End-Permian vocanism in South China and the P-T boundary biosphere crisis

Yukio Isozaki [1], Hiroshi Nishi [2], hodaka kawahata [3], Masao Takano [4], Jianxin Yao [5]

[1] Earth Sci. & Astron., Univ. Tokyo Komaba, [2] Dept.Earth Science, Kyushu Univ., [3] GSJ, [4] Dep. Earth and Planetary Sci., Nagoya Univ., [5] Inst. Geol., Chinese Acad. Geol. Sci.

Upper Permian and Permo-Triassic boundary horizons in South China (Zhejang and Sichuan provinces) contain many acidic (air-fall) tuff layers. Their widespread distribution, regardless of the basin geometry, suggests that an extraordinary explosive volcanism occurred then. Their geochemistry and eruption timing, however, refute the alleged possible correlation to the Siberian trap (flood basalt). The onset of this volcanism coincides not only with the first decline of biota but also with the onset of the Superanoxia across the P-T boundary. This suggests the "Plume Winter" scenario that connects superplume-induced volcanism with global environment change including mass extinction.