

oceanbuzz!

The weekly ocean technology e'Newsletter everyone's talking about

This FREE OF CHARGE newsletter is brought to you by the organisers of the Ocean Business event www.oceanbusiness2007.com. Send us your news, job postings, info on events and we will help spread the word to the Ocean Technology industry. To add your colleagues to the Oceanbuzz circulation list simply email info@intelligentexhibitions.com.

INDEX

1. GENERAL OCEAN NEWS

- a) Real-time Seismic Monitoring Station Installed Atop Active Underwater Volcano
- b) Falmouth Scientific Announces Navy Contract for Ocean Sensors
- c) Short-circuit discovered in ocean circulation
- d) Scripps Oceanographer Russ Davis to be awarded Prince Albert I Gold Medal
- e) Dynamic Positioning Services awarded contract by Shell
- f) Metoc launches new Wales & Western Region Offices
- g) Enhanced SeaBat 7125 multibeam echosounder breaks new ground
- h) Gavia AUV Returns from Under the Arctic Ice
- i) NOAA Deploys first 'SMART Buoy' to Support Captain John Smith Chesapeake National Historic Trail

2. JOB POSTINGS

- a) Hydrographic Surveyors Required
- b) Applanix Recruiting Customer Support Engineer, UK

1. GENERAL OCEAN NEWS

1.a) REAL-TIME SEISMIC MONITORING STATION INSTALLED ATOP ACTIVE UNDERWATER VOLCANO

This week, researchers will begin direct monitoring of the rumblings of a submarine volcano in the southeastern Caribbean Sea. On May 6, a team of scientists led by the Woods Hole Oceanographic Institution (WHOI) installed a new underwater earthquake monitoring system on top of Kick'em Jenny, a volcano just off of the north coast of the island nation of Grenada. Part of a project to develop new technology for earthquake monitoring in coastal areas, the Real Time Offshore Seismic Station (RTOSS) uses an ocean-bottom seismometer (OBS) deployed directly on top of the volcano-250 meters beneath the sea surface-to collect real-time data from Kick'em Jenny.

RTOSS employs a special mooring design that allows seismic data to be transmitted by high-frequency radio to a land-based observatory in the village of Sauteurs. The data will reach the shore within milliseconds of being collected, which will significantly improve the ability of researchers to monitor seismic activity as it happens, a basic requirement for reducing hazards from volcanic gas and rock bursts and from tsunami-generating seafloor avalanches.

A key element of RTOSS, developed by engineers at WHOI, is the flexible, stretchy hose that connects the seafloor anchor and instruments to the buoy on the sea surface. This hose is designed to compensate for the movement of waves, tides, and currents (which are notoriously rough around Kick'em Jenny), and stretches to more than two times its original length without snapping. Electrical conductors are spiraled through the wall of the hose so that the wires straighten out, rather than break, when the hose stretches. A surface buoy on the end of the mooring uses solar panels to power the radio transmitters that send the data approximately seven kilometers (four miles) to a shore station near the coast.

Kick'em Jenny provides scientists with a unique natural laboratory to study the activity at a shallow submarine volcano that will one day emerge from the ocean as a new volcanic island. It is the only "live" submarine volcano in the West Indies, and it has erupted at least twelve times since 1939. The last major eruption occurred in 2001. For more info email media@whoi.edu

1.b) FALMOUTH SCIENTIFIC ANNOUNCES NAVY CONTRACT FOR OCEAN SENSORS

FSI have announced that it has received a US \$3.6 million, multi-year contract for supply of conductivity, temperature, depth (CTD) sensors from the US Navy's Naval Underwater Warfare Center (NUWC) in Newport, RI, USA. The DT-705 sensors are installed on submarines to monitor the surrounding environment. Ocean conductivity, temperature, and depth measurements provided by the sensor are also used to calculate sound velocity, salinity and density for use in weapons targeting and submarine buoyancy determination. FSI has supplied over 150 DT-705 CTD sensors to the Navy under previous contracts. Sensors supplied under the new contract will be used to instrument Los Angeles Class submarines as well as the newer Virginia Class submarines. For more info email flewis@falmouth.com

1.c) SHORT CIRCUIT DISCOVERED IN OCEAN CIRCULATION

Scientists have discovered how ocean circulation is working in the current that flows around Antarctica by tracing the path of helium from underwater volcanoes. The details were published in Nature last week. The team of scientists, led by Alberto Naveira Garabato of the National Oceanography Centre, Southampton has discovered a 'short-circuit' in the circulation of the world's oceans that could help predictions of future climate change. This process in the Southern Ocean allows cold waters that sink to the abyss to return to the surface more rapidly than previously thought. This affects the Southern Ocean circulation, which links all the other oceans, and is also relevant to uptake and release of carbon dioxide by the sea - transport between the deep and surface waters in the Southern Ocean is particularly important for this process.

The findings, presented in a paper in this week's issue of the journal Nature, show that much of the overturning circulation - how water moves and mixes vertically - around Antarctica takes place just around the tip of South America and in the small region in the Atlantic south of the Falklands, called the Scotia Sea.

Leading author Dr Alberto Naveira Garabato, from the University of Southampton's School of Ocean and Earth Science at the National Oceanography Centre, Southampton, said that the findings represented an important shift in how scientists think that the ocean circulation is driven.

"For many years, oceanographers have regarded the circulation in the upper kilometre of the ocean as being independent of that in the abyss. Our observations show that the two are very much intertwined in the Southern Ocean, and that this has substantial implications for how we represent the ocean in climate models."

Co-author Prof Andrew Watson, from the University of East Anglia's School of Environmental Sciences, said that this knowledge will help us to better understand the world ocean circulation and to make confident predictions about how the climate is going to change over the next 100 years. Visit <http://www.noc.soton.ac.uk/index.php?full=1> for more info.

1.d) SCRIPPS OCEANOGRAPHER RUSS DAVIS TO BE AWARDED PRINCE ALBERT I GOLD MEDAL

Russ Davis, a research oceanographer at Scripps Institution of Oceanography at UC San Diego whose observational research and invention of scientific instruments is widely credited for transforming oceanography, will receive the 2007 Prince Albert I Gold Medal from the International Association for the Physical Sciences of the Oceans (IAPSO). Davis has advanced observational, as well as theoretical, components of physical oceanography, according to the association. His accomplishments include a leading role in the development of autonomous Sounding Oceanographic Lagrangian Observer (SOLO) floats used in Argo, an array of instruments spread throughout the world's oceans that make physical measurements at a coverage level never before possible. Davis has also been instrumental in developing the Spray glider, a programmable self-propelled craft containing a suite of measurement instruments that can collect data over long distances and at a variety of ocean depths.

The medal will be presented on July 4, 2007, during the 2007 General Assembly of the International Union of Geodesy and Geophysics (IUGG) in Perugia, Italy. Previous recipients include Scripps physical oceanographer Walter Munk, who won the medal in 2001.

1.e) DYNAMIC POSITIONING SERVICES AWARDED CONTRACT BY SHELL

Dynamic Positioning Services of Aberdeen, a leading equipment hire and sales company for Survey, ROV and Dynamic Position (DP) sensors, has been awarded a major contract by Shell U.K. Limited (Shell) to supply and support a Guidance Navigation DP Reference sensor called RadaScan. The contract involves the installation of up to eleven RadaScan systems on board Shell's contracted fleet of platform supply vessels, and the supply of ninety passive positioning transponders which will be installed on all Shell North Sea installations and mobile drilling unit supported from Aberdeen. RadaScan is an advanced radar based positioning sensor for DP vessels, which was released to the market in 2006 following four years of development by Guidance Navigation, a Leicester based company. The contract award coincides with Dynamic Positioning Services moving to a new purpose built facility in Bridge of Don. It will lead to the creation of four new permanent positions to service the contract including a project manager post. For more info email SJohnstone@dynamic-positioning.co.uk

1.f) METOC LAUNCHES NEW WALES & WESTERN REGION OFFICES

Metoc plc opened offices in Cardiff on the 1st May to support its Environmental Design and Risk Management (EDRM) services for marine, coastal, and river developments in Wales and the South West of England. The Cardiff offices will provide services for offshore wind and marine renewable developments (including tidal barrages), submarine cables, and power stations, to meet the future energy and commercial needs of Wales and the west country, as well as wastewater strategies and schemes for coastal and river protection. For further information contact Natalie Griggs natalieg@metoc.co.uk

1.g) ENHANCED SEABAT 7125 MULTIBEAM ECHOSOUNDER BREAKS NEW GROUND

RESON launches the first multibeam sonar systems on the market with dual frequency for remotely operated vehicles (ROV) down to depths of 6000 meters. The new SeaBat 7125 enables exploration missions to map the sea faster, and more accurately than ever before.

With the release of the updated SeaBat 7125 dual-frequency multibeam echosounder, RESON is setting new standards in deep-sea sonar survey. Offering dual frequency for ROV down to 6000m, the SeaBat 7125 can perform multiple missions from the same vehicle without costly and time-consuming system reconfigurations. An innovative design means switching frequencies can be done in seconds - simply by loading a new software file - so deep-depth survey operations get more time in the water. The SeaBat 7125 is one of the most feature-rich sonar platforms on the market, and ideal for multiple applications. Innovative features include high-density flexible beamforming, beam data recording, Built-in Test, automatic operation, and AUV configuration. For more info contact Rich Lear, Product Lifecycle Manager at rich@reson.com

1.h) GAVIA AUV RETURNS FROM UNDER THE ARCTIC ICE

The GAVIA man-portable autonomous underwater vehicle (AUV) from Hafmynd, Iceland, has returned from its latest trip to the Arctic circle, where it carried a GeoSwath wide swath sonar (GeoAcoustics, UK), collecting bathymetry and side scan data from the underside of the Arctic ice sheet. The GAVIA was deployed from the Applied Physics Laboratory Ice Station 2007 (APLIS07), which has been built in the Beaufort Sea approximately 300 miles North of Alaska.

The 2.6m long by 20cm diameter GAVIA AUV was launched through a 3m by 1m hole melted through the ice, and sent on a series of short out-and-back survey missions from the ice hole . For this survey it was ballasted to fly upside-down so that the camera, GeoSwath mapping sonar and Doppler velocity log (DVL) were looking upwards. The survey team were fascinated by the haunting photographs returned by the Gavia showing the spring sun shining through the 3m thick ice sheet.

The mission to APLIS is part of an ongoing research programme led by Professor Peter Wadhams, Head of the Polar Ocean Physics Group, Department of Applied Mathematics and Theoretical Physics (DAMTP), Centre for Mathematical Sciences, University of Cambridge (UK). This research is aimed at investigating the ability of airborne ice thickness measurements to truly reflect the volume of the ice contained in areas with complex cracking and ridging, and also at understanding the structure of ridges and why they are melting so fast. This could have a significant impact on the accuracy of parameters used in climate change modeling. The ability of the GeoSwath sonar to generate a 3-D digital terrain map of the ice underside allows significant new advances to be made in understanding the nature of the ice. The survey results are currently being analysed at the Polar Ocean Physics Group, with a view to publication in scientific journals in the near future. For more info email tom.hiller@geoacoustics.com at GeoAcoustics.

1.i) NOAA DEPLOYS FIRST "SMART BUOY" TO SUPPORT CAPTAIN JOHN SMITH CHESAPEAKE NATIONAL HISTORIC TRAIL

The NOAA Chesapeake Bay Office has deployed its first "smart buoy" as part of the Captain John Smith Chesapeake National Historic Trail-the nation's first water-based National Historic Trail. The buoy, positioned off Jamestown, Va., in time for the America's 400th anniversary weekend, May 11-13, is the first observation platform to be launched as part of the Chesapeake Bay Interpretive Buoy System.

"These buoys do much more than mark locations along the trail," said retired Navy Vice Adm. Conrad C. Lautenbacher, Ph.D., undersecretary of commerce for oceans and atmosphere and NOAA administrator. "The concept for these 'smart buoys' grew out of NOAA's advancements in Earth observing systems. NOAA is the lead agency for the U.S. Integrated Ocean Observing System-a cornerstone of the President's U.S. Ocean Action Plan-and these buoys will be part of the larger Chesapeake Bay Observing System." The buoys collect chemical, optical and physical observations, among others, and transmit them wirelessly in near-real time. These measurements, as well as historical and cultural information about the Bay, can be accessed over the Internet at <http://www.buoybay.org> and by phone at + 1(877) BUOY-BAY (+1 286-9229).

2. JOB POSTINGS

2.a) HYDROGRAPHIC SURVEYORS REQUIRED

Trident Offshore Ltd a rapidly expanding company, within the Acteon Group of companies, has an urgent requirement for Hydrographic Surveyors to join the Navigation Department. The ideal candidates will have experience in Subsea Acoustic positioning systems in addition to surface DGPS navigation systems and Laser Total Stations.

The position will require travel to offshore installations in the North Sea and overseas on rig-move/vessel positioning contracts as part of our navigation team. The successful candidates will be required to be based in Aberdeen and work in the Trident Offshore Offices for job preparation and reporting duties. Send CV and covering letter by post or e-mail to M J Grubb, Survey Manager, mg@trident-offshore.com

2.b) APPLANIX RECRUITING CUSTOMER SUPPORT ENGINEER, UK

Applanix Corporation is looking for a Customer Support Engineer to be based in the UK. The successful candidate will provide advice and consultation on applications, product performance, installations and complex customizations of Applanix products to customers, internal sales personnel and product managers. Office based product support will include testing, repair and refurbishment of products, as well as the maintenance of spares inventory and demonstration equipment. International travel will be required approximately 35% of the time for field support, to include product installation, setting to work and customer training. If interested, please submit your resume and credentials to hr@applanix.com .

If you wish to be removed from this e-newsletter simply respond with 'REMOVE from Oceanbuzz' in the subject line.