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SWx TREC: An Emerging Integrative Space Weather (SWx) Data Portal

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The Chancellor of the University of Colorado recently awarded a Grand Challenge grant to a group of departments and labs for the development of the Space Weather Technology, Research and Education Center (SWx-TREC https://www.colorado.edu/spaceweather/). As part of this effort, the Laboratory for Atmospheric and Space Physics (LASP) is developing a Space Weather (SWx) Portal to provide unified access to disparate datasets to help close the Research to Operations (R2O) and Operations to Research (O_2R) gap.

LASP is building the SWx Portal leveraging technologies developed in support of spacecraft operations (WEBTCAD), Irradiance Dataset viewing and downloading (LISIRD: http://lasp.colorado.edu/lisird/) and the MAVEN and MMS Science Data Portals. The primary technologies include a data model and software library that enables data interoperability known as LaTiS (https://github.com/latis-data) and the LASP Extended Metadata Repository (LEMR) which is developed as ontologies that not only represent the datasets, but also the front-end elements which are used to display them. These technologies together facilitate a common interface to myriad datasets and formats which will enable us to expand the offerings quickly and provide consistent visualization, access to metadata, and download capabilities across them.

This presentation will provide a demonstration of the prototype system that will include datasets demonstrating a solar event, its progression toward Earth and its Earth affect perspective of Space Weather Data centering on the 2015 St. Patrick's day storm.