

## Seismic structure of the Daito Ridge in the northwestern Philippine Sea plate

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Three large bathymetric highs characterize the northwestern end of the Philippine Sea plate. They are the Amami Plateau, Daito Ridge and Oki-Daito Ridge from north to south. Their origins seem to be paleo-island-arcs. We carried out six seismic refraction and multi-channel seismic reflection profiles across the Daito Ridge and obtained P-wave velocity ( $V_p$ ) models of the crust and uppermost mantle beneath the ridge.

The record sections of the OBSs installed on the Daito Ridge are characterized by many reflection signals from the crust, Moho and uppermost mantle.  $V_p$  structural models beneath the ridge show a large heterogeneity especially in the north-south sections. 6-11 km thick low velocity materials with  $V_p < 6.3$  km/s characterize in the northern part of the ridge. On the other hand, high velocity materials with  $V_p > 6.3$  km/s ascend to several km below the seafloor in the southern part.

Common features between northern and southern parts of the ridge are that P-wave velocities of the bottom of the lower crust and of the uppermost mantle are 7.0-7.2 km/s and significantly less than 8.0 km/s, respectively. These characteristics correspond to those of the Kyushu Palau Ridge that is also a paleo island arc.

Keywords: Daito Ridge, velocity structure