Physical Research Laboratory
Ahmedabad

Space & Atmospheric Sciences Division

Division Seminar

Title: **"Impact of Corotating Interaction region (CIR) and Coronal mass ejection (CME) on magnetosphere-ionosphere system"**

Speaker**: Diptiranjan Rout**

Date: **29 May 2017**

Venue: **Ground Floor Lecture Hall**

Time: **16:00 hrs**

Highlight of the talk:

The CME and CIR are two primary drivers of space weather. The consequences of these space weather events are severe in a modern day society. Therefore, it always remains a challenging topic in the space weather community to predict and understand the geo-effectiveness of these events. In one of our recent study, it is shown that the CIR events can be geo-effective in terms of their ionospheric impact if the solar wind azimuthal flow angle does not exceed a critical angle (6 degree) at first Lagrangian (L1) point. Thus, this result provides an easy and quick method to forecast the geo-effectiveness of CIR events based on the observations from the L1 point.

Based on another investigation, it is also shown that the global magnetosphere-ionosphere system can be significantly influenced by the passage of an ICME driven sheath region even in absence of a typical geomagnetic storm as inferred using Dst variation. These results unravel a few critical aspects of the impact of the space weather events on magnetosphere-ionosphere coupling processes.

All interested are welcome.