The source process of explosion earthquakes at Sakurajima volcano

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We have obtained moment tensor solution of explosion earthquakes generated at Sakurajima volcano using waveform inversion method. First motion of P-wave is excited by an isotropic expansion in the source region. Subsequent secondary wave were dominated by the all negative diagonal components of moment tensor and non-diagonal components are 10% of diagonal ones. This result shows decrease in volume. Horizontal dipoles are about twice larger than vertical dipole. Pulse widths of source time function in expansion and contraction processes are 0.2-0.5s and 0.8-1.2s, respectively. Seismic moments of contractions are 10-30 times larger than expansions. Pulse width and seismic moment of contraction tend to be larger in the case of large expansion.