**Manifestation of the strongest geomagnetic storm on May 10-16, 2024 in magnetometer data on the Yakut meridian**

G.A. Makarov

Federal Research Centre “The Yakut Scientific Centre of the Siberian Branch of the Russian Academy of Sciences”, Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy of SB RAS. Yakutsk, 677980, Russia.

Magnetic variations are considered based on the data from magnetometers of the Yakut meridional chain of geophysical stations during the strongest geomagnetic storm on May 10-16, 2024. The sudden onset of the storm was observed at 17:06 UT, the duration of the storm main phase was ~ 9 hours, while the peak negative value of the Dst index reached -412 nT on May 11 at 02:00 UT, the recovery phase lasted more than 5 days. As a result of the analysis of magnetic data from 3 stations of the meridional chain, it became possible to obtain information on the distribution of equivalent current systems at ionospheric altitudes in the region. It was established that on May 10 in the early morning sector 01-05 MLT an extended system of intense westerly currents with an electrojet developed above the stations, which was located at a latitude of 55⁰<Φ´<61⁰. Subsequently, the electrojet moved south. It was found that on May 11 in the sector 13-19 MLT the Yakutsk and Zhigansk stations were located south of the system of eastern currents, the Tixie station at 13-16 MLT was south of the western currents. In the sector 20-06 MLT all three stations were located north of the system of western currents, and Yakutsk was almost under the concentration of these currents. Interplanetary conditions during the period of magnetic storm occurrence are considered.