

Backarc-like characteristics and their spatial distributions within serpentinized peridotites in the Mineoka belt, Boso peninsula

*Katsuyoshi Michibayashi¹, Toshiyuki Katakai²

1.Institute of Geosciences, Shizuoka University, 2.Department of Geosciences, Faculty of Science, Shizuoka University

We studied chemical compositions and crystal-preferred orientations of serpentinized peridotites in Mineoka belt, Boso peninsula, Honshu island, Japan. The chemical compositions of both olivine and spinel are in the range of the olivine-spinel mantle array of Arai (1994, Chemical Geology). Spinel Cr# can be divided into two groups: high Cr# (0.5-0.6) and low Cr# (0.3-0.4). Moreover, we found that olivine crystal-fabrics in these peridotites have two types along with the two chemical compositions: A type with the low Cr# to the west and D type with the high Cr# to the east of the Mineoka belt. The chemical compositions are compatible with those of Parece Vela Rift (Ohara et al., 2003, G3). We suggest that the peridotites in the Mineoka belt could be derived from backarc environment and they have not so dismembered at present, since both structural and petrological characteristics are correlated to their spatial distribution in the Mineoka belt.

Keywords: Mineoka belt, peridotite, chemical composition of mineral, olivine crystallographic orientation