



Net Energy Budget at the Surface Interface of the “Cold Tongue” Region

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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. Due to the complex and extensive low-level stratocumulus clouds in this region, the accuracy at which current satellite methods can estimate this net heat budget is of interest. In this study, the heat budgets at the ocean-atmosphere interface in a region bound by 0° S – 30° S, 110° W – 70° 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.