

## STRATIGRAPHIC SIGNALS AROUND THE SANTONIAN-CAMPANIAN BOUNDARY CARBON ISOTOPE EVENT

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The Cretaceous to Paleogene Gosau Group of the Northern Calcareous Alps (Austria) provide sections that allow the integration of various stratigraphic signals from macro- and microfossils to chemostratigraphy and magnetostratigraphy. Sections in the area of the Gosau valley, e.g. the Postalm section (Upper Austria - Salzburg) expose a Santonian to Maastrichtian succession of neritic to bathyal sediments. At the Postalm, 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. A 1 m thick interval of unusual high magnetic susceptibility values is present at the end of chron C34n (latest Santonian). Carbonate carbon stable isotopes show a positive excursion near the boundary, i.e. the Santonian-Campanian boundary event (SCBE) which is actually within the upper Santonian section interval below the reversal.

Oxygen isotopes show a negative excursion slightly below the Santonian-Campanian boundary, followed by a trend to more positive values. Together with the magnetic susceptibility data, sequence stratigraphy interpretations and global correlations a sea-level lowstand can be inferred to occur just at the boundary, preceded by a rather short-duration sequence of late Santonian age, and a longer sequence of early Campanian age.

Two of the main suggested plankton biomarkers to pinpoint the Santonian-Campanian boundary, i.e. the first occurrence of the nannofossil *Broinsonia parca parca* and the last occurrence of the planktonic foraminifer *Dicarinella asymetrica* occur in close proximity to the reversal. Strontium isotope stratigraphy indicates a value of 0.707532 for the base of the Campanian in the Postalm section.