

The impacts of North Atlantic multidecadal variability on the Tropical Pacific climate variability

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Using the reanalysis data and a coupled general circulation model (CGCM), we investigate the impact of Atlantic Multidecadal Oscillation (AMO) on the tropical Pacific climate variability. Both reanalysis data and CGCM confirmed that the positive phase of AMO referring the warming SST anomaly over the Northern Atlantic Ocean coincides with the suppression period of the eastern Pacific El Niño (a.k.a 'cold tongue El Niño' or 'conventional El Niño') activity. Finally we found that the weakening of the eastern Pacific El Niño is attributed to the intensified annual cycle and the intensified zonal gradient of the mean SST along the equator, which have been driven by the teleconnection effect of AMO.