

LISIRD: An Online Resource for Making Solar Data More Accessible

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Abstract

Finding quality solar data can be difficult, if not cumbersome at best, especially for students and early career researchers. The trend of having static files in an obscure format served in a hidden directory on some seemingly random server certainly doesn't help the situation, not to mention the datasets that are only accessible via a researcher's hard drive. The LASP Interactive Solar Irradiance Datacenter (LISIRD), lasp.colorado.edu/lisird, seeks to alleviate many of these pains. LISIRD is a website where students and researchers can discover, visualize, and download solar data from a variety of space missions, instruments, models, and laboratories. LISIRD focuses on making heliophysics research as effortless as possible by making solar data openly available and easy to analyze through an intuitive user interface, detailed metadata, interactive plotting capabilities, and a catalog of over 75 datasets. This poster will demonstrate the key features of LISIRD, provide details on the datasets it serves, outline future plans for improvement and growth, and discuss how it can be used as a valuable resource in space physics curricula.

Overview

The LASP Interactive Solar Irradiance Datacenter (LISIRD) is a website that provides convenient, standardized access to solar data from a variety of space missions, instruments, models, and laboratories. LISIRD provides several types of data, including solar spectral irradiance, total solar irradiance, spectral bands, sunspot number, and composite.

Objectives

The primary objectives of LISIRD include:

- **Discoverability:** Make solar data more openly available.
- **Standardization:** Offer a common interface for otherwise disparate data.
- **Modernization:** Rethink how data can be accessed beyond just static files on a server.
- **Analyzability:** Offer data that is analysis ready by removing preprocessing overhead.

Improvements

The LASP web team is in the process of upgrading LISIRD. By the summer of 2020, you can expect several new features, including:

- Image datasets made available through an interactive image viewer.
- Better integration with tools like Python, Jupyter Notebooks, and SunPy.
- Easier comparative analysis by displaying multiple datasets on the same plot or page.
- The ability to save and share specific configurations of plots and groups of plots.

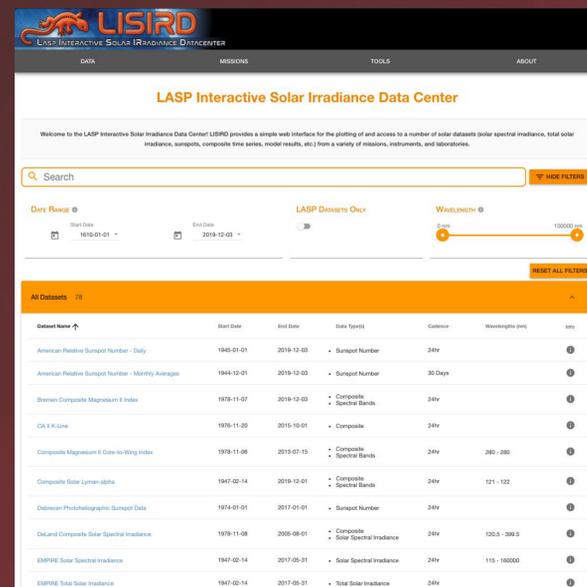
Contact Us

lisird@lasp.colorado.edu

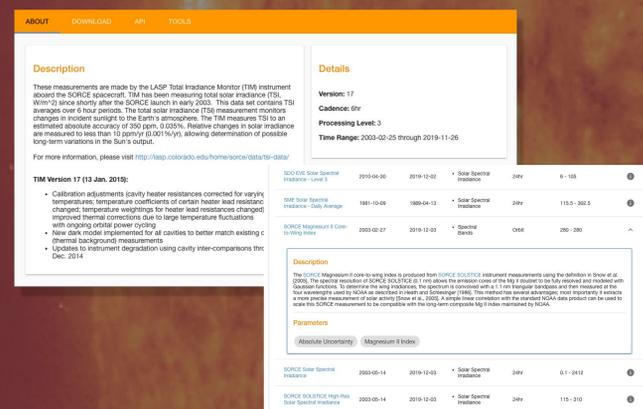
Feel free to contact us with any questions, feedback, or suggestions for datasets you'd like offered through LISIRD.

Over 75 Solar Datasets From LASP, NASA, NOAA, NSO, and more!

Discover



Search and filter controls to help quickly find applicable datasets



Detailed metadata

Visualize

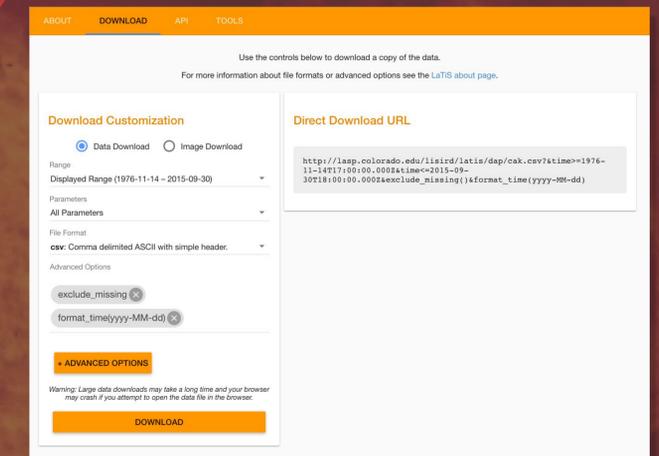


Time series and spectrum views for SSI datasets

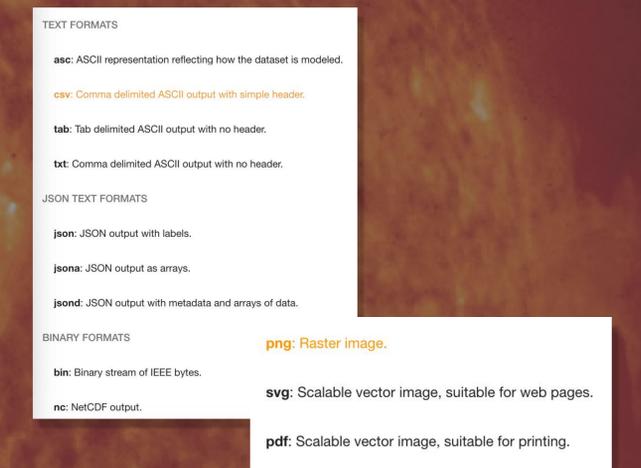


Intuitive plot interaction tools

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