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Multidecadal Variability of El Niño types due to Atlantic remote influence

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Previous studies have relied on the connection between the interannual processes of the Atlantic and Pacific basins since early 70's, so a summer Atlantic Niño is able to develop a Pacific la Niña during the next winter throughout an alteration of the Walker circulation. Besides changes in the characteristics of El Niño Southern Oscillation (ENSO) events have been also reported, highlighting the importance of the mean state and the wind regime in the cause of changing. Regarding the classification of types of ENSO by the location of the maximum of the Sea Surface Temperature anomalies - Eastern Pacific (EP) and Central Pacific (CP) - their frequency, occurrence and intensity have been altered in the last few decades, thus a major number and more intense CP events have been observed. However the link between the ENSO types and the Atlantic oceanic basin state is still unknown.

In the present work, we will asses this problem by analyzing the characteristics of ENSO phenomena before and after the 70's. To this end, we use model outputs from a simulation in which the Tropical Indo-Pacific oceanic basin is coupled to the atmosphere and the Atlantic is forced by observed SST.