Re-examination of Eruptive History of Kuju Volcano (SW Japan) by Thermoluminescence and Radiocarbon Methods

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Kuju Volcano in central Kyushu, Japan, consists of many lava domes and flows of hornblende andesite composition, together with aprons of pyroclastic/debris flow deposits on its flanks. Ohta (1991) and Kamata and Kobayashi (1997) have constructed eruptive history of the volcano group using tephrochronology and radiocarbon (^{14}C) dating. The 52 ka eruption age obtained for the Handa ignimbrite is estimated from stratigraphic position between Aso-4 (90 ka) and Aira-Tn (AT: 29 ka) tephras.

This paper presents thermoluminescence (TL) and ^{14}C dates for lavas and block and ash flows. TL dates suggest that the Kuroiwayama, Kutsukakeyama, Ogigahana, Hsshozan lavas and main lava of Kujusan were formed before the ignimbrite eruption. Furthermore, Hizengajo and the summit lava dome of Kujusan were effused around 30 ka. The ^{14}C dates for the block and ash flows are consistent with TL dates for lava domes.