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Using Boron Isotopes in Benthic Foraminifers to Evaluate Intermediate Water pCO_2 Changes in the Western Pacific Ocean over the past 30,000 Years

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ABSTRACT

The deglacial ventilation history of the deep ocean carbon pool is crucial to understanding the interaction of the atmospheric and marine carbon cycle. We propose to reconstruct seawater pH variations from boron isotopes in shells of epibenthic foraminifers. The study will focus on intermediate water depths (1210-1460 m) in the Southwest Pacific Ocean, and the interval covers the last deglaciation, specifically the period of extensive oceanic CO_2 degassing.