

Robustness of microtremor H/V spectra and improvement of basin model in southern part in Osaka plains

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The two microtremor features, namely, the H/V spectra and the dispersion curves, on the basin periphery area were investigated to the southern Osaka basin. In the coastal area with a gentle basement inclination, the S-wave velocity profile identified from the two features gave the appropriate basement depth. On the other hand, in the terrace area with a steep basement inclination, the S-wave velocity profile identified from the dispersion curves was quite different from the one obtained from the down-hole S-wave logging. As the reason of the experimental results, it could be interpreted that microtremor H/V spectra are likely to be robust than microtremor dispersion curves in the estimation of the subsurface structures with an inclined basin-bedrock interface. On the basis of this usefulness of microtremor H/V spectra, the past basin model in southern part in Osaka plains was improved using three-component microtremor records observed at a hundred stations. The depth of the basin-bedrock interface of the presented model was deeper in the coastal area and shallower in the terrace area than that of the past model.