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Australia and New Zealand form the Australia-New Zealand IODP Consortium (ANZIC), and the two countries have access to all IODP activities. This bulletin provides current news, job opportunities, scholarships and events relating to both national and international scientific communities.

For more information contact:
Website: www.iodp.org.au
Website: drill.gns.cri.nz

News from the ANZIC Office

The twenty second year students from all our partner universities are about to attend the ANZIC-funded student Marine Geoscience Masterclass, to be held in Perth in the first week of December, after much shepherding from Catherine Beasley. Asrar Talukder of CSIRO has brought together an exciting program.

This is the last call for a Scientific Specialist on the ECORD Facility Board. This is an opportunity to have some real influence in the alternative platform program. Applicants cannot have any proposal under consideration by the EFB. If we got the right heavy hitter with a big reputation that person could well fill this particular position, which is reserved for Associate Members (not US, Europe or Japan). Board meetings are held once a year in Europe, and ANZIC would cover the participation cost if an Australian or New Zealander joins the EFB. Any new potential applicants please contact Neville Exon.

Two proposals for post-cruise funding have been assessed and approved. One is for Alexandre Bandini, the University of Western Australia radiolarian specialist from the *JOIDES Resolution* Izu-Bonin-Mariana (IBM) Arc Origins Expedition. The other is for Timothy Chapman, the Sydney University petrologist from the IBM Forearc Expedition 352, the last of the IBM expeditions.

We have assessed applications for ANZIC scientific participation for *JOIDES Resolution* paleoceanographic IODP Expedition 359 in the Maldives, and paleoceanographic Expedition 361 east and south of southern Africa, and sent our nominations on to USIO. Our applicant for Expedition 359 is Craig Sloss from QUT, and our preferred applicant for Expedition 361 is John Rolison from the University of Otago. Both should sail in due course. Two applicants came forward on a late call for an ANZIC carbonate sedimentologist for the Indonesian Throughflow Expedition 356, headed by Stephen Gallagher and with Helen McGregor (ANU) also in the team. After favourable reviews, the applications of Chelsea Korpanty (Sydney University) and Ali Rastegar (Curtin University) have been sent forward to USIO for consideration. One of them will certainly be selected for the expedition.

The last tweaking of data submission for Proposal 884-CPP, to use *JOIDES Resolution* to investigate the Late Cretaceous black shales (global anoxic events) in the Great Australian Bight, has now been completed. With strong scientific and financial support from the petroleum industry, this has been put forward as a co-funded CPP. Very favourable reviews have come back for Proposal 760, Naturaliste Plateau to use *JOIDES Resolution* for a complementary expedition to investigate a wider age range of Cretaceous black shales. The response is being led by Richard Hobbs of Durham University, with input from Irina Borissova (Geoscience Australia) and Neville Exon.

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Richard Arculus and Neville Exon, both from ANU, and Ben Clennell from CSIRO represented ANZIC at the National Marine Science Symposium in Canberra on 25-26 November, and Neville gave a brief presentation on IODP as a follow-up to the IODP white paper submitted in late October. This was an important meeting, well chaired by John Gunn of AIMS, and the final National Marine Science Plan will be submitted in June next year. Richard Arculus will be part of the writing group. About 30 white papers are up on the NMSP web site (http://frdc.com.au/environment/NMSC-WHITE/Documents/Submissions/), and the PowerPoint presentations made at the symposium will also soon be up. Among the recommendations that should come out of the symposium are that *Investigator* sea time be increased from 180 days to 300, that the new Antarctic vessel be available for 60 science days per year, that IMOS funding for their marine monitoring program continue, and that our IODP funding also continue beyond next year.

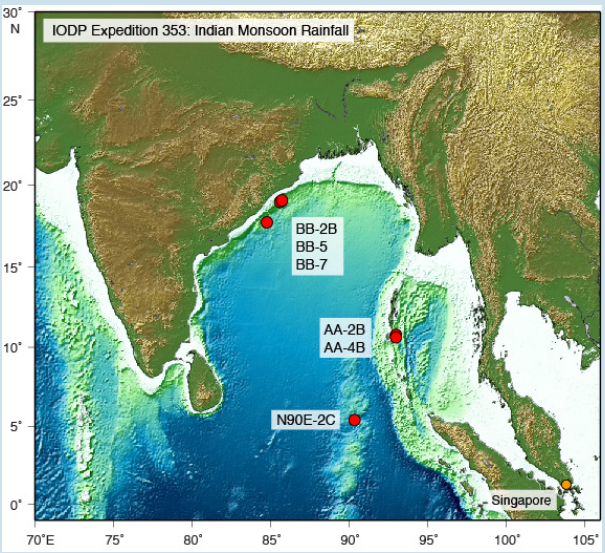
Neville Exon and Catherine Beasley

AT SEA

November sees the *JOIDES Resolution* return to work after two months tied up for maintenance. Expedition 353 Indian Monsoon Rainfall will be launched on the 29th November. Gianluca Marino, ANU, will be sailing as the stratigraphic correlator.

ABSTRACT

Scientific ocean drilling has never taken place in the Bay of Bengal north of 9°N. Thus, the core region of summer monsoon precipitation has never been investigated. DSDP Leg 22 (1974) and ODP Leg 121 (1989) drilled the southernmost region (5°–9°N), capturing the distal end of the summer monsoon influence. India's partnership in the International Ocean Discovery Program (IODP) provides an opportunity to investigate this key northern region. IODP Expedition 353 seeks to recover Upper Cretaceous–Holocene sediment sections that record erosion and runoff signals from river input to the Bay of Bengal as well as the resulting north–south surface water salinity gradient. Analysis of sediment sections from the Mahanadi Basin (northeast Indian margin), the Nicobar-Andaman Basin (Andaman Sea), and the northern Ninetyeast Ridge (southern Bay of Bengal) will be used to understand the physical mechanisms underlying changes in monsoonal precipitation, erosion, and run-off across timescales from millennial through tectonic. These sites will provide crucial new information within which to interpret differences among existing results from previous monsoon-themed drilling expeditions in the Arabian Sea (ODP Leg 117), the South China Sea (ODP Leg 184), and the Sea of Japan (Integrated Ocean Drilling Program Expedition 346). These goals directly address challenges in the "Climate and Ocean Change"



IODP
INTEGRATED OCEAN DRILLING PROGRAM

P05 Southern Hemispheric Forcing of the MOC and Carbon Cycle in Past, Present, and Future Climate Change

Convener: Lisa Beal (Miami, USA) lbeal@rsmas.miami.edu

Co-conveners: Gianluca Marino (Canberra, Australia), Karen Kohfeld (Vancouver, Canada), Marjolaine Krug (Cape Town, South Africa), Shenfu Dong (Miami, USA)

Description

Changes in the Southern Hemisphere wind fields, in the strength and position of oceanic fronts, and in the inter-ocean water transport are all important modulators of the MOC and climate on time scales stretching from interannual to multi-millenial. Climate sensitivity is also dependent on the interplay between many different oceanic processes, including meridional and inter-ocean eddy heat and salt transports, the Southern Hemisphere supergyre and Antarctic Circumpolar Current, the upper and lower overturning cells, and the uptake and storage of carbon in the Southern Ocean. In this symposium we invite contributions on all aspects of ocean circulation and processes, within the Southern Hemisphere, which play a role in climate and its variability. Paleoceanographic studies centred on new proxy-data reconstructions, numerical models of paleo-circulation, and inter-ocean buoyancy exchange are highly encouraged. We also seek contributions on the variability of Western Boundary Currents, their fronts and recirculations, and their relation to oceanic and atmospheric fluxes of heat and freshwater. Studies of the Agulhas system and its leakage, their relation to winds and wind stress curl, to the Southern Hemisphere supergyre and Indonesian Throughflow, and to the MOC are of particular interest. As are studies of Southern Ocean processes, including eddy heat transport, the movement and strength of fronts, the overturning cells, and sources and sinks of carbon. We strongly encourage theoretical and numerical studies that attempt to illuminate the linkages between these systems and processes and can lead to a better understanding of the role of the Southern Hemisphere oceans in climate.