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SCG062-P12

会場:コンベンションホール

時間:5月26日 16:15-18:45

雑微動相関による草津白根山の構造時間変化検出の試み

An exploration of temporal change of crustal structure at Kusatsu-Shirane volcano by cross-correlation of seismic noise

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Mt. Kusatsu-Shirane is an active volcano in the central part of Japan. The volcano has repeated phreatic explosions at several decade interval. The last eruption occurred in 1983. Current activity consists of several fumaroles and small but persistent seismicity around the main crater lakes. We have monitored the seismic activity of the volcano including 3 borehole stations since 2001. Continuous seismic record is available for most of the period.

Recent advance data analysis has enabled us to obtain Green's function between two stations by cross-correlating their data. The Green's function should reflect crustal structure between the stations. In a hope of detecting temporal change of the crustal structure due to the future eruption, we cross-correlate the continuous record at the borehole stations to obtain Green's function at one station due to the source at the other. One-day-long data since 2008 are used for the analysis. Low pass filter and binarization are applied before the cross-correlation. As a whole, obtained functions have common peaks for each station combination. Dominance of long period or short period wave is observed alternately at a few day interval. We have not observed correlation of such alternating feature with other data such as ground tilt.