

High Resolution Global Paleointensity Stack Since 75 kyrs (GLOPIS-75) Calibrated to Absolute Values

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We have obtained a global relative paleointensity stack using new results and a selection of published records from marine cores with sedimentation rates in excess of 10 cm/kyr, from the North and South Atlantic Oceans, the Mediterranean and the Indian Ocean. After correlation of the cores, the results were stacked using the new approach, based on progressive rejection of points distant by more than a standard deviation from the average (Laj et al., AGU Fall Meeting, 2002), to minimize possible local disturbances.

This relative paleointensity stack extends from 75 kyrs to about 10-12 kyr BP . Compared to the previously published NAPIS-75, this new stack extends further towards the recent period and presents a larger overlap with the archeomagnetic/volcanic absolute paleointensity determinations which all well constrained in age for this period. This allows a more precise calibration to absolute values.

The long-term features of this record are very consistent, in age and amplitude, with the geomagnetic field derived from cosmogenic isotopes data at Summit, Greenland. On a shorter time scale, some of the features perfectly correlate but others do not, suggesting a global (dipolar) nature for the first group, while the origin of small scale features uncorrelated between the two records is more difficult to explain.

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