MONTANA STATE UNIVERSITY | College of LETTERS & SCIENCE

Physics Colloquium

Friday, April 8th
4:10 – 5:00 PM
Barnard Hall 103

Energetic Ions, from the Sun to the Earth, and Everywhere in Between

Rachael Filwett

Abstract:

Energetic particles are a significant space weather threat that can cause damage to space-based assets, making understanding their variability and sources crucial. The story of how energetic particles get from the Sun to inside Earth's magnetosphere can be more complicated than often anticipated. In this talk, I'll discuss energetic ions, their wide ranging origins, and how they access Earth's protective magnetosphere. I'll explain the most current theories on sources, the meaningful effect interplanetary transport processes can have, and how these ions behave once they enter Earth's magnetic field. Finally, I'll discuss how measurements of energetic ions is ready for innovation.

Host: John Sample

**** Refreshments served in the Barnard second floor atrium at 3:45 p.m. ****