

## Estimation of underground structure by using microtremors observed in and around the Taichung basin

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We conducted array-measurements of microtremors at four sites and single-measurements of microtremors at 52 sites including 23 strong motion stations in the Taichung basin to estimate the underground structure needed for strong motion evaluation of the Chi-Chi earthquake. It is found that sedimentary layers with  $V_s=250\text{m/s}$ ,  $900\text{m/s}$  and  $1300$  to  $1600\text{m/s}$  have the thicknesses of 16 m, 600 m, and 1700 m, respectively at an array-site. The horizontal-to-vertical spectral ratios of microtremors at most sites in the middle and southern parts of the Taichung basin have the predominant peaks at the frequency of 1 to 2 Hz. This result suggests that their site amplifications at that frequency might be relatively big.