

Mechanism and energy of the phreatic eruption on 1997 at AkitaYakeyama volcano

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Eruption mechanism and energy were evaluated for phreatic eruption at AkitaYakeyama on 1997.

Explosion depth was estimated as very shallow depth less than 10 m by comparison with field explosion experiment. The depth is well matched with crater topography and grain size distributions. Compared with the field explosion experiments, energy of explosion was estimated as order of 10^9 - 10^{10} J. On the other hand, water content of mud, initial temperature and pressure provide the energy release by difference of internal energy of water. The result was greater than former estimation in two orders. Repeated eruption and energy loss during uprise are the main reason of the discrepancy.

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