

## Upper crustal structure around the Suiyo Seamount on the Izu-Ogasawara (Bonin) volcanic front

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Suiyo Seamount on the Izu-Ogasawara (Bonin) volcanic front characterized by high temperature hydrothermal activity in the west summit caldera. The geophysical group of Archaean Park project plans a lot of approach by different sensors. We plan 100m order L array of hydrophone survey in the caldera bottom to investigate the distribution of scattering area (hydrothermal dike swarm?) in 2002 FY. Seismic structure survey is necessary as a pre survey of 2002 plan.

We report about airgun-OBS crustal structure observation (R/V Kairei KR01-15) and its results. In Dec. 2001, 4 OBSH (Ocean Bottom Seismometer with Hydrophone) s are deployed on 30km airgun (GI gun) line of NE-SW direction across the Suiyo Seamount. One OBS was deployed the NE slope of seamount, 2 were deployed in the caldera and last one was deployed the flat bottom of SW part of seamount. Shot intervals are about 30 sec and 10~20m spacing.

All OBS recorded first arrival around 10km distance. As a temporarily results of 2-D ray tracing, P wave velocity 2.2 ~ 4.2km/s about 2km thick layer locate all over the observation line. Under this top layer, about 5km/s layer mounded under the seamount. It is suggested the relative low velocity material under the caldera.