

## **MAGNETOSPHERIC CURRENTS AND VARIATIONS OF CUTOFF RIGIDITIES ON OCTOBER 20, 1989**

A. Struminsky(1,2) and Manohar Lal(2)

(1) IZMIRAN, Troitsk, Moscow Reg., 142092, Russia, (2) Indian Institute of Geomagnetism, Colaba, Mumbai 400005, India

Changes of cosmic ray cutoff rigidities for middle and low latitudes are evaluated for the Forbush decrease on October 20-22, 1989 from hourly values of the Dst index and the modified Dst index, which accounts only increasing of the ring current. The magnetostorm dynamical model using solar wind data available for the initial phase of the event obtains values of the modified Dst index. These results are compared with each other and with data of the balloon flights in Moscow on October 20, 1989, when solar protons of about atmospheric cutoff rigidity have been observed in the stratosphere.