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The End-Permian Regression in South China and Its Implication on Mass Extinction

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Records of more than 20 Permian-Triassic Boundary (PTB) sections from South China show that widespread end-Permian regression took place in whole South China. Timing of the low ebb of this regression was pinpointed to the *Clarkina meishanensis* and *Hindeodus changxingensis* zone. Biostratigraphic and paleogeographic studies at conodont zonation level reveal that the Yangtze Carbonate Platform and isolated small carbonate platforms in the Hunan-Guizhou-Guangxi (HGG) Basin experienced sedimentary hiatus during these two zones which lasted about 50-100 kya. Meanwhile the basinal areas, namely the Northern Marginal Basin of Yangtze Platform and the Hunan-Guizhou-Guangxi Basin, have continuous

conodont zonation with silicious and ashbed deposits. The basinal areas show two negative $\delta^{13}\text{C}$ shifts during the PTB interval from *Clarkina yini* zone to *Isarcicella isarcica* zone, while on the platforms there is usually only one negative shift because the early shift at *C. meishanensis* zone was lost during hiatus. The end-Permian regression and successive rapid transgression taking place at the PTB casted important effects to the pattern and process of the PTB mass extinction. The depositional hiatus hitherto underestimated will necessitate reassessment of some interpretations on the causes and results of that extinction.

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