

# Microtremor Array Observation across Active Faults in Ogasawara Iwo-To Island

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Ogasawara Iwo-To island is an active volcanic island which is located on the southernmost part of Izu-Ogasawara arc. The purpose of our study is to estimate the ground surface characteristics and the subsurface fault structure across the active faults in the Ogasawara Iwo-To island. Three component microtremor array observations were carried out at 52 points across active faults in northeastern part of the Ogasawara Iwo-To island, through observations performed from September 30 to October 2, 2019. We acquired approximately 15 minutes of microtremor data on each observational point with the sampling rate set to 100 Hz using the JU410 seismometer. In this study, the microtremor horizontal-to-vertical (H/V) spectral ratio was used as a tool for imaging of the subsurface faults. We can detect the changes in horizontal distribution of the peak frequencies of the H/V spectral ratio across the active faults.

## Acknowledgments:

This observation in Iwo-to island was supported by Japan Maritime Self-Defense Force Atsugi Air Base and Iwoto Air Base.

Keywords: Ogasawara Iwo-To Island, Active Fault, Microtremor, H/V Spectral Ratio