



Changes in the Tropical Pacific background state and La Niña development from Atlantic remote Influence.

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The Pacific basin have suffered the so-called “climate shift” from the 70s, which has implied important changes in the subtropical and mid-latitudes but also important and still unresolved consequences within the Tropics and thus in ENSO phenomenon.

Recent studies have found how, since the 70’s, the summer Atlantic Niño is able to alter the dynamics of the central and eastern Pacific via anomalous Walker circulation, favouring the development of a Pacific La Niña during the next winter (Rodríguez-Fonseca et al., 2009).

Here, we investigate the change in the background state in the Tropical Pacific and therefore ENSO variability before and after the climate shift. This is done considering upper ocean dataset from an oceanic Reanalysis for the period 1958-2006.

The mechanisms at work in the development of Pacific La Niña from the disruption of the system due to Atlantic influence in the context of the Pacific basic state are also investigated. We use oceanic reanalysis as well as ensemble integrations with an atmospheric general circulation model coupled in the Indo-Pacific basin to an ocean model and forced in the Atlantic by the observed SSTs in the period 1949-2002.