



The Significance of ^{13}C - ^{18}O isotopic excursion of the Carbonates Rock at the PTB in the Wenbudangsang section, Tibet

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The research on the marine PTB in Southern China has been well-established, and the significant breakthrough has been done on the terrestrial PTB in Eastern Yunnan Province, Western Guizhou Province and Tianshan Mountain, but not well enough on that of the Tibetan Tethys Region. This research conducted ^{13}C - ^{18}O isotopic composition analysis on the complete Permian-Triassic conodonts biostratigraphy column established by the previous study. The analysis results indicate an obvious negative excursion on the ^{13}C isotopic composition at the PTB in the Wenbudangsang section, Tibet, but the excursion pattern is distinguished from that of the Meishan section, Southern China. To be specific, the pattern showed that its $\delta^{13}\text{C}_{\text{carb}}$ decreased as time passed by, which is similar to that of the PTB in Southern Alps. Compared with the typical marine PTB in Yangtze Plateau which indicate the transition from carbonates platform to lower shelf facies, it suggests that the $\delta^{13}\text{C}_{\text{carb}}$ excursion pattern from the Wenbudangsang section (Tibet) is highly consistent with that of the Xishan shallow carbonates platform. The negative $\delta^{13}\text{C}_{\text{carb}}$ excursion at the PTB suggest there may be a significant land weathering resulting from land uplift during the Pangea convergence, with the tectonic-related volcanic activity co-occurring.