



A study of cosmic ray cutoff rigidities at disturbed period in November 2004

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Geomagnetic field variations during geomagnetic storms lead to redistribution of cosmic ray fluxes in the magnetosphere because of their cutoff rigidity changes. We studied cutoff rigidity variations during the very disturbed period 7-13 November 2004. We determined cutoff rigidity variations by the method of a particle trajectory tracing through the magnetic field of the Tsyganenko magnetospheric model and by the spectrographic global survey (SGS) one. The Tsyganenko model represents the very disturbed magnetosphere field. The calculations have been carried out for several cosmic ray stations located in a wide limit of the geographic latitudes. Correlation coefficients between cutoff rigidities obtained by the method of the trajectory tracing and by SGS one are similar in a high degree. Comparison of the obtained cutoff rigidities with solar wind parameters was done. It was found that main contribution in cutoff rigidity changes is due to the Dst-variation furthermore influence of solar wind parameters on cutoff rigidity can be seen too.