



MACOORA

Mid-Atlantic Coastal Ocean Observing Regional Association

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SPRING GLIDERS



A new glider, named Scarlet Knight, will be launched this spring. The glider is part of the Integrated Ocean Observing System, a project to collect and use ocean information continuously covering oceans, coastal waters and Great Lakes. "The capacity to fly through the ocean, across the Atlantic, taking data about temperature, salinity and other properties of the water gives us keen insight into what's happening down there," Rutgers professor and MACOORA's Board member, Scott Glenn, is leading the glider project.

"The launching [of the glider] is tremendously exciting because there is just so much that we don't really know about what happens in the oceans," said Jane Lubchenco, head of the National Oceanic and Atmospheric Administration. Unmanned and without a motor, the glider can rise and dive, seeking out currents that will carry it along without worrying about refueling. Whenever it comes to the surface, it radios its findings back to the scientists. "The ocean plays such a critical role in the dynamics of the climate system, having a better understanding of what's happening in real time is invaluable information," said Lubchenco. "We're beginning to be able to infer much about the kinds of plants and animals and microbes that may be present from some of the kinds of data that the glider will be taking," she added.

Glenn said the device will be able to take a daily profile of water conditions and maneuver, directed by radio messages from student researchers. "If we can do it with one, we can do it with 10," he said. Gliders can be sent into hurricanes and into Arctic and Antarctic conditions.

MACOORA: Protecting lives, livelihood and quality of life through an understanding of marine and coastal environments, from Cape Hatteras to Cape Cod

MACOORA /MARCOOS

On April 20, new ocean observing data was released from the Integrated Ocean Observing System (IOOS®) as a joint effort between IOOS, the Mid-Atlantic Coastal Ocean Observing Regional Association, the US Coast Guard, the Department of Homeland Security, and NOAA.

The data will feed into Coast Guard servers to improve environmental observations for the agency's operational Search and Rescue Optimal Planning System. A short term predictive system that allows 24-hour forecasts for sea surface currents based on the most recent ocean observations will also be available in the Mid-Atlantic region.

The new data sets will include surface current maps from high frequency radar systems. The technology measures speed and direction of ocean surface currents in near real time, which the Coast Guard can then use during search and rescue operations to track the probable path of victims and drifting survivor craft. The maps can also be used to support other scientific work, such as oil spill response, harmful algal bloom monitoring, and water quality assessments.

"This is a big step for a data set that is unique to IOOS to go operational in this way," said Zdenka Willis, NOAA IOOS Program Director. "It shows collaboration between government and academic institutions and uses available resources to add value to multiple agencies and the nation's citizens."

The Department of Homeland Security Center of Excellence for Port Security helps maintain the radar network for use in vessel tracking applications to improve Maritime Domain Awareness.

"From the recreational fisherman to the family swimming at the beach, people in the Mid-Atlantic region will enjoy a safer life as a direct benefit of joint technology and understanding of community needs," said Judith Krauthamer, Executive Director of the Mid-Atlantic Coastal Ocean Observing Regional Association.

There are also plans to allow for the nationwide use of this radar data and to translate the forecast capability to other USCG regions.

Sub-Regional Observing Systems For a full listing visit

www.macoora.org/sub.html

Massachusetts & Rhode Island Bays & Shelf

<http://mvcodata.whoi.edu/cgi-bin/mvco/mvco.cgi>

<http://tidesandcurrents.noaa.gov/>

<http://nerrs.noaa.gov/WaquoitBay/welcome.html>

<http://nerrs.noaa.gov/NarragansettBay/welcome.html>

Long Island Sound

<http://lisicos.uconn.edu/>

<http://www.sunysb.edu/soundscience>

<http://www.co-ops.nos.noaa.gov/nhports/nhports.shtml>

New York Bight

<http://hudson.dl.stevens-tech.edu/maritimeforecast/>

<http://co-ops.nos.noaa.gov/nyports/nyports.html>

<http://www.marine.rutgers.edu/cool/>

<http://www.marine.rutgers.edu/mrs/codar.html>

<http://nerrs.noaa.gov/HudsonRiver/welcome.html>

<http://nerrs.noaa.gov/JacquesCousteau/welcome.html>

Delaware Bay

<http://nerrs.noaa.gov/Delaware/welcome.html>

<http://www.udel.edu/dbos/>

<http://tidesandcurrents.noaa.gov/dbports/dbports.shtml?port=db>

Chesapeake Bay

<http://nerrs.noaa.gov/ChesapeakeBayMD/welcome.html>

<http://nerrs.noaa.gov/ChesapeakeBayVA/welcome.html>

<http://www.cbos.org/>

<http://www.nasa.gov/centers/goddard/home/index.html>

<http://tidesandcurrents.noaa.gov/cbports/cbports.shtml?port=cb>

Offshore Coastal Waters

<http://nerrs.noaa.gov/Monitoring/>

<http://www.weatherflow.com>

<http://marcoos.us/index.htm>

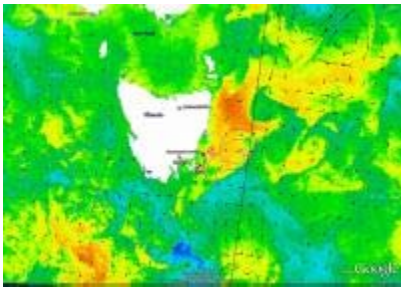
<http://www.ndbc.noaa.gov/>

<http://www.nws.noaa.gov/>

http://portfocus.com/united_states_america/index.html

MACOORA: Protecting lives, livelihood and quality of life through an understanding of marine and coastal environments, from Cape Hatteras to Cape Cod

Glider News (continued)



The first successful deployment and retrieval of a glider is being celebrated this spring in Australia. The, deep ocean-going robotic submarine will measure changes in two of Australia's most influential ocean currents. Under the joint CSIRO Wealth from Oceans National Research Flagship and Integrated Marine Observation System (IMOS) project, the underwater ocean glider was launched in February on a two-month, 1,500 kilometre voyage. The ocean glider was supplied through IMOS's Australian National Facility for Ocean Gliders facility located at The University of Western Australia.

Mid-Atlantic News

The Mid-Atlantic Regional Coastal Ocean Observing System (MARCOOS) has assembled a HF (High Frequency) Radar network of 26 installations from North Carolina to Massachusetts. MARCOOS uses the HF radars to measure 2D sea surface current fields, and then feeds that data into its Short Term Predictive System (STPS) to predict the next 24 hours of currents and tides. happening in a certain area, so workers can respond.

Coast Guard search and rescue crews use the information to plan and direct deployments of aircraft and vessels that work to find and save people at sea. Crews use observed or predicted surface wind and surface current data from the Coast Guard's Environmental Data Server to predict the probable path of floating objects.



The Coast Guard and NOAA hazardous materials (HAZMAT) crews use the data for their work. Both require surface current products for tools that tell crews what is happening in a certain area, so workers can respond. Coast Guard search and rescue crews use the information to plan and direct deployments of aircraft and vessels that work to find and save people at sea. Crews use observed or predicted surface wind and surface current data from the Coast Guard's Environmental Data Server to predict the probable path of floating objects. Continued Next page.

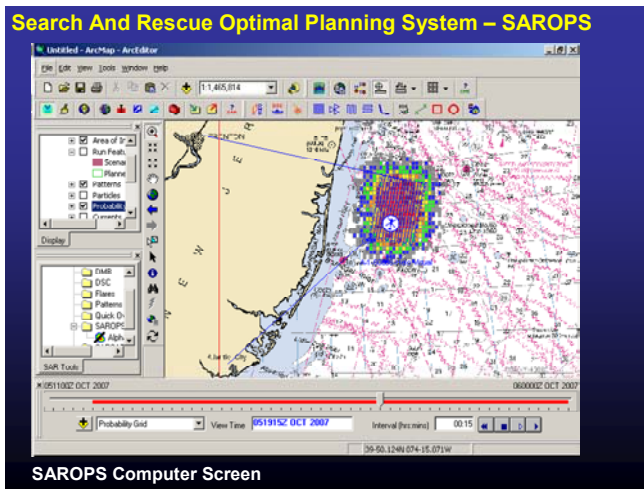
MACOORA Members in the News

MACOORA Board Director, Dr. Michael Bruno, received an impact award at the annual DHS summit in Washington DC this spring for their response to the emergency landing of the aircraft in the Hudson. This is a kudo for IOOS-- the MARCOOS grant is one of the grants supporting of Alan Blumberg's model. He writes that although it is great recognition, "I wish it recognized our entire center."

Bruno is a Feiler Chair Professor and Dean, School of Engineering & Science, Stevens Institute of Technology, Center for Maritime Studies. Dr. Blumberg 's work is directed towards understanding and predicting the flow processes operating in rivers, lakes, estuaries and the oceans. His research makes use of numerical models, laboratory experiments and field measurements. These efforts have contributed to understanding the physical dynamics of estuarine and coastal ocean circulation and to the creation of ocean observing and forecasting systems which are used for environmental studies, surface vessel operations, and as a basis for maritime security. See http://www.stevens.edu/ses/cms/People/faculty_profile.php?faculty_id=84.



Mid-Atlantic News



The IOOS region's high frequency radar network can provide higher resolution sea surface current data to aid in these efforts. During an event or test operation, workers deploy a few thousand virtual objects and let them drift. The cluster disperses based on uncertainty estimates in wind and current fields downloaded from the Coast Guard system. Coast Guard then relies on the IOOS data to decrease uncertainty. This improves dispersion predictions, decreases search areas, and enhances the likelihood for success in saving lives and property. The Coast Guard estimates the added data capabilities supplied by IOOS can result in another 26 to 45 lives.

This information, and much more, can be found at NOAA IOOS, Phone: (301) 427-2420. <http://ioos.noaa.gov> and Art Allen, USCG, Arthur.A.Allen@uscg.mil.



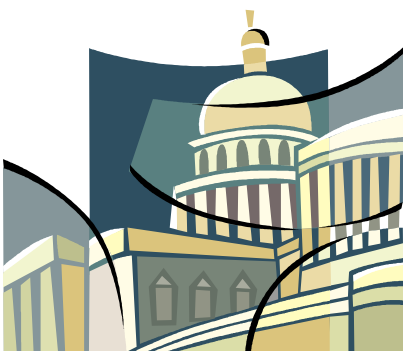
Education News

In Honolulu, Hawaii, a project that began with one sixth-grade science class at Kawanakoa Middle School, teachers and students are following the journeys of “coconuts”—floating global positioning system (GPS)-enabled sensors—cast into the Pacific Ocean as part of a K–12 science curriculum called Project Niu.

Students research and hypothesize about where the Niu will travel based on ocean currents, weather patterns, tides, and other factors. “Project Niu gives students the opportunity to integrate science concepts with other disciplines [such as] math and technology,” says Mary Costello, high school marine science teacher at the Academy of the Pacific in Honolulu. “The lesson plans made it easy for me to integrate content topics. I found it very easy to adapt the lessons to a high school audience.” For more information, visit <http://www.nsta.org/publications/news/story.aspx?id=55944>

Legislative News

President Obama signed into law 3/30/2009 H.R. 146, the Omnibus Public Land Management Act of 2009.



The largest conservation bill to pass in 15 years, Obama stated, “This bipartisan bill has been many years in the making, and is one of the most important pieces of natural resource legislation in decades”. The law establishes the organizational, legal and financial framework for the IOOS program, clarifies the role of the regions (including MACOORA) as part of the national program, provides the regions with liability protection for the provision of data and forecasts, establishes NOAA as the lead for this inter-agency program, and establishes an advisory committee to ensure the program is responsive to the needs of users. For more information, contact MACOORA, info@macoora.org or contact: Josie Quintrell, executive director, National Federation of Regional Associations for Coastal and Ocean Observing, jquintrell@suscom-maine.net.