

The charged particle access to Inuvik neutron monitor

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Abstract. The influence of magnetospheric disturbances on the charged particle access to the Inuvik location (geographic coordinates 68.35 N - 226.28 E and 21 m a.s.l.) was evaluated by computing the particle trajectories in the geomagnetic field for the spring equinox of 1986 (01 UT). For the computations we used the DGRF85/DGRF90 and the TSYG89 (Tsyganenko 1989) magnetospheric models. We show results for cutoff rigidities (RL, RC, RU) and asymptotic di-

rections of vertical incident particles considering different geomagnetic activity levels. We get the information that geomagnetic disturbances induce a significant variability in the Rc values but the effective rigidity for vertical incident charged particles at Inuvik is stable over the years (1955 - 1986). We show also that magnetospheric disturbances mainly concerns cosmic ray rigidities below 20 GV.