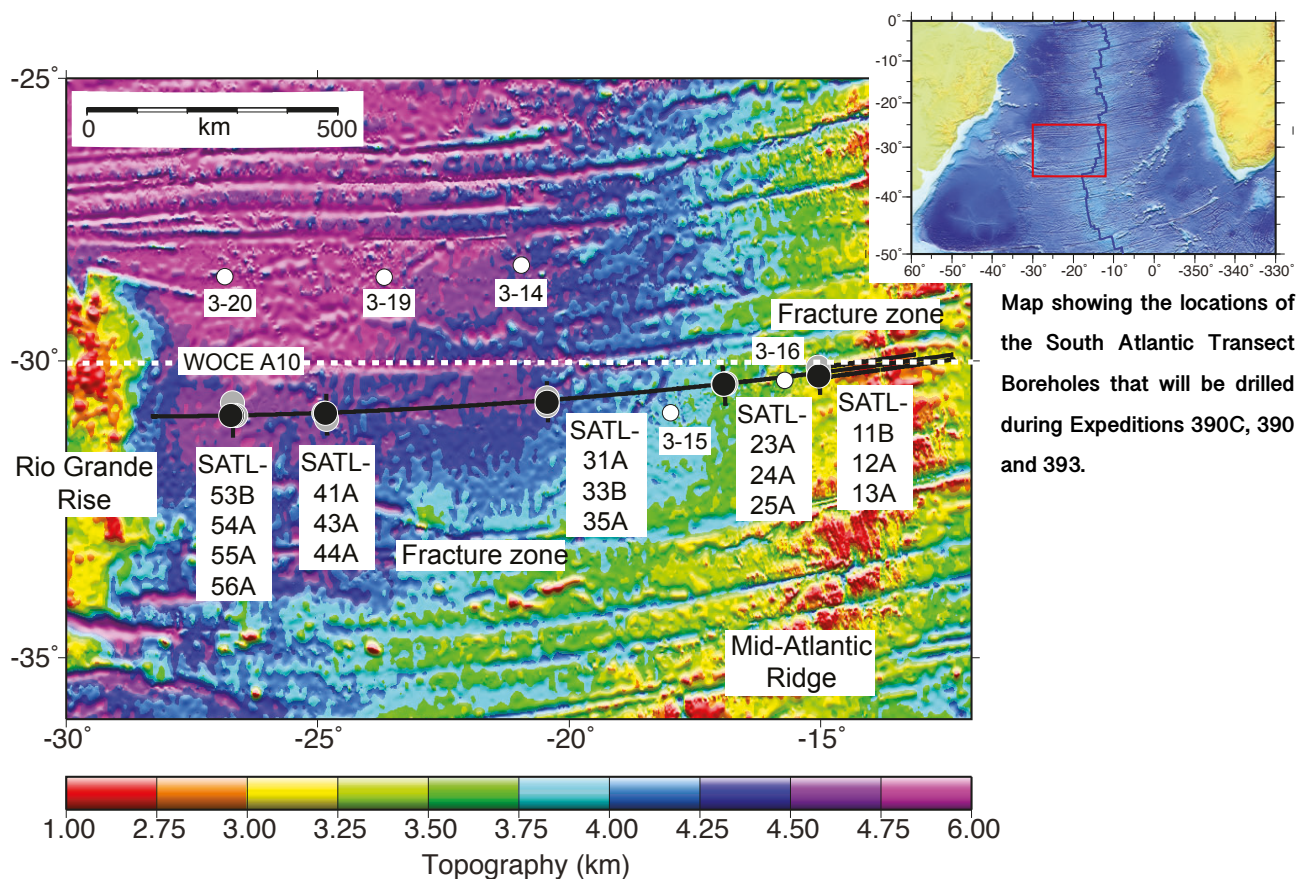


# Expedition 390C sets sail

The JOIDES Resolution is currently sailing through the English Channel and heading to the South Atlantic, where she will begin drilling 'The South Atlantic Transect' (SAT)— a multidisciplinary scientific ocean drilling project led by UK-IODP scientists Dr Roz Coggon and Professor Damon Teagle (both of University of Southampton). The SAT project will recover complete sedimentary sections and the upper ~250 m of the underlying oceanic crust along a slow/intermediate spreading rate Mid-Atlantic Ridge crustal flow line at ~31°S. The sediments along this transect were originally spot-cored more than 50 years ago, during Deep Sea Drilling Project Leg 3, to help verify the theories of seafloor spreading and plate tectonics. Given dramatic advances in drilling technology and analytical capabilities since Leg 3, many high-priority scientific objectives will be addressed by revisiting the transect. The SAT expeditions will target six primary sites on 7, 15, 31, 49, and 61 Ma ocean crust, which will fill critical gaps in our sampling





The JOIDES Resolution at sea. Image credit Tim Fulton, IODP JRSO.

of intact in situ ocean crust with regards to crustal age, spreading rate, and sediment thickness. Using these sections we will investigate: the history of the low-temperature hydrothermal interactions between the aging ocean crust and the evolving South Atlantic Ocean and quantify past hydrothermal contributions to global geochemical cycles; sediment and basement-hosted microbial community variation with increasing substrate age; the paleoceanographic evolution of the South Atlantic Ocean; and the deep-ocean and subtropical gyre responses to changing global climate.

The SAT project comprises two IODP science Expeditions – Exp 390 (Apr – June 2022) and 393 (June-Aug 2022). Although these scientific expeditions had to be rescheduled as a result of the on-going pandemic situation, the SAT project starts on schedule this week with engineering Expedition 390C - thanks to the extraordinary efforts of the JOIDES Resolution Science Operator. The Exp 390C drilling operations will include installation of reentry cones and casing in preparation for Expeditions 390 and 393 and to establish legacy boreholes for future basement hydrothermal and microbiological experiments.

More details on the South Atlantic Transect, and updates on the progress of Exp 390C can be found here: [http://iodp.tamu.edu/scienceops/expeditions/south\\_atlantic\\_transect.html](http://iodp.tamu.edu/scienceops/expeditions/south_atlantic_transect.html)



Reentry cones like the one pictured here will be deployed at the South Atlantic Transect boreholes during the current engineering Expedition 390C. Image credit William Crawford, IODP JRSO.