

2003 Seismic Experiment in Kusatsu-Shirane Volcano

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An overview of a seismic experiment in Kusatsu-Shirane Volcano is presented. The seismic experiment comprises a part of Comprehensive Joint Volcano Observation of Kusatsu-Shirane Volcano in 2003 which is included in National Project for Prediction of Volcanic Eruptions.

The major targets of this experiment are detection and mapping of shallow seismic reflectors beneath the summit area and constraining a seismic velocity structure of Kusatsu-Shirane Volcano. These informations are expected to be new perspectives in studies of shallow volcanic processes in Kusatsu-Shirane volcano.

The experiment was carried out during 25 Sep. - 1st Dec. 2003. Seismic crue is comprised by 21 researchers from Tokyo Institute of Technology, Hokkaido University, Akita University, National Research Center of Disaster Prevention, University of Tokyo, Aichi Educational University, Kyoto University and Kyushu University. Totally 40kg of chemical explosives were used as three seismic sources which were located in the summit area and foot of Kusatsu-Shirane Volcano. 96 temporal seismic stations were deployed around and among these shot points. A dense network includes 71 stations a coarse network in the summit area and a coarse network includes the rest 25 stations over whole flank of Kusatsu-Shirane volcano. The rapid static GPS method and the total station surveying were used as positioning method of these temporal stations.

Seismic sources were detonated at 15 minutes interval. Godd quality records were obtained at each 83 stations. Ocasiaonally, several natural earthquakes were recorded in appendix mearsuring windows.

These seismic datda have distributed over all participant of this experiment.

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