



Paleomagnetic record from the Sea of Marmara for the last 70 ka

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We present new and well dated high-resolution record of the Earth's magnetic field from the sediments of the Sea of Marmara (SoM) covering the last 70 ka. These records from the SoM, such as excursions or paleosecular variation, are very important for the reconstruction of the paleoclimatographic evolution of the SoM, which is a gateway between the Mediterranean Sea and the Black Sea. We studied cores MD01-2430 and MRS-CS19 recovered from water depths of 580 m and 365 m on the Western High and the Imralı Basin, respectively and obtained paleomagnetic directions and relative paleointensity records. The age-depth models were established by tephrochronology, radiocarbon dates and wiggle-matching the XRF-Ca record from the cores with the onsets of Greenland Interstadials. Ca and magnetic susceptibility record of the cores correlated well with the $\delta^{18}O$ of the NGRIP record of MIS4 to MIS2. The cores include three distinct tephra layers. Starting from youngest to oldest, these are "Avellino" (4 ka), "Cape Riva" (22 ka) and "Campanian Ignimbrite" (39.3 ka). According to the age-depth model, sequences in cores MD01-2430 and MRS-CS19 reach back to 70 ka and 32 ka, respectively. High sedimentation rates with an average ~ 43 cm/ka for core MD01-2430 and 68 cm/ka for core MRS-CS19 allow high resolution measurements of paleomagnetic parameters and recovery the relative paleointensity (rPI) record from SoM. The preliminary results show stable and well defined characteristic remanent magnetization (ChRM) indicates reliable paleomagnetic directions for most of the samples. The paleomagnetic record of SoM and geomagnetic field models show considerable agreement. A directional anomaly at 41 ka and 18.5 ka, associated negative inclination and low rPI, are probably contemporaneous with the Laschamp and Hilina Pali excursions, respectively.