

2012 Workshop: Planetary Aeronomy

Long title

Planetary Aeronomy & Comparative Upper Atmospheres

Conveners

Edwin Mierkiewicz

Description

Planetary aeronomy is the study of the upper regions of a planet's neutral and ionized atmosphere. In some sense a planet's upper atmosphere is a boundary layer between the atmosphere below and the interplanetary environment. In this session we will explore the complex interplay between a planet's upper atmosphere and its near space environment. How do these upper atmospheres respond to solar forcing? How do escape processes influence their evolution and mean states? In some cases (e.g., the Moon and Mercury) the entire atmosphere of the body is in close contact with its near space environment. How do these surface bounded exospheres compare throughout the solar system? We invite contributions from observers and modelers with the aim of summarizing recent work and discussing new directions in planetary aeronomy, including: planets, moons, comets and other solar system minor bodies.

Justification

As stated in the CEDAR New Dimension document, "comparative planetary aeronomy remains a fertile research path to the development and validation of dynamic and chemical models, through applications to similar systems with characteristically different forcing and composition."

This workshop directly supports this idea by providing a venue in which CEDAR community members can gather and share their work in the area of planetary aeronomy. A comparative approach will be taken, highlighting differences and similarities between these diverse systems.

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