

## SPECIAL CALL FOR APPLICATIONS

(physical properties; stratigraphic correlation; biostratigraphy)

### **JOIDES Resolution Expedition 395: Reykjanes Mantle Convection and Climate**

June 12 – Aug. 12, 2023

**DEADLINE to apply: 18 July 2022**

The European Consortium for Ocean Research Drilling (ECORD) offers you the unique opportunity to sail on Expedition 395 on-board the *JOIDES Resolution* in the framework of the International Ocean Discovery Program (IODP), an international research program for drilling at sea.

Reykjanes Mantle Convection and Climate (Expedition 395) will investigate mantle upwelling beneath Iceland, which supports the regional bathymetry and has led to changes in the height of oceanic gateways that control the strength of deep-water flow over geologic timescales. This drilling program contains three objectives: (1) to test contrasting hypotheses for the formation of V-shaped ridges that are the result of interaction between the Mid-Atlantic Ridge and the Iceland plume; (2) to understand temporal changes in ocean circulation and explore connections with plume activity; and (3) to reconstruct the evolving chemistry of hydrothermal fluids with increasing crustal age, varying sediment thickness, and crustal architecture.

Expedition 395 is based on IODP Proposal 892-Full2 (Mantle Dynamics, Paleooceanography and Climate Evolution in the North Atlantic Ocean) and will target the sediments and igneous basement along with downhole logging at sites east of the Reykjanes Ridge. Five sites have already been visited during Expeditions 384 and 395C, in support of Expedition 395.

The proposed sites intersect V-shaped ridges/troughs pairs and sample the Bjorn and Gardar sediment drifts. Millennial-scale paleoclimate records are contained within rapidly accumulated sediments of contourite drifts in this region. The accumulation rate of the sediments is a proxy for current strength, and the sediments also provide constraints for climatic events including Pliocene warmth, the onset of Northern Hemisphere Glaciation, and abrupt Late Pleistocene climate change. Major, trace and isotope geochemistry of basalts will allow us to observe spatial and temporal variations in mantle melting processes. This combined approach will explore relationships between deep Earth processes, ocean circulation, and climate.

For more information on Expeditions 395 and 395C refer to the Expedition website:

[https://www.iodp.tamu.edu/scienceops/expeditions/reykjanes\\_mantle\\_convection\\_and\\_climate.html](https://www.iodp.tamu.edu/scienceops/expeditions/reykjanes_mantle_convection_and_climate.html)



**WHO SHOULD APPLY:** We encourage applications from qualified scientists (including graduate students) in: **(1) physical properties; (2) stratigraphic correlation** with an emphasis in cyclostratigraphy; and **(3) biostratigraphers** specializing in Neogene nannofossils, diatoms, or radiolarians. We are especially interested in recruiting scientists keen to engage in multidisciplinary research. Good working knowledge of the English language is required. ECORD is committed to a policy of broad participation and inclusion, and to providing a safe and welcoming environment for all participants.

**COVID-19 Protocol:** The JRSO has created a protocol to safely operate during the COVID-19 pandemic. If pandemic conditions have not improved by summer 2023, the expedition 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](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 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@ogs.it](mailto:essac@ogs.it)) with the following additional documents by the deadline of **18 July 2022**:

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. **Early career 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:**

**ECORD Science Support & Advisory Committee**

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