

The Gauss-Matuyama polarity transition record from the Plio-Pleistocene marine sequence of the Mera Formation, Chikura Group, in the southernmost part of the Boso Peninsula

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We aim to reconstruct a detailed geomagnetic field variation during the Gauss-Matuyama polarity transition which has a fewer study cases compare to the Matuyama-Brunhes boundary, we have conducted a paleomagnetic study on the Plio-Pleistocene marine sequence of the Mera Formation, Chikura Group.

In the section of the layer thickness of 36.4 m in the middle part of the cloth layer containing the G-M boundary, samples for palaeomagnetic measurements were placed at intervals of about 5 to 30 cm in the layer intervals of 12.1 to 19.1 m, at intervals of about 1 m in the layer intervals of 25.4 to 36.4 m, From a total of 72 layers. As a result of rock magnetometry measurements, the change in the magnetic minerals which is obvious lower and upper than the layer thickness of 19.1 m was caught. In addition, the transition of the magnetization direction from the positive magnetic pole to the reverse magnetic pole was captured in the layer intervals of 12.5 to 13.3 m from the restored VGP fluctuation. Since the relative paleomagnetic intensity at that time attenuates to about 1/4 of the normal time, we considered that the G-M boundary was recorded in this level. The restored VGP fluctuation can be confirmed to be stagnant in the mid latitudes after reversal. This is consistent with the record of the Gauss-Matsuyama boundary restored by Ohno et al. (2012).

Keywords: Gauss-Matuyama boundary, Chikura Group