

**ANT-XXVII/4, Weekly Report No. 1**  
**20 April - 1 May 2011**

The last part of the Antarctic cruise ANT-XXVII/4 of RV *Polarstern* started as planned on 20 April 2011, 20:00 local time. *Polarstern* left the harbour of Cape Town in misty weather conditions and strong wind heading to Bremerhaven. The farewell from the beautiful Table Mountain and the cosmopolitan city was disturbed by the bad weather conditions. Immediately after leaving the harbour mole, *Polarstern* started to roll and to pitch intensively. The physiological reactions followed promptly and most of cabin doors were suddenly closed. An effective relief was offered by the stabilizer flaps and the medical doctor. 20 international scientists from 4 nations and 42 crew member are well on board and will take care for the planned scientific program during the next four weeks.

The following scientific groups are on board:

A large working group from Leibniz Institute for Tropospheric Research (IFT) in Leipzig continues the OCEANET-programme measuring aerosol concentrations, solar radiation as well as other meteorological and oceanographic parameters.

A biological group from Alfred Wegener Institute (AWI) takes care of living fishes and other marine animals collected during the last leg in Antarctica for scientific purposes. Keeping the water in the aquaria at a temperature of almost 0° C under tropical ambient air and water conditions presents a big challenge.

Another AWI group carries out sea trials on instruments and systems which were developed at AWI. One of it is a calibration unit for hydroacoustic sounders like the fishery sounder EK 60. The other is a new termination for the 18 mm coaxial and fibre optical cable.

A small group from the United States (Fermi-Lab) and Germany (DESY) measures the intensity of cosmic ray on our route to Bremerhaven.

The German weather service (DWD) supports us with weather forecasts and collecting meteorological data.



RV Polarstern in Cape Town on 20 April 2011. (photo: Saad El Naggar)



First station to collect surface water samples by using the Zodiac. (photo: Saad El Naggar)

After unpacking and installation of the scientific equipment and the overcoming of the normal initial problems most of the instruments are now running as expected. The first station work started on 23 April 2011 collecting water samples from the sea surface by using a rubber boat (Zodiac).

Sea trials and calibrations of fishery sounder EK 60 were successfully carried out on 26 April and 27 April 2011 by using the new calibration unit. The scientific lecture programme during which each group presents the objectives and the planned work for its project has started.

On 1st May 2011 at about 10:00 UTC we crossed the Equator at 11° 38' West. Neptun and his company visited the ship for a short time and allowed us to continue our cruise entering the northern hemisphere without any further delay.

All on board are well, very satisfied and greet all those that remained at home including our readers.

On behalf all on board  
Saad El Naggar - Chief Scientist