2017 Workshop: Thermosphere and ionosphere

Long title
Variations in the Thermospheric compositions and their impact on the ionosphere
Conveners
Yongliang Zhang
Wenbin Wang
Larry Paxton
Description

The thermospheric conditions (compositions, temperature, and density) change significantly due to energy and momentum inputs from above (solar EUV, particle and Joule heating in high latitudes, ion drag) and below (lower atmosphere waves, such as tides). There are also feedback effects among composition, temperature and wind variations (e.g. enhanced nitric oxide cools the thermosphere).

These variations directly and indirectly impact the ionospheric conditions through ion-neutral coupling and space weather operations.

We welcome short presentations on thermospheric composition variations of various temporal and spatial scales, as well as changes in other neutral parameters and the ionosphere associated with these variations (based on observations and/or model simulations) and operational impacts (e.g. LEO satellite drag, radio communication).

Justification

The ionosphere and thermosphere (IT) continue to be one of the focuses in the space weather nowcast and forecast. New observations and modeling capabilities improve our scientific understanding as well as accuracy in IT prediction. It is a great opportunity to review these progresses at CEDAR annual workshop.

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