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Palynological study around the Paleocene/Eocene (P/E) boundary in the Untersberg section (Salzburg, Austria)

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The 190 cm thick Untersberg section (Salzburg, Austria) of the Northern Calcareous Alps comprises the Palaeocene–Eocene transition and equivalent to planktonic foraminifera zone P5 and calcareous nannoplankton zone NP9. The succession is comprise of red and green claystone and marly claystone, represents the global negative carbon isotope excursion (CIE) which is used to recognize the Palaeocene/Eocene (P/E) boundary. The succession was deposited in a lower bathyal slope environment at a palaeodepth of about 2000 m and the CIE was associated with a shallowing of the calcite compensation depth by at least 1 km. A 49% increase in detrital quartz and feldspar within the CIE-interval suggests enhanced continental run-off due to high rainfall, associated with abundant radiolarian casts indicating high primary productivity (e.g. Egger et al., 2005). The palynological investigation indicates bad dinoflagellate cysts preservation in all samples except two at 100 and 120 cm above the P/E boundary which are characterized by an acme of *Apectodinium homomorphum*. The kerogene slides are characterized by a high abundance of amorphus organic materials (AOM) and phytoclasts groups, palynomorphus group are very rare.

Keywords: Paleocene; Eocene; Dinoflagellate cysts; kerogene; Carbon isotope excursion.

References:

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