

Microseismicity of the Sanriku-Oki area deduced by a dense OBS network

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In summer of 2001, we made an airgun-OBS seismic survey in the Sanriku-Oki area, the landward slope of the northern Japan Trench. The OBSs deployed along the survey lines recorded seismic activity in and around this area for about two month after the seismic experiment. The OBS network covered 30 x 50 km area with spatial interval of 5 to 10 km. Recent seismicity is not high; only about 20 earthquakes were located by the Tohoku University, in the OBS-survey area. Although the OBSs recorded more than 30 earthquakes per day in average, most of them are located at more than 30 km in depth and between the location of OBS network and the mainland of Tohoku and these earthquakes have to be relocated by combining the land and OBS data. Number of earthquakes located beneath the OBS network is less than 100 and it is difficult to discuss whether there are any systematic differences in the hypocenter distribution of the swarm activity in 1992 and that at present. The arrival time data of these earthquakes will be used to determine 3-D seismic velocity structure, combined with the airgun seismic experiment data.