

## Eruption age determination of Kannabe scoria cone using multi-dating method

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We determined eruption age of Kannabe scoria cone, which is located in southwest Japan. Although the eruption age had been estimated using K-Ar and loess stratigraphy, there is room for improvement in precision of the age determination.

We applied optically stimulated luminescence (OSL) dating, paleomagnetic measurement and tephrochronology on sediments and basaltic rocks associated with the Kannabe scoria cone. The sediment above the Kannabe basalt was formed at 21+/-1.7 ka (OSL dating). The eruption age was tephrochronologically estimated as 7.3-29 ka because the lava exists between two widespread tephra: Aira-Tn ash (ca. 26-29 ka) and Kikai-Akahoya ash (ca. 7.3 ka). The eruption age of the Kannabe scoria cone was before 21 ka and until ca. 29 ka.

We evaluated the eruption age of the Kannabe basaltic by detailed paleomagnetic investigation. The paleomagnetic data of 23 rock samples from 6 locations in the Kannabe basaltic field showed good agreement with each other. The averaged declination and inclination were respectively, 7.5° and 65.9°, which was in accordance with the geomagnetic secular variation of sediments in Lake Biwa at ca. 25 ka.

Consequently we proposed that the Kannabe basalt erupted at ca. 25 ka.

Keywords: Kannabe scoria cone, eruption age, paleomagnetic dating, OSL dating, tephrochronology

