

Occurrences of sapphirine granulites in the Tonagh Island, Napier Complex, East Antarctica

Yasuhito Osanai [1], Tsuyoshi Toyoshima [2], Masaaki Owada [3], Toshiaki Tsunogae [4], Tomokazu Hokada [5]

[1] Earth Sci., Okayama Univ., [2] Grad. Sch. Sci. & Tech., Niigata Univ., [3] Dept. Earth Sci., Yamaguchi Univ., [4] Fac. Edu., Shimane Univ., [5] Grad. Univ. Advanced Studies / NIPR

Tonagh Island locates in the central part of Napier Complex underlain by Archean-Proterozoic ultra high temperature (UHT) metamorphic rocks. The UHT rocks are subdivided into five lithologic units bounded by thrust-shear zones each other. Sapphirine-bearing aluminous granulites in the units I-III show various modes of occurrences as follows; (1) UHT metasomatic reaction zone between ultramafic and felsic gneisses (characteristically Cr-rich Spr without Qtz), (2) lenticular block surrounded by granitic leucosome in the felsic gneiss (high-Mg Spr with colorless Spl and Crn, not coexist with Qtz), and (3) quartz-feldspathic variety among layered gneiss (Spr+Grt+Qtz and Opx+Sil+Qtz).