

Ionospheric response to the great magnetic storm of November 2004 in the low latitude region

S. Sarkar (1), A.K.Gwal (1), S. Bhattacharya (1) and N. Sharma (1)

(1) Space Science Laboratory, Department of Physics, Barkatullah University, Bhopal-462026, India

This paper discusses the effects of the magnetic storm of 8-10 November 2004 on the low latitude ionosphere. The data from the low earth orbiting satellite DEMETER (which is in a polar orbit, $h = 710\text{km}$) and from the Global Positioning System (GPS) Satellites recorded at Bhopal (23.2°N , 77.16°E) has been used for the study. The DEMETER in situ measurements show the presence of electron and ion density irregularities during this period. Strong electromagnetic emissions are also observed during this period. Significant changes in the Total Electron Content data recorded by the GPS satellites have also been found during this period.