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Petrology, geochemistry and zircon U-Pb geochronology of a layered igneous complex from Akarui Point in the Lützow-Holm Complex, East Antarctica: Implications for Antarctica-Sri Lanka correlation

Sou Kazami ^a, Toshiaki Tsunogae ^{b,c,*}, M. Santosh ^{d,e}, Yukiyasu Tsutsumi ^f, Yusuke Takamura ^g

^a Graduate School of Education, University of Tsukuba, Ibaraki 305-8572, Japan

^b Faculty of Life and Environmental Sciences, University of Tsukuba, Ibaraki 305-8572, Japan

^c Department of Geology, University of Johannesburg, Auckland Park 2006, South Africa

^d School of Earth Sciences and Resources, China University of Geosciences Beijing, 29 Xueyuan Road, Beijing 100083, China

^e Centre for Tectonics Resources and Exploration, Department of Earth Sciences, University of Adelaide, SA 5005, Australia

^f Department of Geology and Paleontology, National Museum of Nature and Science, Ibaraki 305-0005, Japan

^g Graduate School of Life and Environmental Sciences, University of Tsukuba, Ibaraki 305-8572, Japan

* Corresponding author (T. Tsunogae, tsunogae@geol.tsukuba.ac.jp)

Abstract

The Lützow-Holm Complex (LHC) of East Antarctica forms part of a complex subduction-collision orogen related to the amalgamation of the Neoproterozoic supercontinent Gondwana. Here we report new petrological, geochemical, and geochronological data from a metamorphosed and disrupted layered igneous complex from Akarui Point in the LHC which provide new insights into the evolution of the complex. The complex is composed of mafic orthogneiss (edenite/pargasite + plagioclase ± clinopyroxene ± orthopyroxene ± spinel ± sapphirine ± K-feldspar), meta-ultramafic rock (pargasite + olivine + spinel + orthopyroxene), and felsic orthogneiss (plagioclase + quartz + pargasite + biotite ± garnet). The rocks show

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