

The Historical Development of SORCE

Gary Rottman [gsorcer@hotmail.com] and Tom Woods, Laboratory for Atmospheric and Space Physics (LASP), University of Colorado, Boulder.

In 1988 LASP was still operating the Solar Mesosphere Explorer that carried a solar irradiance spectrometer (115 to 300 nm) in addition to atmospheric ozone experiments. LASP had also just completed the design and fabrication of the SOLSTICE (Solar Stellar Irradiance Comparison Experiment) then in calibration and waiting integration and launch on NASA's Upper Atmosphere Research Satellite in 1991. That was the year NASA released its Announcement of Opportunity for the Earth Observing System, and LASP responded with their proposal to provide a second generation SOLSTICE for the EOS Program. NASA received 458 proposals in response to their AO, and SOLSTICE was one of the 30 Instrument Investigations selected.

However the EOS SOLSTICE would not launch as proposed on the Polar Platform in 1995 but would become a Flight-of-Opportunity (FOO). This involved an (almost) endless search with all possible large and small, national and international, high and low risk missions considered. Only in 1998 did the small, free-flying SORCE begin to materialize. Meanwhile in 1997 NASA selected LASP again to provide the Total Solar Irradiance Monitor (TSIM) also an instrument investigation for EOS. Two years later both EOS SOLSTICE and EOS TSIM were being studied as free flyers, with a small satellite for each. The two missions were then combined and SORCE was off and running as a Principal Investigator Program with LASP, the University of Colorado, as the lead institution. LASP issued an RFP and selected Orbital to build the spacecraft that was launched on a Pegasus XL, January 25, 2003. This talk will discuss the 15-year period, 1988 to 2003, during which the SORCE instruments and mission were developed.