

Crustal structure study on Izu-Bonin subduction zone (Preliminary report)

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In the Izu-Bonin subduction zone, several distinct deep-sea canyons transect the Izu-Bonin Trench. At the forearc slope serpentine diapirs, which might contain water, are recognized. The objectives of this study are to reveal the nature of plate boundaries and to show heterogeneity of crust around the trench if the canyons are tectonic origin. The present study was carried out in fall, 1998. The two survey lines have 130 km long, E-W and N-S, respectively. 23 OBSs were deployed SE of Myojin-sho knoll. Airguns and 106 chemical explosives were used as artificial sources. The tentative results show existence of clear 6 km/s and 4.5 km/s layers similar to previous results at 200 km north of this region Suyehiro et al.(1996). The arrivals show discontinuous arrivals at the deep-sea canyon.