

On the calculations of cosmic ray transmission function.

P. Bobik (1), K. Kudela (1), R. Bucik (1), K. Firoz (1)

Institute of Experimental Physics SAS (Watsonova 47, 040 01 Košice, Slovak Republic,
bobik@saske.sk / Fax: +421 55 633 62 92)

Trajectories calculations of low energy cosmic rays in the models of geomagnetic field are widely used for estimation of the particle access either to ground stations or to satellites positions. There were many discussions about precision of these calculations especially in penumbra regions. Transmission function is based on these calculations. We check hypothesis of convergence of transmission function from some level of calculation precision. We test this hypothesis in IGRF, Tsyganenko 96 and T04 models of geomagnetic field mainly for vertical direction. Influence of parameters of the calculation is tested.