

**BOSTON
UNIVERSITY**

**Boston University College of Arts & Sciences
Center for Space Physics**

2018 - 2019 SPACE PHYSICS SEMINAR SERIES

Modelling the Upper Atmospheric Reaction to Energy Input

Models of the thermosphere and ionosphere solve fluid dynamics equations on a rotating sphere. They have a large number of source terms that describe how mass, momentum, and energy enter and leave the system. In this talk, I will describe some of the concepts of how to create a model of the upper atmosphere, and will provide some examples of phenomena that can be investigated using such a model. For example, I will describe how magnetospheric substorms can cause perturbations in the thermospheric density, and will discuss how the different phases of the substorm can drive change in different areas of the polar region. As another example, I will discuss the cusp and how there is some controversy about how the heating in the cusp happens and how models don't really always agree with each other. I will attempt to make the talk as generally accessible as possible, so if you don't know what some of these things mean, I will try to explain them!



Thursday, November 1st

4:00 - 5:00 p.m.

725 Commonwealth Avenue | Room 502



Aaron Ridley
University of Michigan