

Variations of the equatorward boundary of auroral luminosity at different types of quasi-stationary fluxes of solar wind

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The analysis of occurrence probabilities of different types of solar wind fluxes is carried out in view of duration of their interaction with the Earth's magnetosphere in a maximum of a solar cycle and on its fall down (1970-1975 years). It is shown, that the occurrence probability of fluxes strongly varies from one year by one year because of change of occurrence probabilities of solar sources in a solar activity cycle.

The behaviour of equatorward boundaries of auroral luminosity for different types of solar wind quasi-stationary fluxes is investigated. The average values of the equatorward boundary location of the auroral luminosity in the midnight sector make: for a body of a high-speed solar wind streams from coronal holes $\Phi' \sim 61.4^\circ$; for Quiet Heliospheric Current Sheet and Coronal Streamers $\Phi' \sim 65.2^\circ$; for Non Compression Density Enhancement of plasma $\Phi' \sim 64.2^\circ$. Peculiarity of behaviour of the equatorward boundary of a luminosity for a body of a high-speed fluxes from coronal hole is the gradual increase of latitude in process of flux body crossing by the Earth from $\Phi' \sim 60^\circ$ in the first day up to $\Phi' \sim 62^\circ$ in sixth and next days.