R004-P04
ポスター 2 ：9/25　AM1/AM2 （9:00-12:30）

東南極大陸，リュツォホルム岩体の古地磁気情報：ルンドボークスヘッタ地域，明るい岬地域，天文台岩地域

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Paleomagnetic information from the Lutzow-Holm Complex, East Antarctica: Rundvagshetta, Akarui Point and Tenmondai Rock areas

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East Antarctica is one of key cratons in the formation history of supercontinents during the Earth history. Although East Antarctica had been considered to behave as a single craton in the period from the break-up of Rodinia to the formation of Gondwana continent, tectonic blocks belonging to other cratons of Gondwana members have been suggested in East Antarctica, and East Antarctica craton has been considered to have formed during the formation process of the Gondwana continent at around 500Ma. The Lutzow-Holm Complex (LHC), extending in the coastal region of Enderby Land between longitudes 39 and 45E in East Antarctica, is a metamorphic belt of amphibolite to granulite facies. The LHC provides geochronological data of about 500 Ma, indicating that the LHC had suffered the Pan-African orogenic event related to the amalgamation of Gondwana members. The number of Paleomagnetic data has been still rare from the LHC as well as East Antarctica, and previous paleomagnetic data from East Antarctica has supported the amalgamation event. In order to re-examine tectonic movements in East Antarctica during the amalgamation process, paleomagnetic analyses has been performed on the LHC, paleomagnetic results from Rundvagshetta (RH), Akarui Point (AP) and Tenmondai Rock (TR) areas will be presented.

The LHC is composed of metamorphic rocks from granulite to amphibolite facies, and its metamorphic grade decreases progressively eastward. Metamorphic rocks in RH area show the highest grade in granulite facies. AP and TR areas belong to the transitional zone between granulite and amphibolite facies and to the amphibolite faces zone, respectively. Based on protolith ages by U-Pb dating analyses, geological subdivisions are proposed in the LHC, and RH area and AP-TR region belong to different units. Gneisses and granitic rocks were corrected at 28 sites in RH, 10 sites at AP and 11 sites at TR.

Progressive thermal demagnetization analyses provided characteristic remanent magnetic components (ChRMs) carried by magnetite, which were isolated in high temperature above 500C, from samples of 22 sites at RH, 8 sites at AP and 5sites at TR. Tentatively-estimated virtual geomagnetic poles of ChRMs seem to be located close to mean paleomagnetic poles of about 500 Ma in the synthetic apparent polar wonder path for East Antarctica (East Gondwana) proposed by Torsvik et al. (2008).