Holocene variations in the evaporation-precipitation balance in the Indo-Pacific Warm Pool

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Core G5-2-056P is located in the centre of the Indo-Pacific Warm Pool (IPWP), Seram trough, Indonesia. This core serves as an archive to reconstruct past changes in the evaporation-precipitation balance in this region. A decadal scale (20-30 year) stable oxygen isotope record and, for selected time intervals, Mg/Ca time series on *Globigerinoides ruber* were established. The age model is confined with 10 AMS C14 dates.

The oxygen isotope record covers termination 1B and the Holocene, where the Mg/Ca time series comprises 500-1000 year intervals centred at 0.8, 1.7, 4, 6, 9 and 12.5 ka BP. Average sea surface temperatures (SST) of 27 degrees are observed at 12 ka BP. The present day average SST of 28 degrees is reached at 10 ka BP. Subsequently from the 6 ka BP to the 4 ka BP interval a small decrease in average SST of 0.5 degree was found.

The variability in the oxygen isotope signal for the intervals at 12.5, 9 and 6 ka BP can be almost completely explained by SST changes, whereas for both late Holocene intervals the variability in the SST signal exceeds the temperature variations implied by the oxygen isotope record. This finding points to salinity changes i.e. variations in the oxygen isotope composition of the seawater occurring along with the SST variations.

Further implications and changes in the inter-annual SST variations during the

Holocene will be discussed.