AOML Keynotes
Miami, Florida
May-June 2003 Atlantic Oceanographic and Meteorological Laboratory Volume 7, Number 3

Cameras Keep an Eye on Coral Reefs

Cameras are being added to the instrumentation at coral reef monitoring stations to help researchers observe environmental conditions at coral reefs. Scientists and technicians with AOML's Ocean Chemistry Division recently fine-tuned and made operational both surface and underwater cameras at the Coral Reef Early Warning System (CREWS) site in Salt River Bay National Historical Park and Ecological Preserve, St. Croix, U.S. Virgin Islands.

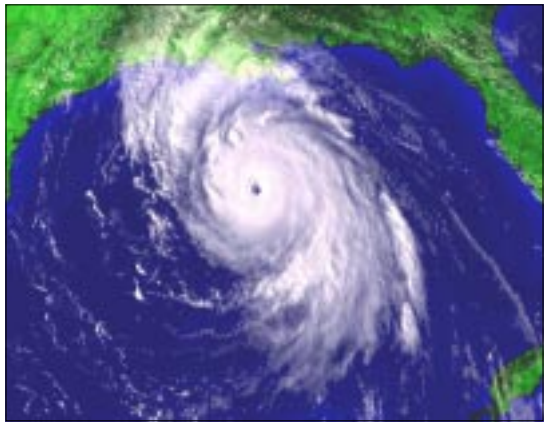
Video images from the cameras are relayed to NOAA's Coral Health and Monitoring Program (CHAMP) web site (http://www.coral.noaa.gov) where they can be viewed on the Internet in real time. The above-water camera helps to assess conditions at the surface, while the underwater camera assists by remotely verifying coral bleaching (and other) predictions produced by the CREWS software.

Installation of a 360° panning camera at the Molasses Reef SEAKEYS site in Key Largo, Florida, is currently underway. The camera will help Florida Keys National Marine Sanctuary managers monitor diving and fishing boat traffic. The SEAKEYS network monitors oceanographic and meteorological conditions in Florida Bay and along the 220-mile long coral reef tract of Florida.

Additional cameras will be installed at other CREWS and SEAKEYS stations as funding becomes available. CREWS and SEAKEYS stations are a critical component of NOAA's effort to protect, sustain, and improve coral reef ecosystems.

NOAA Predicts Busy Hurricane Season for 2003

NOAA's team of hurricane experts issued their annual hurricane forecast on May 19th, stating that higher-than-normal ocean temperatures in the Atlantic and other multi-decadal patterns would likely result in above average levels of storm activity during the June 1-November 30 Atlantic hurricane season. Eleven to 15 tropical storms are forecasted to develop, with six to nine becoming hurricanes, and two to four being classified as major with sustained winds of at least 111 mph.



An average hurricane season produces 10 tropical storms, with six strengthening into hurricanes and two being classified as major. Since 1995, however, researchers have observed an increase in the overall number of tropical storms and hurricanes. The 1995 through 2002 storm seasons comprise the most active eight consecutive hurricane years on record.

An additional factor contributing to the likelihood of an active season is the 70% forecasted return of the La Niña weather phenomenon during the summer. La Niña episodes produce colder-than-normal sea surface temperatures in the equatorial Pacific Ocean and contribute to enhanced levels of hurricane activity by decreasing the amount of vertical wind shear in the region of the Atlantic basin where most tropical storms and hurricanes that affect the United States develop.

Five-day tropical cyclone forecasts make their debut during the 2003 season as a new tool for protecting public safety, replacing the three-day forecasts used since the 1960s. The longer-range outlooks should provide increasingly populated coastal regions with greater lead time for evacuation and implementation of emergency measures should an approaching storm threaten.

NOAA's team of hurricane experts is comprised of scientists from the Climate Prediction Center, AOML's Hurricane Research Division (HRD), and the National Hurricane Center. HRD meteorologists Christopher Landsea and Stanley Goldenberg have participated on the panel since 1998. An updated forecast will be issued in August as the peak of the hurricane season begins.

2003 Atlantic Storm Names

Ana	Danny	Grace	Juan	Mindy	Peter	Teresa
Bill	Erika	Henri	Kate	Nicholas	Rose	Victor
Claudette	Fabian	Isabel	Larry	Odette	Sam	Wanda

May-June 2003
Informal Research Reports*

May 6

On the Characteristics and Variability of the Equatorial Deep Jets

Dr. Claudia Schmid
Physical Oceanography Division

May 20

Surface Drifter Observations of the Equatorial and South Atlantic Ocean

Dr. Rick Lumpkin
Physical Oceanography Division

May 22

Ozone Measurements from Some Atlantic Hurricanes

Dr. Thomas Carsey
Ocean Chemistry Division

May 27

The State of Florida Hurricane Loss Projection Model

Dr. Mark Powell
Hurricane Research Division

June 5

An Update on the Role of the Western Hemisphere Warm Pool in the Climate Variability of the Americas

Dr. David Enfield
Physical Oceanography Division

June 26

The Tropical Cyclone Inner-Core Prediction Group: Recent Research and Future Plans

Dr. Joseph Cione
Physical Oceanography Division

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

In Memory Of...

AOML was recently saddened by the untimely death of Robert Kenney, a data entry clerk with the Office of the Director's Administrative Group. Robert was at work on the afternoon of April 22nd when he began experiencing chest pain and shortness of breath. He died of a heart attack at Mercy Hospital two hours later. Robert was 47 years old. He is survived by Susan Traugott, his partner of 16 years, and his cousin, Richard Morgan.

Friends and coworkers gathered for a lunchtime memorial in Robert's honor on May 13th. AOML Director, Kristina Katsaros, guided the event. Robert was remembered for his dry wit and intellect, as well as his keen interest in science fiction literature.

During the two years Robert was with the Administrative Group, he rarely missed a day of work. His reliability and dedication were invaluable in enabling the Group to meet its long and short-term objectives.

Robert Kenney's unique personality touched many lives. As a living memorial, his favorite potted palm tree was donated to AOML and will be planted on the grounds.

Repeat Hydrography Program Underway in the Atlantic

Scientists from AOML's Ocean Chemistry and Physical Oceanography Divisions and the University of Miami's Rosenstiel School will be aboard the NOAA ship *Ronald H. Brown* when it departs from Reykjavik, Iceland on June 19th for the inaugural cruise of the Repeat Hydrography Program. During their two-months at sea, they will conduct an intensive schedule of water column sampling in the Atlantic Basin between Iceland and northern Brazil to measure ocean properties such as circulation, tracers, nutrients, and carbon dioxide (CO_2).

Rik Wanninkhof and Shari Yvon-Lewis load supplies and equipment that will be used during the first cruise of the Repeat Hydrography Program.

The World Hydrographic Programme and NOAA's Ocean-Atmosphere Carbon Exchange Study (OACES) made baseline measurements of these parameters in the 1990s. This follow-up effort will provide decadal "snapshots" of the penetration of CO_2 emitted by fossil fuel burning.

Two additional research cruises will sample the eastern Atlantic in September-October 2003. The South Atlantic, Pacific, and Indian Oceans will be occupied in subsequent years. The multi-million dollar effort is sponsored by the National Science Foundation and NOAA.

The Repeat Hydrography Program was planned by a committee co-chaired by Rosenstiel School professor Rana Fine and Rik Wanninkhof of AOML's Ocean Chemistry Division to fulfill the scientific objectives of both the U.S. Carbon Cycle Science and CLIVAR (Climate Variability and Prediction) programs. "Plans for this effort started in earnest back in 1995. It is very gratifying to see the strong involvement of scientists from Virginia Key and to finally get this important research endeavor in the water," said Wanninkhof.

By monitoring the changing patterns of CO_2 in the ocean and other climatically-significant parameters, the Repeat Hydrography Program will provide the necessary data for the development of better models, leading to improved and more accurate forecasting skill of the oceans and the global climate system.

Sim Aberson and Kristina Katsaros

Year-In-Service certificates were awarded to the following individuals for their years of full-time federal employment at the May 8, 2003 AOML Awards Ceremony:

10 years ..... *John McKeever*

15 years ..... *Jessie Harris*

20 years ..... *Paul Leighton*

25 years ..... *Douglas Anderson*
Charles Fischer
Peter Ortner
Mark Powell
Carla Stephens

30 years ..... *Gary Soneira*

Shirley Murillo and Kristina Katsaros

Awards Ceremony Celebrates Staff Accomplishments

AOML's annual awards ceremony was held on May 8, 2003 to celebrate the various accomplishments of staff members. Congratulations to the following individuals who were recognized:

• ***Robert Molinari***, in recognition of receiving the 2003 NOAA Administrator's Award for leadership in developing the global ocean observing system and for research that has advanced the understanding of the Atlantic Ocean's role in global climate balances.

• ***Sim Aberson***, in recognition of being named a 2003 Research Employee of the Year by NOAA's Office of Oceanic and Atmospheric Research for leadership in promoting science and for research that has resulted in significant improvement of tropical cyclone track forecasts.

• ***Stanley Goldenberg, Christopher Landsea, and Alberto Mestas-Nuñez,*** in recognition of receiving a FY-2002 Outstanding Scientific Paper Award from NOAA's Office of Oceanic and Atmospheric Research [Goldenberg, S.B., C.W. Landsea, A.M. Mestas-Nuñez, and W.M. Gray, 2001: The recent increase in Atlantic hurricane activity: Causes and implications. *Science*, 293(5529):474-479].

• ***Christopher Meinen,*** in recognition of receiving a FY-2002 Outstanding Scientific Paper Award from NOAA's Office of Oceanic and Atmospheric Research [Meinen, C.S., and M.J. McPhaden, 2000: Observations of warm water volume changes in the equatorial Pacific and their relationship to El Niño and La Niña. *J. Climate*, 13(20):3551-3559].

• ***Alberto Mestas-Nuñez,*** in recognition of being named the Research Team Member of the Month for February 2003 by NOAA's Office of Oceanic and Atmospheric Research for enthusiasm and initiative as well as the thoroughness and accuracy of his ocean-atmosphere climate interactions research.

• ***Qi Yao,*** in appreciation of her enthusiasm, excellence, and dedication to data processing for the Physical Oceanography Division.

• ***Jessica Redman,*** in recognition of her excellent work in the Physical Oceanography Division's Drifter Data Assembly Center.

• ***Gregory Banes, Neville Cohen, Manuel Fraga, Joseph Pica, and Judy Gray,*** in recognition of their outstanding efforts to update and improve the infrastructure of the AOML facility.

• ***Shirley Murillo,*** in recognition of her excellent preparation of the H*Wind User's Guide.

Robert Molinari

Stanley Goldenberg, Kristina Katsaros, and Christopher Meinen

Qi Yao and Kristina Katsaros

Gregory Banes, Manuel Fraga, Neville Cohen, and Kristina Katsaros

It's a Boy!

Congratulations to Kelly Goodwin, a microbiologist with the Ocean Chemistry Division, and her husband Robert Johnson, on the birth of their first child, a son, Kai Dylan Johnson. Kai was born on May 8th, just in time for Mother's Day, and weighed in at 4 lbs., 13 oz. Kai and his Mom and Dad are all doing well.

Welcome Aboard

William Dubel joins the staff of the Ocean Chemistry Division to assist the Acoustics Research Group's senior engineer and to help design and build electronic circuits. He is a recent graduate of Florida International University with a B.S. degree in computer engineering.

Grant Rawson joins the staff of the Physical Oceanography Division to assist researchers with activities related to the Florida Bay Circulation and Exchange program. Grant is a recent graduate of the Rosenstiel School's Marine Affairs Program.

Laurie Sindlinger joins the staff of the Physical Oceanography Division to assist Dr. Carlisle Thacker with the task of assimilating temperature data from expendable bathythermographs (XBT) into the hybrid coordinate ocean model (HYCOM).

Axa Tomayo joins the staff of the Office of the Director to serve as a backup for the receptionist and to assist the Administrative Group with clerical tasks.

Farewell

Michael Crane, east coast Liaison Officer with the National Coastal Data Development Center (NCDDC) of NESDIS (National Environmental Satellite, Data and Information Service) departed AOML on May 9th after 13 years of working in Miami. Mike will continue his employment with the NCDDC in Bay St. Louis, Mississippi as a Service Officer, working in the area of customer outreach. Best wishes to Mike for much success in his new position with the NCDDC.

NOAA Represented at Annual Federal Awards Luncheon

Two NOAA employees were nominees at the 38th Annual Federal Employee of the Year awards luncheon hosted by the Miami Federal Executive Board on May 9, 2003. Shailer Cummings, a research oceanographer with AOML's Ocean Chemistry Division, and Jennifer Schull, a fishery biologist with the Southeast Fisheries Science Center, were contenders in the "professional/scientific" and "technical" categories, respectively. A group of well-wishers from AOML attended the event held at the Wyndham Bonaventure Resort and Spa in Weston, Fort Lauderdale to support Shailer and Jennifer and cheer them on. An enjoyable afternoon was experienced by all.

Cummings was nominated for the leadership role he played in outfitting the *Explorer of the Seas*, a commercial cruise liner, with state-of-the-art oceanographic and meteorological sampling equipment. Due to his efforts, critical data about the windward passages between Caribbean islands and the variability in the Gulf Stream front and its associated chemical and biological properties are being furnished to scientists in near real time.

Schull was nominated for her professional contributions, leadership skills, and community involvement. Her research and conservation efforts on behalf of protected species have resulted in greater data accuracy and reliability, better customer relationships and service, and improved public appreciation of NOAA.

Among those attending the Federal Employee of the Year luncheon were Erica Van Coverden, Gladys Medina, Kristina Katsaros, Jennifer Schull, Shailer Cummings, Eugenia Cummings, Sandy Taylor, Gail Derr, and Howard Friedman.

Team AOML competed in the 2003 Corporate Run at Bayfront Park on May 8th. The 3.1 mile run/walk race brought together 17,931 participants from 524 companies in the metropolitan Miami area. Proceeds from the event were donated to the South Florida Chapter of the Leukemia and Lymphoma Society.

Travel

Jules Craynock, James Hendee, Skeet Perry, and Michael Shoemaker visited St. John, St. Thomas, and St. Croix (U.S. Virgin Islands) to make repairs and upgrades to Coral Reef Early Warning System (CREWS) stations on April 27-May 3, 2003.

Judy Gray helped develop the data integration system for NOAA's Coastal Storms Initiative (CSI) program in Seattle, Washington on May 5-8, 2003. She participated in planning the 2004 CSI program in Washington, D.C. on May 28-29, 2003.

Christopher Landsea visited the Woods Hole Oceanographic Institute in Woods Hole, Massachusetts and the Massachusetts Institute of Technology in Cambridge, Massachusetts on May 7-9, 2003.

Shailer Cummings, Ben Kates, Ulises Rivero, and Jack Stamates attended an Acoustic Doppler Current Profiler (ADCP) training class aboard the Royal Caribbean Cruise Lines ship *Explorer of the Seas* on May 10-17, 2003.

Molly Baringer, Silvia Garzoli, Gustavo Goni, and Robert Molinari attended NOAA's Climate Observation Program Workshop in Silver Spring, Maryland on May 12-16, 2003.

Christopher Meinen attended the Pacific Upwelling and Mixing Physics (PUMP) Workshop in Boulder, Colorado on May 19-21, 2003.

Louis Florit attended a ReefCheck meeting in Los Angeles, California on June 2-3, 2003.

Robert Kohler and Alejandra Lorenzo attended NOAA's WebShop 2003 in Longmont, Colorado on June 2-6, 2003.

James Hendee attended the Coral Reefs, Climate Change and Coral Bleaching Workshop in Oahu, Hawaii on June 18-20, 2003.

Erica Van Coverden participated in the visiting scientist program aboard the Royal Caribbean Cruise Lines ship *Explorer of the Seas* on June 23-28, 2003.

All In a Day's Work

AOML's hardworking Facility Maintenance crew turns up in some of the most unusual places in their efforts to keep the 30+ year-old AOML facility and grounds in good repair. Whether patching the roof, helping install a new energy efficient air conditioning system, or simply changing light bulbs in the parking lot from a high lift platform, there's always plenty of projects guaranteed to prevent their workday from deteriorating into dull, monotonous routine.

Manuel Fraga and Neville Cohen rise to the occasion in an effort to keep the lights on in the AOML parking lot.

NREL National Renewable Energy Laboratory

June 2, 2003

Mr. Bernie Denno
1305 East-West Highway
SSMC4, Room 11109
Silver Spring, MD 20910

Re: *Federal Energy Saver Showcase designation for the Atlantic Oceanographic and Meteorological Laboratory*

Dear Mr. Denno:

On behalf of the United States Department of Energy, Federal Energy Management Program, I am pleased to inform you that the Atlantic Oceanographic and Meteorological Laboratory has been designated a 2003 Federal Energy Saver Showcase facility. I hope you will share this honor and recognition with all those involved in the project from its inception to completion.

Each Federal Energy Saver Showcase will receive a plaque notifying visitors they are entering a Government building that uses energy and water wisely and saves taxpayer dollars. We hope to get these plaques out to each of you via U.S. Mail or Federal Express in the next two months.

This project will also be summarized in the 2003 Federal Energy Saver Showcase booklet describing all the great projects completed this year. A representative from our communications team may be contacting you in the next several weeks to collect additional information about, and photos of, your showcase facility, as necessary for inclusion in this booklet.

This year's showcase facilities represent some of the best examples of energy efficiency and renewable energy technologies in the Federal sector, and each helps our government save money and run more efficiently. FEMP commends all the individuals and agencies who have contributed to their successful implementation. Congratulations on a job well done!

Sincerely,

Trina Masepohl

Trina Masepohl, Federal Energy Management Program
Showcase Program Coordinator

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