

2018 - 2019 SPACE PHYSICS SEMINAR SERIES

Saturn: Ring Losses or Ionospheric Gains?

The Cassini spacecraft capped a spectacular 13 years in orbit at Saturn by smashing into the atmosphere on 15 September 2017. For the 23 orbits preceding its final plunge, however, Cassini was able to measure Saturn's upper atmosphere and inner magnetosphere in situ, providing a wealth of unique new insights. One of the biggest surprises to come out of Cassini's Grand Finale was that its rings are losing mass to its atmosphere at substantial rates, primarily in the equatorial region, but also at latitudes connected magnetically to the rings. I will review the history of observational signatures of this coupling process, outline the chemical evolution induced in Saturn's ionosphere by the infalling ring material, and expand on the long-term implications of Saturn's so-called "ring rain".

**Thursday, February 21st**

4:00 - 5:00 p.m.

725 Commonwealth Avenue | Room 502

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