

SCG082-P11

Room: Convention Hall

Time: May 24 17:15-18:45

## Geochemistry of the post-metamorphic granite in the West Ongul Island, East Antarctica

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Latest Proterozoic to Early Paleozoic pre/syn- and post-metamorphic granites occur in the Lutzow-Holm Complex (LHC) (Yoshida & Kaminuma, 1986; Nishi et al., 2002; Ajishi et al., 2004). Ajishi et al. (2004) categorized the granites into pre/syn- and post-metamorphic granites on the basis of the mode of occurrence. Pre/syn-metamorphic granites show ambiguous contacts and gneissose structures, whereas post-metamorphic granites are characterized by sharp intrusive contacts and by crosscutting the layered gneissose structure of the metamorphic rocks. The post-metamorphic granites in the West Ongul Island are composed of quartz, K-feldspar, plagioclase and biotite, and are characterized by higher TiO<sub>2</sub> and Rb contents and lower Al<sub>2</sub>O<sub>3</sub>, FeO, MgO, Y and Zr contents than those of the pre/syn-metamorphic granites. The Rb-Sr whole rock isochron age of 524±28 Ma with an initial <sup>87</sup>Sr/<sup>86</sup>Sr ratio of 0.71225±0.00107 is obtained from six post-metamorphic granites. This age is slightly younger than SHRIMP U-Pb zircon age of 532±6 Ma (Shiraishi et al., 1994). These geochemical and isotopic features suggest that the post-metamorphic granites had different origin from the pre/syn-metamorphic granites.

Keywords: East Antarctica, West Ongul Island, granite, Geochemistry, isotope