

IODP Expedition 339: Mediterranean Outflow

Week 1 Report (16-20 November 2011)

Operations

IODP Expedition 339 began when the first line was passed ashore at 0830 hr on 16 November 2011 to berth 12 in Ponta Delgada harbor on the island of Saõ Miguel, Azores. The IODP technical crew change occurred as scheduled on 17 November, although a group of IODP personnel arrived on 18 November due to travel problems. The scientific compliment joined the vessel on 18 November. In addition to the routine resupply of consumables and the offloading of returning freight, noteworthy items included the loading of approximately 600 MT of MGO, and the loading of 60 ST of sepiolite and 20 ST of barite drilling mud.

The vessel is scheduled to depart for the first site of the expedition at 0730 hr on 22 November. The transit of 743 nmi is expected to take 2.9 days.

Science Results

The overarching objective of Expedition 339 is to study the vast contourite depositional system (CDS) along the Iberian Margin that has been generated by the influence of Mediterranean Outflow Water (MOW). The study will reveal the onset and evolution of the MOW since the late Miocene, and its effects on North Atlantic water circulation and global climate. Moreover, the expedition aims to produce a marine reference section of Pleistocene millennial-scale climate variability and changes in surface and deepwater circulation along the Portuguese margin. To accomplish this, Expedition 339 will drill two sites west of Portugal and five sites in the Gulf of Cádiz in water depths between 577 and 2589 meters.

The first week of the expedition was dominated by port call activities and scientists' orientation and training activities, unpacking of laboratory instruments and supplies, and laboratory preparations. In addition, guided tours of the vessel were conducted for over 200 students, teachers, and visiting dignitaries.

Portcall activities for the scientific party included personnel introductions and orientation into all the aspects of an IODP expedition. Scientists received presentations and training on the range of shipboard applications used for core description, sample registration, input and output of samples and science data from the database, and guidelines to writing shipboard reports. The science party also received tours of the ship's laboratories and the hotel stack as well as safety inductions to the laboratories. The science party then proceeded to define the methods for the scientific activities of the cruise, with emphasis on the specification of macroscopic and microscopic description of core material.

Education and Outreach

Education and public relation activities were carried out on Friday and Saturday, 18-19 November, and included tours of the *JOIDES Resolution* for 175 students and 15 teachers from four local High Schools (Escola Secundária Antero de Quental - Ponta Delgada; Escola Secundária das Laranjeiras - Ponta Delgada; Escola Secundária de Lagoa - Lagoa; Escola Secundária da Ribeira Grande - Ribeira Grande). On Saturday, ship tours were conducted for 12 students and professors from the Universidade dos Açores (UA), 25 students and researchers from the Centro de Vulcanologia e Avaliação de Riscos Geológicos (CVARG), 20 local visitors, 9 local government representatives, the Portuguese ECORD Delegate, and 6 local journalists.

Technical Support and HSE Activities

The Expedition 339 technical staff conducted routine portcall activities, including loading and offloading of instruments and supplies, the offloading of frozen and refrigerated samples and equipment from the previous expedition, setting up the laboratories for the current expedition and providing introductions and safety instructions for the scientific party to the shipboard laboratories. In the Core Laboratory, the Cryogenic Magnetometer was topped up with liquid helium, a copier stand was moved, and an additional core rack was installed. The forward Rig Net SSPA was changed out. All air and surface freight, food and DOE van were received. The Captain of the vessel provided the ship safety presentation and orientation to the scientific party and new technical personnel.