



## **Integrated magnetobiostratigraphy at the Oligocene/Miocene transition in the southwestern Atlantic Ocean (DSDP Leg 72, Hole 516F)**

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A high-resolution integrated magnetostratigraphic and biostratigraphic (planktonic foraminifera and calcareous nannofossils) record of the interval encompassing the Oligocene/Miocene transition (OMT) at DSDP Hole 516F is here presented. This stratigraphic interval was previously studied by Berggren et al. (1983), Pujol (1983) and Spezzaferri (1994), although with a lower sample resolution. The magnetobiostratigraphic results of Berggren et al. (1983) are, moreover, considered as reference data for the age calibration of several bioevents along the OMT (Gradstein et al., 2012). Dealing with the same stratigraphic interval, other authors (Pagani et al., 2000; Plancq et al., 2012) based their paleoceanographic reconstruction on age model derived by Berggren et al. (1983).

Our high-resolution integrated stratigraphy approach allowed us to obtain: 1) a more detailed succession of magnetic reversals across the OMT, including a better constraining of the base of Subchron C6Cn.2n, which formally defines the base of the Neogene (Steininger et al., 1997); 2) an integrated planktonic foraminifer and calcareous nannofossil quantitative biostratigraphy across the OMT. Particular focus has been addressed to the Lowest Common Occurrence of *Paragloborotalia kugleri* and the Highest Occurrences of *Sphenolithus delphix* and *Sphenolithus capricornutus*, which approximate the O/M boundary; 3) an updated age model of the OMT at Hole 516F.

Finally, the new data here presented contributed to a critical review of the calcareous planktonic biostratigraphy across the OMT.

### References

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