

## Provenance analysis of Jurassic-Cretaceous formations in Japan using detrital-zircon-age spectra

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Several patterns of detrital-zircon-age distribution are discriminated of pre-Jurassic clastic rocks of Japan and Mongolia, and transition of the tectonic setting of each geologic body or stratigraphic succession can be traced from the temporal change of these patterns. In the following geologic belts, the pattern changed from (1) a multimodal pattern with Meso- and Neoproterozoic small peaks through (2) a unimodal pattern to (3) a bimodal pattern without Meso- and Neoproterozoic zircons: the Hida Gaien, Renge, Akiyoshi, Suo, Ultra Tamba-Tamba, and Northern Chichibu belts of Japan and north-central Mongolia. Okawa *et al.* (2013 *Mem. FPD*), Kouchi *et al.* (2015 *JpGU*), and Ueda *et al.* (2015 *JpGU*) interpreted that the transition indicates the following tectonic evolution: (1) Gondwana margin ->rifting ->(2) oceanic island arc ->collision ->(3) northeastern margin of Pangea.

From the Triassic, the northeastern margin of Pangea or Laurasia changed to a large igneous province and the provenance analysis with detrital-zircon-age distribution become more difficult. However, compilation of the zircon U-Pb ages of igneous rocks in (present-day) East Asia has revealed certain provinciality at the age of igneous rock bodies. On the other hand, we made classification of Jurassic-Cretaceous geologic units in Japan from a simple verification of the similarity in detrital-zircon-age distribution. By comparison of a certain detrital-zircon-age spectrum with the age-distribution of igneous rock bodies in East Asia, we induced the provenance that could make the age spectrum. Moreover, we induced relative displacements of geologic bodies from the analysis of provenance transition of each geologic belt or stratigraphic succession.

Ikeda *et al.* (2015 *JpGU*) presented preliminary results of our study. In the poster presentation, we will introduce and discuss the detailed results.

Keywords: detrital zircon, U-Pb age, East Asia, Jurassic, Cretaceous, tectonics