**Auroral portrait of the extreme GICs events**

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The work analyzes the forms of auroras during the period of recording extreme values ​​of geomagnetically induced currents (GICs) in power lines at Vykhodnoy station (VKH), Kola Peninsula. Analysis of aurora forms provides information about the structure of ionospheric current systems during the period of GIC growth. We used a database of extreme GICs values ​​(I >20 A) for 11 years of observations (2012-2022) at the VKH station, including 92 events [Belakhovsky et al., 2024]. To record auroras, data from the camera at the observatory of the Polar Geophysical Institute "Lovozero" (LOZ) was used. 12 cases of extreme GIC values ​​accompanied by auroras were found. The analysis shows that all GIC jumps were accompanied only by discrete forms of auroras in green line (557.7 nm). As a rule, vortex current structures are observed. A number of events were accompanied by the development of auroral bulge.

- Belakhovsky V.B., Pilipenko V.A., Selivanov V.N., Sakharov Y.A. Events of extreme growth of geomagnetic-induced currents on the Kola Peninsula over 11 years of observations // Physics of Auroral Phenomena, pp. 36-39, doi: 10.51981/2588-0039.2024.47.008. 2024.