

北中国クラトン北部, 1.3Ga 貫入岩の古地磁気 Preliminary paleomagnetic results from 1.32 Ga diabase sills from Northern China Craton

三木 雅子^{1*}, 関 華絵¹, 乙藤 洋一郎¹, Zhen-yu Yang², Yabo Tong²

MIKI, Masako^{1*}, SEKI, Hanae¹, OTOFUJI, Yo-ichiro¹, YANG, Zhen-yu², TONG, Yabo²

¹ 神戸大学大学院理学研究科, ² 中国地質科学院

¹Dept. Earth & Planet. Sci., Kobe Univ., ²Chinese Academy of Geological Sciences

We report new paleomagnetic results from diabase sills within the Mesoproterozoic meta-sedimentary rocks in the northern North China Craton. The age of the sills is assigned to 1320 Ma by U-Pb method (Li et al, 2009). We collected oriented block samples from ten sills for paleomagnetic investigation. Host rock samples were also collected for the baked contact test.

Preliminary paleomagnetic analyses were done on three or four diabase samples per site where two or three were demagnetized by thermal techniques while one complementary sample was demagnetized by an alternating field. We obtained stable paleomagnetic components from six sills. Two or three magnetic components are revealed during the experiments. The characteristic high temperature component is isolated between about 400 degrees and 600 degrees after removing low-temperature component with present field direction. The unblocking temperature of about 600 degrees indicates the main magnetic carrier of magnetite. During alternating field experiments, the high temperature component is exhibited as a high coercivity component.

Both normal and reversed directions and smaller scatter after tilt correction indicate likely primary origin of the magnetization. The characteristic components have northerly direction with shallow inclination after tilt correction. The preliminary paleomagnetic results indicate the low latitude position of North China Craton at about 1.3 Ga.

キーワード: 古地磁気, 北中国クラトン, 原生代

Keywords: Paleomagnetism, North China Craton, Proterozoic