

Observation of Aftershock due to the 2018 Hokkaido Eastern Iburi Earthquake and Microtremor observation in the Damaged Area

*Isamu Nishimura¹, Tatsuya Noguchi², Yusuke Ono², Masanori Kohno², Keishin Hibi¹

1. Graduate School of Sustainability Science, Tottori University, Department of Engineering, Social Systems and Civil Engineering Program, 2. Department of Engineering Tottori University

To investigate a cause of serious damages of the 2018 Hokkaido Eastern Iburi Earthquake, we observed microtremors and aftershocks at a landslide area and around strong ground motion observation stations. As a result, S-wave velocity structures were estimated at all observation sites. It was found that thickness of the volcanic ash layer (S-wave velocity: 75-130 m/s) is 10m. Especially, it is suggested that two layers of volcanic ash layer have caused a landslide in the Shikanuma and Atsuma sites. It was found that the H / V spectral ratio of microtremor corresponds to the thickness of volcanic ash. The spectral amplitude of the H / V of the orthogonal direction component of the mountain ridge line became larger than that of the parallel direction component.

Keywords: Microtremor observation, landslide, H / V spectral ratio, S-wave velocity, subsurface abstraction