2020 Workshop: ICON data tutorial

Long title
NASA Ionospheric Connection Explorer (ICON) data introduction and tutorial
Conveners
Brian Harding
Colin Triplett
Yen-Jung Joanne Wu
Description

NASA's Ionospheric Connection Explorer (ICON) mission was launched in October 2019 and aims to study the sources of ionospheric variability. From an equatorial, low-earth orbiting platform, ICON simultaneously observes the neutral wind, temperature, and composition along with the ionospheric drift, temperature, and density. The ICON dataset is planned to be publicly released during the CEDAR conference. The purpose of this workshop is to provide information for potential users of the data (e.g., assumptions, limitations, and best practices). Detailed discussions of science results and instrumentation are left for other venues.

Conveners: Brian Harding, Colin Triplett, Yen-Jung Joanne Wu (UC Berkeley SSL)

Agenda

- ICON overview (pdf)- *Scott England*
- MIGHTI - Michelson Interferometer for Global High-Resolution Thermospheric Imaging
    - Brief instrumentation and analysis (pdf) - *Chris Englert*
    - Neutral wind profiles (pdf) - *Brian Harding*
    - Neutral temperature profiles (pdf) - *Michael Stevens*
- FUV - Far Ultraviolet
    - O/N2 ratio (day) (pdf) - *Robert Meier*
    - Ionosphere density profiles (night) (pdf) - *Farzad Kamalabadi*
- EUV - Extreme Ultraviolet
    - O+ density profiles (day) (pdf) - *Andrew Stephan*
- IVM - Ion Velocity Meter
    - Ion density, velocity, and temperature (in situ) (pdf)- *Russell Stoneback*

- Software tools and examples (Python/IDL) - *Yen-Jung Joanne Wu* and *Colin Triplett*
- (Remaining time) Q&A

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