

Geophysical mapping in the north Izu-Ogasawara region by results of R/Vs Kairei, Kaiyo, and Yokosuka cruises

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We designed sophisticated multi-phase cruises in the north Izu-Ogasawara region since 2002. During four-year cruises by R/Vs Kaiyo, Kairei, and Natsushima surveys, we special focused on geophysical features of morphology, crustal structure, gravity and magnetics bounded by latitude, longitude: N30 - 33, E138 - 141, in this region, which include frontal volcanoes and back-arc seamounts. Swath bathymetric surveys were conducted along box type tracks with totally 4,000 miles long. Along the single channel seismic (SCS) records obtained by the R/V Kairei KR02-16 and KR04-04 cruises, and Multi-channel Seismic (MCS) system as overwrap and across lines by the KY03-10 cruise, there are spotted dive positions to observe deep camera. We operated gravity and magnetic surveys on the same line of swath bathymetry. We performed a rockmagnetic measurements and chemical composition measurements on the rock samples by dredges and the Hyper Dolphine.