The Space Weather TREC (SWx TREC) Portal

16TH EUROPEAN SPACE WEATHER WEEK
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Image by Anastasia Kaufman

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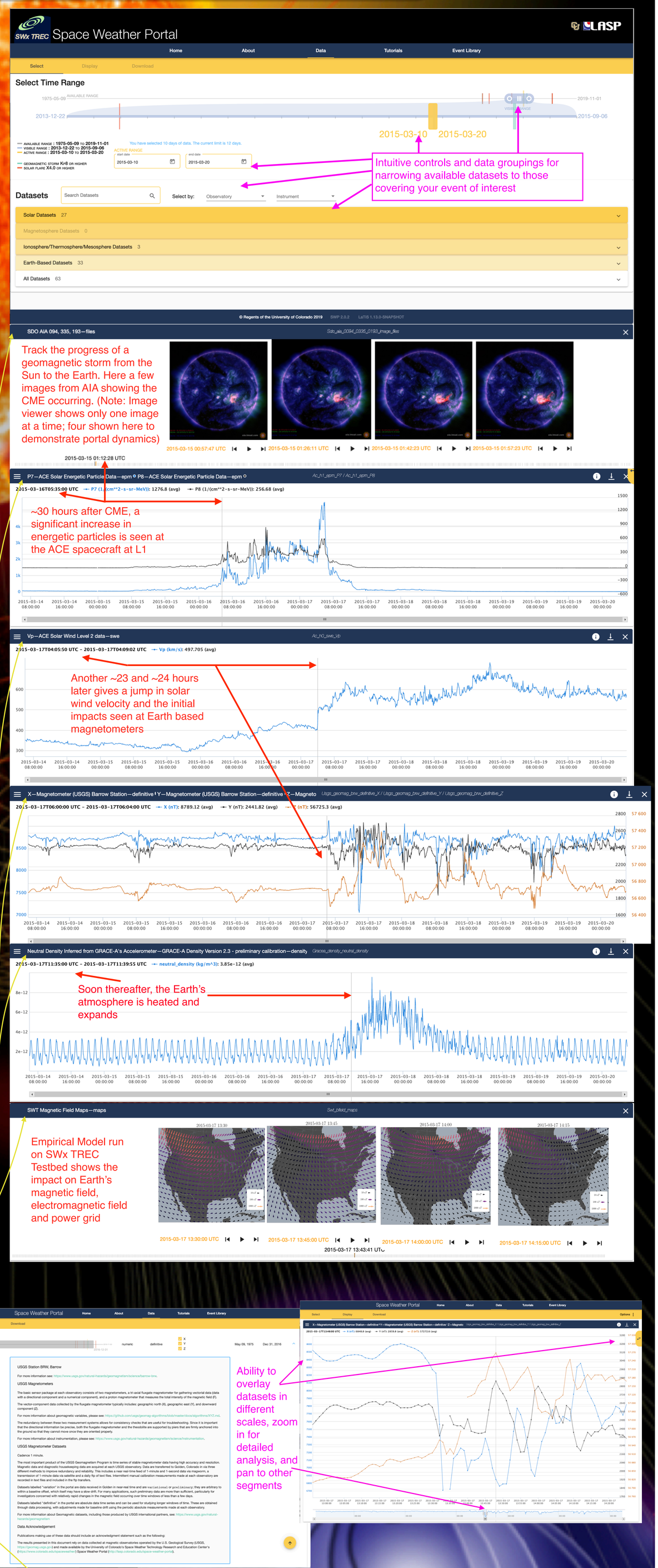
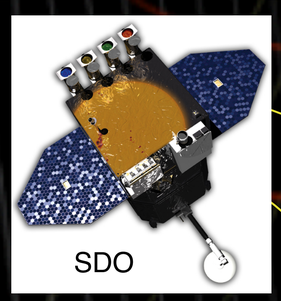
Grand Challenge
UNIVERSITY OF COLORADO BOULDER
SPACE WEATHER CENTER

The SWx TREC Space Weather Portal lasp.colorado.edu/space-weather-portal provides the ability to discover, learn about, plot, and download space weather datasets to describe a space weather event.

These datasets show the event:
- occurring on the Sun (SDO EVE and AIA)
- generating energetic particles and increased solar wind between Sun and Earth (ACE)
- affecting Earth's atmosphere (GRACE-A) and magnetic field (Magnetometer and Model data)



Measurement/ Modelling System


SDO

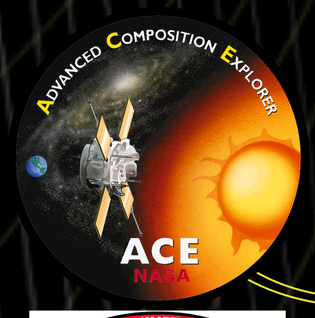
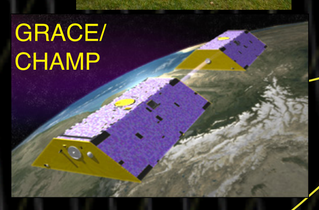

ACE NASA


Photo by Geometrix


GRACE/ CHAMP

Data Provider

SDO | Data

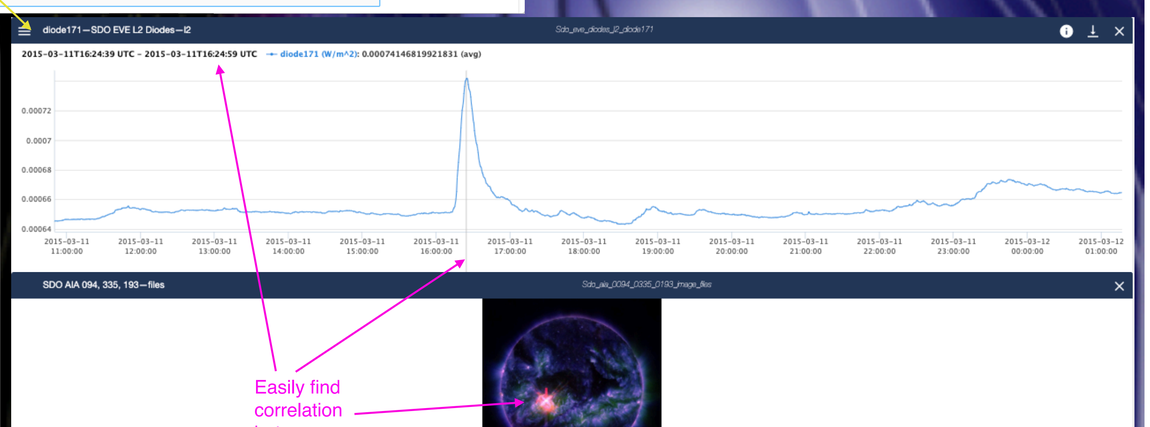
NASA CDAWeb

USGS science for a changing world

SWx TREC

SWx TREC Testbed

Built on LaTiS
https://github.com/latis-data/latis



Going forward, we will continue to:
- reach out to data providers to add datasets
- extend the sources and types of datasets
- provide for download of selected subsets in additional formats, including code snippets for programmatic access
- perform usability testing to guide design
- expand the metadata offerings
- further integrate with the SWx TREC testbed environment (see poster by Lucas et. al.)
- add events to the library

As part of the University of Colorado's Space Weather Technology, Research, and Education Center (SWx TREC) https://www.colorado.edu/spaceweather/, the Laboratory for Atmospheric and Space Physics (LASP) is developing a Space Weather Portal https://lasp.colorado.edu/space-weather-portal to provide unified and highly interactive access to disparate datasets to help close the Research to Operations (R2O) and Operations to Research (O2R) gaps. This poster shows a subset of the currently available measurement instruments and data providers exemplifying the 2015 St. Patrick's Day storm as it makes its way from Sun to Earth (red). The poster also shows the **highly interactive** capabilities offered by the Space Weather Portal (purple).