in Arlington, Virginia on May 24-28, 2010.

Maribeth Gidley and Christopher Sinigalliano attended the Returning to Katrina: Bringing Hurricane Katrina Research Back to the Community Conference in Long Beach, Mississippi on June 4-5, 2010. Sinigalliano also attended the Gordon Research Conference on Oceans and Human Health in Biddeford, Maine on June 13-18, 2010.

Recent Publications*

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*The names of AOML authors are denoted by blue bolded letters.

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