

Movements and shapes of explosion columns on field explosion experiments

Tsukasa Ohba [1], Mario Yoshida [2], Hiromitsu Taniguchi [3], Hiromitsu Oshima [2], Taniguchi Hiromitsu Research Group on Volcanic Explosion

[1] Petrol, Min, and Econ. Geol, Tohoku Univ, [2] Earth and Planetary Sci., Hokkaido Univ, [3] CNEAS, Tohoku Univ

<http://www.ganko.tohoku.ac.jp/ganseki/>

Field explosion experiments were done for the understanding of mechanism of volcanic explosion. We observed the movement and shape of explosion cloud using video tape recorder. A clear correlation between scaled time and scaled position of the head of explosion cloud was observed. Shape of the cloud revealed a systematic change with a scaled depth. Similar shapes of cloud were observed in the experiments with similar scaled depths. Depth of volcanic explosion may be possible to determine based on the observations of movement and shape of eruption columns.