

Qs value of the Osaka basin structure model

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Three-dimensional structure models of the Osaka sedimentary basin were constructed by integrating both geophysical and geological data such as seismic reflection survey, borehole, and gravity anomaly data. However, later arrivals of the simulated motions are usually underestimated compared with the observed ones. Qs value is an important parameter for causing such underestimations. We simulate several earthquakes using finite difference method, and estimate the optimal Qs value for the Osaka basin structure model.

As a result, the optimal Qs value is 1/5 to 1/2.5 of Vs(m/s) in the frequency range of 0.1 to 0.7Hz.

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