

## Seismic activity of Ontake volcano, central Japan since December 2006

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A dense seismic network has been operated around Ontake volcano, central Japan, by the Nagoya University, Nagano Prefecture, Gifu Prefecture, and the Japan Meteorological Agency. Intense seismic activity just beneath the summit of the volcano started since the end of December 2006 and continued until now (February 2007). Volcano tectonic (VT) earthquake intensively occurred during the beginning to the middle of January 2007. Low-frequency earthquakes occurred and the daily number of VT earthquakes gradually decreased since the middle of January 2007. Volcanic tremors had been observed since the end of January 2007. The time history of the seismic activity consists with the generic volcanic earthquake swarm model [McNutt, 1996].

We applied the DD method [Waldhauser and Ellsworth, 2000] to obtain the detailed hypocenter distribution beneath the summit of Ontake volcano. The hypocenters distribute at the depths of 0-2 and 3-5 km just beneath the fumarole area (Jigokudani) near the summit of Ontake volcano.

Several of the volcanic tremors associated with very long-period events (VLPEs). Waveforms of VLPEs consist of very long-period (20 s) signals. Seismic signals of the VLPE on January 25, 2007 observed at broad band stations of the Nagoya University and the F-net, some of which are 140 km far from the volcano. Particle motions of the broad band stations near the volcano consistent with the vertical crack source mechanism obtained by Kumagai et al. [this session]. Since January, we have gradually deployed the broad band stations near the volcano to capture VLPEs. A long-term data logging system [Okubo et al, 2006] has been operating at a broad band station.