

VIMS Uses Acrobat Towed Vehicle for Monitoring Dissolved Oxygen

Excessive amounts of nutrients (nitrogen and phosphorus) from point and nonpoint sources can fuel algal blooms in estuaries and coastal waters. Excess algal growth can lead to low oxygen concentrations (anoxia and hypoxia) that are detrimental to living resources. Effective management of this condition requires an understanding of spatial and temporal extent of oxygen depleted waters.

In the spring of 2007, VIMS was awarded a contract by the Virginia Department of Environmental Quality (VADEQ) to conduct enhanced monitoring and assessment of dissolved oxygen (DO) in the York and

Rappahannock Rivers. The data will be used to assess attainment of DO criteria in open water, deep water and deep channel designated uses as established by the EPA/Chesapeake Bay Program.

Essential to the task is the Acrobat towed instrument equipped with a short response time (200 msec) oxygen electrode (AMT Analysenmesstechnik GmbH). Combining the undulating flight path capability of the Acrobat with a sawtooth cruise track allows for detailed 3-D mapping of oxygen distributions. This approach enables scientists at VIMS to measure oxygen distributions under the dynamic and highly variable spa-

ACROBAT/Rosette being deployed by VIMS scientists during a monitoring practice cruise.
(Photo Credit: Jason Adamo, VIMS)



trial and temporal conditions in estuaries. VIMS scientists are also developing techniques to visualize oxygen distributions and to calculate hypoxic volume, the volume of water in an estuary containing less than a designated oxygen concentration.

VIMS scientists further enhanced the data collecting capability of the Acrobat by the addition of a remotely-triggered water sampling device. With funding provided by CICEET (The UNH/NOAA Cooperative Institute for Coastal and Estuarine Environmental Technology) and in collaboration with Sea Sciences Inc., VIMS developed and successfully tested a mini-rosette (6 x 125 ml Niskin-type bottles) mounted on the Acrobat platform. The rosette can be triggered anywhere along the flight path, collecting discrete water samples where unique or interesting conditions are observed. Samples collected with the mini-rosette can be used


for sensor calibration and characterization of plankton.

For more information, contact Chris Casagrande, Sea Sciences, Inc., at Email sales@seasciences.com

science
news

BlueView Wins Contract

BlueView Technologies Inc., Seattle, WA, was recently awarded a contract from Oceaneering International Inc. for the supply of (3) BlueView P-900E multibeam imaging sonar. Oceaneering is providing BP Americas Production Co. with vessel and ROV services in the Gulf of Mexico to support hurricane damage-related platform decommissioning operations. The BlueView P-900 sonars will be integrated onto work class ROVs to assist with navigation and operations in zero visibility conditions. (Oceaneering International, Inc)



TEXAS A&M UNIVERSITY at GALVESTON
Engineering
Faculty Positions

Texas A&M University at Galveston, a branch campus of Texas A&M University (TAMU, College Station) with a marine-oriented mission, is expanding its two engineering programs. The B.S. program in Maritime Systems Engineering has an emphasis on the design of offshore structures and coastal engineering works. The B.S. program in Marine Engineering Technology has an emphasis on the engineering and operation of seagoing vessels and auxiliary facilities. Applications are invited from outstanding candidates for tenured, tenure-track, and non-tenure track faculty positions of all ranks. For tenure-track positions, candidates must demonstrate the potential to obtain graduate or joint faculty status at TAMU and to produce scholarly works.

A Ph.D. in a relevant field and/or a combination of appropriate advanced degrees and industry/teaching experience are essential to successfully participate in the research, teaching, and public service mission of the university. The ideal candidate will possess a background in one or more of the following fields: marine structural engineering, naval architecture, marine geotechnical engineering, marine environmental engineering, metocean prediction and statistics, sediment transport, propulsion systems, energy and power systems, instrumentation, facilities engineering, and/or other related emerging areas. Candidates must have the ability to teach relevant undergraduate engineering courses as well as the potential to procure government and industry grants for projects to advance student education and the engineering field. Excellent English-language skills are required and experience with ABET-accredited institutions is preferred. For questions, contact Professor Vijay Panchang at 409-740-4504. For application forms and other details, visit our website at <http://www.tamug.edu/hrd>. The entire application MUST be completed and submitted along with CV and (3) references. Employment is contingent upon a background check.

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