



## 2018 Sun-Climate Symposium –

Save the date announcement! Please mark your calendar today to join us in March 2018! We encourage your participation and hope that you will share this “Save the Date” announcement with colleagues.

**Lake Arrowhead, California**  
**March 19-23, 2018**

We are pleased to announce the 2018 Sun-Climate Symposium, which is sponsored by the Sun-Climate Research Center – a joint venture between NASA GSFC and CU/LASP. Our focus topic for this 3.5-day meeting is *“The State of the TSI and SSI Climate Records at the Junction of the SORCE and TSIS Missions.”* Like our past meetings, the format will consist of invited and contributed oral and poster presentations in several themed sessions. The Call for Abstracts will be advertised in late summer – stay tuned.

### Science Overview

Observations of the Sun and Earth from space have revolutionized our view and understanding of how solar variability and other natural and anthropogenic forcings impact Earth’s atmosphere and climate. Since 1978 – more than three solar cycles – the total and spectral solar irradiance (TSI and SSI) and global terrestrial atmosphere and surface have been observed continuously, providing unprecedented quality data for Sun-climate studies. The 2018 Symposium will convene experts from across the solar-terrestrial community and from various disciplines that include Sun-climate connections, atmospheric physics and chemistry, heliophysics, and metrology to discuss solar and climate observations and models during this crucial period near the end of the Solar Radiation and Climate Experiment and the start of the Total and Spectral Solar Irradiance Sensor (TSIS) Mission. Sessions will be organized around the following six themes:

1. Making accurate Climate Records
2. The state of the TSI and SSI Climate Records at the end of the SORCE Mission
3. What was learned about solar variability and impacts on the terrestrial environment during Solar Cycle 24?

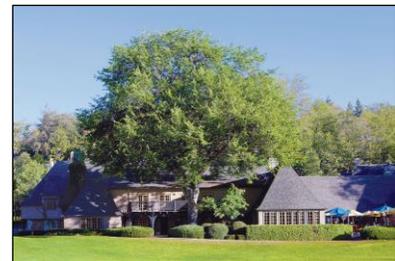


Sunset over the San Bernardino Mountains in southern California.

4. What are the expectations for the next solar minimum and Solar Cycle 25?
5. Stellar variability and connections to the Sun
6. Next generation of solar and atmospheric observations

### Venue

We will be meeting at the **UCLA Lake Arrowhead Conference Center**, a state-of-the-art full service retreat facility on the north shore of beautiful Lake Arrowhead in southern



California. Meeting attendees will enjoy the fresh air and 42 acres of beautifully forested terrain tucked in the San Bernardino Mountain foothills (5000 ft.). For more information, visit their website at:

<http://lakearrowheadconferencecenter.ucla.edu/>.

### Website

The symposium website is under development and will be updated with new information regularly. Check it out at: <http://lasp.colorado.edu/home/sorce/news-events/meetings/>.

## Happy Belated Birthday!

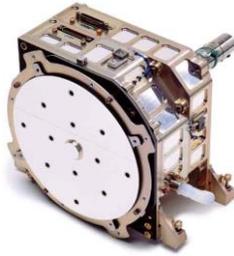
SORCE celebrated its  
**14<sup>th</sup> birthday on Jan. 25!**  
Pretty good for a 5-year mission!

**Go SORCE!**



## *XPS Releases Version 11 –*

XPS Version 11 (V11) was introduced on March 20, 2017. The new version updated and improved the XPS dark and visible light corrections while *SORCE* is in Daylight-Only Operations (DO-Op) mode, which began in March 2014. V11 improved the data products most noticeably from late 2012 onward.



Routine processing of V11 XPS data is ongoing, and data products are available on the *SORCE* website (<http://lasp.colorado.edu/home/sorce/data/>) and through LISIRD at LASP (<http://lasp.colorado.edu/lisird/sorce/>).

## *SORCE Extended Mission –*

In early March, the *SORCE* team submitted a Sr. Review Proposal for another extended mission (2018-2020). *SORCE* successfully completed its 5-year core mission (Jan. 2003-Jan. 2008) and is currently in its tenth year of its extended mission. It has achieved its primary mission goal of measuring total solar irradiance (TSI) and solar spectral irradiance (SSI) with unprecedented accuracy and precision. The main objectives of the *SORCE* extended mission are very much aligned with the original *SORCE* mission objectives, but have new focus with the current state of NASA missions and solar activity in Solar Cycle 24.



With proper management of spacecraft resources, we are confident that making good quality solar irradiance measurements will continue throughout the extended mission timeframe. Obtaining overlapping irradiance measurements with upcoming missions (such as TSIS) is critical, so *SORCE*'s extension is essential.

As a follow-up to the written proposal, a few of the *SORCE* scientists will meet with the NASA Sr. Review Panel in early May to respond to questions and items needing further clarification. The review panel is expected to make a decision on the next *SORCE* Extended Mission by late June.



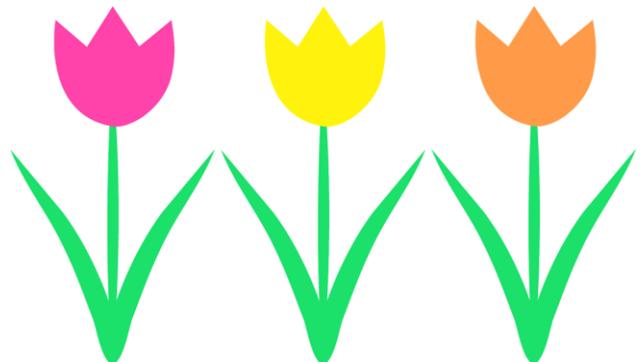
## *SORCE Selects Summer Undergrad Research Students –*

Each summer, the *SORCE* mission funds student research projects in concert with the University of Colorado's Research Experience for Undergraduates (REU) program. For ten weeks (up from the 8 weeks in past years), 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 \$500/week stipend.

This year the program will start the week of May 30<sup>th</sup> at LASP with a 1-week lecture series on Solar and Space Physics from experts in the field. The program will run through August 4<sup>th</sup>, ending with a student symposium where the students present their findings. Marty Snow is the REU Program Organizer for the entire program which includes 21 REU students working interesting solar and space physics projects in several Boulder locations.

For 2017, three *SORCE*-related projects were selected for the REU program. The project title, mentors, and the REU student selected are:

- ***Got five minutes? Solar global oscillations in the MgII index***  
Mentors: Andrew Jones (LASP), Janet Machol (NOAA), and Marty Snow (LASP)  
REU Student: Erica Nathan, Colgate University, Hamilton, NY
- ***Solar spectral irradiance: measurements vs models***  
Mentors: Stéphane Béland and Laura Sandoval (both from LASP)  
REU Student: Bailey Donaldson, University of Colorado, Boulder
- ***Analysis of top-down solar influence using AIRS and SABER data***  
Mentor: Jerry Harder (LASP)  
REU Student: Santiago Mejia, Miami Dade College, Miami, FL



*Happy Spring!*

## 2017 EGU General Assembly –

Stéphane Béland and Marty Snow will be attending the EGU General Assembly, April 23-28, in Vienna, Austria to present the most recent *SORCE* results.

Stéphane will be presenting “The *SORCE* Solar Irradiance Monitor: Limitations in a two instrument model.” He will discuss the limitation encountered with the SIM two-instrument method of tracking degradation. He will also present the TSIS SIM three-instrument model and the proposed observing plan. He will discuss lessons learned from *SORCE* SIM observations and how these can be applied to future instrument improvements.

Marty Snow will be presenting in Session ST4.2: The Use of Observations and Models to Improve Space Weather Forecasting Capabilities. Marty’s talk is “Magnesium II Index Measurements from *SORCE* SOLSTICE and GOES-16 EUVS.” Specifically, he will be present comparisons of the *SORCE* SOLSTICE and GOES-16 EUVS measurements during the period of overlap. GOES-16 launched November 19, 2016 and instruments saw first light in January 2017.

Marty and Stéphane look forward to seeing you in Vienna! The EGU website is: <http://www.egu2017.eu/>. The entire science program is available at: <http://meetingorganizer.copernicus.org/EGU2017/sessionprogramme>.



## Upcoming Meetings / Talks –

*SORCE* scientists will present papers or attend the following 2017-2018 meetings/workshops:

### 2017

SOLAR/SOLSPEC Team Meeting, March 16-17,

ESA/Estec Noordwijk, The Netherlands

International CCMC-LWS Working Meeting: Assessing Space Weather Understanding and Applications, April 3-7, Cape Canaveral, FL

Boulder Solar Day, April 4, Boulder, CO

European Geosciences Union (EGU), General Assembly,

April 23-28, Vienna, Austria, <http://www.egu2017.eu/>

Space Weather Workshop, May 1-5, Broomfield, CO

Solar Irradiance Science Team Meeting, May 11-12, Lanham, MD

ISSI Working Group: “Towards a Unified Solar Forcing Input to Climate Studies”, Oct. 2-6, Bern, Switzerland

AGU Fall Meeting, Dec. 11-15, New Orleans, LA

<https://fallmeeting.agu.org/2017/>

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