***Continuous Constellation for Total and Spectral Solar Irradiance in the next 35 Years***

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This presentation will explore the TSSI Operational Monitoring Constellation (TOMC), a proposed implementation concept to reduce the cost and risk of the follow-on to the TSIS-2 mission, and the collection of the Total and Spectral Solar Irradiance (TSSI) Climate Data Record (CDR). TOMC is based on our success with SORCE mission, the current and ongoing TSIS-1 development and new developments in the launch vehicle and low-cost spacecraft arena.

The keys to this concept are: 1) a very capable and low cost bus design, 2) the roll out of several small low-cost launch vehicles (for example: 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 USD per year over the 25 year implementation of the program.