

TMI/VIRS Derived Turbulent Heat Fluxes over the Tropical Pacific Ocean

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This investigation is presented for the Tropical Microwave Imager/Visible Infrared Scanner (TMI/VIRS) application to the problem of estimating monthly averages of air temperature, specific humidity, and turbulent heat fluxes at the air-surface interface over the planet ocean. The objective is directed at adaptation of retrieval mechanisms that have been used elsewhere with SSM/I-AVHRR combination. In order to determine the impact, TMI/VIRS derived products are verified against Triangle Trans-Ocean Buoy Network/Tropical Atmosphere Ocean (TRITON/TAO) buoy-array observations in the warm pool region. The results reveal extremely small biases in the TMI-VIRS's surface air temperature and specific humidity. The root mean square is 0.61 K and 0.92 g Kg⁻¹, respectively. This shows the sampling is sufficient for the calculation of latent and sensible heat fluxes.