Relationships between Subsurface Structure and Instrumental Seismic Intensities Recorded in Tottori Prefecture, Southwest Japan

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A database of instrumental seismic intensities recorded in Tottori prefecture, Southwest Japan, during 1997-2006 has been complied. An average difference between recorded seismic intensities and those estimated using the attenuation equation was defined as an index representing the site amplification. On this basis, site-specific characteristics which affect observed seismic intensities have been quantified. The site amplification index were compared with subsurface structures; AVS30, topographical / geographical features and gravity anomalies. As a result, we ascertained that AVS30 and topographical / geographical features correlate with the site amplification index.