**International Ocean Discovery Program**

**CALL FOR APPLICATIONS**

**Apply to participate in**

***JOIDES Resolution* Expeditions**

**Application deadline: 15 August 2015**

**Note:** These expeditions subject to the availability of funds.

**WESTERN PACIFIC WARM POOL EXPEDITION September - November 2016**

The Western Pacific Warm Pool (WPWP) Expedition (based on IODP Proposal 799-Full2) aims to understand the interaction between climate and the WPWP from the middle Miocene to Holocene. A series of sites will be drilled in the western equatorial Pacific and eastern Indian Ocean to investigate (1) the role and response of the WPWP to millennial climate variability during the late Quaternary, (2) changes in the WPWP and relation to monsoon activity on orbital timescales during the Pliocene-Pleistocene, (3) changes in the Indonesian Throughflow during the Pliocene-Pleistocene, and (4) the long-term evolution of WPWP sea surface (SST) and intermediate water temperatures (IWT) and water chemistry since the middle Miocene.

Sediments obtained from these sites will investigate the relationships between millennial-scale variability in the tropical Pacific and in the northern Atlantic; the controls on tropical Pacific SST patterns on various time scales; the response of the hydrologic cycle and the mechanisms controlling these variations; the evolution of the WPWP from the mid-Miocene Climate Optimum to the present; and the relationships between changes in the equatorial Pacific mean climate state and dynamical processes and how they relate to the Pliocene-Pleistocene transitions.

**MARIANA CONVERGENT MARGIN EXPEDITION November 2016 to January 2017**

The IODP Mariana Convergent Margin Expedition (based on IODP proposals 505-Full5 and 693-APL) will investigate geochemical, tectonic, and biological processes at intermediate depths of an active subduction zone. This expedition will core the summits and flanks of serpentinite mud volcanoes on the forearc of the Mariana system, a non-accretionary convergent plate margin in the western Pacific. In addition, a reentry cone and casing system will be installed at three of these sites to provide the infrastructure for post-cruise installation of long-term monitoring; the existing Hole 1200C borehole observatory (CORK) will also be removed.

Sediments, rocks, and fluids recovered during this expedition will be used to (1) to understand mass transport and geochemical cycling in subduction zones of non-accretionary forearcs at convergent margins; (2) to ascertain spatial and temporal variability of slab-relate fluids in the forearc environment to trace dehydration, carbonate dissolution, and water/rock reactions in the subduction zone; (3) to understand physical properties of the subduction zone as controls over dehydration reactions and seismicity; (4) to study spatial and temporal variability in metamorphic and tectonic processes and the history of these processes in non-accretionary forearc regions; and (5) to investigate controls over biological activity associated with these mud volcano processes.

**For more information about the expedition science objectives and the *JOIDES RESOLUTION* Expedition Schedule** see <http://iodp.tamu.edu/scienceops/> - this includes links to the individual expedition web pages provide the original IODP proposal and expedition planning information.

**WHO SHOULD APPLY**: Opportunities exist for researchers (including graduate students) in all specialties – including but not limited to sedimentologists, structural geologists, paleontologists, biostratigraphers, petrologists, paleomagnetists, petrophysicists, borehole geophysicists, microbiologists, and inorganic/organic geochemists.

**WHERE TO APPLY**: Applications for participation must be submitted to the appropriate IODP Program Member Office – see <http://iodp.tamu.edu/participants/applytosail.html>