2012 Workshop: Low Latitude Ionosphere

Long title
Thermosphere-ionosphere coupling and the development of irregularities
Conveners
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Description

Knowledge of the coupling between the thermosphere and ionosphere (TI) associated with the F-region dynamo is important for understanding the dynamics and the structure of the low-latitude F-region ionosphere and thermosphere. Several ongoing ground- and space-based experiments providing observations of the TI at low- latitudes provide a new opportunity to study the coupling between the neutral atmosphere and the ionosphere and how these interactions can lead to the development of irregularities. This workshop solicits contributions to address the most recent experimental results from both ground- and space-based observations and simulation and modeling results related to such TI coupling, and the development of ionospheric irregularities as well as effects caused by the coupling between the ionosphere and neutral atmosphere.

Agenda

Tuesday June 26, 2012

13:30-13:50 M. C. Kelley - Evidence for Gravity Wave Seeding of Convective Ionospheric Storms Initiated by Tropospheric Storms

13:50-13:10 J. D. Huba - Vertical Winds, Gravity Waves and Equatorial Spread F

13:10-13:30 D. L. Hysell - Intermediate and Transisitonal Scale Structure in Midlaitude Es Layers

13:30-13:50 Y. S. Dimant - Modeling Small-scale Plasma Density Irregularities Associated with Equatorial Spread F

13:50-14:10 H. C. Aveiro - Equatorial Spread F Simulations in the Peruvian Sector: Results and Diagnostics

14:10-14:30 F. Vargas - EPB Observation on O(1S) Nightglow Emission at the Andes LIDAR Observatory

Friday June 29, 2012

10:00-10:20 E. S. Millar - Topside Observations of MSTIDs

10:20-10:50 R. Pfaff - Update on C/NOFS Observations of Ionospheric Irregularities During Periods of Increased Solar Activity

10:50-11:10 G. Liu - Periodic Variability of the Atmosphere and Ionosphere: Planetary Wave Impacts on Scintillations

11:10-11:30 N. P. Chapagain - Comparison of Zonal Neutral Winds with EPB and Plasma Drift Velocities

Justification

The workshop is motivated by recent new experimental observations related to neutral winds and plasma drift velocity in the TI system. This system is of great interest to the CEDAR community and includes a variety of important topics that improve our ability to unravel the development of irregularities and to forecast ionospheric scintillations as well as the ambient plasma condition.

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