

Revisiting the effect of equatorial Pacific sea surface temperature variability on Atlantic Nino/Nina events

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A relationship between the Pacific El Niño/Southern Oscillation (ENSO) and Atlantic Niño/Niña events has long been controversial. Some studies suggest interdecadal changes in the Pacific influence on Atlantic Nino, while others indicate that the summertime Atlantic Niño makes a favorable condition for developing La Niña in the following autumn and winter. The correlation between ENSO and Atlantic Niño/Nina is not as significant and robust as that between ENSO and the tropical Indian Ocean basin mode. Here we revisit the effect of equatorial Pacific sea surface temperature variability on the Atlantic Niño/Niña and find that the long-lived ENSO events can trigger the Atlantic Niño/Niña more effectively through persistently anomalous Walker circulation across the Pacific-Atlantic basin. In thre presentation, we will discuss observational and modeling findings on the robust linkage between the long-lived ENSO and Atlantic Nino/Nina events.

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