



SORCE Approved for Extended Mission Funds, FY08 - FY11

Earlier this year SORCE underwent an in-depth review for extended mission funding. The NASA Sr. Review Panel looked at each of NASA's Earth Science Division (ESD) mission's science quality, operational utility, continued spacecraft and instrument performance, data availability and accessibility, EPO activities, and cost.



The review process involved submitting a written proposal justifying continued funding for the basic mission, as well as requesting funding for possible add-on science objectives. The SORCE team then followed-up in April with an in-person presentation, which included fielding panel questions.

In early August, the results came through. **SORCE received very high marks and the basic mission was 100% funded.** The Science Panel consensus was that all 11 missions under review warranted some level of funding for extended basic mission continuation through FY08-FY09. SORCE was also endorsed for FY10-FY11 funding for a total extension of 4 years.

In the final summary the panel felt, "the SORCE mission measurements of total solar irradiance and spectral properties are critical to the NASA Science Strategic Plan. These measurements should be extended as long as possible to provide a spectrally-resolved record over at least a complete solar cycle. Continuation of SORCE is intrinsically of very high value. It will also provide the overlap with its follow-on mission, GLORY, for cross-validation. The SORCE mission was strongly endorsed exclusively on its value to the space

environmental measurements. The scientific justification for continuing the SORCE observations through FY2011 is high, as long as spacecraft and instrument health permits."

None of the five enhanced SORCE mission options were funded, and the Review Panel recommended that these tasks either be absorbed as part of basic mission funding or pursued as ROSES proposals. The SORCE science team will do their best to find alternative funding for each of these important science objectives:

- 1) Extend long-term solar irradiance records (reconstruction)
- 2) Study atmospheric heating rates derived with SORCE solar spectra
- 3) Improve SORCE data quality and access
- 4) Provide calibration references from lunar stellar observations
- 5) Derive atmospheric density from SOLSTICE stellar occultation measurements

The biggest issue that NASA wants resolved (by end of FY09) is the TSI differences between SORCE TIM and ACRIMSAT. The panel "recognizes the fundamental importance of the TSI measurement made by SORCE, and notes the continued discrepancy between the ACRIMSAT and SORCE measurements. The cause of the discrepancy needs to be clarified." The SORCE and ACRIMSAT teams have been working on this effort and are also involving the NIST calibration experts.

SORCE Meeting - Confirmed Speakers

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



The 2008 SORCE Science Meeting, ***SORCE's Past, Present, and Future Role in Earth Science Research***, is shaping up to be another excellent event. Each of the four sessions, which are briefly described below, include the following confirmed speakers in alphabetical order.

1. **Variability of the Solar Irradiance Over the Solar Cycle**

328,255

Hits to the SORCE Website

(Since 4/21/03, As of 8/24/07)

We will review total and spectral solar irradiance variations over the 11-year solar cycle and discuss potential causes and indicators of this variability.

- Doug Biesecker, NOAA, Space Environment Center
- Gary Chapman, SFO, California State Univ.
- Greg Kopp, LASP, Univ. of Colorado
- Judith Lean, Naval Research Laboratory
- Gary Rottman, LASP, Univ. of Colorado
- Gérard Thuillier, Service d'Aéronomie du CNRS
- Tom Woods, LASP, Univ. of Colorado

2. Atmospheric Models, Processes, and Solar Irradiance

We will discuss the influence of solar cycle irradiance variability in atmospheric models and chemical and dynamical processes related to stratospheric ozone variations.

- Guy Brassuer, Natl. Center for Atmospheric Research
- Michael King, NASA, GSFC
- David Lary, NASA, GSFC
- Jay Mace, Univ. of Utah
- Paul Newman, NASA, GSFC
- Mark Schoeberl, NASA, GSFC

3. Models of Solar Processes Causing Variability Affecting Climate

We will discuss the solar physical processes that cause irradiance variations over time periods of years to centuries.

- Tom Ayres, CASA, Univ. of Colorado
- Juan Fontenla, LASP, Univ. of Colorado
- David Hathaway, NASA, Marshall Space Flight Center.
- Karel Schrijver, Lockheed Martin, ATC
- Sami Solanki (or Natalie Krivova), Max-Planck-Inst. fur Sonnensystemforschung
- Juri Toomre, JILA, Univ. of Colorado

4. Climate Models, Processes, and Solar Irradiance

We will talk about the influence of solar cycle irradiance variability on climate change and in climate models.

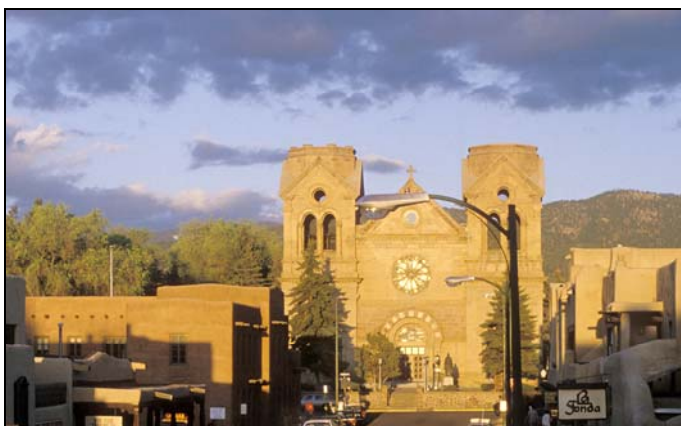
- Caspar Ammann, Natl. Center for Atmospheric Research
- Bryant Cramer, NASA, GSFC
- David Rind, NASA, GISS

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.

A Call for Abstracts will be coming out in mid September for contributed papers and posters. For a complete meeting description and key questions to be addressed, please visit our website at:

<http://lasp.colorado.edu/sorce/2008SciMeeting>. Registration information will also be available very soon. We encourage your participation and hope that you will join us!

Mark your calendar today!
Don't miss this *SORCE* Meeting!



Cathedral Basilica of St. Francis of Assisi in downtown Santa Fe, NM.

Solar Minimum Article in NASA's "The Earth Observer" –

“The Sun Approaches Its 11-Year Minimum and Activity Cycle 24”, by Tom Woods and Judith Lean, appears in the latest issue of NASA's *The Earth Observer*. The article is available on-line at:

http://eosps0.gsfc.nasa.gov/earth_observer.php, July-Aug., 2007 (vol. 19, issue 4), page 8.

Upcoming Meetings / Talks – ***SORCE scientists plan to present papers or attend the following 2007 meetings:***

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

International Space Science Institute (ISSI) Workshop, Nov. 12-14, Bern, Switzerland

AGU Fall Meeting, Dec. 10-14, San Francisco, CA

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