

1. Weekly Report M68/1, 27 April.-30 April, 2006

Cruise M68/1 began at 09:00 on 27 April, sailing from Bridgetown, Barbados. The transit to the first working area at 5°S on the Mid-Atlantic Ridge (MAR) will take about 12 days, assuming the present head-wind and slight swell stay with us. The long transit time is being used by the interdisciplinary scientific team, composed of geologists, oceanographers, geochemists and biologists, supported by the technical teams of the ROV Quest (MARUM, Univ. Bremen) and the AUV ABE (Woods Hole Oceanographic Institution) to equip their labs and coordinate their activities. All labs are full and everywhere people are busy setting up their equipment and checking that all is working correctly.



Autonomous Underwater Vehicle ABE of WHOI on the working deck of R/V Meteor



A look into one of the chemistry labs where a gas chromatograph is already set up.

Cruise M68/1 is part of the priority program SPP 1144 of the German Science Foundation DFG, entitled „From Mantle to Ocean: Material, Energy and Life Cycles at Spreading Axes“. It aims at investigating the previously only scarcely explored MAR south of the equator, to discover new vent fields and revisit the hydrothermal sites that had been discovered in 2005 during cruises CD169 and M64/1, which are two fields at 5°S and 9°S. Among the focuses of

interest is an extremely hot field at 5°S, comprising fluids venting with 400°C, which is apparently related to recent volcanic activity and is in a young post-eruptive state. This is a somewhat unexpected type of hydrothermal system to be found at a slow-spreading ridge such as MAR.

Besides the preparations for the deployment of the equipment, the transit time is also a much-appreciated opportunity for a scientific exchange between the different working groups and disciplines. We have prepared a little workshop covering three afternoons, during which scientists will present the background of their work. In addition, the ROV and AUV teams will provide us with a detailed insight into how the equipment functions and the possibilities that their devices offer. The first ROV tour has already occurred, at the time of writing the first day of the workshop, covering the topics geology, oceanography and biology of the southern MAR, is about to begin. We hope that the discussions during the workshop will be of benefit both during the cruise and for the SPP in general.

With best regards from Andrea Koschinsky and all the cruise participants of M68/1