

Space Physics Seminar

Thursday, November 20, 2014

The Inner Heliosphere in 3D: A Recap of the first 7 Years of the STEREO mission

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Abstract:

We are engulfed in the sun atmosphere, the solar corona. But the corona is a highly dynamic places, punctuated by ejections of plasma and magnetic field (CMEs) and fast solar wind streams (CIRs), which in turn can severely impact our space-based infrastructure. Uncovering the secrets of the variable solar wind requires a unique observational approach. The Solar Terrestrial Earth Relations Observatory (STEREO) is such a unique mission. It comprises two spacecraft with identical instrumentation, one ahead of Earth and the other trailing it with increasing separation. The images onboard STEREO are capable of imaging the full space from Sun to the Earth and provide three dimensional information for CME and CIRs.

The mission, already in its seventh year, has uncovered the magnetic nature of CMEs, the shape of CIRs, revealed the unexpected extent of solar energetic particles in the heliosphere and provided the first over 360 deg coverage of a stellar atmosphere. In this talk, I will present these important results and discuss what lies ahead for STEREO and inner heliospheric studies, in general.

3:00 pm

Refreshments
CAS Room 500

3:30 pm

Seminar
CAS Room 502

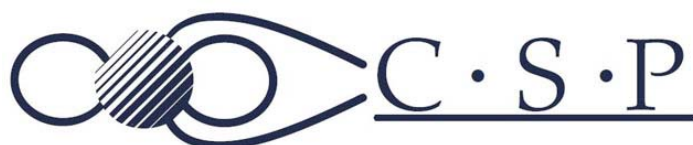
Next Week

- Thanksgiving Break (11/27)
- Paula Aspell (12/1)
WGBH
- NOVA Science

*Joint Seminar:
Astrophysics and
Space Physics
Room 522*



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