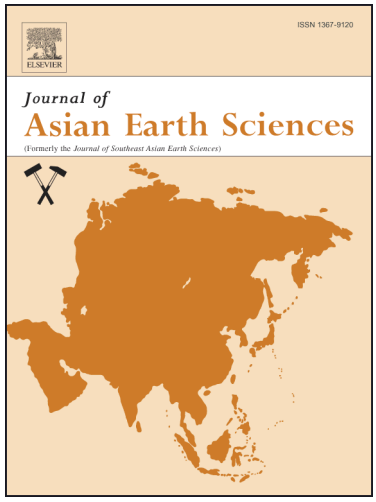

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Abstract

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