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北半球氷床発達期（MIS100)における千年スケールの古環境変動の岩石磁気記録
Millennial-scale rock-magnetic variation indicating instability of North Atlantic environments during MIS 100

大野 正夫 [1*] ; 佐藤 雅彦 [1] ; 林 辰弥 [2] ; 桑原 義博 [1] ; 北 逸郎 [1]
OHNO, Masao[1*] ; SATO, Masahiko[1] ; HAYASHI, Tatsuya[2] ; KUWAHARA, Yoshihiro[1] ; KITA, Itsuro[1]

[1] 九州大学大学院地球社会統合科学府, [2] 御船町恐竜博物館
[1]Graduate School of Integrated Sciences for Global Society, [2]Mifune Dinosaur Museum

Ocean thermohaline circulation (THC) plays an important role in global climate change linked with continental ice sheets. To clarify the variation of ocean THC in the early stage of glaciations in the northern hemisphere, we studied a deep-sea sediment core with high sedimentation rate recovered at IODP Site U1314 in the North Atlantic. Rock magnetic study of the sediments during marine oxygen isotope stage (MIS) 100 indicated links between the millennial-scale variability in deep water circulation and iceberg discharge. The observed abrupt decreases of magnetic coercivity associated with ice-rafted debris (IRD) are interpreted to be reduced transport of high-coercivity material from Icelandic source indicating reduced formation of North Atlantic Deep Water (NADW). In these periods, a current from the south, Lower Deep Water, transports sediments with low magnetic coercivity contributed by coarse grained magnetite of continental sources. Repetition of vigorous and weaken NADW production linked to IRD was observed during MIS 100 in a similar manner to that in the last glacial suggests that the regime of climate change in the millennial-scale was already established in the early stage of glaciations in the northern hemisphere.

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