

Monotonic volcanic tremor at Sakurajima volcano, August, 2017

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Monotonic volcanic tremor was observed from Aug. 22 to Aug. 25, 2017, at Sakurajima volcano Japan. This tremor is triggered by an impulsive high-frequency event, and monotonic component follows about several seconds in general. The monotonic volcanic tremor is observed with the interval about 10–20 minutes. Infrasonic wave is also observed at the initial phase, suggesting the explosive triggering.

The frequency spectra suggest one or a few characteristic frequencies, which varies in different periods. Their waveform characteristics show both simple monotonic one, and in some case, indicate a system with limit-cycle.

From the visual observation, this volcanic tremor is associated with chugging at the Showa crater, and in some cases, the signal is audible. Their source locations are determined around shallow beneath Showa crater by amplitude-decay method. This volcanic tremor is suggestive to recognize the liquid-gas system beneath the crater at Sakurajima.

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