

SPECIAL CALL FOR APPLICATIONS

for microbiologist and sedimentologists based in ECORD Member Countries to participate in

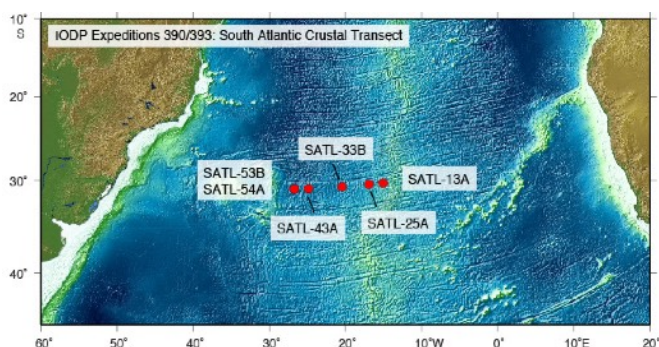
IODP Expeditions 390 & 393:

South Atlantic Transect 1 & 2

on-board the *JOIDES Resolution*

DEADLINE to apply: 15 October 2021

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



Expedition 390: South Atlantic Transect 1 (7 April to 7 June 2022)

Expedition 393: South Atlantic Transect 2 (7 June to 7 August 2022)

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 ageing 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 CO₂ 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 ageing 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 CO₂ 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.

General expedition information:

http://iodp.tamu.edu/scienceops/expeditions/south_atlantic_transect.html

Scientific Prospectus link: http://publications.iodp.org/scientific_prospectus/390_393/

WHO SHOULD APPLY: This call is open to researchers (including PhD students) from all ECORD nations who are able to fulfil the shipboard role of (1) either a microbiologist or sedimentologist on Expedition 390, and (2) microbiologist on Expedition 393.

Microbiology candidates with experience using sediment oxygen sensors or handling hard rock microbiology samples are encouraged. The JOIDES Resolution Science Operator (JRSO) is committed to a policy of broad participation and inclusion, and to providing a safe and welcoming environment for all participants. Good working knowledge of the English language is required.

COVID-19 Protocol: The JRSO has created a protocol to safely operate during the COVID-19 pandemic. If pandemic conditions have not improved by early-mid 2022, one or both expeditions may need to sail with a reduced shipboard contingent. However, all participants will maintain their designation as science party members regardless of whether they sail or not, and will have equal access to all expedition data and core materials. The protocol is available here: http://iodp.tamu.edu/scienceops/JR_COVID-Mitigation-Protocols.pdf.



The Application Process is open to scientists in all ECORD member countries. Please download the *Apply to Sail* general application form 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 **15 October 2021**:

1. A **letter of interest** outlining your specific expertise, previous involvement (if any) in DSDP/ODP/IODP expeditions, research interests, and the primary research goals of your proposed participation
2. **CV and publication list**
3. **PhD students** must additionally provide a **letter of recommendation** from their host institution

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:

ECORD Science Support & Advisory Committee

Antony Morris (ESSAC Chair)

Hanno Kinkel (ESSAC Science Coordinator)

School of Geography, Earth and Environmental Sciences,

Plymouth University, UK

Drake Circus, Plymouth PL4 8AA, UK

e-mail: essac@plymouth.ac.uk

website: www.ecord.org

