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Modoki vs classical ENSO impacts in New Caledonia (166°E, 22°S) and South West Pacific

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Impacts of El-Niño Modoki vs classical ENSO events on rainfall anomalies are analyzed on New Caledonia (NC) and SW Pacific during the extended September-December austral spring using a network of 22 rain gauges (NC), CMAP precipitation and tropospheric winds anomalies from NCEP-NCAR on the period 1950-2009. Composites analyses reveal that subsidence is strenghtened over New Caledonia during Modoki compared to classical ENSO. This anomalous subsidence is associated with a southward shift of the Hadley circulation that inhibits convection and delays the onset of the rainy season of about one month compared to classical ENSO. This change is consistent with the strengthened relationships between ENSO and rainfall anomalies in New Caledonia (and SW Pacific) from 1950 to 2009.