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The latest Paleocene to middle Eocene interval in the Bay of Biscay - preliminary results from calcareous nannofossils and planktic foraminifera

A. Bornemann

Universität Leipzig, Institut für Geophysik & Geologie, Leipzig, Germany (a.bornemann@uni-leipzig.de)

Calcareous plankton (calcareous nannofossils, planktic foraminifera) is currently studied from DSDP Site 401 during the latest Paleocene to Middle Eocene greenhouse episode. This site is situated on the edge of a tilted fault block underlying the southern edge of the Meriadzek terrace on the North Biscay margin and comprises a 100-m-thick, nearly complete sedimentary record of Paleocene to middle Eocene sediments covering the Paleocene-Eocene Thermal Maximum as well as the Early Eocene Climatic Optimum. Detailed age control is achieved by calcareous nannofossil and planktic foraminiferal biostratigraphy suggesting that the study interval covers the NP9 to NP16 and P5 to E13 biozones, respectively, with a pronounced condensed interval across the Early to Middle Eocene boundary (NP13/NP14).

Besides DSDP Site 550 this site represents one of the most northern locations which consists of Paleogene carbonates and will provide us a more complete picture by considering also long-term records from the northern hemisphere. Here we present first assemblage data from the two plankton groups which are accompanied by planktic and benthic foraminiferal oxygen and carbon isotope data in order to unravel the impact of the long-term climate change on the planktic ecosystem during the Eocene greenhouse.