Paleomagnetism and rock magnetism of the upper part of the Miocene Ichishi Group in Southwest Japan

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We present new paleomagnetic and rock magnetic data from an early Miocene sedimentary sequence of the upper part of the Ichishi Group. This study was performed in order to correlate the N7/N8 planktonic foraminiferal zonal boundary, which has successfully been detected in the same sequence, to the magnetostratigraphy. We collected oriented cores at 33 sites on a measured stratigraphic section. Analysis of stepwise demagnetization data allow us to determine site-mean characteristic remanent magnetization (ChRM) directions for 26 sites that display a reverse-normal-reverse (R-N-R) stratigraphic change of magnetic polarity. Our results show that the N7/N8 zonal boundary is located within the upper reverse polarity zone, and this magneto-biostratigraphic correlation is consistent with GTS2004 rather than GTS2012 (GTS = Geologic Time Scale). The reliable site-mean directions have a consistently northeasterly declination, indicating $^{2}40^{\circ}$ clockwise rotation.

Keywords: Ichishi Group, magnetostratigraphy, paleomagnetism, rock magnetism, Southwest Japan, tectonic rotation