**Planetary features of westward and eastward electrojets during the very strong magnetic storm on 10-11 October 2024**

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The magnetic storm on 10-11 October 2024 (*Dstmin* = −333 nT) was one of the strongest storms in the present 25th solar cycle. Large variations in the intensity of the IMF *By* and *Bz* (from +40 nT to −40 nT) were observed during the main phase of the storm at the very high solar wind dynamic pressure *(Psw*) up to ~ 40 nPa. The storm recovery phase developed under the unusual strong (up to −40 nT) and long lasting (~12 h) IMF *Bz*. This led to high substorm activity in the storm recovery phase as well. Thus, at least 8 substorms with *AL*-index ~−1500 nT and higher were recorded during the storm main phase and 7 substorms in the recovery phase. In addition, during the main phase of the storm, 7 positive magnetic bays with an amplitude of 500-1000 nT in *AU*-index were observed, the maximum of which did not coincide with the minimum in *AL*-index. There were no intense positive magnetic bays (in *AU*-index) during the storm recovery phase. The planetary features of the configuration of the ionosphere electrojets and field-aligned currents (FAC) were studied by applying the global maps based on the magnetic measurements on 66 LEO satellites of the AMPERE project. The results of our study demonstrated the strong dependence of the electrojet and FAC features on the sign and values on the IMF *By* and *Bz* as well as on the *Psw* level. It was shown that the sign of the IMF *By* controls not only the direction of the dayside polar electrojet but also affects the eastward current and the width of the region where it is observed. Rapid simultaneous variations in the IMF components and *Psw* led to the abrupt changes in the planetary distributions of the electrojets and FACs. This makes it difficult to identify specific effects of each individual component. Further detailed studies are required to understand the observed features.