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Transmissivity predictions for cosmic rays in disturbed magnetosphere: a case study

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Different models of disturbed magnetosphere provide different predictions for the transmissivity function, cut-off rigidity and asymptotic directions for cosmic ray access at given point above the atmosphere. Computations of trajectories during an isolated, relatively strong geomagnetic disturbance on April 6, 2000 illustrates it. Using our code we estimated the transmissivity characteristics for a couple of middle latitude stations for this event using Ts'89, modified Ts'89 using Dst parameter, Ts'01 and Ts'05 models of geomagnetic field. Comparison of Ts'05 result with that earlier presented (Desorgher, L. et al, IAGA 2005) is done. The implications for neutron monitor measurements for that case are discussed. This work was supported by the Slovak Research and Development Agency under the contract No. APVV-51-053805.