

# Component Materials and their Temporal Change of Volcanic Ash during the Asama 2004 Eruption

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Mt. Asama began to erupt at the summit crater on September 1, 2004. A series of eruptions has intermittently continued for a half of year. The activity is characterized with intermittent eruptions of a Vulcanian type and emission of volcanic ash. This study focuses to the component materials and their temporal change of volcanic ash during the Asama 2004 Eruption. The initial eruption on September 1 produced a thin tephra fall. The main axis of ash-fall deposits extent NE and reached to the Pacific Ocean far away 250km from the volcano. The deposits contained fresh juvenile fragments (Yoshimoto et al., 2004; Shimano et al., 2004; Takahashi et al., 2004). The amount of pumices fragments was estimated as 12 wt%. Frequencies of ash emission and earthquake occurred during September 16 and 17. Fresh vesiculated fragments in volcanic ash started to increase since September 15. The amount of the pumice fragments reached to above 85 wt% on September 16 and 17. New lava emission was recognized on the floor of the summit crater on the same days (Oki et al, 2004). After the lava emission several explosive eruptions occurred on September 23 and 29, October 10, and December 14. Temporal change of component materials was recognized from the lava emission. These deposits mainly consist of lava fragments and few pumice fragments. These pumice changed to be less vesiculate than September 16 and 17. The amount of pumice fragments has decreased as 19 wt% on September 23, 4 wt% on October 10, 0.2 wt% on November 14. Also the average amount of ash fall at selected sampling sites ( $\text{g}/(\text{m}^2 \cdot \text{day})$ ) have rapidly decreased since November 14 as 0.33 from November to December, 0.07 from December to January 2005, 0.01 on January. These data shows that explosive activity on the Asama 2004 eruption has gone to decline.