



Intermodel comparison of the relationships among ENSO amplitude, changing annual cycle and mean sea surface temperature

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Using X12-ARIMA seasonal adjustment process, inter-model relationships among ENSO amplitude, annual cycle and mean sea surface temperature in the NINO3.4 region are investigated with twenty four coupled general circulation models including 21 IPCC AR4 models.

ENSO amplitude is positively correlated with the annual cycle strength and is negatively correlated with the mean SST. The mean SST and annual cycle strength is negatively correlated at the 1% level. In other words, the models producing stronger ENSO amplitude have the tendency to simulate colder mean SST and stronger annual cycle in the NINO3.4 region than other models and vice versa.

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