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## INTERPLANETARY MAGNETIC FIELD TURBULENCE AND RIGIDITY SPECTRUM OF THE GALACTIC COSMIC RAYS INTENSITY VARIATION

*Tuesday, 6 September 2016 16:30 (1h 45m)*

We investigate a relationship between the temporal changes of the rigidity  $R$  spectrum exponent  $G$  of the Galactic Cosmic Rays (GCR) intensity variation and the exponents  $N_y$  and  $N_z$  of the Power Spectral Density (PSD) of the  $B_y$  and  $B_z$  components of the Interplanetary Magnetic Field (IMF) turbulence in different periods of solar activity. We show that a temporal changes of the parameters  $G$ , and  $N_y$  and  $N_z$  can be considered as the very essential proxies to study GCR propagation in heliosphere. We demonstrate that a reliable dependence of the rigidity  $R$  spectrum exponent  $G$  of the GCR intensity variation on the parameters  $N_y$  and  $N_z$  give an opportunity to construct a more realistic model of transport equation for describing a propagation of GCR in heliosphere when data of IMF absent. For this purpose we construct a 2D non stationary model of transport equation using the exponents  $G$  and  $N_y$  as an alternative proxies and show a satisfactorily coincidence of a density and a spatial gradients of GCR.

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