

Keynotes

March-April 2001

Atlantic Oceanographic and Meteorological Laboratory

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“ACCESS” Workshop Addresses Coastal Storms

The Florida Division of Emergency Management and NOAA's National Coastal Data Development Center (NCDDC), under the auspices of Project ACCESS, jointly sponsored a Coastal Storms Workshop in Destin, Florida on February 13-14, 2001. More than 100 participants representing a variety of federal, state, and local agencies attended the workshop to discuss issues related to coastal storms, in particular, storm surge forecasting and storms at landfall with heavy rain.

Designed as a forum to promote open dialogue among participants, the workshop addressed three areas of concern to coastal communities: pre-storm planning, storm forecasting, and post-storm assessment. The history of coastal storms, forecasting technologies, emergency response approaches, and storm assessment strategies were among topics discussed. The dialogue continued with a panel discussion providing community and commercial input and perspectives.

Invited speakers included Dr. Don Wernley (National Weather Service), who presented an assessment of storm impacts and hazards, Col. David Bird (Eglin Air Force Base), who defined issues of emergency management for a large military installation located on the coast, and Dr. Hans Graber (University of Miami), who presented a new model for storm surge prediction and assessment.

The Coastal Storms Workshop was one of a series presented by Project ACCESS. Project ACCESS (Accelerated Coastal Community Environmental Science Service) is a program developed at AOML whose purpose is to gather members of Florida's marine community to coordinate coastal data collection and distribution.

Shallow Water Drifters Designed for Florida Bay Study

Erica Van Coverden, AOML Outreach Coordinator

AOML scientists and engineers have recently completed another milestone in the South Florida Ecosystem Restoration and Modeling Program (SFERPM)—the creation of a newly designed Florida Bay shallow water drifter. The drifters are a key part of a SFERPM proposal written by Doug Wilson and Libby Johns of AOML's Physical Oceanography Division (PhOD) and Tom Lee of the University of Miami's Rosenstiel School of Marine and Atmospheric Science (RSMAS). The proposal calls for a focused study of water flow in and out of the many shallow basins that cover the southern portion of Florida Bay. The eventual goal is to map the dynamics of water movement in each of these basins, subsequently resulting in data that will be critical for creating a realistic model of water flow in Florida Bay.

Drifters are common instruments used to measure surface currents in the open ocean. A standard drifter extends 15 m below the surface, a slight problem considering Florida Bay's extremely shallow average depth of only 1 meter. The new drifter stands a mere 7 inches in height and is designed to travel with near-surface currents and track its position over a period of several days. The drifter, however, is only one of a suite of instruments AOML and RSMAS scientists plan to use in the study. Bottom-mounted current meters, hull-mounted acoustic Doppler current profilers, thermosalinographs, and bottom pressure gauges will also be used to map the flow and mixing of fresh water from the Everglades.

The drifters will be released in the upper, central, and lower regions of the basins and then allowed to drift for three (*continued on page 2*)



Nelsen Melo and David Bitterman display a prototype of the newly designed drifter that will be used in the shallow waters of Florida Bay.



Top view of the shallow water drifter.



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



(continued from page 1)



Nelson Melo and Ryan Smith prepare to deploy shallow water drifters into Whipray Basin.

days. The drifters will transmit their location via the satellite-based ARGOS system, but this is only to monitor general position and location for recovery. The real position data is gathered with a state-of-the-art, 12-channel GPS receiver that has a position accuracy of 2 to 3 meters. The position data is stored in the buoy as frequently as every 4 minutes and has a maximum memory of 32 thousand positions.

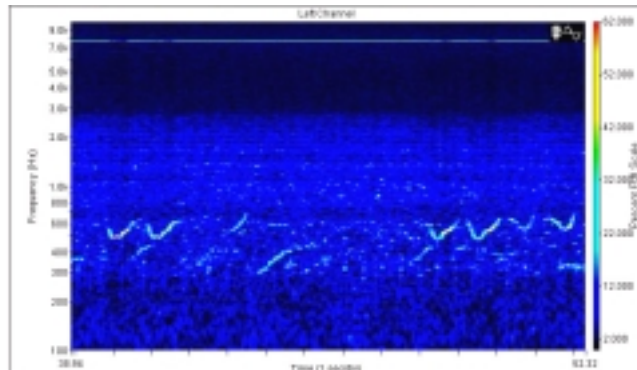
The shallow water drifter was designed and built at AOML by Ryan Smith, David Bitterman, and Nelson Melo of PhD. The drifter is designed to have a smooth low profile, while the bottom has molded fins to assure it moves with the currents. Possible alternate uses for these drifters include tracking near-surface currents around sewage spills or other materials that are not visible to the naked eye. The drifter is currently in the testing phase with plans to be in use by this summer.



Shallow water drifters deployed for testing in Whipray Basin are anticipated to greatly assist scientists in their efforts to map the dynamics of water movement in Florida Bay.

RSD Scientists Have a Whale of a Time

Researchers from AOML's Remote Sensing Division (RSD) (Jack Stamates, Bret Elkind, Paul Dammann, and Jules Craynock) enjoyed an interesting change of pace this past February-April when they joined scientists from NOAA's Southeast Fisheries Science Center (SEFSC) aboard the R/V *Gordon Gunter* for a whale survey research cruise. Employing acoustical methods (linear towed arrays and surplus Navy DiFAR sonobuoys), RSD scientists were able to detect and estimate populations of various cetacean species in the Gulf of Mexico, Bahama Islands, and the coastal waters of Dominican Republic and Puerto Rico. Particular attention was paid to surveying and tracking populations of Humpback and Sperm whales. The Windward 2001 cruise was a collaborative effort between RSD researchers and Dr. Steve Swartz and Anthony Martinez of SEFSC's Protected Resource and Biodiversity Branch. Additional RSD-SEFSC research cruises to acoustically survey and monitor cetacean species are anticipated.



Spectrogram of a Humpback whale singing as detected by a DiFAR sonobuoy.


“Close Up” Students Thank AOML

A group of five Hialeah Senior High School students visited AOML on March 6, 2001 to share their experiences from a Washington, D.C. trip as participants of the Close Up Program. “Close Up” is a non-partisan civics education program that strives to enhance participants’ understanding of the democratic political process by engaging them in an activity-filled, behind-the-scenes look at government in action. Their trip to the Nation’s capital was made possible, in part, by funding secured from NOAA’s Office of Equal Employment Opportunity.

During their week in Washington, D.C. this past February, the group (Cinthya Boza, Shaohuan Huang, Emilio Lozano, Jonathan Moleiro, and Harold Silva) attended seminars with congressional representatives, senators, lobbyists, media personnel, and representatives of both the judicial and executive branches of the federal government. They also participated in discussion seminars with students from across the country, attended a session of Congress, and visited museums, historical landmarks, and national monuments. Accompanied by History teacher Catherine Palmore, the students gave an entertaining and enthusiastic account of what they learned from the experience and how it has positively affected their lives and future career choices.



Standing: Emilio Lozano, Harold Silva, Cinthya Boza, Alejandra Lorenzo, Howard Friedman, and Jonathan Moleiro. Kneeling: Shaohuan Huang, Judy Gray, and Kristina Katsaros.

 **Secretaries Day**
April 25, 2001

Congratulations

Kristina Katsaros, AOML Director, was elected to membership in the National Academy of Engineering this past February. Election to the National Academy of Engineering is among the highest professional distinctions accorded an engineer. Academy membership honors those who have made important contributions to engineering theory and practice, including significant contributions to the literature of engineering theory and practice, and those who have demonstrated unusual accomplishments in pioneering new and developing fields of technology. Dr. Katsaros was elected for her efforts to advance understanding of ocean-atmosphere energy exchange through innovative measurement techniques.

Jules Craynock, Deputy Director of AOML's Remote Sensing Division, is the recipient of a NOAA Administrator's Award. NOAA Administrator Awards honor individuals and groups that have made significant contributions to NOAA's mission. Jules received the award for his advocacy, dedication, and commitment to equal employment opportunity (EEO) principles and outreach activities during the last 20 years.

Isaac Shaftal, a 17-year old senior high school student at MAST Academy on Virginia Key and an intern with AOML's Physical Oceanography Division, was chosen this past January as a semifinalist in the Intel Science Talent Search. Isaac's Intel research project, directly related to his internship with the Physical Oceanography Division, was to calculate the volume of water being transported through the North Brazilian Current rings in the Atlantic Ocean. Dr. Gustavo Goñi, an oceanographer with PhOD, served as Isaac's mentor and directed his research. Sixty-one Miami-Dade County students entered the annual competition, which attracted close to 1,600 entries nationwide. Isaac was one of four students from Miami-Dade County schools to make it to the semifinalist level of the Intel contest, considered the most prestigious science and technology competition in the country, a type of junior Nobel Prize for high school students.



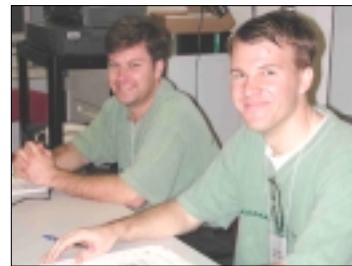
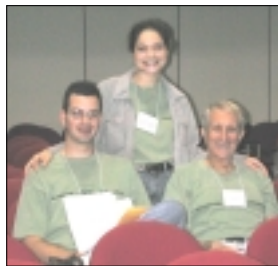
Earth Day
April 22, 2001

Volunteers Contribute to NOSB Success

On February 10 and 11th, AOML employees volunteered as moderators, science judges, and rules judges for the Miami regional competition of the National Ocean Science Bowl (NOSB). The University of Miami organized the two-day event, a game-show style team competition that tested high school students' knowledge of marine science. Twenty-two high school teams from across Florida participated in the competition. The winning prize included a one-week cruise aboard the Royal Caribbean Cruise Lines' newest ship, *Explorer of the Seas*.

First place in the competition was awarded to a team from Melbourne, Florida representing Eau Galley High School. During its week-long cruise of the Caribbean, the Eau Galley team will have the opportunity to access and operate the *Explorer's* state-of-the-art oceanographic and atmospheric research laboratories.

Two teams representing MAST Academy, the local Virginia Key competitor, completed the competition in third and fourth places. The NOSB national competition will be held on Miami Beach in early April. Many thanks to all of AOML's volunteers who helped make this event a great success!



AOML volunteers at the Miami regional competition of the National Ocean Science Bowl. Top left: Joe Pica, Erica Van Coverden, and George Berberian. Top right: Eric Uhlhorn and Paul Reasor. Bottom left: Chauncy Kelly of RSMAS and Roger Simon of MAST Academy (standing); Nick Carrasco, Chris Landsea, and Maria Bello (seated). Bottom right: Craig Engler. AOML volunteers missing from the photographs include Sonia Otero, Shirley Murillo, David Enfield, and Alejandra Lorenzo.

It's a Boy!

Congratulations to Mark Powell, a meteorologist with the Hurricane Research Division, and his wife Linda on the birth of their first child, a son, Riley, born March 11, 2001.



Welcome Aboard

Colleen Donoghue joins the staff of the Physical Oceanography Division's Global Ocean Observing System (GOOS) Center to assist with the day-to-day operations of the Global Drifter Program and Expendable Bathythermograph (XBT) Program. Although Colleen's main duties will be of an administrative nature, assisting with the shipping and tracking of drifters, probes, and equipment, she will also interact with PhOD's scientific staff regarding various research projects being conducted at AOML. Colleen is a senior at the University of Miami majoring in biology, with a minor in microbiology, and will graduate in December 2001.

Scientist Keeps on his Toes

Bret Elkind, a physical scientist with AOML's Remote Sensing Division, is also a professional dancer with 17 years experience. This past March 23-24th, he participated as a member of the Dance Now! Ensemble in a two-day performance of *Triage*, a modern dance original work. Bret will also appear with the Dance Now! Ensemble in an upcoming performance this July at the Colony Theater on Miami Beach.



AOML Diversity Seminar Series presents

"Growing up Cuban"

Maria Bello,
Alejandra Lorenzo,
and others

March 12, 2001

12 noon

First-Floor
Conference Room



Members of AOML's Cuban contingent who participated in presenting the "Growing Up Cuban" diversity event. Standing: Nelsen Melo, Jannette Perez, Reyna Sabina, Maria Bello, Alejandra Lorenzo, and Gladys Medina. Kneeling: Mayra Pazos, Emy Roque-Rodriguez, Joaquin Zabalo, and Nancy Griffin.



AOML's Cuban employees banded together this past March to present an entertaining diversity seminar entitled "Growing Up Cuban." The seminar was organized by Maria Bello, a library technician with the NOAA regional library located at AOML. Maria dressed for the event by wearing the attire of a typical Cuban peasant women. On display was an assortment of scenic photographs highlighting the lush tropical beauty of Cuba and items one would likely find in a Cuban household. AOML staff members were treated to a Cuban-style lunch that featured an assortment of dishes including yuca, black beans and rice, pastalitos, flan, and expresso coffee. Maria's nostalgic presentation focused on the ease and simplicity of life in Cuba before the political turmoil of the 1950s. Memories of those long-ago days live on as a source of pride and heritage for those exiled from their homeland.

Travel

James Hendee attended a Caribbean Observations in a Global Context meeting in Hastings, Barbados on February 28-March 2, 2001 and made a presentation entitled "A marine expert system for near real-time monitoring of conditions conducive to coral bleaching and other biological effects."

Staff members of the Hurricane Research Division attended the Interdepartmental Hurricane Conference in Orlando, Florida on March 5-9, 2001.

Robert Roddy, Claudia Schmid, Derrick Snowden, and John Steger participated in a research cruise aboard the R/V *Oceanus* to study the interaction between off-equatorial currents and the Equatorial Undercurrent on March 5-26, 2001.

Oleg Esenkov participated in the visiting scientist program aboard the Royal Caribbean Cruise Lines' ship *Explorer of the Seas* on March 31-April 7, 2001.

Jack Stamates attended the Southeast and Mid-Atlantic Marine Mammal Symposium (SEAMAMMS) in Beaufort, North Carolina on March 31-April 1, 2001.

Christopher Landsea attended the Workshop on Hurricane Reconstruction from Historical and Paleo Records in Columbia, South Carolina on March 24-27, 2001. From March 28-31, 2001, he attended the Bahamas Weather Conference in Grand Bahama Island. On April 17-18, 2001 he will attend the Royal Meteorological Society's Annual Meeting in Las Vegas, Nevada.

Stanley Goldenberg, Frank Marks, and Mark Powell will attend the 23rd National Hurricane Conference in Washington, D.C. on April 11-13, 2001.

Michael Farmer will attend an Occupational Safety and Health Act (OSHA) Training Workshop in Baltimore, Maryland on April 22-24, 2001.

Christopher Kelble, Terry Nelsen, Peter Ortner, and Joseph Pica will attend the 2001 Florida Bay Science Conference in Key Largo, Florida on April 23-26, 2001.

March-April 2001 Informal Seminars*

- March 15** *High-Altitude Microphysics Observations in Hurricane Bonnie from the NASA DC-8*
Mr. Robert Black, Hurricane Research Division
- March 29** *A Numerical Study of the Impact of Vertical Shear on the Distribution of Rainfall in Hurricane Bonnie (1998)*
Dr. Robert Rogers, Hurricane Research Division
- April 3** *Studies of a Two-Layer, Semi-Spectral Hurricane Tracking Model*
Dr. Robert Jones, Hurricane Research Division
- April 5** *The First Two Years of Synoptic Surveillance: Disappointments and Prospects*
Mr. Sim Aberson, Hurricane Research Division
- April 17** *The Cycling of Methyl Bromide in the North Atlantic and Eastern Pacific Oceans*
Dr. Shari Yvon-Lewis, Ocean Chemistry Division
- April 26** *Title to be announced*
Dr. Peter Black, Hurricane Research Division

*Presentations begin at 3:00 p.m. in the first-floor conference room. Coffee and tea are served at 2:45 p.m.

Thanks!

Thanks to all of the AOML and Southeast Fisheries Science Center employees who participated in the Community Blood Center of South Florida's blood drive this past January 26th. Your generous donations of blood made a difference in the lives of many people.



Keynotes can be viewed online in PDF format at the following World-Wide Web Internet address:
<http://www.aoml.noaa.gov/keynotes>

Keynotes is published bi-monthly by the Atlantic Oceanographic and Meteorological Laboratory. Contributions and/or comments are welcome and may be submitted via email (Gail.Derr@noaa.gov), fax (305-361-4421), or mailing address: NOAA/AOML, Keynotes, 4301 Rickenbacker Causeway, Miami, FL 33149.

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