

Site Amplification Factors of K-NET Sites in eastern part of the Fukushima Prefecture

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Site amplification factors at K-NET sites in the eastern part of the Fukushima Pref. are investigated by spectral inversion analyses using horizontal components of strong motion records from 12 earthquakes around the area. In the frequency range lower than about 1Hz, site amplification factors obtained by the inversion analyses are lowest at granite sites and increase from 2 to 5 as the geological ages of the sites become young. In the frequency range higher than 10Hz, however, granitic site shows higher amplifications than Quarternary sites. This inverse relation in the higher frequencies is interpreted as results from strong attenuation in the thick sediments of the Quarternary sites and/or strong resonance in the thin and soft soil deposits overlying hard baserocks of the granite sites.