CORRECTION OF THE AURORAL ELECTROJET INDICES ON BAZE OF THE HIGH LATITUDE GEOMAGNETIC VARIATION MODEL

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The auroral electrojet indices (AE, AL, AU) are widely used as a measure of geomagnetic activity at high latitudes to estimate the magnetospheric energy input and the entire magnetosphere energy budget. But due to electrojets spatial shift AE indices depend on AE stations location in different UT moments (UT variation) and level of geomagnetic activity (Dst variation) as well.

We suggest to correct AE (AL, AU) indices for different UT moments, season of year (summer, winter, equinox), different interplanetary magnetic conditions and Dst variation based on the IZMIRAN's large-scale high latitude variations model (IZMEM) and show the way to construct the correction coefficients for different sets of the AE stations i.e. AE(9), AE(11) to compile the homogeneous set of indices for 1966-2000 years. The correction improves indices correlation with the solar wind parameters. [This paper has been supported by the Russian Foundation for Fundamental research, grant 99-05-64296].