

Paleomagnetism and rockmagnetism of long piston core from off northwest of Australia

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Paleomagnetic study was conducted on long piston core MD05-2970 from off northwest of Australia during IMAGES cruise. Sediment consists of calcareous silt to clay with abundant foraminifera. ^{14}C and oxygen isotope measurements revealed sedimentation rates of 18 cm/kyr from top to 7m and 11 cm /kyr to the bottom. Measurements of anisotropy of magnetic susceptibility and paleomagnetism were carried out on continuously taken cube samples. Intensity of magnetization after 10 mT AFD is 8 mA/m at the core top, which reduces to 0.08 mA/m at 1 m indicating reduction diagenesis. Paleomagnetic inclination is about -28 degrees, which is steeper than the expected inclination of -18 degrees for the axial geocentric dipole at the site. There are some horizons with anomalous positive inclinations, however, these are accompanied by high coercivity characters, which may indicate formation of secondary magnetic minerals. Relative paleointensity was estimated by normalizing NRM with ARM, which shows sharp drop at 35 ka and 183 ka corresponding to Laschamp and Iceland Basin excursions.