Densely microtremor observation to estimation of subsurface structure in Hane and Kute area, Ohda City, Shimane Prefecture, Japan

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An earthquake (Mj6.1) occurred in vicinity Ohda City western Shimane Prefecture in Japan on April 9, 2018. Densely microtremor observations were carried out to estimate the characteristic of ground motion in the damage area, Hane and Kute area, Ohda City. A distribution of the predominant period of microtremor H/V spectra and S-wave velocity structures were obtained from observation data. As a result, it was found that maximum thickness of the weak soil subsurface layer is 40m and a short period component of predominant period about 0.2-0.4 seconds may have influenced structural damage.

Keywords: microtremor observation, characteristics of ground motion, subsurface structure, 2018 eastern Shimane prefecture earthquake

