

## Status and perspective of the development of new observational Instruments for volcanic explosion

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The purpose of the present study is to develop new three instruments for the observation of volcanic explosions. They are Mobile Observatory for Volcanic Explosions (MOVE), doppler radar for volcanic use, and a penetrater-type GPS system. The aims of MOVE are to observe volcanic pressure wave, dynamic pressure and temperature of pyroclastic surge, to collect rock sample and so on. The operation of MOVE is performed by wireless from 2-km distance. The doppler radar observes the eruption column and pyroclastic flow, and determines their velocities. GPS observation system is installed by air-drop from a helicopter, and monitors the crustal movement.

We have succeeded to complete making the instruments for these 4 years, however, our final goal is the real observation at volcanic site. For this goal, we have performed practical use test of MOVE at Oshima volcano, Izu Islands, in 2006. This volcano erupted in 1986. The test was performed according to the scenario of 1986 eruption if we could succeed to practical use or not at that time, and had a satisfactory result. There still remained some problems for practical use, however, we convinced that all of them will be solved in a near future.