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Does ENSO lead the global decadal change?

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A paradigm on the decadal change of SST in the Pacific Ocean and tropical Indian Ocean is proposed. The decadal modulation of ENSO and its nonlinear teleconnection possibly lead the decadal change of the mean SST in both the Pacific and Indian Oceans through the nonlinear rectification. The decadal change of El Nino-La Nina asymmetry directly engraves the decadal change of the tropical Pacific SST. Asymmetric impact of ENSO to the midlatitude Pacific Ocean: the increase of SST anomaly induced by La Nina is larger than the decrease of SST anomaly by El Nino, in addition to the asymmetric ENSO, plays an important role of generating the decadal change of SST in the midlatitude Pacific Ocean. As a result, the residual of the sum of the nonlinear regressed North Pacific SST pattern associated with El Nino and La Nina exhibits a similar pattern to the observed decadal change in the North Pacific SST. The atmospheric teleconnection associated with the decadal change of the El Nino-La Nina asymmetry is also responsible to induce the decadal change of SST in the tropical Indian Ocean.