

Astrophysics & Space Physics Seminar

Monday, February 22, 2016

Solar Wind-Magnetosphere- Ionosphere Coupling from Auroral Observations

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Abstract:

Aurora, optical emissions in the upper polar atmosphere, reflects a variety of space phenomena around the Earth, and thus optical observations can be used for remote sensing of space environment. Many types of those are strongly controlled by the solar wind. This talk will introduce how the space environment around the Earth responds to different types of solar wind driving, including interplanetary shocks, discontinuities and foreshock phenomena. Of particular interest are coupling processes between structured solar wind and transient energy input into the Earth's magnetosphere and ionosphere, which have recently been recognized as a major contributor to plasma transport. I will present our recent imaging results during those solar wind drivings, and a modeling effort for examining global coupling of such transient phenomena directly driven by structures in the solar wind. Finally, I will discuss future research directions along this subject, including Heliophysics system observatory for community-wide space-ground coordination, and imaging network.

3:00 pm

Refreshments
CAS Room 500

3:30 pm

Seminar
CAS Room 502

This Week

- Thursday 2/25
Slava Merkin
Johns Hopkins
- MHD modeling of Helio-
spheric plasma environments

Next Week

- Monday 2/29
Lorenzo Sironi
CfA
- TBD



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