

Features of the Geomagnetic Variations In the Moscow Region

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The results of instrumental observations indicate the presence of significant amplitude variations in Earth's magnetic field. The data obtained in the research of geomagnetic variations allow us to not only establish and classify their sources, but also to form the basis for the improvement and development of new source models of magnetospheric and ionospheric disturbances, new methods of magnetotelluric and magnetovariational sensing and diagnostic methods of geodynamic state of the Earth's crust and the research of meteorological processes in the atmosphere.

In this research we used the results of instrumental observations of geomagnetic field, carried out in the period of 2009 - 2015 at Geophysical Observatory "Mikhnevo" of Institute of Geosphere Dynamics of Russian Academy of Sciences. The observatory (54,960N; 37,774E) is located in the Moscow region.

The analysis shows that in general the geophysical situation in the Moscow region is disturbed. The tendency to increasing in geomagnetic activity over time is established (the number of days with a perturbed state of the geomagnetic field is increased by 7.6 times during the period of 2009 – 2015). Repeatability of geomagnetic disturbances is characterized by clearly pronounced periodicity with characteristic periods of about 14, 27, 60, 182 and 365 days.