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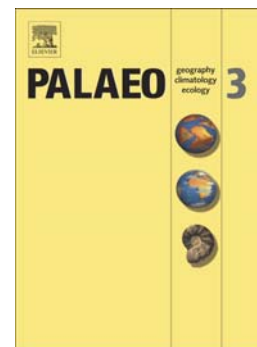
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Last glacial-interglacial productivity and associated changes in the eastern Arabian Sea

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Abstract

We reconstruct paleo-productivity and bottom water oxygenation changes during the past 32 ka, from the southeastern Arabian Sea, using absolute abundance of planktic foraminifera, relative abundances of *Globigerina bulloides*, angular asymmetrical benthic foraminifera (AABF), measurements of total organic carbon (C_{org}), %CaCO₃, and *Globigerinoides ruber* $\delta^{18}O$ and $\delta^{13}C$. The faunal and geochemical proxies suggest that productivity in the southeastern Arabian Sea was high during MIS 3. A distinct decrease in productivity is inferred during the last glacial maximum (19-23 ka) (LGM). Bottom water was well oxygenated during MIS3, only to become oxygen-depleted during the LGM. Productivity decreased abruptly during Heinrich Stadial 1 (HS-1), but the response to Heinrich Stadial 2 (HS-2) was different. Low productivity during the early deglaciation is also synchronous with an increase in ice-volume corrected $\delta^{18}O$ ($\delta^{18}O_{sw-ivc}$), a salinity proxy, between 18.9 (18.3-18.9) ka BP and 15.9 (15.0-16.3) ka BP, and a concomitant

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