バイカル湖から得られた Iceland Basin エクスカーションの古地磁気記録:地球磁場変動およびバイカル湖の年代モデルについて

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Paleomagnetic records of Iceland Basin excursion from Lake Baikal: Geomagnetic signatures and age models for Lake Baikal sediments

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Lake Baikal is situated in the central part of the Eurasian continent and the sediments deposited serve as a valuable archive of paleoenvironment. Several paleomagnetic records were reported from the Lake including geomagnetic excursions. In this study, we report a high resolution paleomagnetic record of Iceland Basin excursion for a sediment core (Ver96-2, St.7) taken from Academician Ridge, Lake Baikal. The record is compared with the other records of Iceland Basin excursion previously reported from Lake Baikal. These include Ver98-1, St.6 (Oda et al., 2002) and CON01-603-2 (Demory et al., 2005) from Academician Ridge. VGP paths of the records from these sediment cores agree well with each other. In addition, relative paleointensity records are compared with each other and evolution of geomagnetic field during Iceland Basin excursion is investigated. Finally, age models are investigated based on paleomagnetic records itself and climate proxies (rock magnetic properties, X-ray CT values etc.). It suggests that age model of BDP96 developed by Prokopenko et al (2006) might better be reinvestigated based on the paleomagnetic records at least for the interval around oxygen isotope stage 6/7 boundary. Although the record of Iceland Basin excursion by Oda et al. (2002) was excluded from the compilation by Lanci et al. (2008), the combined analysis will make it possible to contribute to the modelling of Iceland Basin excursion in the future.