

Features of the 27-day variation of galactic cosmic rays anisotropy

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The changes of the amplitude of the 27 – day variation of galactic cosmic rays (GCR) anisotropy have been studied based on the numerical solution of the Parker’s transport equation and neutron monitors experimental data for the positive ($A>0$) and for the negative ($A<0$) polarities epochs of the solar magnetic cycle. The changes of the solar wind velocity and the power spectral density of the interplanetary magnetic field (IMF) turbulence versus the heliolongitudes are taken into account among others general processes-convection, diffusion, drift and adiabatic cooling in the theoretical modeling. The theoretical and experimental calculations show that the amplitudes of the 27 – day variation of GCR anisotropy in the energy range of 5-50 GeV (responding by neutron monitors) are greater for the period of the $A>0$ than for the period of the $A<0$.