

Mid-Eocene Thermals record in Istrian Paleogene Basin (Outer Dinarides, Croatia), Neotethys

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DATASET DESCRIPTION

Title for dataset: Mid-Eocene Thermals record in Istrian Paleogene Basin (Outer Dinarides, Croatia), Neotethys

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Abstract: Several short sections have been studied in Istria (Outer Dinarides, Northern Adriatic) to determine impact of short-term climate variability during the critical period of Mid-Eocene greenhouse climate evolution on pelagic assemblages from the northern mid-latitudes. In order to determine the age of the deposits and paleoecological conditions of the environment, marl samples were laboratory processed and prepared for microscopic analysis. Further taxonomic determination of calcareous nannoplankton and planktonic foraminifera was done together with quantitative research methods. Planktonic foraminifera tests are recrystallized and not suitable for stable isotope data. Because of that, isotope analyses have been proceeded ($\delta^{13}\text{C}$ and $\delta^{18}\text{O}$) from bulk sediments and $\delta^{13}\text{C}$ is correlated with regional to global results. Based on new calcareous nannofossil biostratigraphy with regional geochronology (Fornaciari et al., 2010), and implementations of available geochemical data for two hyperthermal intervals (Late Lutetian Thermal Maximum and Middle Eocene Climate Optimum CIE), for the first time these events are going to be more precisely dated from the first attempts made by Jovane et al. (2007), where the age was miscorrelated with 41.5 Ma for the MECO, which is actually the LLTM age dated in Southern Hemisphere.

Keyword(s): Eocene hyperthermal events, Calcareous nannoplankton, Planktonic foraminifera

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Geolocation: Jakomići I (J 45.2091530 N, 14.05085170 E and Jakomići II (JAK 45.2125950N, 14.050880E), Racani (RAC 45.298855N, 13.927823E) and Gabrijeleći (GAB 45.288864N, 13.959391E)

Size: 3 dataset: Galovic et al. 2023 geochemical and isotope data, Galovic et al. 2023 nannofossils, Galovic et al. 2023 planktonic foraminifera