

Interactive comment on “Quantifying sea surface temperature ranges of the Arabian Sea for the past 20 000 years” by G. Ganssen et al.

Anonymous Referee #3

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I would have used standard statistics to define the range of a quasi-Gaussian distribution (e.g. 1.5x std dev.). Probably this would yield comparable values to the ones found. In any case, "means" should be listed along with the spread, thus defining the uncertainty (in the table).

It is certainly interesting that the low end of the ranges seems relatively fixed (interpreted as upwelling temperature by the authors) and the high end fluctuates. It seems reasonable to invoke changes in monsoon type (although I am not in a position to judge the validity of the approach).

The YD anomalies are puzzling and unexpected. Do I believe they got the temperatures right on the head? Well, no, but I do believe that they got the change in ranges right, at least semiquantitatively. Even in the present, when a few decades of measurement is

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all we have, the absolute values may not reflect the prevailing T ranges of the Holocene, which makes calibration difficult.

The climate modeling types have been telling us to get seasonal ranges to test their models. Ganssen et al. are doing it. They are on the right track.

Interactive comment on Clim. Past Discuss., 6, 2795, 2010.