



Late Pliocene age control and composite depth at ODP Site 982, revisited

Nabil Khélifi (1,2) and Michael Sarnthein (1)

(1) Institute of Geosciences, University of Kiel, D-24118 Kiel, Germany, (2) Present address: Leibniz Institute of Marine Sciences (IFM-GEOMAR) at the University of Kiel, D-24148 Kiel, Germany (nkhelifi@ifm-geomar.de)

Ocean Drilling Program (ODP) Site 982 provided a key sediment section at Rockall Plateau for reconstructing northeast Atlantic paleoceanography and monitoring benthic $\delta^{18}\text{O}$ stratigraphy over the Late Pliocene to Quaternary onset of major Northern Hemisphere Glaciation. A renewed hole-specific inspection of magnetostratigraphic events and the addition of epibenthic $\delta^{18}\text{O}$ records for short Pliocene sections in holes 982A, B, and C, crossing core breaks in the $\delta^{18}\text{O}$ record published for Hole 982B, now imply a major revision of composite core depths. After tuning to the orbitally tuned reference record LR04 the new composite $\delta^{18}\text{O}$ record results in a hiatus, where the Kaena magnetic event has been lost, and in a significant age reduction for all proxy records by 130 to 20 ka over the time span 3.2–2.7 Ma. Our study demonstrates the significance of reliable composite-depth scales and $\delta^{18}\text{O}$ stratigraphies in ODP sediment records for ocean-wide correlations in paleoceanography, such as for a Late Pliocene sea surface temperature (SST) drop at Site 982 that now well compares with SST trends found elsewhere in the North Atlantic.