

Space Physics Seminar

Thursday, November 9, 2017

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Ushering in a New Frontier in Geospace Science

Disruption of the near Earth space environment (geospace) caused by the solar-terrestrial connection, or space weather, has emerged as an area of critical importance to human kind's economic and social well-being. Our ability to predict space weather phenomena relies on an accurate understanding and specification of the complex, highly coupled magnetosphere-ionosphere-thermosphere (MIT) system (altitudes from ~ 100 km—several Earth radii).

Our understanding and specification of the MIT system benefits from taking advantage of comprehensive data-intensive approaches. In this talk, I will share examples of data-driven discovery in the MIT system, specifically related to coupling phenomena in the high-latitudes where space weather effects are most direct. I will discuss the opportunity for ionospheric data from Global Navigation Satellite System (GNSS) signals to provide a backbone for the space weather observational system and suggest the possibility of a new frontier in geospace science, one built at the intersection of traditional approaches and new data-driven science and the technologies that enable them.

4:00pm in CAS 502. *Refreshments served at 3:45pm in CAS 500.*

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Next Week
Yingjuan Ma
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