Garnet-bearing amphibole schist and serpentine schist collected from the basement of Ohmachi Seamount,Izu-Ogasawara Arc

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Along the south-western part of the basement-cliff of Ohmachi Seamount,Izu-Ogasawara(Bonin) Arc, garnet-bearing amphibole schist and serpentinite schist were collected by 2001YK0104 cruise.

These schists seems to have been in conatct with Tertiary volcanics(pre-Izu-Ogasawara arc) by a fault. Garnet with high Ca(Gross. Mol. ca30%) and moderate Mg(15-25mol.%) is rarely found in amphibole schist. Less Mg part of garnet forms a network pattern suggesting formation by depression with fracturing. Psuedomorph of garnet is also observed. The ocurrence suggest that garnet with higher Mg is relic.

Although actinolitic amphibole(Si=7.49,low Ti and Mg) is included in garnet, garnet is a product by high grade metamorphism.Elongated opaque minerals in serpentine schist recryatallized into granule sub-grains.Composition of amphibole is slightly rich in Na and Si(6.63),less Ti and high Mg/Fe as compared with that of amphibolite occurred in the Shimanto belt(Kamogawa-cho, Boso peninsula).