



#### Mission Update –

Things are happening at the speed of light! Normal operations commenced on March 6 when the instruments on-board SORCE began making daily solar observations. Data are received two times each day through either the ground station at Wallops Island, Virginia or the station at Santiago, Chile.

#### Instrument Status –

The instruments are performing wonderfully. All instruments are in normal mode and they are collecting solar data daily. The scientists and engineers are meticulously reviewing the first preliminary data products and are very involved in the calibration process.

As expected, each instrument is experiencing its own unique set of opportunities leading to a greater understanding in many areas. One step at a time, the instruments and data products are being fine-tuned to maturity, and the end result will be an incredible set of solar measurements. Once the instruments are calibrated, future issues of SNS will feature in-depth information on the instruments, their data products, and analysis. Below is a brief summary of the current status of each SORCE instrument.

**TIM** – Breaking ground in TSI measurements, the TIM instrument is showing exciting promise. Scientists are working on data processing algorithms to implement the new phase sensitive detection method.

**SIM** – As a new invention, engineers and scientists are extremely pleased with SIM's progress. Every mechanism and detector on SIM is functioning as it should, and the SIM team is currently in the midst of complex instrument calibrations.

**SOLSTICE** – Using the same stars for calibration purposes, the preliminary SORCE SOLSTICE results are in agreement with the UARS SOLSTICE measurements.

**XPS** – The first XPS measurements coming from SORCE compare very well with those of the XPS TIMED satellite measurements, which have been collected since January 2002.



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#### Spacecraft Status –

All spacecraft systems are performing exceptionally well. As planned for this stage of the mission, the spacecraft is in normal mode with the CEU (Central Electronics Unit) in control and the solar arrays collecting solar power. The spacecraft is in its nominal Sun pointing mode.

#### Mission/Science Operations Center –

The MOC provides the computer hardware and software necessary to conduct real-time spacecraft operational activities, including command and control of the satellite, mission planning, and assessment and maintenance of spacecraft and instrument health. The science operations from the MOC include experiment planning, data processing and analysis, validation, and distribution of the finished data product.

Of course, everyone is excited and anxious to have calibrated data as soon as possible. Scientists are diligently working through the data to validate the solar measurements. The data are compared to similar instruments on other spacecrafts currently collecting comparable data products. Calibrated data products will begin to be available in a couple of months.



All SORCE data products will be fully accessible through the Goddard Space Center's DAAC web site at [http://daac.gsfc.nasa.gov/DAAC\\_DOCS/gdaac\\_home.html](http://daac.gsfc.nasa.gov/DAAC_DOCS/gdaac_home.html). Telemetry data can also be accessed through other methods within LASP. Chris Pankratz is the contact person for this, and he plans to hold several tutorial sessions to explain the options and what is necessary.

#### Weekly Status Report –

SORCE team members are producing a weekly SORCE Status Report to document progress during the mission. It is a fairly technical document that overviews the week's activities. It summarizes the spacecraft activity, ground contacts, the instrument measurements, spacecraft and instrument planning, and data processing. If you would like to be on the weekly e-mail list to receive this report, contact Vanessa George. This report is also available on the SORCE web site at [weekly\\_status.html](#).

#### SORCE Team Member Retiring –

George Lawrence has been an integral part of LASP for over 30 years during which time he has made exceptional contributions to all of the Laboratory's programs in solar, atmospheric, and planetary sciences. He has been an essential cog in the SORCE development wheel, and has been particularly invaluable to the development of the TIM and SIM instruments. Fortunately for LASP, George is very interested in SORCE data analysis after his official retirement. Everyone is welcome to attend a special dinner in George's honor on Monday, March 31st. Contact Vanessa George for details and reservations.



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#### SORCE Viewing –

Although very faint, SORCE is periodically visible from Earth. The public can check out SORCE viewing opportunities, as well as other satellites, at [www.heavens-above.com](http://www.heavens-above.com).

#### SORCE Instrument and Data Validation Workshop –

A SORCE Instrument and Data Validation Workshop is scheduled for late April in Boulder. This workshop will focus on SORCE first results and plans to refine data processing and validate the irradiance data. Scientists will be reviewing the SORCE instrument data and validation methods along with concurrent mission instrument activities. Through collaboration on validation campaigns, attendees will ensure the solar irradiance measurements are making the most significant contribution possible towards the universal use of these important data products.

#### Upcoming Meetings

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

- AGU/EGS/EUG, April 6-11, Nice, France
- SORCE Instrument and Data Validation Workshop, April 28-30, Boulder, Colorado
- AAS, Solar Physics Division, June 16-20, APL, Laurel, Maryland
- SCOSTEP Intl. Solar Cycle Studies Symposium 2003, June 23-28, Tatranska Lomnica, Slovakia
- IUGG Assembly 2003, June 30-July 11, Sapporo, Japan
- SPIE - Optical Science and Technology, Aug. 3-8, San Diego, California
- Radiometric Calibration Conference, Sept. 15-18, Logan, Utah
- SORCE Science Team Meeting, Fall 2003, location – tbd
- AGU Fall Meeting, Dec. 8-12, San Francisco, California

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