

MEASUREMENTS OF REMANENT MAGNETIZATION ON  
THE SEDIMENT CORES OBTAINED IN TH-85 CRUISE  
(ABSTRACT)

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Paleomagnetic measurements were carried out on five sediment cores collected from the sea bottom off the Queen Maud Land, Antarctica during the TH-85 cruise of R/V HAKUREI-MARU. The specimens for paleomagnetic study were taken out as a vertical series of 2-cm cubes from each core (PC-601, -602, -603, -605 and -606). Remanent magnetization of these specimens after demagnetization at optimum alternating field (10 mT) was measured using an SCT superconducting rock magnetometer.

Reliable paleomagnetic results were obtained from these cores. Except PC-601 the remanent magnetization through almost all the length of the cores has deep and negative inclination. Shallow or positive inclinations are found around 2.5 m from the top of PC-602, 3.6 m of PC-605 and 3.9 m of PC-606. Providing that the age of the top of the core is the present and that shallow or positive inclinations are correlated with the Blake Event, the sedimentation rate of PC-602, -605 and -606 is 2.3, 3.3 and 3.6 cm/1000 y, respectively. Since PC-603 does not show any positive inclination throughout the core, the age of the core may be assumed younger than that of the Blake Event and the sedimentation rate may be estimated greater than 7.1 cm/1000 y. Although several reversals are observed in PC-601, it is difficult to estimate the age of these reversals, because of the lack of data for the upper part of the core. It seems, however, to indicate that the sedimentation rate of PC-601 is smaller than the other cores.

Although the sedimentation rate of five cores was paleomagnetically estimated as mentioned above, all of the shallow or positive inclinations in the cores may not correspond to some of the geomagnetic reversals or excursions, because many of them were found in sandy parts of the sediment and moreover only the fossils of radiolaria of the middle to late Pleistocene were observed in all the cores.

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