

Evaluation of Surface Heat Fluxes throughout El-Nino Southern Oscillation (ENSO) Evolution in Reanalysis Data Sets

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The purpose of this study is to evaluate the processes that govern the surface energy budget during ENSO evolution. While this has been studied in the past, recent developments to reanalyses (e.g., increased horizontal resolution, changes in physical parameterizations, etc.) allow further insight into the details of ENSO evolution. In this study, seasonal values of surface heat fluxes, surface winds, and precipitation are compared in the tropical/subtropical Pacific Ocean for a thirty-one year period (1979-2009). The following reanalyses are analyzed using statistical techniques: NCEP/NCAR R1, NCEP/DOE R2, CFSR, ERA-Interim, and MERRA. Analysis will focus on surface fluxes through the ENSO cycle with an emphasis on ENSO's seasonal evolution.

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