



The planktic response to the Latest Danian Event (62.2 Ma) – A synthesis

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The Latest Danian Event (LDE, 62.2 Ma) is an early Paleogene transient warming event that has been identified in different ocean basins over the last decade. We compare new and previously published micropaleontological results between different sites from the Pacific Ocean (ODP 1210) to the North Atlantic (IODP Site U1407), South Atlantic (ODP Site 1262) and the Tethys (Qreiya, Egypt; Zumaia, Spain). The records cover roughly one million years across this event and reveal substantial changes in the planktic foraminifera faunal composition that are strictly related to the LDE, in addition to previously published changes in the nannofossil community as indicated by the appearance of the *Lithoptychius* genus also known as the 1st radiation of fasciculithids (e.g. Monechi et al., 2013, *Mar. Micropaleontol.*). Our results show that the planktic community strongly reacts directly to the LDE, whereas the benthic community is known to be less influenced by this event (Deprez et al., 2017, *Terra Nova*). Moreover, accurately dated changes of planktic foraminifera at orbitally tuned records from the Pacific and the South Atlantic has consequences for the current Paleocene planktic foraminifera stratigraphy, specifically the reliability of *Igorina albeari* as the marker for the base of the P3b Subzone is questioned.