

東海層群上部の古地磁気層序：ガウス-松山境界の探索

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Magnetostratigraphy of the upper part of the Tokai Group: a search for the Gauss-Matuyama boundary

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New paleomagnetic data from tephros and fine-grained clastic sediments are used to redefine the Gauss-Matuyama boundary (GMB) in the Tokai Group in central Japan. Samples collected from 19 sites within a ca 70 m sedimentary sequence were subjected to stepwise demagnetization, and the demagnetization data were statistically analyzed in order to determine site-mean remanent magnetization directions. Demagnetization results and rock magnetic experiments show that most samples contain magnetite as a dominant magnetic carrier, and that hematite is also contained in most samples. In the northern part of the Kameyama area in Mie Prefecture, the GMB is at about 30 m below the Reiho volcanic ash bed. This finding is clearly different to a previous magnetostratigraphic study that determined the Reiho to be normal polarity and placed the GMB above it. A recent tephrostratigraphic study put forward the possibility that the Reiho can be correlated with a tephra bed below the GMB in a sedimentary sequence on the Boso peninsula >300 km to the east, but this idea must be reconsidered. The 22 site-mean directions that include those reported from above the Reiho pass a reversals test, and yield an overall mean direction which is acceptable as a reliable paleomagnetic direction of the latest Pliocene to earliest Pleistocene (around 2.6 Ma).