JAMES COOK UNIVERSITY
AUSTRALIA

News Release

November 2, 2009

Drilling for climate change

The large research drilling ship *JOIDES Resolution* will be visiting Townsville this week between scientific expeditions in the Pacific Ocean.

Capable of drilling more than two kilometres into the seabed, the ship will be replenishing its supplies and picking up scientists for its next expedition off the South Island of New Zealand.

The *JOIDES Resolution* is part of the Integrated Ocean Drilling Program (IODP), which is the world's largest multinational geoscience research program.

Hundreds of scientists from the 24 countries collaborating in the program participate in IODP expeditions to investigate climate change history, how the Earth works, and many other scientific questions.

James Cook University's Professor Bob Carter and Associate Professor Simon George from Macquarie University will be joining the ship in Townsville to take part in the next expedition.

The *JOIDES Resolution* will be going to the Canterbury Basin east of New Zealand to investigate the relative importance of global climate change versus local tectonic forces on changing sea levels and sedimentary processes during the past 30 million years.

The ship's complement of around 100, including about 40 scientists and technicians, has just just completed a nine-week drilling program on the Shatsky Rise, 1500 km east of Japan.

Professor Neville Exon from The Australian National University said that the Shatsky Rise expedition investigated the nature of a huge submarine volcanic plateau that formed about 145 million years ago, as part of a worldwide episode of submarine volcanism that affected oceans and atmosphere.

"Rock cores were taken in drill holes penetrating 300m deep in the Rise to examine the history, volcanic sources, and evolution of this plateau," he said.

Professor Exon manages the Australian office of the Australian New Zealand consortium ANZIC, which is part of the world-wide IODP. The Australian involvement is supported by the Australian Research Council, 14 universities and CSIRO, ANSTO and AIMSand is based at ANU.

Professor Exon said that the Canterbury Basin was a good place to investigate global sea level changes, which have frequently amounted to 100m in the past.

"An understanding of past sea level changes helps geologists to better interpret sedimentary strata around the world, which is important for resource assessment," he said.

"Such studies also help scientists improve predictions of possible future changes in sea level and is related to the current debate over the impacts of CO2-induced global warming."

Macquarie's Associate Professor George said that he was really looking forward to helping analyse and understand the sediments that will be drilled in the basin.

"Some of them will be organic-rich, and they will provide a fabulous repository of information about past climate change and depositional environments," he said.

The *JOIDES Resolution* is expected to dock in Townsville at 9 pm today, November 2.

EDS NOTE: There will be a press conference on board the ship at 9am on Friday, November 6. Scientists involved with both expeditions will be present.

There will be no opportunity to board the ship before the Friday media conference.

The co-chief scientists, Will Sager from the USA and Takahashi Sano from Japan, plus David Murphy from the Queensland University of Technology, will be available to outline the Shatsky Rise expedition results and their meaning.

The co-chief scientists, Craig Fulthorpe from the USA, and Koichi Hoyanagi from Japan, plus Bob Carter from James Cook University and Simon George from Macquarie University, will be available to discuss the Canterbury Basin cruise plans and science.

Mr James Bidgood MHR will be present representing the Minister for Science.

There will be a guided tour of the ship after the press conference.

Pls note that we will need to provide the Port Authority of the names of journalists/camera crew who wish to attend on Friday.

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