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Time:May 24 16:15-18:45

Determination of underground structure of Padang, Indonesia by microtremor observations

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Serious damages occurred by the strong ground motions during the 2009 Southern Sumatra earthquake in the area. Microtremor observations have been carried out in Padang, Indonesia and determined a subsurface structure by Noguchi et al. (2010). The deep S-wave velocity structure models at the 3 sites were determined from array observation records. The predominant period at 63 sites were obtained from 3-component observation records. S-wave velocity of a bottom bedrock layer is 1500m/s and depth to the bedrock was about 200m maximum from obtained underground model at 3 sites array observation. The predominant period was 1.5-3.0 period that H/V spectral ratio has clear single peak and double peaks. It was found that soft alluvial layer was distributed whole area from S-wave velocity structure.

Keywords: Microtremor observation, S-wave velocity structure, H/V, Padang, Indonesia