# High-frequency tremor with frequency transition at Mt. Asama, Japan

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There are few studies on volcanic tremor in a higher frequency range than 10 Hz. As an example, Hotovec et al. (2013) reported volcanic tremor with frequency transition from low to high (> 20 Hz) frequency ranges during eruption of Mt. Redoubt in 2009. In this study, we report high-frequency volcanic tremor at Mt. Asama with low-to-high frequency transition in a range of 20~30 Hz, on the basis of V-net data provided by NIED. We find the tremor 161 times at Takamine station and 36 times at Onioshidashi station during a period from January 1, 2011, to July 15, 2016. Function fitting on the frequency transition in spectrograms of vertical motion reveals that a logarithm form is the best. We investigate temporal distribution of the tremor occurrences and find that the tremor frequently occurred in the morning from November to April. This point implies a possible relation between the tremor occurrences and snow coverage on Mt. Asama.

Keywords: Volcanic tremor, High-frequency tremor, Mt. Asama, Snow coverage

 