

## Broadband Seismic Array in Micronesia Zone, the South Western Pacific Region

ISHIHARA, Yasushi<sup>1\*</sup>; TANAKA, Satoru<sup>1</sup>; SUETSUGU, Daisuke<sup>1</sup>; OBAYASHI, Masayuki<sup>1</sup>;  
TONEGAWA, Takashi<sup>1</sup>

<sup>1</sup>JAMSTEC

Although seismic network is well developed in continental and island arc region recently, oceanic region has still very sparse seismic network. For further research of ocean plate, its substructure and geodynamic in the ocean region, seismic network in the ocean are required. OHP/Pacific21 network is focusing Micronesia, the south western Pacific region. In this region only some OHP/Pacific21 stations and USGS stations are under operation and still sparse network. JAMSTEC and ERI, Univ. of Tokyo have started to deploy Broadband Ocean Bottom Seismic (BBOBS) array for about two years around Ontong-Java Plateau where is dynamic evidence of Earth's history. Micronesia islands locate north edge of Ontong-Java Plateau. Then our group has installed some seismic stations in Micronesia islands to place complement of BBOBS network.

In this program, we performed three items as follows, (1) Restart of measurement in Majuro, Marshall islands (2) Installation in Chuuk island and Kosrae island, FSM (3)Relocation of Palau station. Majuro station had long interval of measurement due to permission of land usage. We restarted observation in small island on Majuro atoll after negotiation. Fortunately this site is very silent because this site is out of place of residence. Chuuk and Kosrae stations are installed as temporal stations joining BBOBS array supported by local residence. Last Palau station located in downtown, so that measurement condition was not fine. We relocated new site where is silent filed area.

All stations listed above are off-line recording. Our group retrieves data on site about every six month. To reduce the risk of data gap by power supply trouble, line trouble, GPS trouble and system trouble, we installed observation system multiply for all parts.

As for new temporal stations, Chuuk and Kosrae stations, we retrieved the data last December. We evaluated noise signal level and checked seismic event data. Generally seismic station is ocean island has high noise level and unstable recording. In these new stations, both stations record stable data and low noise signal except oceanic wave origin's signal. Especially horizontal component of Chuuk station is close to low noise model in long period component. PKP phase excited by distant deep earthquake is recorded in original raw data. The performance of these stations expects more fine quality data in long-term operation to our research.

Keywords: Broadband seismic observation, Ontong-Java Plateau