Source, path, and site effects of the Noto Hanto Earthquake in 2007; Preliminary results based on K-NET and KiK-net records

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Source, path, and site amplification factors are evaluated from the K-NET and KiK-net strong motion records of the Noto Hanto Earthquake in 2007 and its aftershocks. The spectral inversion method (Iwata and Irikura, 1986) is applied to the strong motion records observed at 11 K-NET stations for 9 crustal events with JMA Magnitude greater than 4.5. The site amplification factor at ISK003 (Wajima site) is constrained to 2.0 to solve the inverse problem.

Qs-value along the propagation path shows frequency dependency, and is modeled as $Qs(f)=22f^{1.1}$. The Qs-value is within the range of previous results for crustal earthquakes in other regions, $Qs(f)=[20\text{-}50]f^{(0.8-1.0)}$ (Amaike et al., 2006).

Evaluation of Qs-value is not influenced by the constraint condition. On the other hand, source spectra and site amplification factors depend on the constraint condition. We are now involved in processing additional data obtained at KiK-net stations. Source parameters such as stress drop for main and aftershocks, and site amplification factor at each station will be presented at the Japan Geoscience Union Meeting, after confirming the validity of the constraint condition applied in this study.