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Super instrumental El Niño events recorded by *Porites* corals from the Enewetak atoll, Western Pacific Warm Pool

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The Western Pacific Warm Pool (WPWP) is a critical region to study the El Niño -Southern Oscillation (ENSO) behaviour. However, very few studies have been conducted on the long-term ENSO variability in the WPWP region, thus limiting our knowledge of the link between the ENSO events and the WPWP structure. The Sr/Ca ratio in Porites corals is a robust proxy for reconstructing sea surface temperature (SST) and is widely used to identify paleo-ENSO events.

In this study, we present monthly Sr/Ca data derived from two short Porites corals collected from the Enewetak atoll located on the eastern edge of the WPWP. The Sr/Ca record spans years from 1965 to 1984. Results suggest that the Enewetak corals reliably record 20 years of local SST. These two Porites corals also recorded two super ENSO events during 1982-1983 and 1972-1973 as revealed by large SST anomalies and high Sr/Ca values (cold temperature). However, these two corals do not appear to have been sensitive enough to record all other ENSO events and the intercolony variability between these two corals exists.

The Enewetak corals show their fidelity to recording ENSO events in the WPWP region. Work is underway to reconstruct SST from a longer coral (over 100years) from Enewetak in order to provide more insights into the past ENSO variability in the WPWP region and help us better understand how the ENSO events or even longer decadal-scale Pacific Decadal Oscillation (PDO) events changed the WPWP climate.