Geophysical Research Abstracts
Vol. 18, EGU2016-18003, 2016
EGU General Assembly 2016
© Author(s) 2016. CC Attribution 3.0 License.

The Net Energy Budget at the Surface Interface of the "Cold Tongue" Region

Abderrahim Bentamy, Rachel Pinker, Banglin Zhang, and Yingtao Ma
IFREMER, LOPS, Plouzane, France (abderrahim.bentamy@ifremer.fr)

The southern tropical Pacific region also known as the "cold tongue" region is of great interest in terms of understanding the atmosphere-ocean coupling, and the observed strong seasonal cycle in sea surface temperature. The primary goal of our study is to investigate the spatial and temporal variability of air-sea interaction through the analysis of the net heat budget over the "cold tongue" region. Such analysis requires high quality heat budget estimates which are impacted by the complex and extensive low-level stratocumulus clouds in this region. The accuracy at which current satellite and numerical model methods can estimate this net heat budget is of interest. In this paper, the heat budget at the ocean-atmosphere interface in a region bound by 0o S – 30o S, 110o W – 70o W has been derived using satellite observations and compared to in situ measurements and to predictions from numerical models. The approach is based on multi-satellite sensors, buoy observations and numerical analyses. The fluxes are generated at daily and monthly time scales for a 10 year period (2002-2012) at a nominal 10 resolution (some parameters are available at higher resolution). Once the metrics on the accuracy of the satellite estimates are known, they can serve as "ground truth" for evaluating numerical models.