



Upper Miocene-Pliocene diatoms in the Southern Ocean: IODP Site U1361 on the continental rise off Wilkes Land, Antarctica

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During the Integrated Ocean Drilling Program (IODP) Expedition 318, a total three sites has been drilled at the continental rise along the Antarctic margin off Wilkes Land. Sedimentary sections obtained at those three sites provide continuous sequence of Miocene through Pleistocene to access siliceous biochronology and paleoceanography in the Southern Ocean.

Systematic offset of diatom biostratigraphic events and geomagnetic polarity in uppermost Miocene to lowermost Pliocene section observed at Site 1095 in the Antarctic Peninsula (Iwai et al., 2002, Acton et al., 2002; Leg 178SR) and it was critical to access the timing of overdeepening of continental shelf topography and Ice dynamics (Bart and Iwai, 2011, PPP).

The offset has been reconfirmed at Sites U1359 and U1361 (Escutia et al., 2011; 318 Expedition Reports). We conclude that the most probable reason for the discrepancy between the biostratigraphic and magnetostratigraphic data from Sites 1095, U1359, and U1361 is previous miscalibration of Southern Ocean biostratigraphic events to the GPTS in the late Miocene to basal Pliocene time interval.

Here we will present the result of counted diatom biostratigraphy at Site U1361 as an example.