'Maria S. Merian' Collects Current Data and Samples in Southern Atlantic

A few weeks after the research vessel '*Meteor'* left Cape Town with an international research team headed by the GEOMAR Helmholtz Centre for Ocean Research Kiel, RV '*Maria S. Merian'* is on the same course from Table Mountain to South America. On board is a team of more than 20 scientists from eight countries. Of particular interest is the oceanic heat transport in the region including, for example, the northward transport of warm water masses in so-called Agulhas rings.

The South Atlantic, more than 10,000 kilometres from Germany, is currently a popular destination for marine researchers. The region is chronically undersampled because not many ships operate here. However, the South Atlantic plays a key role in European climate because it is closely connected with the North Atlantic through the global conveyor belt circulation.

Since 15 December 2016 RV *Meteor* is heading westward along 34.5°S. Since the 4 January 2017, she is followed by RV *Maria S. Merian*, during her 60th journey. The working programme of the scientific crew, from eight countries and head by Dr. Johannes Karstensen from the GEOMAR Helmholtz Centre for Ocean Research Kiel, aims to measure various physical, chemical and biological parameters over the entire water column down to more than 5,000 metres depth.

Currents

Every 65km, water samples are collected with a CTD system, in parallel the researchers continuously record water currents in the upper 1,200 metres. One focus is measuring carbon dioxide in seawater to determine the uptake capacity of the ocean for this greenhouse gas. The data will also to be compared with historical data of a somewhat more northern section through the South Atlantic. The A10 section was sampled by FS *Meteor* in 1993 as part of the World Ocean Circulation Experiment (WOCE) – the warming of the ocean and systematic changes in salinity are expected to be observed.

The measurements are embedded in the international South Atlantic Meridional Overturning Circulation (SAMOC) program and the EU-funded AtlantOS project.

The scientific crew of 22 people include a total of 12 researchers from Argentina, Brazil and South Africa and which are particularly interested in research questions on the meridional heat, fresh water and volumetric transport in the South Atlantic.

The MSM60 expedition ends in Montevideo, Uruguay, at the beginning of February. The RV *Meteor*, which has been traveling on its 133rd journey since the middle of December in the South Atlantic, will arrive on the Falkland Islands on 13 January 2017 about 1,800km further south.