



Correlation between the galactic cosmic ray intensity variations and rigidity spectrum

0.1 M. Siluszyk

Institute of Math. And Physics of University of Podlasie,
3th Maja 54, 08-110 Siedlce, Poland
sil_m@ap.siedlce.pl

The temporal changes of the rigidity spectrum of the long period variations of the Galactic Cosmic Ray (GCR) intensity related with the changes of the structure in the energy range of the Interplanetary Magnetic Field (IMF) turbulence during the 11-year cycle of solar activity have been investigated. A high level negative correlation is established between the temporal changes of the rigidity spectrum exponent γ and the GCR intensity variations during the 1960–2006 for different the $A>0$ and $A<0$ polarity periods of solar magnetic cycles. Particularly, it is found that the correlation coefficients $\rho = -79\%$ and $\rho = -88\%$ for the $A>0$ and for the $A<0$ polarity periods, respectively.