



SPACE PHYSICS SEMINAR

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Solar Wind-Magnetospheric Coupling

725 Commonwealth Ave.

Thursday, January 24, 2013

Refreshments at 3:30pm in CAS 500

Talk begins at 4:00pm in CAS 502

Abstract:

The Earth's magnetosphere is in constant interaction with the solar wind. These interactions cause compressions and motion of the magnetosphere as well as magnetic reconnection along the magnetopause. Both the upstream conditions in the solar wind and the internal conditions within the magnetosphere control the efficiency of the coupling. Current spacecraft observations are used to look at the efficiency of coupling in the presence of a strong internal driver, cold dense material from the plasmaspheric plume. The presence of the plume can increase the density at the magnetopause by three orders of magnitude and greatly impact reconnection. Looking ahead, an update will be given on a developing tool to globally observe the solar wind-magnetospheric interaction through soft x-rays.