

Space Science Seminar
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**Tethered Satellites as an Enabling Platform for
Operational Space Weather Monitoring Systems**

Prof. Brian Gilchrist/University of Michigan

While space tethers have been recognized for their potential to support novel measurements of the space environment for some time, advances in both tether technology and more capable miniaturized electronics are enabling us to consider more capable and simpler designs. In this seminar, I will review examples of how tethered satellites are uniquely suited to address certain shortfalls in our ability to measure critical environmental parameters necessary to drive these space weather models. Examples include very-long-baseline electric field measurements, magnetized ionospheric conductivity measurements, and the ability to separate temporal from spatial irregularities in environmental parameters. I will also discuss current efforts in electrodynamic tethers and also very small (femtosat) constellations of spacecraft that are capable measurement platforms as well as being maneuverable.

<http://solarscience.msfc.nasa.gov/SpaceScienceSeminars.html>