

Time-frequency analysis of Holocene paleomagnetic secular variation records from Japan, Britain, and North America

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The correlation functions were calculated between the paleomagnetic secular variation records of last about 10000years and synthetic secular variations for three sites; Japan, Britain, and North America. The synthetic secular variations at a site were generated by an axial dipole field and a field of non-axial dipole, located at CMB, moving at the rates from 0.36 to 0.09 degrees/year along the equator. In results, the correlation functions showed maxima at 3900, 2600, and 2400yrBP in Japan, Britain, and North America, respectively. The secular variations around these ages can be explained by passing through the longitudes of each site of a downward non-axial dipole (positive anomaly) at these ages. The drifting rates of them are different among sites.