

Variations in geomagnetic field elements for the last 4000 years based on paleomagnetic studies of the bottom sediments of lake aslikul (southwestern bashkiria)

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Abstract

The results of the paleomagnetic studies of the bottom sediments of Lake Aslikul have been considered in this work. Bottom sediment cores of thickness of up to 3.0 m have been taken with a special corer, which does not disturb a sample's structure. It has been established that the variations in the declination and inclination of the ChNRM vector, distinguished as a result of cleaning by the alternating magnetic field, are coincident in all three cores studied. The absolute age of the sediments and the time scale in the cores have been determined by radiocarbon (¹⁴C) data. The obtained data made it possible to construct the curves of variation in inclination and declination in this region for the last 4000 years. The obtained results have been preliminarily compared with the records of paleosecular variations in the geomagnetic field elements in Western Europe. It has been found that the curves of declination variation for the last 4000 years in the longitude sector from 1.6° W to 54.7° E correlate well. It has been established that the westward drift of certain inclination features is 0.2-0.13 deg/yr. The anticorrelation in the declination variations, recorded at the westernmost and easternmost points of the studied longitude interval (1.6°W-54.7°E) in the Northern Hemisphere, has also been found. Copyright © 2000 by MAIK "Nauka/Interperiodica".
