



The Tropical Atlantic North Equatorial Countercurrent Dynamics Revisited From SMOS Satellite

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The tropical Atlantic North Equatorial CounterCurrent (NECC) is investigated using altimetry Absolute Dynamic Topography (ADT) and Sea Surface Salinity (SSS) provided either by the recent SMOS (Soil Moisture and Ocean Salinity) satellite or by the ISAS (In Situ Analysis System) reanalysis. The two SSS data present similar results that confirm the robustness of the new technology to capture ocean salinity. The satellite high resolution helps in understanding the NECC development between 2010-2012 and in separating the eastern from the western characteristics. The current variability described from altimetry is in agreement with previous works. The existence of two different cores is confirmed in the western basin but only suggested in the East. These cores follow the Inter-Tropical Convergence Zone (ITCZ) displacements tracked as a SSS minima and those of a secondary and northern line. The SSS minima structure, either shown as a broad and diffuse area or a well marked line, also plays a role.