

THE ROLE OF SOUTHERN OCEAN INTERMEDIATE WATERS DURING DEGLACIATIONS: ASSESMENT WITH NEODYMIUM ISOTOPES IN FORAMINIFERA

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Abstract

The formation of Subantarctic Mode Waters (SAMW) and Antarctic Intermediate Waters (AAIW) in the Southern hemisphere is currently the single most important pathway for the uptake of anthropogenic CO₂ from the atmosphere and for transporting it into the ocean interior. Therefore, past changes in the formation and advection intensity of these water masses might have indeed affected the climate system, particularly during glacial-interglacial transitions. We propose to use neodymium isotopic composition in thermocline dwelling foraminifera to estimate the advection of Southern Ocean intermediate waters into the tropical thermocline during the last three glacial-interglacial cycles.