2014 Workshop: Using SSUSI data

Long title
Using a new resource for CEDAR Science: SSUSI images of the ionosphere and aurora and GUVI spectrograph mode data
Conveners
L. Paxton
R. Schaefer
Y. Zhang
Description

In this workshop we describe how to access, use, and understand data from the DMSP SSUSI instrument. The first of five (5) SSUSI instruments was launched in November 2003, yet only recently have we secured the permission to distribute the data to the science community. Four SSUSIs should be operational at the time of this workshop. SSUSI is the predecessor of the GUVI instrument on TIMED. The DMSP platforms fly in sun-synchronous orbits, near and just after twilight, so they provide a unique view of the equatorial ionosphere and the aurora. We will describe how to use the data located and what the various products there mean. We will also describe the TIMED/GUVI spectrograph mode data and how to use it. Some of those data are used to make O/N2 maps many other products can be generated but no funds have been released to support the GUVI website at this time. These data provide information that can be used for analysis and to understand how data products from GOLD and ICON can be used.

Agenda

1:30 – 1:45pm Introduction SSUSI and GUVI: How they work - Paxton

1:45 – 1:55pm GUVI Science Topics (selected) Using Spectrograph Mode Data to Explore Questions - Paxton

1:55 – 2:05pm SSUSI Science Topics (selected) Using the web site to explore the data - Paxton

2:05 – 2:15pm Discussion/Questions for Exploration Determine what we will be sure to address in the next discussions - All

2:15 – 2:25pm SSUSI Low-Latitude Products Overview of the SSUSI Ionospheric Products: Why they are what they are, how to access them and demonstration - Schaefer

2:25 – 2:35pm SSUSI Low-Latitude Products Questions/Discussion All Questions and development of topics for further work

2:35 – 2:45pm SSUSI High-Latitude Products Overview of the SSUSI Auroral Products: Why they are what they are, how to access them and demonstration - Zhang

2:45 – 2:55pm SSUSI High-Latitude Products Questions/Discussion Questions and development of topics for further work - All

2:55 - 3:05pm SSUSI and GUVI – New Data Products and Web Sites How to navigate the website to find what you need now. What future capabilities are planned. - Romeo

3:05 – 3:30pm Exploration of the data set After getting input from the participants we will walk through the SSUSI and GUVI data sets showing how to answer questions about the data and how to use the data for scientific analysis. - Paxton/Schaefer/ Zhang/Romeo/ All

Justification

This workshop is dedicated to two of the CEDAR strategic thrusts: - Fuse the Knowledge Base across Disciplines - Manage, Mine, and Manipulate Geoscience Data and Models This workshop intends to help increase the use of UV data already available (especially the SSUSI data which has just become available) so that the broader community knows how to use the data to get a better understanding of the ITM and coupling mechanisms. Tutorial and contributed talks will provide the CEDAR community with the background needed to appreciate and use the ICON and GOLD UV data. This is a new resource for the community. Progress will be measured by use of the data and publications using the data.

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