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Title: COUPLED OCEAN ATMOPHERE IN THE BRAZIL-MALVINAS CONFLUENCE REGION ESTIMATED FROM GLOBAL DATABASES

Forename: Ronald Surname: Souza

Authors: Souza, Ronald; Pezzi, Luciano; Casagrande, Fernanda;

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abstract: The Brazil-Malvinas Confluence (BMC) region in the South Atlantic Ocean is characterized by the thermal gradients of the meeting between the warm Brazil Current (BC) and the cold Malvinas Current (MC). The region is considered a key region for understanding the linkage between Antarctica and South America. This paper aims to describe the atmospheric wind modulation forced by the thermal contrasts of the BMC region and estimate the variation of heat flux (latent and sensible heat) over the study area. Data were available from the QuikScat satellite, NCEP/NCAR reanalysis, HiRAC (High-resolution, Regionally Analyzed COADS -Tokinaga et al., 2005), and from the AMSR sensor onboard the Aqua satellite. Analysis of the data demonstrated that wind and heat flux intensity fields were directly related to the SST fields attesting the coupling between the ocean and the atmosphere at the BMC region. The satellite data confirms former evidence (Pezzi et al., 2009; Acevedo et al., 2010) that wind and heat flux intensity increases over the warm waters of BC and decreases over the cold waters of the MC. The reanalysis data was not as able as the satellite data to represent the atmospheric modulation in terms of wind intensity. This work suggests that the use of satellite data is important when studying ocean-atmosphere coupling over regions of intense oceanic mesoscale activity.