LASP Interactive Solar IRradiance Datacenter (LISIRD)

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Abstract

The University of Colorado at Boulder’s Laboratory for Atmospheric and Space Physics (LASP) has a long history of providing state of the art solar instrumentation and datasets to the community. LISIRD has played an integral part in this history by providing a simple web interface for the plotting of and access to a number of solar datasets (irradiance, sunspots, proxies, etc.). Since introducing LISIRD version 3 last year at AGU, LASP has nearly doubled the number of datasets that are being served via LISIRD and has drastically increased LISIRD’s usage both within LASP and around the world. This talk will discuss many aspects of LISIRD including: Interface updates to enhance dataset search and analysis capabilities. User insights through usage statistics and usability testing. Infrastructure to easily manage datasets being served on LISIRD.
Overview
LISIRD is a website where researchers can discover, analyze, and download solar data from a variety of missions, instruments, and laboratories. LISIRD provides many dataset types, including:
- Solar Spectral Irradiance: irradiance measured at individual wavelengths.
- Total Solar Irradiance: a measurement of the integrated energy across the entire electromagnetic spectrum.
- Composite: integrated solar irradiance measurements from different instruments, reference spectra, etc.
- Sunspot Number: number of sunspots observed on the surface of the sun.

Feel free to contact us at lisird@lasp.colorado.edu if you have solar datasets you’d like to offer through LISIRD.

Improvements
The LASP web team has made significant improvements to LISIRD over the past year, including:
- Nearly doubling the number of available datasets (both internal and external to LASP)
- User interface updates to enhance dataset search, analysis, and download capabilities.
- Increased user insights through usage statistics and usability testing.

Built On
LaTiS: LaTiS is both a library and a service for manipulating and serving data modeled using the functional data model (FDM). The FDM is a specialization of the model of relational data model in which relations are strengthened to functions, providing richer semantics useful for representing scientific data.

LEMR: The LASP Extended Metadata Repository is a semantic database of metadata information about the datasets served.

These technologies together make it quick and easy to add and maintain datasets.

FREE SOLAR DATA!
75 Datasets (and Growing)

Discover
Search and filter controls to help quickly find applicable datasets

Analyze
Time series and spectrum views for SSI datasets

Download
download customization options
Great for keeping file sizes small by getting only the data you need

lasp.colorado.edu/lisird