



## **Evaporation Variability at the air-sea interface in the Equatorial Pacific from models and observations**

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Tropical Pacific evaporation is a key metric for coupled model evaluations with respect to air-sea exchange. The evaporative fluxes at the sea-surface represent a tight connection between the ocean and the atmosphere that depends on wind, SST, air humidity, bulk parameterizations and boundary layer physics. At the same time the Tropical Pacific, which is an extended body of water, is the primary driver of the tropical atmospheric circulation and is well observed (by buoys, ships and satellites). The air-sea interaction at the tropical Pacific is described by several different physical mechanisms and scales of variability: for example the Warm Pool vs. the Niño3 region, the ENSO variability and the Madden-Julian Oscillation. Here, we compare the magnitude and variability of latent heat flux, wind and humidity in the Tropical Pacific from satellite derived datasets and in situ observations and investigate the fidelity of climate models with respect to evaporative fluxes in the Tropical Pacific.