

Source characteristics of shallow earthquakes, Q_s and Site factors in and around the central part of the Niigata Prefecture

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We investigated source spectra of 18 shallow earthquakes, Q -value of wave propagation path, and site factors at 30 strong motion sites in and around the central part of the Niigata prefecture by spectral inversion method. We tried to evaluate those unknown parameters without reference sites of which site factors are a priori known, by fitting spectral ratios of omega-square source spectra to those obtained from spectral inversion analysis. The site factor obtained by this method for the Hinoemata site (granitic site) shows a good agreement with theoretical site amplification inferred from its ground structure model.