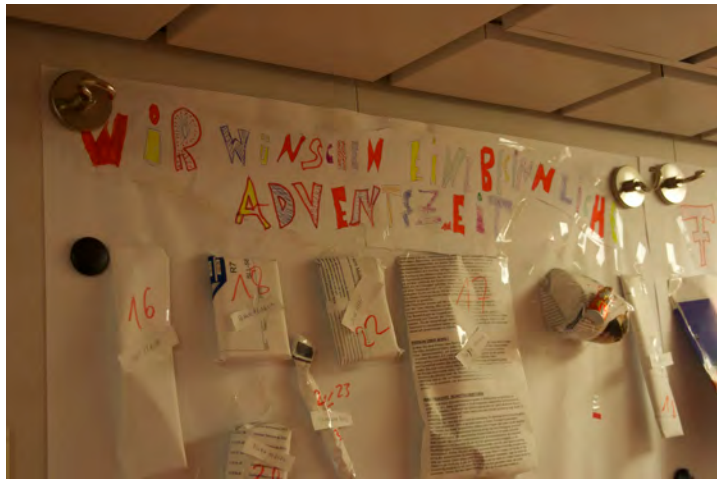


Weekly Report Nr. 1
SO-237
14.12.14. - 21.12.14

The brand new research vessel "Sonne" left the port of Las Palmas for her maiden scientific voyage on 14th December 2014. For the scientists of course a new ship to experience, but also for the crew a ship which they have only been working on for the last few hectic weeks. There are lots of new and great things on the ship (like lots of lab space, great working conditions, a remarkably quiet ship). All on board are convinced that it will be a great ship for doing science and are looking forward to seeing how it performs. And it is a very mixed set of scientists and nationalities for this first cruise, ranging from deep-sea biologists to volcanologists and seafloor mappers and with participants coming from Germany, U.K., Spain, Brazil, France, Poland, Russia and Canada! In view of the international and multi-disciplinary nature of marine science, this is a very fitting group to be on the maiden marine science voyage

The cruise SO-237 began with a 4-day transit to the working area south of the Cape Verde islands. During the transit everyone was busy setting up labs, learning their way around the ship's network, finding out where everything is (and who everyone is) on this new ship. But despite all this work, we also were all conscious of Christmas approaching. Many



people had brought decorations for their cabins and some generous Christmas Elves even made an Advent's Calendar with something on it for everyone! So even far from home and our families, the Christmas feeling is definitely on board!

The transit took us directly through the Cape Verde archipelago, where we had our last glimpse of land for the next 4 weeks. As we passed the island of Fogo we had hopes of seeing signs of the present volcanic activity. Scientists and crew were outside peering into the darkness but we caught no glimpse of any glowing rocks, sadly.

On Thursday 18.12.14 we left the Cape Verde EEZ and the first scientific data were collected with the ship's multibeam echo-sounder. One of the goals of this voyage is to produce the first detailed map of the bathymetry of a trans-Atlantic area, additionally the multibeam maps are used by all on board for planning the locations of their stations. From now on the bathymetry team will have their hands full, keeping an eye on the echo-sounders to make sure all is running smoothly but also checking and cleaning up all the data - and there is a lot of data, with the ship collecting 512 soundings every 2-3 seconds.

The seafloor sampling began on Friday 19.12.14 with successful deployments of the sediment gravity core, the multi-corer and the epibenthos sled. In parallel the deep-diving autonomous underwater vehicle ABYSS was deployed to map the seafloor in high resolution. Taking advantage of the synergies offered by this mixed group of scientific disciplines aboard, the seafloor mappers and AUV-team were keen to experiment with tracking the epibenthos sled under water using the Posidonia ultra-short baseline location system. It worked! For the first time we will be able to locate the exact position of the epibenthos sled in a seafloor map with sub-meter resolution. As I write, the groups are working on putting all these data together - the result will have to wait for next weeks report!

Following a successful dredge haul in the night from Saturday 20.12.14 to 21.12.14, Sonne then began with the first long mapping transect. This will be over 4 days of multibeam measurements, providing the first-ever seafloor maps of the crust between 25° and 31°W along the Vema Fracture Zone.

All aboard are well and enjoying their work on the samples and data collected. We send Advent Greetings to all on land. Daily reports on the work on board can also be seen at our blog: www.oceanblogs.org/so237/

On behalf of the scientists and crew of SO-237,
Colin Devey
Chief Scientist

Photo credit: "Adventskalender" - C.Devey