Crustal Structure of Northernmost part of Okinawa Trough by Ocean Bottom Seismographic Observation (preliminary report)

Kazuo Nakahigashi[1], Masanao Shinohara[2], Ryota Hino[3], Hajime Shiobara[4], Hiroshi Takenaka[5], Nobuki Kame[6], Kenji Uehira[7], Nobukazu Seama[8], Toshihiko Kanazawa[9], Hiromi Fujimoto[10], Sadaomi Suzuki[11]

[1] Earth and Planetary Sci. Kyushu Univ, [2] ERI, Univ. Tokyo, [3] RCPEV, Tohoku Univ., [4] OHRC, ERI, Univ. Tokyo, [5] Dept. Earth & Planet. Sci., Kyushu Univ., [6] Earth and Planetary Sci., Kyushu Univ., [7] SEVO, Kyushu Univ., [8] Graduate School of Sci.and Tech., Chiba Univ., [9] ERI, Tokyo Univ, [10] School of Sci., Tohoku Univ., [11] Earth and Planetary Sci., Kyushu Univ

The area of East China Sea, west of Kyushu is the northern extension of Okinawa Trough and has a high microseismicity. The northernmost part of Okinawa Trough is considered to be an early stage of back arc spreading. The seismic structure beneath such an area is very important information for understanding tectonics of back arc spreading. The objective of this study is to obtain the detailed uppermost mantle and crustal seismic structure. The surveys were carried out in autumn, 1999. The profile is 300 km long and 20 OBSs were deployed at an interval of 15 km. We used airguns and explosives as controlled sources. OBS records have generally good quality for both airgun and explosive signals. First arrivals from all explosive sources can be clearly seen

The area of East China Sea, west of Kyushu is the northern extension of Okinawa Trough and has a high microseismicity. The northernmost part of Okinawa Trough is considered to be an early stage of back arc spreading. The seismic structure beneath such an area is very important information for understanding tectonics of back arc spreading. The objective of this study is to obtain the detailed uppermost mantle and crustal seismic structure. The surveys were carried out in autumn, 1999. The profile is 300 km long and 20 OBSs were deployed at an interval of 15 km. We used airguns and explosives as controlled sources. OBS records have generally good quality for both airgun and explosive signals. First arrivals from all explosive sources can be clearly seen.