



**Time to celebrate!  
SORCE in orbit 6 months!**



**Mission Update –**

The days and months have flown by since SORCE was launched January 25th. We certainly have something to celebrate and be proud of! This is a great achievement and everyone is looking forward to a very long and scientifically rewarding mission.

The SORCE team is very pleased with SORCE's progress to date and they are delighted to be on the way to meeting the mission long-term science objectives.

These objectives are: 1) to extend the current 24-year record of TSI measurements, 2) to establish a data set of SSI with daily measurements over the wavelength (color) range from 1 nm to 2000 nm, and 3) to improve our understanding of the Sun's variability and its effect on our atmosphere and climate.

**Spacecraft and Instrument Status –**

All spacecraft systems continue to perform exceptionally well. The spacecraft is in its nominal Sun pointing mode, and is making two scheduled ground contacts each day. New experiment commands are up-loaded daily to the spacecraft, and the quality and quantity of solar data continues to expand.

Operating in normal mode, SORCE instruments are making excellent daily solar observations, with nightly stellar observations for calibration. Scientists and engineers continue to verify the instrument calibrations and data processing software. The preliminary data products generated are reviewed as scientists work towards data validation by improving data processing code. This process will continue for months. Data are being distributed to the science community through the Goddard Space Flight Center DAAC.

**SORCE Science Meeting**

**December 4-6, Sonoma, California –**

The next SORCE Science Meeting – *Physical Processes Linking Solar Variability with Global Change* – is scheduled for December 4-6, 2003 in Sonoma, California. The SORCE meeting dates have been selected to accommodate people wanting to attend the AGU meeting, which is the following week in San Francisco.

The meeting will be devoted to our understanding of the physical processes that connect the Sun's radiation and its variability to our terrestrial environment, including the direct and indirect processes that cause this solar forcing and the mechanisms that cause solar variations. The agenda will consist of both invited and contributed oral presentations and posters, and the Call for Papers will be coming out in early August.



The scientific organizing committee members are Judith Lean from NRL, Peter Pilewskie from NASA Ames Research Center, and Doug Rabin from GSFC. They are putting together an exciting agenda and everyone anticipates a very interesting meeting. We encourage your attendance and hope that you will share this announcement with colleagues. It is available with additional information on the SORCE website at [Dec03ScienceMeeting.html](#)

Complete meeting information will be available in early August and will include an agenda, abstract forms, registration forms, and meeting logistics. The final meeting announcement will be distributed by e-mail and on the SORCE website. For additional information, contact Vanessa George at [vanessa.george@lasp.colorado.edu](mailto:vanessa.george@lasp.colorado.edu).



**Special Session at AGU Meeting –**

A special session relevant to SORCE has been accepted for the AGU Fall Meeting in San Francisco, December 8-12. Falling under the Solar and Heliospheric Physics (SPA) section, the session (SH09) is called *The Sun's Spectrum and Life on Earth*. Conveners are Gary Rottman (LASP, SORCE Principal Investigator), Robert Cahalan (NASA GSFC, SORCE Project Scientist), and Judith Lean (NRL, SORCE Co-Investigator). Following is the abstract for this session.

Earth receives its primary energy from the Sun in the form of electromagnetic radiation that spans a wide range of wavelengths, from the ultraviolet to the infrared. The atmosphere, surface and oceans transmit, absorb, reflect and scatter this radiation in different ways depending on wavelength. Changes in the Sun's radiation spectrum, whose integral defines the total solar irradiance, are potential causes of climate and global change via radiative and dynamical processes that may include direct surface heating, altered circulation patterns and cloud formation, modulation of ozone and the North Atlantic oscillation. As a result, understanding and modeling a multitude of terrestrial processes and their temporal variations depend upon reliable knowledge of the Sun's spectrum and its variability. A new generation of instrumentation that includes, for the first time, the capability to measure the entire solar spectral irradiance simultaneously with total irradiance, was launched recently on the Solar Radiation and Climate Experiment (SORCE). NPOESS will continue operational measurements of TSI including the new spectral capability, but

not before 2012. One aim of this session is to convey the new solar spectrum and variability results emerging from SORCE, in the context of lessons learned from past and on-going solar monitoring, and future needs. Equally important, the session aims to bring together research from a wide variety of disciplines, which require precise solar spectrum measurements. If you are interested in submitting a paper to this session, AGU abstract submission forms will be available by August 1. For more information, the upcoming AGU Fall Meeting website is <http://www.agu.org/meetings/fm03/>. You can also reach the AGU Meetings Department by calling 1-800-966-2481, ext. 333 or by e-mailing [meetinginfo@agu.org](mailto:meetinginfo@agu.org).

**Upcoming Meetings**

*SORCE scientists plan to present papers or attend the following 2003 meetings:*

- IUGG Assembly 2003, June 30-July 11, Sapporo, Japan
- Intl. Geoscience and Remote Sensing Symposium, July 21-25, Toulouse, France
- SPIE - Optical Science and Technology, Aug. 3-8, San Diego, California
- Characterization and Radiometric Calibration for Remote Sensing, Sept. 15-18, Logan, Utah
- SORCE Science Team Meeting, Dec. 4-6, Sonoma, California
- AGU Fall Meeting, Dec. 8-12, San Francisco, California

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