

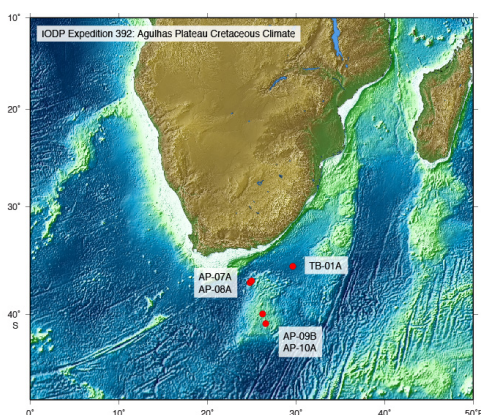
# CALL FOR APPLICATIONS

for scientists based in ECORD Member Countries to participate in

## **IODP Expedition 392: Agulhas Plateau Cretaceous Climate on-board the *JOIDES Resolution***

**DEADLINE to apply: 1 December 2019**

The European Consortium for Ocean Research Drilling (ECORD) offers you the unique opportunity to sail on Expedition 392 on-board the *JOIDES Resolution* in the framework of the International Ocean Discovery Program (IODP), an international research program for drilling at sea.



### **Agulhas Plateau Cretaceous Climate – Expedition 392: 4 February to 6 April 2021**

Agulhas Plateau Cretaceous Climate Expedition 392 is a scientific ocean drilling project that seeks to understand the evolution of Earth's climate system from the Cretaceous Supergreenhouse into the Icehouse world of the Oligocene through examination of temperature, ocean circulation, and sedimentation changes as  $p\text{CO}_2$  fluctuated from as much as 3500 parts per million by volume (ppmv) to less than 560 ppmv. The Late Cretaceous was marked by reduced meridional temperature gradients and oceanic sedimentation was punctuated by episodic deposition of organic-rich sediment known as Oceanic Anoxic Events (OAEs); however, whether these events resulted from enhanced productivity or sluggish circulation remains unclear. This expedition also seeks to understand the nature and formation of the Agulhas Plateau as a Large Igneous Province (LIP) following the breakup of Gondwana and its impact on the timing of oceanic gateway opening, which has implications for oceanic circulation, carbon cycling, and global climate during the Late Cretaceous.

This expedition will address six primary questions. (1) Did Indian Ocean LIPs related to the breakup of Gondwana tap a similar source and show a similar temporal and geochemical evolution to coeval and older Pacific LIPs? (2) Did sedimentation start immediately after crust emplacement under subaerial conditions? (3) Do reflectors and unconformities identified in seismic sequences relate to changes in deep and intermediate water mass circulation and climatic events? (4) What was the paleotemperature history at high southern latitudes from the Cretaceous Supergreenhouse into the Paleocene? (5) Was the Cretaceous and Paleocene Southern Ocean a major source of deep-water formation that strongly influenced climatic changes? (6) What forcing factors caused Cretaceous OAEs and what effects did these events have on the high latitude climate, oceanography, and biota?



Expedition 392 is based on IODP Proposals 834-Full2 and 834-Add and will primarily target Cretaceous to Paleogene age sediment and igneous basement at five primary sites on Agulhas Plateau (4 sites) and Transkei Basin (1 site) to examine the nature of Agulhas Plateau basement, opening of oceanic gateways, and evolution of the climate system through the Cretaceous Supergreenhouse and into the Cenozoic.

**For more information about the expedition science objectives and the *JOIDES Resolution* expedition schedule**, please see <http://iodp.tamu.edu/scienceops/> – this site includes links to individual expedition web pages with the original IODP proposal and expedition planning information.

**Application deadline:** 2 December 2019

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

**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](mailto:essac@plymouth.ac.uk)) with the following additional documents by the deadline of **2 December 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:**

**ECORD Science Support & Advisory Committee**

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