Physical Research Laboratory
Ahmedabad

Space & Atmospheric Sciences Division

Division Seminar

Title : **"Association of dawn-dusk asymmetry in the ring current with field-aligned currents under different space weather conditions"**

Speaker**: Sandeep Kumar**

Date**: 11 March 2019**

Venue**: Ground Floor Lecture Hall**

Time**: 16:00 hrs**

Highlight of the talk:

Geomagnetic storms are the most important component of space weather studies. During a geomagnetic storm, global depressions in the horizontal component (H) of geomagnetic field are observed. This depression in H is mainly caused by the westward ring current encircling the Earth around 2-7 RE. The ring current is highly asymmetric during the main phase of the geomagnetic storm and a dawn-dusk asymmetry is observed in H components at low latitudes. This dawn-dusk asymmetry is generally attributed to the development of the partial ring current (PRC) which closes via region 2 field aligned currents (FACs) through auroral ionosphere. PRC is generally located in the dusk sector (1700-2100 MLT) and thus H variations on dusk side are more negative than the dawn side (0300-0700 MLT). The variation of dawn-dusk asymmetry under different solar wind interplanetary conditions and its association with FACs has been investigated. The results will be discussed during the talk.

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All interested are welcome.