

西部赤道太平洋の海底堆積物を用いた過去 300 万年の相対古地磁気強度変動に関する研究
Relative paleointensity during the last 3 m.y. from sediments in the western equatorial Pacific

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It is important to determine the strength of the past geomagnetic field for better understanding of the geodynamo. This study aims to estimate relative paleointensity of the geomagnetic field (RPI) back to about 3 Ma. Marine sediments can preserve temporally continuous paleomagnetic records. Piston core samples obtained from the West Caroline Basin (R/V MIRAI MR14-02 cruise, core PC01) were used. This area is empirically known for yielding good paleomagnetic records. Alternating field demagnetization of the natural remanent magnetization (NRM) enabled to estimate directions of the past geomagnetic field. Ages of the sediments were estimated from the magnetic polarity reversal sequence. We are also trying age estimations based on the oxygen isotope stratigraphy. The anhysteretic remanent magnetization (ARM) and the saturation isothermal remanent magnetization (sIRM) were imparted to normalize the NRM intensity for obtaining RPI. Here, the ARM was chosen for the normalizer. The result generally agrees with the previous RPI stacked curves of the last 2 m.y.. However, the RPI record seems to correlate with the ARM/sIRM ratio, which may reflect the variation in the sedimentary environment. Thus the RPI record may be influenced by environmental changes. We need to evaluate this influence for more reliable RPI estimation.

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