

## IONOSPHERIC SCINTILLATION STUDY OVER INDIAN ANTARCTICA STATION MAITRI USING GPS DATA AS PART OF IPY

Purushottam Bhawre\*, R.S.Dabas\*, Rupesh M. Das\*, Kavita Sharma\*, A. K.  
Upadhyaya\*, S.C Garg\* and A.K. Gwal†

\*RASD, National Physical Laboratory  
New Delhi, India

†Department of Physics, Barkutllah University  
Bhopal, India

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**Abstract.** The high latitude ionosphere often becomes turbulent and develops electron density irregularities due to solar flares-magnetosphere-ionospheric interactions. The dimensions of these high latitudinal ionospheric irregularities are ranged from few meters to kilometers causes to scatter the GPS navigation signals in terms of amplitude and phase scintillation. These types of scintillations are also commonly known as auroral scintillations. To study the L-band scintillations and the associated irregularities, about one year observations are carried out over high latitude Indian Antarctica Station Maitri by using Novatel make dual frequency GPS receiver. The data observed with the help of GPS receiver is then used to study the occurrence characteristics of high latitude L-band scintillation during the low solar activity period 2008. The observation reveals that the high latitude L-band scintillations are observed only during night time and since it was a low solar activity conditions and hence the observed scintillations are generally weak type (s4 index less than 0.5). Season wise, their maximum percentage occurrence is observed in winter season i.e. polar night periods from May to August 2008 as compare to summer and equinox seasons.