

## (2) Mantle peridotites from the Izu-Bonin (Ogasawara)-Mariana and Tonga arc - Geological cross section of the island-arc system-

# Hiroshi Sato [1], Teruaki Ishii [1], Hidetsugu Taniguchi [2]

[1] Ocean Floor Geotec., Ocean Res. Inst., Univ. Tokyo, [2] Komazawa Univ.High Sch.

Geological and petrological characteristics of mantle peridotite exposed in the Izu-Bonin-Mariana and Tonga arcs are discussed in this presentation. Mantle peridotites from the Izu-Bonin-Mariana forearc mainly consists of harzburgite which underwent high degree of partial melting, and they are considered to be residue after island arc volcanic activities. On the other hand, plagioclase-lherzolite to harzburgite which show moderate degree of partial melting and lherzolite similar to that in the Izu-Bonin-Mariana forearc are coexisting. The formers are considered to be residue after moderate degree of partial melting during volcanic activities at back arc spreading center. In the Tonga arc harzburgite of both island arc and back arc origin.