

Air-sea Coupling of the Tropical Instability Wave

W. Timothy Liu, Xiaosu Xie, and Paulo Polito

Jet Propulsion Laboratory, California Institute of Technology

The Tropical Instability Wave (TIW) have been studied as the temperature front of the equatorial cold tongue in the Pacific which propagates westward with a period of about 30 days and a wavelength of 1100 km. TIW was clearly observed by the radar scatterometer SeaWinds, the radiometer on TRMM, and the altimeter on Topex/Poseidon. A temporal and spatial filter was applied to isolate the wave. The differences in phase between various pairs of parameters, including wind vector, sea level, sea surface temperature, and atmospheric water vapor, are used to check various hypotheses in ocean-atmosphere coupling

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