

## **Expected effects of the disturbed magnetosphere on cosmic ray transmissivity to the Earth**

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One of the parameters important for radiation dose estimates for the aircraft as well as for interpretation of energetic particle measurements at low orbit satellites is the transmissivity function of low energy cosmic rays and of solar energetic particles. The review of some earlier results on the subject is presented. In addition, the transmissivity function for selected points on the ground as well as for a low altitude polar orbiting satellite is computed for quiet time periods and for strong geomagnetic disturbances occurred in 2003 and 2004. The computation is based on different available models of geomagnetic field of external sources (e.g. Tsyganenko codes of the models T89c, T96\_01, T01\_01, T04\_s available at <http://nssdc.gsfc.nasa.gov/space/model/magnetos/data-based/modeling.html>).

Comparison with the predictions obtained from IGRF is done. The implications of the results for the observations at aircrafts is discussed. The work is supported by APVT grant agency, project 0259.