

Crustal and uppermantle structure of the North Island, New Zealand, revealed by an OBS and airgun experiment

Ami Yamada[1], Yuichi Nishimura[2], Hideki Shimamura[3], Ingo Pecher[4], Stuart Henrys[4]

[1] Graduate School Sci., Hokkaido Univ., [2] Inst. Seismology and Volcanology, Hokkaido Univ., [3] Institute of Seismology and Volcanology, Hokkaido Univ., [4] GNS

During January and February 2001, the North Island Geophysical Transect (NIGHT) project collected near-vertical and wide angle reflection/refraction data across the central North Island in NW-SE direction. The project is undertaken by four institutions; Institute of Geological Nuclear Sciences (GNS NZ), Victoria University of Wellington (NZ), Cambridge University (UK), and Hokkaido University. About 200 land seismographs and 16 OBSs (14 offshore and 2 in Lake Taupo) were installed. OBSs were deployed every 10 to 20 km. In addition, 9 shots were detonated onshore, and an airgun-shooting was carried out. Pn are well recorded on almost all OBS sections up to the epicentral distance of 80 km. Phases from upper crust seem to be more complex and the features are significantly different in the eastern and western part of the offshore profile.