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Active source seismic experiment in and around Sakurajima volcano in 2013 and comparison with the experiment in 2008

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We conducted active seismic experiment in and around Sakurajima volcano in December 2013, five years after the similar experiment that was conducted in 2008. We deployed 280 temporary seismic stations, 90% of which were located at the same locations of the experiment in 2008. Six explosive shots with 200 kg or 300 kg charges were detonated in December 5. The 2013 shot locations (S1, S2, S4, S5 and S6) are less than 60 m from the 2008 shot locations except for 1 shot (S3). We successively observed the explosions and volcanic events during nighttime nine hours continuous recording. The continuous records contain not only waveforms excited by the six shots but also by an explosive eruption and volcanic tremor. We evaluate cross-correlations of waveforms at the same station locations that obtained in 2008 and 2013 to detect temporal change of subsurface structure beneath Sakurajima volcano except for S3.

Member organizations of the Research Group of the Seismic Dynamic Structure in Sakurajima Volcano: Graduate School of Science, Hokkaido University, Graduate School of Engineering and Resource Science, Akita University, Graduate School of Science, Tohoku University, Earthquake Research Institute, University of Tokyo, Volcanic Fluid Research Center, Tokyo Institute of Technology, Graduate School of Environmental Studies, Nagoya University, Graduate School of Science, Kyoto University, Disaster Prevention Research Institute, Kyoto University, Graduate School of Science and Engineering, Kagoshima University, and Japan Meteorological Agency

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