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Change of guard in the South Atlantic Research vessel FS Maria S. Merian follows FS Meteor to South America

4 January / Kiel / Cape Town. 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 now on the same course from Table Mountain to South America. On board is a team of more than 20 scientists from eight countries.

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. In particular the oceanic heat transport in the region is of interest and include for example the northward transport of warm water masses in so-called Agulhas rings.

Since 15th December RV METEOR is heading westward along 34.5°S – but now, since the 4th January, 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 5000 meters depth.

“About every 65 km we stop the ship and collect water samples with a so-called CTD system, in parallel we continuously record water currents in the upper 1200 meters”, Dr. Johannes Karstensen explains. One focus of our work is measuring carbon dioxide in seawater because these observations allow us to determine the uptake capacity of the ocean for this important greenhouse gas. The data will also to be compared with historical data of a somewhat more northern section through the South Atlantic. The so-called 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”, Dr. Karstensen continues. “All the data obtained on this trip are important contributions to the international data collection for ocean and climate studies ”.

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 13th January about 1800km further south.

Expedition at a glance:

MARIA S. MERIAN Expedition MSM60

Research topic: Meridional heat, fresh water and volume transports in the South Atlantic

Scientific Drivers: Dr. Johannes Karstensen (GEOMAR)
Start: 04 January 2017, Cape Town (South Africa)
End: 31 January 2017, Montevideo (Uruguay)

Note:

The expedition is supported by the EU project AtlantOS under the EU programme Horizon2020.

Images:

Images are available for download at www.geomar.de/n4934

Links:

www.geomar.de The GEOMAR Helmholtz Centre for Ocean Research Kiel

http://www.aoml.noaa.gov/phod/SAMOC_international/index.php The South Atlantic Meridional Overturning Circulation Project

<https://www.atlantos-h2020.eu> The AtlantOS project within the framework of the EU Horizon2020 programme.

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