

The eastern continental margin of Cretaceous Asia and sedimentary basins in Japan

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The tectono-sedimentary history of the Cretaceous arc-trench system of Japan has been reconstructed on the basis of conventional geological studies on the paired metamorphic belts, granite batholith belt, and various sedimentary basins. The recently developed detrital zircon chronology can add more critical constraints in reconstructing the sedimentary settings of various basins with respect to the coeval arc complex and conterminous continent on the back-arc side. We reported several preliminary results on U-Pb age spectra of zircon grains from various Cretaceous sandstones in Japan, and the mutual comparison among them allows us to discriminate/characterize various sedimentary units and basins. In particular, we could identify back-arc, intra-arc, and fore-arc basins for the Cretaceous Japan with respect to the Asian continent.

Keywords: Cretaceous, sedimentary basin, detrital zircon, Asia, U-Pb age