

SSS027-P07

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## Waveforms of seismic events followed by the 2008 Iwate-Miyagi Inland Earthquake

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It is reported that the 2008 Iwate-Miyagi Inland Earthquake (Mj 7.2) had foreshock activity 40 minutes before the mainshock which occurred at 8:43 on June 14. Two foreshocks at 8:01 (Mj 0.6) and 8:11 (Mj 1.3) less than 1 km apart from the mainshock epicenter are listed in the JMA hypocenter catalog. In this study, we check the waveforms carefully which were recorded at the nearest Hi-net station (Ichinoseki-Nishi, epicentral and hypocentral distances are 3 km and 8 km, respectively), and investigate the foreshock sequence of this earthquake.

We used the waveform of updown component recorded at the Ichinoseki-Nishi station from 7:45 to 8:45 on June 14. We detected by eye 13 events whose initial phases are clear and have large amplitudes compared to noises. Each event has quite similar waveform: every phase such as P, S and reflection phases at the ground arrive at the same time when arranged at the P time. Normalized amplitudes of these phases by those of first P waves are classified into at least two groups by their magnitudes. This fact is thought to reflect that there are various types of focal mechanisms of foreshocks. These features of foreshock waveforms suggest that foreshocks occurred at almost the same place but had more than one fault plane. We will extract the information on change of hypocenter location or heterogeneity structure from the recorded waveforms.

Keywords: 2008 Iwate-Miyagi Inland Earthquake, foreshock, focal mechanism, later phases