

## **HIGH RESOLUTION C, O, AND SR ISOTOPE STRATIGRAPHY OF A NEOPROTEROZOIC CAP CARBONATE IN THE BAMBUI GROUP, BRAZIL**

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The Pedro Leopoldo facies of the Neoproterozoic Bambui Group in Minas Gerais, Brazil comprises a spectacular outcrop of alternating laminated micrite and fibrous calcitic seafloor cements above diamictite. The preservation, morphology and Sr abundance of these crystal fans argues for a subtidal, aragonitic precursor. Above this level sedimentary indicators suggest shallowing of the basin consistent with an increase in dolomite, although no evidence for exposure was observed. Samples were collected at high stratigraphic resolution for subsequent C, O, and Sr isotopic analysis. A clear transition was noted in all isotopic tracers across a narrow interval some nine meters above the base of the measured section. Below this event in well-preserved samples, C isotope values are consistently negative, similar to other post-glacial cap carbonates worldwide, and Sr isotope compositions hover around 0.7073. Above this event, however, C isotope values immediately rise to near 0 permil and  $^{87}\text{Sr}/^{86}\text{Sr}$  climbs to 0.7090. The rise in Sr isotopes most likely reflects diagenetic resetting associated with the increase in dolomite. However, the consistent values in the aragonitic crystal fans are an exact match for similar seafloor cements preserved in post-glacial carbonates of the Otavi Group in Namibia, suggesting a direct correlation of strata across the Atlantic.