

***Research to Operations, Possibilities for Total and Spectral Solar Irradiance in the Next 25 Years***  
***Thomas Sparn [tom.sparn@lasp.colorado.edu], Peter Pilewskie, Pete Withnell, and Greg Kopp,***  
***Laboratory for Atmospheric and Space Physics (LASP), University of Colorado, Boulder.***

This poster will explore the TSSI Operational Monitoring Constellation (TOMC) a new implementation concept to reduce the cost and risk of the TSIS-2, and the collection of the Total and Spectral Solar Irradiance (TSSI) Climate Data Record (CDR) based on our success with SORCE, and new developments in the launch vehicle arena.

The keys to this concept to be presented include: 1) a very capable and low cost bus design, the LASP Micro Bus LMB (or the “LASP Mighty Bus”), 2) the roll out by Sandia Labs/Aerojet Corp. of a “large sounding rocket” launch vehicle, the “Super Strypi (SPARK)” Missile, and 3) a 25-year plan to provide continuous TSSI CDRs with a constellation of overlapping spacecraft efficiently controlled by the LASP Operations Center and existing data processing system.

By managing all of the interfaces within one organization, with efficient yet streamlined NASA oversight, following the SORCE model, and using our existing low cost space-mission operations center and data production system we can accomplish 22 years of continuous TSSI CDR production for less than ten million per year over the 25 year implementation of the program.