

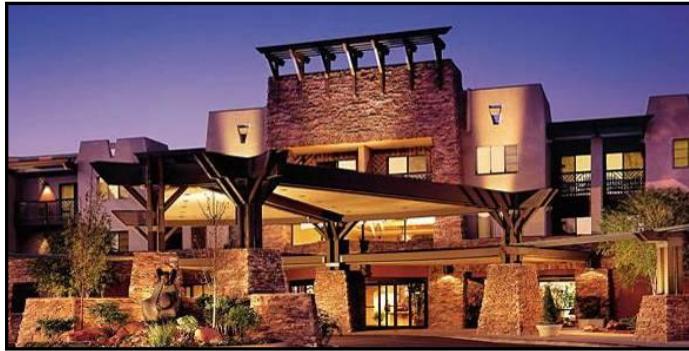
# SNS • SORCE News Source



Solar Radiation and Climate Experiment Monthly Newsletter

August 2011

## 2011 SORCE Meeting – *Decadal Cycles in the Sun, Sun-like Stars, and Earth's Climate System* Sept. 13-16, 2011 ♦ Sedona, Arizona



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

### LODGING

The meeting will be held at the *Sedona Hilton Resort and Spa* (<http://www.hiltonsedonaresort.com/>). Hotel information is on the SORCE website, including a link to register online. Or call 1-877-273-3762 today. Refer to the SORCE Meeting code "SORCE" to receive the special \$142 rate. About 70% of their rooms are suites so reserve yours early. *Note: The cut-off date is firm – Friday, August 12.*

### 2011 SORCE Meeting Website

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

### REGISTRATION

Information on meeting registration and special events is on the website. *The pre-registration fee is \$375.* After Friday, August 12, the rate will go to \$425. While you are registering, be sure to sign-up for the *SORCE Science Dinner at the Lowell Observatory*. It is going to be a very special evening and we hope you will join us! Register today at:

<http://lasp.colorado.edu/sorce/news/2011ScienceMeeting/meeting-registration.html>

**SORCE**

***Important Deadline:***

***Friday, Aug. 12***

***Lodging and Pre-Registration***

### AGENDA / SCIENCE PROGRAM

For a detailed agenda with speakers, abstracts, and specific times, please visit the meeting website for the latest information. The program includes:

**Monday, Sept. 12:** Welcoming Reception, 5:30 p.m.

**Tuesday, Sept. 13:**

Welcome and Introduction

Session 1. Solar Irradiance Cycles

**Wednesday, Sept. 14:**

Session 2. Climate System Decadal Variability

Session 3. Comparative Sun-Star Cycles

Poster Session / Reception

**Thursday, Sept. 15:**

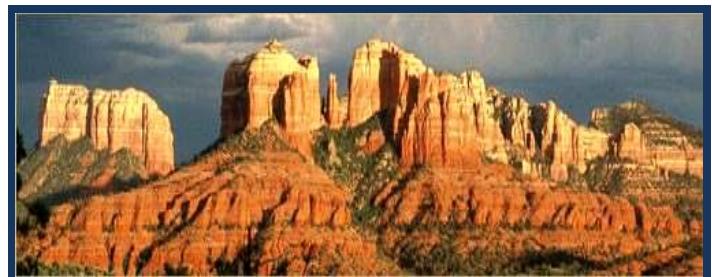
Session 4. Climate Sensitivity and Global Imbalance

Session 5. Solar Rotational Variability

Science Dinner / Fieldtrip – Lowell Observatory

**Friday, Sept. 16:**

Session 6. Modeling and Forecasting Solar Cycles and Climate Impacts



Sedona, Arizona – “Red Rock Country”

### GETTING THERE – TRANSPORTATION

The 2011 SORCE Meeting will take place at the beautiful *Hilton Sedona Resort*, just 115 miles north of Phoenix, Arizona. For maps and transportation information please visit the SORCE Meeting website.

### 2011 SORCE Meeting Website

***Agenda / abstracts available online!***

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

## SORCE-Related AGU Sessions –

The Fall AGU Meeting is Dec. 5-9, in San Francisco, California. **You are encouraged to submit abstracts to AGU sessions GC43 and GC44.**

**Abstract Deadline: Thursday, August 4<sup>th</sup>**

<http://sites.agu.org/fallmeeting/>



### **Solar Spectral Irradiance Variability: Observations and Implications**

**Session GC44:** Climate Change and the Sun 3.

**Conveners:** Marty Snow, Erik Richard, Frank Eparvier, and Rodney Viereck

### **Improvements to the Total Solar Irradiance Record**

**Session GC43:** Climate Change and the Sun 2.

**Conveners:** Greg Kopp and Richard Wilson

**3,122,036**

**Hits to the SORCE Website**

(Since 4/21/03, As of 7/29/11)

## NASA Releases Earth Science Senior Review Report –

The NASA Earth Science Senior Review report was released in July. You can find the full report online at: [http://science.nasa.gov/media/medialibrary/2011/07/22/2011-NASA-ESSR-v3-CY-CleanCopy\\_3x.pdf](http://science.nasa.gov/media/medialibrary/2011/07/22/2011-NASA-ESSR-v3-CY-CleanCopy_3x.pdf). The SORCE Senior Review proposal was submitted in March. The good news is all of the Earth Science missions are expected to be extended for another four years.

The reviewers unanimously agreed that the scientific merit of SORCE is outstanding and they fully supported the extension of the mission. The review panel also concluded that all four instruments will likely continue to operate nominally for two- and four-year extensions.

The SORCE mission received a medium-high technical risk rating due to battery health and the impact that it will have on maintaining the extended climate

data record of solar irradiance. Although the SORCE team has taken exceptionally proactive steps to maximize the life of the mission by mitigating reaction wheel and battery issues, these subsystems are well past their design life and thus a risk situation. The preliminary report suggests that the SORCE team could get an augmented budget to help manage its aging spacecraft.

The report also reviewed all missions on their qualitative utility in regards to national interests. SORCE received a high utility rating, since the data are useful for improving our understanding of how solar irradiance contributes to changes in the atmosphere and climate forcings. The review panel felt that SORCE has been invaluable to obtaining and sustaining an historical record of solar measurements across different solar cycles.

Detailed letters from NASA Headquarters are expected out in mid August and they will provide the actual budget plans for the extended mission.

## SORCE Presentations at IUGG –



SORCE team members Tom Woods and Jerry Harder from LASP, and Robert Cahalan from NASA GSFC attended the 2011 International Union of Geodesy and Geophysics (IUGG) General Assembly in Melbourne, Australia, June 28 – July 7. This year's topic was *Earth on the Edge: Science for a Sustainable Planet*, and sessions addressed a wide range of subjects. Approximately 3,500 scientists from over 91 countries attended this multi-disciplinary conference which focused on the ramifications of recent international weather/climate issues (earthquakes, weather patterns, cyclones, tsunamis, bush fires, and floods).

In the session entitled, *The Impact of Solar Variability on the Earth*, was co-chaired by Tom Woods. Within the session Jerry Harder gave an invited talk called *Measured and Modeled Trends in Solar Spectral Irradiance Variability and Application to Earth Atmospheric Studies*. Tom Woods presented *Solar Irradiance Variations during Solar Cycle 23/24 Minimum*, and Bob Cahalan presented *Temperature Responses to Spectral Solar Forcing Since 1600 from a Coupled Ocean-Atmosphere Radiative Convective Model*.

## **SORCE Database Recovery –**

By Chris Pankratz, LASP, Univ. of Colorado

The SORCE project suffered a storage system failure on June 10<sup>th</sup>, which resulted in downtime to systems that support flight operations and also the SORCE Science Data System. Flight operations capabilities were restored within hours allowing operators to perform necessary health and safety monitoring. There was minimal disruption to mission operations activities and no risk to the spacecraft or instrument health.



Full restoration of the entire history of SORCE telemetry data and support for science data processing activities has unfortunately taken additional time. Generation of SORCE science data products was been temporarily suspended, but public access to already-processed SORCE science data was unaffected and these data continued to be available to the public.

After a discussion on the best approach to the database failure, it was determined that purchasing a new disk array with a higher-level of reliability was the best option. The process of procuring, configuring, and recovering to this new array took longer than expected.

Using alternative systems (prior to receiving the new disk array), the routine product generation of SORCE TIM Total Solar Irradiance (TSI) data was resumed on June 24<sup>th</sup>, and the space weather Magnesium II index data product became available June 30<sup>th</sup>. Please note that there was no loss of science data from any of the instruments onboard SORCE.

By July 25<sup>th</sup>, the new disk array has been received and configured, and restoration of SORCE databases was completed. All systems are now restored into full operation and science data products have been caught-up to present (re-populated the full telemetry data in the databases). Catch-up processing of science data products is complete.

## **Upcoming Meetings / Talks –**

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

SPIE, August 21-25, San Diego, CA

CALCON, August 29-Sept. 1, Logan, Utah

**SORCE Science Meeting, Sept. 13-16, Sedona, Arizona**

NEWRAD, Sept. 19-23, Maui, Hawaii

AGU Fall Meeting, Dec. 5-9, San Francisco, California