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Indian-Atlantic ocean transport: Dynamics, Observations and Variation

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As part of international and national programmes (SAMOC - South Atlantic Meridional Overturning Circulation; SANAP - South African National Antarctic Programme) repeat monitoring lines attached to relief voyages of South African scientific bases have been conducted. In the framework of these projects, our work focuses on the eastern part of the SAMBA array (South Atlantic MOC Basin-wide Array) offering a ideal set of data to observe the Agulhas Leakage, its behaviour, its influence on the adjacent continental shelf and its role in linking the Indian and Atlantic Oceans. The eastern side of the SAMBA array presently consists of current meter moorings, CPIES (Inverted Echo Sounders with pressure sensor and current meter), and bottom- moored ADCP that are deployed from the shelf to near the Walvis Ridge offshore. The analysis of the SAMBA- east moored data sets will provide some accurate information on how the transport of Indian Ocean varies annually. This long-term physical changes within the eastern boundary current represents a fundamental step towards our understanding of the strength and variability of the MOC and so the climate system variability.