IODP Expedition 378 South Pacific Paleogene Climate: New high-resolution high-latitude Cenozoic Section

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As the world’s largest ocean, the Pacific Ocean is intricately linked to major changes in the global climate system. International Ocean Discovery Program (IODP) Expedition 378 is designed to recover Paleogene sedimentary sections in the South Pacific to reconstruct key changes in oceanic and atmospheric circulation. These cores will provide an unparalleled opportunity to add crucial new data and geographic coverage to existing reconstructions of Paleogene climate and as part of a major regional slate of expeditions in the Southern Ocean to fill a critical need for high-latitude climate reconstructions. Appropriate high-latitude records are unobtainable in the Northern Hemisphere of the Pacific Ocean.

The drilling strategy included a transect of sites strategically positioned in the South Pacific to recover Paleogene carbonates buried under red clay sequences at present latitudes of 40°–52°S in 4650 – 5075 meters of water depth. Due to technical issues we no longer will be able to reach the deeper sites. Therefore, the focus of Expedition 378 will be now to obtain a continuous sedimentary record of a previously single hole, rotary-drilled, spot-cored, classic Cenozoic high-latitude DSDP Site 277 and provide a crucial, multiple hole, mostly APC-cored, continuous record of the intermediate-depth Subantarctic South Pacific Ocean from the Latest Cretaceous to late Oligocene.