



## 2011 SORCE Meeting –

### *Symposium on the Decadal Variability of Earth's Climate, Solar Irradiance, and Sun-like Stars*

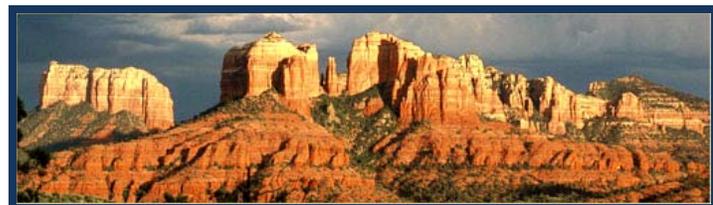
*Sept. 13-16, 2011 ♦ Sedona, Arizona*

We are pleased to announce the theme of the 2011 SORCE Symposium – solar cycle (decadal) variability and the climate system. This symposium is motivated by the solar irradiance observations by NASA's Solar Radiation and Climate Experiment (SORCE). The 2011 Meeting will be held jointly with the new NASA GSFC / CU LASP Sun–Climate Research Center. Sessions will be organized around the following questions:

- What can we learn about decadal climate response and climate sensitivity using the solar cycle as a well-specified external radiative forcing?
- What is current understanding of the amplitude of solar spectral variability and the response of the Earth's atmosphere and climate system?
- How does total solar irradiance vary over the solar cycle and what are the implications for climate modeling to recent refinements in its magnitude?
- How do comparisons with Sun-like stars improve our understanding of solar variability?
- How can solar and climate models be advanced to better reproduce decadal variability and improve forecast capabilities?

The format for this 3.5-day workshop consists of invited and contributed presentations in several theme sessions. We encourage your participation and hope that you will share this announcement with colleagues. More information regarding submitting an abstract for this meeting is available at:

<http://lasp.colorado.edu/sorce/news/2011ScienceMeeting/abstracts.html>.



Sedona, Arizona – “Red Rock Country”



The Hilton Sedona Resort and Spa, a full-service meeting facility.

The 2011 SORCE Symposium will take place at the beautiful *Hilton Sedona Resort*, just 90 miles north of Phoenix, Arizona. The Resort is nestled in a dramatic Red Rock setting that ranges from nearby creeks surrounded by piñon pines to ancient Sinagua ruins of mystical beauty. The meeting facilities are first-class and attendees will be inspired with the dramatic vistas. For further information on this special venue, you can visit their website at <http://www.hiltonsedonaresort.com/>. Information on making your hotel reservations, registration, and logistics will be posted to the SORCE Meeting site in a couple months.

### **For more information:**

<http://lasp.colorado.edu/sorce/news/Meetings.htm>

#### **Important Deadlines:**

**Abstracts Due: June 12**

**Pre-Registration: August 12**

**Lodging Cut-off: August 12**

*~ ~ Please join us! ~ ~*

# SORCE

## ***SORCE Wants REU Students –***

*By Marty Snow, LASP, Univ. of Colorado*

Each summer, the SORCE mission funds student research projects as part of the University of Colorado's Research Experience for Undergraduates (REU) program. For eight weeks, the students come to Boulder, Colorado to work with SORCE scientists on a research project involving measurements from SORCE. The program pays for the students' travel costs and housing, plus a \$400/week stipend. Last year, REU students did projects on the time evolution of faculae and plage (SIM), correlations between total solar irradiance and solar spectral irradiance (SIM and TIM), and the solar cycle response of the geocorona to Lyman alpha flux (SOLSTICE). Projects this year will include coronal dimming, using SIM data in atmospheric models, and analysis of rotational variability in the ultraviolet.

Applications for the 2011 program are now being accepted, and we invite students from around the country to apply for a position to work on SORCE and other missions. We depend on scientists interested in SORCE science to recommend well qualified students to our program. Full details are available at <http://lasp.colorado.edu/reu> including all deadlines (application deadline is Jan. 28). For further information, feel free to contact the REU Program Organizer, Marty Snow ([snow@lasp.colorado.edu](mailto:snow@lasp.colorado.edu) or 303-735-2143).



SORCE SIM scientist Erik Richard worked with REU student Lois Smith during the summer of 2010. They worked on SIM and TIM data comparisons.

## ***Press: Solar Spectral Variability –***

NASA issued a press release in mid December 2010 regarding solar spectral variability. Its timely release corresponded well with a related special AGU Fall Meeting session, "Solar Variability and Climate", chaired by Steven Lloyd from NASA GSFC and Erik Richard from CU LASP. Talks within the session included:

- *Observations of SC Variability in UV Spectral Irradiance Since 1978*; Matt DeLand, SSAI, Maryland
- *Application of SSI Variability in a Earth Atmospheric Model*; Jerry Harder, LASP, Univ. of Colorado

- *SC Effects of Spectrally Varying Solar Irradiance in a Coupled Chemistry – Climate Model*; Bill Swartz, APL, Johns Hopkins Univ.
- *Modeling the Temperature Responses to Spectral Solar Variability on Decadal and Centennial Time Scales*; Robert Cahalan, NASA GSFC
- *International Pyroheliometer Comparison 2010 Results for SORCE/TIM*; Greg Kopp, LASP, Univ. of Colorado
- *Do Flares Contribute to TSI Variability?*; Matthieu Kretzschmar, CNRS, Univ. of Orleans, France

The link to the full NASA Press Release is:  
<http://www.nasa.gov/topics/solarsystem/features/solarcycle-sorce.html>.

The 2010 Fall AGU Meeting in San Francisco, California was a busy time for all of the SORCE scientists. There were many oral and poster presentations given throughout the week.

Claus Fröhlich (left; PMOD/WRC) talks with Jeff Morrill (NRL) during a poster session.



## ***SORCE Team Submits Several White Papers –***

The SORCE scientists at LASP responded in force to the Call for Papers when asked to submit White Papers for "A Decadal Strategy for Solar and Space Physics (Heliophysics)". Although the deadline has passed, there is still much interest in where their efforts will lead. The National Research Council is working to establish significant science objectives to lead research plans for NASA, the National Science Foundation, and NOAA for the time frame 2013-2023. For more information on the Feb. 7-8 Town Hall Meeting concerning these papers, please visit the following website:

[http://sites.nationalacademies.org/SSB/CurrentProjects/ssb\\_056864](http://sites.nationalacademies.org/SSB/CurrentProjects/ssb_056864).

**2,467,638**

**Hits to the SORCE Website**

*(Since 4/21/03, As of 1/07/11)*

## *SORCE Mission Operations –*



The LASP Mission Operations SORCE team continues to work through the latest on-board computer (OBC) anomalies and resulting safeholds. The good news is that at this point the spacecraft is doing well and all instruments are collecting measurements.

And better news – the root cause of the safehold issue has been determined and fixed.

Following analysis by LASP mission operations and Orbital Sciences Corporation engineers, the cause of the recent OBC incidents was due to the Microprocessor Unit (MU) sending a data packet of zero length causing the spacecraft OBC to recognize a fault condition and then enter into a safehold. The problem was repaired with a software patch that tells the MU to ignore bad packets in the future. The patch has been successfully implemented and the system is being monitored to ensure its performance.

The SORCE science community is extremely grateful to the LASP Mission Operations team. They have worked long hours under stressful conditions to restore SORCE and to fix the source of problem.

## *Upcoming Meetings / Talks –*

*SORCE scientists plan to present papers or attend the following 2011 meetings:*

ISSI Working Group – Cross-Calibration of 30 years of FUV Instruments, Jan. 10-11, Bern, Switzerland  
ISSI Workshop – Observing and Modeling Earth's Energy Flows, Jan. 10-14, Bern, Switzerland  
Boulder Solar Day, March 18, Boulder, Colorado  
SpaceWeather Workshop, April 26-29, Boulder, Colorado  
IUGG, June 28-July 7, Melbourne, Australia  
**SORCE Science Symposium, Sept. 13-16, Sedona, Arizona**

☺ *Happy New Year!* ☺