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## Origins of the low frequency climate variability in the Pacific basin

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Substantial decadal climate variability has been observed in the Pacific Ocean which is known as the Pacific Decadal Oscillation (PDO). It is not yet clear whether the decadal variability is inherently related to El Niño/Southern Oscillation (ENSO) or whether the midlatitudes independently undergo decadal changes which may affect ENSO variability.

In order to identify the mechanisms governing the decadal climate variability in the Pacific region specifically designed experiments are performed using a hierarchy of global climate models: the new coupled ECHAM5-MPIOM atmosphere-ocean-ice model without flux adjustments, the atmospheric general circulation model ECHAM5 run in the stand-alone mode or coupled to a mixed layer ocean model. Results are presented for multicentury experiments performed at two horizontal resolutions: a coarse resolution (T31 for the atmosphere/3° for the ocean model) and a higher resolution (T63 for the atmosphere/1.5° for the ocean model). We carried out a number of sensitivity experiments each of 200 years duration forcing the coupled model with idealized sea surface temperature and sea surface salinity anomalies in the subtropics of both hemispheres. The role of local air-sea interactions and ocean dynamics in tropical-extratropical interactions at decadal timescales will be discussed.