



## **Interaction between near-annual and ENSO modes in the Coupled Model Intercomparison Project simulations**

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The background state of the equatorial Pacific determines the prevalence of the 'slow' ENSO mode over a 'fast' near-annual mode, the latter being related to the theoretical coupled Pacific Ocean Basin (POB) mode controlled by the zonal advective feedback. Both modes, when coexisting, may interact through non-linearities and participate to the low frequency modulation of the seasonal cycle and ENSO. Due to the sensitivity of the near-mode to the mean state, model intercomparisons may help understanding the underlying mechanisms of time-scale interactions relevant to ENSO.

Here, the near-annual activity is characterised in different models participating in the Program for Coupled Model Diagnosis and Intercomparison (PCMDI). Its modulation and relationship with the ENSO mode characteristics are studied, which includes the 'asymmetry' (a variance-weighted skewness) of SST anomalies. We also investigate how the simulated near-annual variability is related to model biases in the mean state and seasonal cycle.