

Repetitive seismic survey 2013 in Sakurajima Volcano.

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The latest report on structural evolution and on effect of the density reduction in the seismic network will be presented through the sixth round of the repetitive seismic experiment in Sakurajima Volcano. Sakurajima Volcano locates in Kagoshima, south Kyushu, which is one of the most active volcanoes in Japan. The repetitive seismic experiment have been carried out since 2008 in order to detect and research structural evolution along volcanic activity, with using 4.5Hz sensors. This round has carried out as a part of the experiment which presented by Nakamichi et al. in this conference.

The detection and researching the structural evolution approach to magma movement under the ground along volcanic activity and will provide essential measure on development of volcanic activity. Extending its result into evaluation on flux and accumulation will bring significant informations on considering scenario about volcanic activity in progress. And the experiments should be sustainable method because of long time scale of the target.

The latest report about structural evolution will be presented. Details and results of the experiment rounds have been reported in these conferences since 2009. The seismic response along the line in the north flank have changed year by year. Two major sweet spots have been found at 4.9km depth in the northeastern Sakurajima and at 8km depth beneath northern flank of Kitadake, the northern edifice, through these experiments. The changes in seismic response are interpreted as a result of mass movement underground with going volcanic activity. Further change is expected associating with development of volcanic activity.

The effect of density reduction will be also discussed. Though the repetitive seismic experiments with two lines have been done with about 250 stations every December until 2012, the latest experiment with the most sensitive line with 74 stations on the northern flank was carried on December 2013. Discussions on the effect of density reduction in the seismic network is necessary in order to have a style of sustainable execution of the research.

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