

Estimation of local site effects from K-NET strong motion data on the 1997 Kagoshima-ken Hokuseibu events

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Evaluation of local site effects is of particular importance for the mitigation of earthquake disasters as well as for the improvement of strong motion predictions. K-NET array provides us high-quality strong and weak motion data on various site conditions during the 1997 Kagoshima-ken Hokuseibu events. The spectral inversion technique is applied to the data set, and site amplification factors are empirically evaluated at sites with different geological condition. The relation between site amplification factors and the average shear wave velocity in the upper 20 m depth are discussed at different frequency ranges.