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NEWS RELEASE

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Research cruise to improve understanding of Earth's interior water cycle and regional earthquake patterns

St. Augustine, Trinidad & Tobago W.I. – March 21st, 2016 – Earth scientists from a consortium of UK-based institutions along with regional scientific agencies, recently concluded a 12-day cruise to deploy 34 broad-band ocean-bottom seismometers (BBOBS) across the Lesser Antilles seabed to better understand the Earth's interior water cycle and how it may relate to regional earthquake patterns.

The scientific cruise was a component of the NERC-funded VOILA (Volatile cycling in the Lesser Antilles arc) research project which takes a holistic approach to the cycling of volatiles (water, along with other volatiles such as carbon dioxide and sulphur) into the deep Earth at the Lesser Antilles (Eastern Caribbean) subduction zone or volcanic arc (from St. Kitts-Nevis in the north to Grenada in the south).

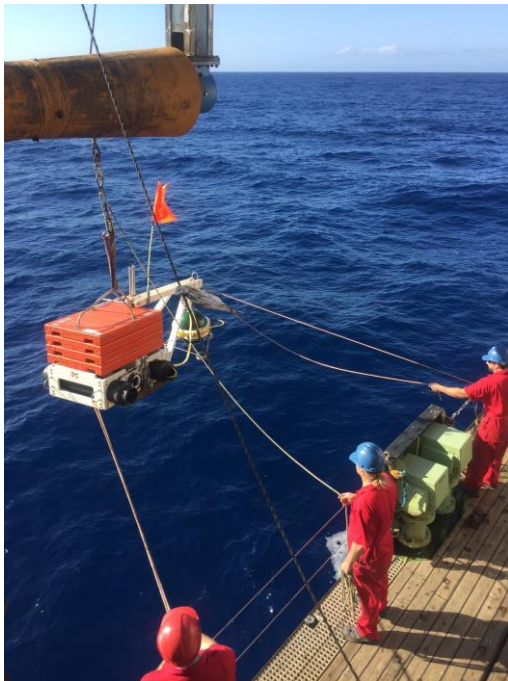
Here the North American plate, soaked with water from the Atlantic Ocean subducts (dips) beneath the Caribbean plate. The project combines a range of Earth scientists with skills in petrology,

geochemistry, numerical modelling as well as marine geophysics to track the passage of the water as it goes into and out of the subduction zone system as part of an interior water cycle. One of the aims of the project is also to assist regional hazard assessment and answer specific questions such as is there a link between the fluid pathways and the pattern of earthquakes?

The VOILA passive array is the largest of its type ever deployed at an Atlantic subduction zone. The instruments will sit on the seabed for about 15 months recording earthquake waves from local and distant events after which time further geophysical measurements will be conducted to determine the pattern of water on the incoming plate in order to complete scientists' understanding of this interior water cycle.

The UWI Seismic Research Centre is a partner of the VoiLA project. Other participants include Durham University, University of Bristol, Imperial College London, Natural History Museum, University of Leeds, University of Liverpool and University of Southampton.

Additional information on the VoiLA project and other partners may be found at <http://www.voila.ac.uk/>



The team deploys a broad-band ocean-bottom seismometer to the west of Guadeloupe. 34 OBS instruments were deployed along the volcanic arc.
Photo courtesy: VoiLA



Some of the members of the VoiLA research team at the end of their journey near Antigua.
Photo courtesy: George Cooper

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ABOUT THE UWI SEISMIC RESEARCH CENTRE

The University of the West Indies (UWI) is the largest and most longstanding higher education provider in the English-speaking Caribbean, with main campuses in Barbados, Jamaica and Trinidad and Tobago, and Centres in Anguilla, Antigua & Barbuda, The Bahamas, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Montserrat, St Christopher (St Kitts) & Nevis, Saint Lucia, and St Vincent & the Grenadines. UWI is an international university with faculty and students from over 40 countries and collaborative links with over 60 universities around the world. Through its seven Faculties, UWI offers undergraduate and postgraduate degree options in Engineering, Humanities & Education, Law, Medical Sciences, Pure & Applied Sciences, Science and Agriculture, and Social Sciences.

Established in 1953, the Seismic Research Centre is a Centre within the UWI. It operates the largest network of seismographs and other geophysical instruments in the Caribbean region. The SRC monitors earthquakes and volcanoes for most of the English-speaking Eastern Caribbean, manages the Montserrat Volcano Observatory as well as it conducts education and outreach activities in these countries. The Centre is involved in a regional effort to establish a tsunami warning system for the Caribbean.

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