



A reference section for the Santonian-Campanian boundary: The Postalm section, Austria

Michael Wagreich (1), Jaume Dinarès-Turell (2), and Erik Wolfgring (1)

(1) University of Vienna, Department of Geodynamics and Sedimentology, Vienna, Austria (michael.wagreich@univie.ac.at),

(2) Istituto Nazionale di Geofisica e Vulcanologia (INGV), Roma, Italy

The base of the Campanian, the longest stage of the Late Cretaceous, is still not defined by a suitable GSSP. Furthermore, no consensus exists about the boundary criterion: ammonites suffer from bioprovincialism; the LAD of the crinoid *Marsupites testudinarius* was proposed as the primary fossil marker, but the marker is mainly a chalk facies fossil, which is rare to absent in pelagic low-latitudes and absent in oceanic sections; or a boundary defined by magnetostratigraphy, i.e. the base of Chron C33r after the Long Cretaceous Normal chron.

The Postalm section in the Northern Calcareous Alps (Salzburg, Austria) provides a Santonian to Maastrichtian succession of neritic to bathyal sediments. The Santonian-Campanian boundary interval comprises a deepening succession from a sandy conglomerate with a hardground on top, overlain by grey to yellowish shelf marls grading into red marly limestones. The base of the Campanian can be defined by magnetostratigraphy, i.e. the reversal from Chron C34n (the Long Cretaceous Normal Polarity-Chron) to C33r. An interval of ca. 80 cm of undetermined magnetostratigraphy between clearly normal and clearly reversed polarities is present. We define the base of the Campanian arbitrarily at the midpoint of this undetermined interval. A 1 m thick interval of unusual high magnetic susceptibility values is present at the end of chron C34n (latest Santonian).

Nannofossil biostratigraphy shows the first occurrence of *Broinsonia parca parca* (base of CC18a/UC14a) at the undetermined boundary interval. *Ceratolithoides cf. verbeekii* starts 1.60 m above the boundary, in the lower part of Chron 33r. Planktic foraminiferal biostratigraphy indicates the *elevata-asymetrica* concurrent range zone due to the presence of *Globotruncanita elevata elevata*, *Dicarinella asymetrica*, and *Marginotruncana* spp. at the base of the section. *Dicarinella asymetrica* has its last occurrence in the section ca. 40 cm below the magnetostratigraphic boundary. Large *Globotruncana arca* occur above this event. Thus two of the main suggested biomarkers, i.e. the FO of *Broinsonia parca parca* and the LO of *Dicarinella asymetrica* occur in close proximity to the reversal at the base of Chron 33r which may be suggested as the main marker event for the base of the Campanian.