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Solar Radiation and Climate Experiment Monthly Newsletter **May 2007**

SORCE Spacecraft Experiences OBC Anomaly –

SORCE had a spacecraft anomaly with its On-Board Computer (OBC) on Monday, May 14, day 2007/134 at ~23:51 UT. The spacecraft went into safe hold, but was fully recovered on Sunday, May 20, and is back into normal Sun tracking mode. The anomaly is related to a memory access in the OBC, although it is uncertain if it was caused by an energetic particle hit or not. Everything is operating normally now. No redundant systems were activated for this recovery.

The instruments were properly powered down automatically for the safe hold (slits and filter mechanisms were put into safe positions), so no new degradation effects are expected for the instruments. All instruments survived the safe hold period just fine. On Sunday, May 20, the instruments were turned back on and special calibration experiments were performed. After a brief warm-up period as a safety precaution, normal solar observations began on Monday, May 21.

The spacecraft and instruments continue to operate normally since the recovery. There is a gap in the SORCE science data for 2007/135 through 2007/140 (5.62 days, May 15-20). This is considered a small impact on SORCE science as we focus on climate changes over many months to years.

The initial analysis of data downloaded thus far shows no unusual degradation for any of the instruments. The calibration experiments carried out also show no instrument degradation. The instrument scientists will continue to check the data for unusual patterns and any change in instrument responsivity.

The entire SORCE team and the LASP and Orbital Sciences Corporation engineers are commended for their outstanding work under stressful conditions. They were quick to identify the anomaly, pinpoint the issues, make and implement the recovery plan, which brought the SORCE mission back to science mode quickly. This is the first time that SORCE has ever gone into Safe Hold mode, and the team worked 24/7 to correct the situation.

The SORCE Weekly Status Reports on line have additional information on this spacecraft anomaly – http://lasp.colorado.edu/sorce/news/weekly_status.htm.

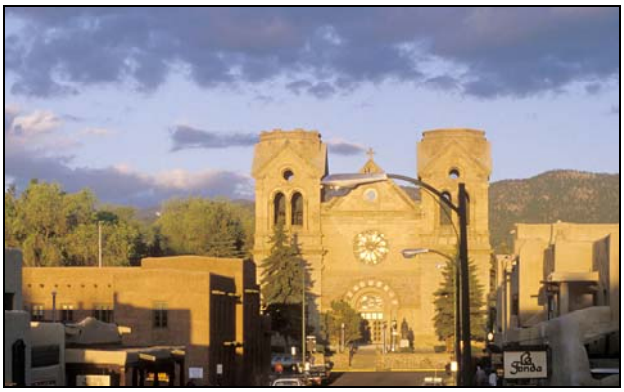
2008 SORCE Science Meeting –

Feb. 5-7, 2008
La Posada de Santa Fe Resort & Spa
Santa Fe, New Mexico

Acknowledging SORCE's 5th anniversary, the meeting's theme and title is ***SORCE's Past, Present, and Future Role in Earth Science Research***. The meeting will focus on solar irradiance variability and the modeled and measured response to this variability of Earth's atmosphere and climate. Of particular interest are models that incorporate the physical processes thought to facilitate the Sun-Earth connection. Coupled with accurate solar and climate measurements, these models are critical to determining and understanding climate sensitivities to solar forcing.

The agenda for this interactive meeting consists of invited and contributed oral and poster presentations concerning variations in the Sun's radiation and in the Earth environment. We will discuss the utilization of improved solar irradiance measurements and models, such as being developed by SORCE, to help advance climate and atmospheric models, in conjunction with ongoing Earth Science measurements. We encourage your participation and hope that you will join us. Registration materials will be available in the fall, but mark your calendar today!

Key questions to be addressed and tentative sessions are posted on the 2008 SORCE Science Meeting web site: http://lasp.colorado.edu/sorce/2008scimeeting.



Current Solar Irradiance Data Products –

LASP hosted the local Boulder solar community to a very informal lunch-time seminar on Friday, May 11, to discuss the new SORCE and TIMED data products. New versions have recently been released for many of the instruments, and the SORCE website has undergone many enhancements recently. The high level summary included an update on the four SORCE and TIMED instruments (SIM, SOLSTICE, TIM, XPS) and the TIMED SEE (XPS, EGS) data products. The lunch concluded with a live demonstration on retrieving the data via the SORCE, TIMED, and LISIRD websites.

Organized by Alysha Reinard at NOAA, the local solar group meets monthly for a social lunch. They have recently added a more science-focused lunch every so often.

Fontenla et al. Paper Accepted –

"*Semi-Empirical Models of the Solar Atmosphere II. The Quiet-Sun Low Chromosphere at Moderate Resolution*" by Juan Fontenla, K.S. Balasubramaniam, and J. Harder. has been accepted for publication in *The Astrophysical Journal.*

318,462

Hits to the SORCE Website

(Since 4/21/03, As of 5/25/07)

Upcoming Meetings / Talks –

SORCE scientists plan to present papers or attend the following 2007 meetings:

IUGG – July 2-13, Perugia, Italy
SPIE – Optical and Photonics, August 28-30, San Diego, CA
CALCON, Conference on Characterization and Radiometric Calibration for Remote Sensing, Sept. 10-13, Logan, UT
AGU Fall Meeting, Dec. 10-14, San Francisco, CA

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