Space Weather and a Technology Dependent Society

Disturbances from the Sun, often referred to as “space weather”, cause geomagnetic storms that can affect critical infrastructure on the ground such as navigation systems, high-voltage electric power transmission grids, and pipelines. Understanding the dynamic response of the coupled magnetosphere-ionosphere to severe space weather is still a challenge even today. This presentation will focus on how applied research at the space weather laboratory located at NASA Goddard Space Flight Center is being used to address societal needs. Specifically, I will talk about the modeling and impact of geomagnetically induced currents (GIC) on the electric power grid, and then discuss how and why this work is important for mitigating space weather impacts. Furthermore, I will also show some recent results from my research regarding space weather effects on the ionosphere electron plasma density, which is important for radio wave signals propagating through the ionosphere. Electron density perturbations can severely degrade the accuracy of critical navigation signals, such as those used by GPS.

Wednesday, April 15, 2015
4:00pm
106 Hannan Hall
Refreshments will be served at 3:45

Sponsored in part by the Graduate Student Association
For more information, please contact:
Dr. Vadim Uritsky (202) 319-5538

If you would like to request disability accommodations, please contact Patrick Burke at (202)-319-5315 to make arrangements.