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Transmisivity function of cosmic rays in the disturbed magnetosphere.

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Penetration of low energy galactic cosmic rays and of solar energetic particles to the Earth's surface and to low altitude orbits depends on the geomagnetic field which is variable due to the external current systems in the magnetosphere. The transmissivity function for selected ground based stations as well as for the low altitude polar orbiting satellite CORONAS-F is computed for quiet time periods and for strong geomagnetic disturbances in October-November 2003 and in November 2004, respectively. The computation is based on different available models of geomagnetic field of external sources and compared with the predictions obtained from IGRF. The implications for the observations at high and middle latitudes are discussed.

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