

Latitudinal cosmic ray density gradient and solar activity asymmetry

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Abstract. diurnal variation that depends on the sense and direction of the interplanetary magnetic field. We have made study of these effect in the diurnal variation data for various solar cycle epoch. Also rigidity dependence of latitudinal gradient and influence of drift for different solar magnetic state are investigated.

Data obtained from muon telescope and worldwide neu-

tron monitor stations for 1965 to 1998 are used. The obtained results pointed to that directions of the gradient anticorrelated with the N-S asymmetry in solar activity.

The results are compared with estimate of latitudinal density gradient from annual cosmic ray variation.