CALL FOR APPLICATIONS

for scientists based in ECORD Member Countries to participate in

IODP Expedition 390 & 393:
South Atlantic Transect 1 & 2

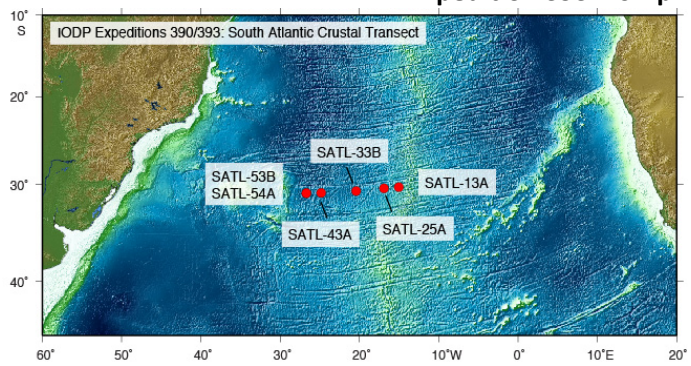
on-board the *JOIDES Resolution*

DEADLINE to apply: 1 August 2019

The European Consortium for Ocean Research Drilling (ECORD) offers you the unique opportunity to sail on Expedition 390 & 393 on-board the *JOIDES Resolution* in the framework of the International Ocean Discovery Program (IODP), an international research program for drilling at sea.

South Atlantic Transect 1
Expedition 390 – 5 October to 5 December 2020

South Atlantic Transect 2
Expedition 393 – 6 April to 6 June 2021



South Atlantic Transect Expeditions 390 and 393 (based on IODP Proposals 853-Full2 and 853-Add) are a multidisciplinary and joint scientific ocean drilling project that aims to recover complete sedimentary sections and ~200 m of oceanic crust along a crustal age transect at ~31°S across the South Atlantic Ocean to

(1) investigate the history of low-temperature hydrothermal interactions between the aging ocean crust and the evolving South Atlantic Ocean; (2) quantify past hydrothermal contributions to global geochemical cycles; (3) investigate sediment and basement-hosted microbial community variation with substrate composition and age in the low energy South Atlantic Gyre subseafloor biosphere; and (4) investigate the responses of Atlantic Ocean circulation patterns and the Earth's climate system to rapid climate change, including elevated CO_2 during the Cenozoic.

The South Atlantic Transect expeditions will target six primary sites on 7, 15, 31, 48, and 63 Ma ocean crust. The proposed transect, which follows a Mid-Atlantic Ridge crustal flow-line, will fill critical gaps in our sampling of intact in-situ ocean crust with regards to crustal age, spreading rate, and sediment thickness. The transect traverses the previously unexplored sediment- and basalt-hosted deep biosphere beneath the South Atlantic gyre, samples of which are essential to refine global biomass estimates and investigate microbial ecosystems' responses to variable conditions in a low energy gyre and aging ocean crust. The transect is located near World Ocean Circulation Experiment (WOCE) line A10, providing access to records of carbonate chemistry and deep-water mass properties across the western South Atlantic through key Cenozoic intervals of elevated atmospheric CO_2 and rapid climate change. Reconstruction of the history of the deep western boundary current and deep-water formation in the Atlantic basins will yield crucial data to test hypotheses regarding the role of evolving thermohaline circulation patterns in climate change, and the effects of tectonic gateways and climate on ocean acidification.

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 with the original IODP proposal and expedition planning information.

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

The Application Process is open to scientists in all ECORD member countries. Please download the *Apply to Sail* general application forms from the ESSAC webpage:

http://www.ecord.org/expeditions/apply-to-sail/

Please, fill out all applicable fields and send it to the ESSAC office by email (essac@plymouth.ac.uk) with the following additional documents by the deadline of **1 August 2019**:

1. **A letter of interest** outlining your specific expertise, previous involvement in DSDP/ ODP/ IODP expeditions, research interests, primary research goals of your proposed participation.
2. **CV** and **publication list**.
3. **Young researchers** must additionally provide a **letter of support** from their host institution, including information on post-cruise science support.

All applications should state how you intend to achieve your proposed scientific objectives, with information on the funding scheme and support from your institution or national funding agencies. More information can be found under: http://www.ecord.org/expeditions/apply-to-sail/

In addition to the ESSAC application, all applicants *must inform their national office or national delegate* and send them a copy of their application documents. The national offices or national delegates can also provide information regarding travel support, post-cruise funding opportunities, etc.
See http://www.ecord.org/about-ecord/about-us/ for a list of the national contact persons.

For further information or questions, please contact the ESSAC Office:

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