

Bedrock motions near seismic fault during the 2000 Tottori-ken Seibu earthquake and comparison with Kobe bedrock motions

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Bedrock motions are evaluated using the strong ground motions recorded at the KiK-net stations near the seismic fault of the 2000 Tottori-ken Seibu earthquake. Soil properties are adjusted to fit to spectral ratios between the two vertical array points by using the Genetic Algorithm. The peak velocities of the bedrock motions are smaller than those in the Kobe City during the 1995 Hyogo-ken Nanbu earthquake. Strength demand spectra indicate that the destructive power of bedrock motions is also less than those in Kobe, which might be one of the reasons why the structural damage was smaller than expected from the recorded strong motions.