***Total and Spectral solar Irradiance Sensor (TSIS) NASA Project Status***

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TSIS-1 studies the Sun's energy input to Earth and how solar variability affects climate. TSIS-1 will measure both the total amount of light that falls on Earth, known as the total solar irradiance (TSI), and how that light is distributed among ultraviolet, visible and infrared wavelengths, called solar spectral irradiance (SSI). TSIS-1 will provide the most accurate measurements of sunlight and continue the long-term climate data record.

TSIS-1 includes two instruments: the Total Irradiance Monitor (TIM) and the Spectral Irradiance Monitor (SIM), integrated into a single payload on the International Space Station (ISS). The TSIS-1 TIM and SIM instruments are upgraded versions of the two instruments that are flying on the Solar Radiation and Climate Experiment (SORCE) mission launched in January 2003.

NASA Goddard's TSIS project responsibilities include project management, system engineering, safety and mission assurance, and engineering oversight for TSIS-1. TSIS-1 was installed on the International Space Station in December 2017. At the end of the 90-day commissioning phase, responsibility for TSIS-1 operations transitions to the Earth Science Mission Operations (ESMO) project at Goddard for its 5-year operations.

NASA contracts with the University of Colorado Laboratory for Atmospheric and Space Physics (LASP) for the design, development and testing of TSIS-1, support for ISS integration, science operations of the TSIS-1 instrument, data processing, data evaluation, calibration and delivery to the Goddard Earth Science Data and Information Services Center (GES DISC). TSIS data products will be made available to the public through the GES DISC.

NASA is committed to long-term monitoring of total and spectral solar irradiance and is currently studying implementation alternatives for a follow-on mission, designated TSIS-2, to continue this long-term data record.