Estimation of source location of volcanic earthquakes beneath Nishinoshima volcano applying the envelope correlation method to ocean bottom seismometer data

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Meteorological Research Institute deployed five ocean bottom seismometers (OBS) around Nishinoshima volcano to investigate the source location of volcanic earthquakes. The observation period is from June 21 to October 2, 2015.
As a preliminary analysis, we picked up 45 earthquakes from 30-minute-long OBS data (2015/6/21 07:00:00-07:30:00), converted them into RMS envelope in 4-8 Hz, and estimated source locations applying the envelope correlation method (Obara, 2002). Most earthquake sources located almost right beneath the volcano with a wide distribution in a vertical section. A further analysis is expected to figure out more precise source locations of volcanic earthquakes and to reveal the eruption processes.

Keywords: Nishinoshima volcano, source location, envelope correlation

