**Some peculiarities of the eastward electrojet distributionin the extreme magnetic storm on 10-11 May 2024**

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The magnetic storm on 10-12 May 2024 (*Dstmin*= −403nT) was the strongeststorm~~s~~ in the current25thsolar cycleto date.The magnetic storm developed under strong and rapid changes in the structure of the interplanetary magnetic field (IMF):the IMF components changed from negative to positivevalues (IMF *By* from -40 upto +70 nT, IMF *Bz*from -40upto +50 nT)under the high speed*V* (~750 km/s), and dynamic pressure *Psw*(~30-35 nPa) of the solar wind.Here we studied some effects of these IMF changes on the planetary configuration of the ionospheric electrojets and field-aligned currents based on the global maps derived from the magnetic measurements on 66 low orbital satellites of the AMPERE project.An unpredicted large eastward current expansion was found under the strong positive IMF *By* (>+20 nT) values associated with the appearance of the local very intense upward field-aligned current in the afternoon sector. The details of new electrojet configurations are discussed.