

Developing an observing array for monitoring meridional fluxes in the Southwest Atlantic

Edmo J. Campos¹, Silvia Garzoli^{2,3}, Chris Meinen³ and Alberto Piola⁴

¹Oceanographic Institute of the University of Sao Paulo – edmo@usp.br

²Cooperative Institute for Marine and Atmospheric Studies, Univ. of Miami, Miami, FL

³NOAA Atlantic Oceanographic and Meteorological Laboratory, Miami, FL

⁴Servicio de Hidrografia Naval and University of Buenos Aires, Argentina

During December 1-17, 2012, an oceanographic cruise onboard the University of Sao Paulo's *N.Oc. Alpha-Crucis* was conducted in the South Atlantic as part the South Atlantic Meridional Overturning Circulation (SAMOC) initiative, a broad international program designed to improve the understanding of the Meridional Overturning Circulation in the South Atlantic. Among others, the SAMOC initiative incorporates research being done by the Brazilian funded SAMOC-Br project, the NOAA funded Southwest Atlantic MOC project (SAM), and the South Atlantic Climate Change (SACC) study, a project funded by the Inter-American Institute for Global Change Research (IAI). During the cruise, three PIES previously deployed by the SAM Project were recovered, fitted with new batteries, and redeployed at the same sites, while data from a fourth PIES were acoustically downloaded. Additionally, three new current-and-pressure equipped instruments (CPIES), funded by the Brazilian SAMOC-Br Project were deployed. A full-depth hydrographic section was occupied across the Brazil Current and the adjacent continental shelf. The section consisted of 20 stations including one at each of the mooring sites. Presently, all data collected during the cruise are being analyzed. Two other cruises on board the *N.Oc. Alpha-Crucis* will be conducted in 2013. The first, scheduled for late April, will deploy a bottom mounted ADCP and a bottom pressure gauge on the continental slope in the western end of the 34.5°S line to better capture the meridional flows in the vicinity of the continental shelf break. The second cruise, to be carried out in November, will include a hydrographic survey and the acoustic download of the data stored in the moored PIES and CPIES instruments.