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Solar Radiation and Climate Experiment Monthly Newsletter

July 2012

2012 SORCE Meeting –

***Models of Spectral Irradiance Variability:
Origins in the solar atmosphere and
impacts on Earth's atmosphere***

Sept. 18-19, 2012 ♦ Annapolis, MD



LODGING

The meeting will be held at the ***Historic Inns of Annapolis*** (<http://www.historicinnsofannapolis.com>). Hotel information is on the SORCE Meeting website, including a link to register online. You can also call 1-800-847-8882 to reserve your room today. Refer to the SORCE Meeting code “SORCE” to receive the special \$116 rate. Rooms are limited so reserve early. ***Note: the cut-off date is firm – Friday, August 17.***

REGISTRATION

Information on the meeting registration and special events is on the SORCE Meeting website. ***The pre-registration fee is \$225.*** After Friday, August 17, the rate will go to \$275. While you are registering be sure to sign-up for the SORCE Science Dinner at ***Carrol's Creek Waterfront Restaurant***, a local favorite tucked in the Annapolis City Marina area. It is going to be a special evening and we hope you will join us! Register today!

VENUE

Our meeting site, ***Historic Inns of Annapolis***, is within easy walking distance (10 min) of Annapolis's main attractions. Annapolis is located on the banks of the Severn River, which flows into the Chesapeake Bay, allowing for its reputation of being “America's Sailing Capital.” Annapolis boasts a rich maritime heritage mingled with spectacular parks, fabulous museums and historic sites, as well as being home for the U.S. Naval Academy. Maryland's state capital is Annapolis and it has more 18th century buildings still in use than any other U.S. city.

***Important Deadline:
Friday, Aug. 17
Lodging and Pre-Registration***

AGENDA / SCIENCE PROGRAM

For a detailed agenda with speakers, talk titles, and the abstracts, please visit the meeting website for the latest information. The full 2-day program includes:

Monday, Sept. 17:

Welcoming Reception, 5:30 p.m.

Tuesday, Sept. 18:

Welcome and Introduction

Session 1. Modeling of the Solar Atmosphere with
Emphasis on Spectral Irradiance

Session 2. Modeling of the Solar Influence on
Earth Climate

Poster Session / Reception

Science Dinner – Carrol's Waterfront Restaurant

Wednesday, Sept. 19:

Session 3. Observations of Solar Spectral Irradiance
Variability

Session 4. Observations of the Solar Influence on
Earth Climate

Adjourn, 5 p.m.

2012 SORCE Meeting Website

<http://lasp.colorado.edu/sorce/news/2012ScienceMeeting/>





SCIENCE PROGRAM OVERVIEW

The 2012 SORCE Meeting examines modeling efforts to understand SSI variability, in terms of both its origins in the solar atmosphere and its impact on Earth's climate and atmosphere. In solar physics, advancements in radiative transfer, surface feature identification, dynamics and how observations of solar magnetic fields and irradiance all lead to an improved understanding of the mechanisms of irradiance change. Earth-atmospheric general circulation models (GCM) incorporating sophisticated codes for chemistry, radiation, dynamics, and feedback mechanisms associated with clouds, aerosols, and ocean processes are able to address the role of SSI variability in climate. In both cases, comparisons with observations lead to a deeper understanding of the dynamic solar atmosphere and our complex Earth climate system.

The key science questions to be addressed can be found on the SORCE Meeting website.

Agenda / abstracts available online!

<http://lasp.colorado.edu/sorce/news/2012ScienceMeeting/>

CONFIRMED SPEAKERS (as of 7/30/2012)

The speakers are given in alphabetical order within each session. Talk titles and full abstracts are available on the SORCE Meeting website.

Session 1 – Modeling of the Solar Atmosphere with Emphasis on Spectral Irradiance

Phil Chamberlin, NASA GSFC, Greenbelt, MD
Juan Fontenla, LASP, Univ. of Colorado-Boulder
Judith Lean, NRL, Washington, DC
Alexander Shapiro, PMOD, Switzerland
Regner Trampedach, JILA, Univ. of Colorado-Boulder
Han Uitenbroek, NSO, Sacramento Peak, NM

Session 2 – Modeling of the Solar Influence on Earth Climate

William Ball, Imperial College, London, UK
Sarah Ineson, Met Office, Exeter, Devon, UK
Charles Jackman, NASA GSFC, Greenbelt, MD

Cora Randall, LASP, Univ. of Colorado-Boulder
Nicola Scafetta, Duke University, Durham, NC
Bill Swartz, John Hopkins University, APL

Session 3 – Observations of Solar Spectral Irradiance Variability

Linton Floyd, Interferometrics Inc., Herndon, VA
Jerry Harder, LASP, Univ. of Colorado-Boulder
Russell Howard, NRL, Washington, DC
Scott McIntosh, HAO, NCAR, Boulder, CO
Dora Preminger, SFO, California State Univ., Northridge
Doug Rabin, NASA GSFC, Greenbelt, MD
Mark Rast, LASP, Univ. of Colorado-Boulder
Marty Snow, LASP, Univ. of Colorado-Boulder
Ken Tapping, NRC, Penticton, BC, Canada
Gerard Thuillier, LATMOS, France
Tom Woods, LASP, Univ. of Colorado-Boulder

Session 4 – Observations of the Solar Influence on Earth Climate

Ralph Kahn, NASA GSFC, Greenbelt, MD
Jae Lee, NASA GSFC, Greenbelt, MD
Aimee Merkel, LASP, Univ. of Colorado-Boulder
Sebastian Schmidt, LASP, Univ. of Colorado-Boulder
Kurt Thome, NASA GSFC, Greenbelt, MD
Shuhui Wang, JPL, Cal. Inst. of Tech., Pasadena, CA
Dong Wu, NASA GSFC, Greenbelt, MD

~ Please join us! ~

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SORCE REU Students —

By Marty Snow, LASP, Univ. of Colorado

Each summer, the SORCE program at LASP employs three student research interns as part of the Boulder Solar Alliance's Research Experience for Undergraduates (REU) program. This year's students – Lauren Bearden, Jess Haskins, and Ariana Giorgi – are working on



a diverse set of projects using SORCE data. The students come to Boulder for 8 weeks of research, starting with a series of lectures on Solar and Space Physics from experts in the field, and ending with a student symposium where the REU students present their findings. Further information about the program can be found at <http://lasp.colorado.edu/reu>.



Jess Haskins with her mentors, Aimee Merkel (left) and Jerry Harder (center).

Jess Haskins from MIT is working with Jerry Harder and Aimee Merkel on analyzing the temperature and ozone measurements of the middle atmosphere from the Microwave Sounding Unit and the SABER instrument on the TIMED satellite. She will then compare the measured temperatures to results from the WACCM atmospheric model using SIM observations as the solar forcing.

Lauren Bearden from Colgate University is studying the solar spectral irradiance variations in the visible and infra-red using SIM data. In particular, she is studying how the rotational variability evolves over the course of the solar cycle. Odele Coddington, Erik Richard, and Marty Snow are helping to guide her investigation.



Lauren Bearden (left) is working with Odele Coddington, Erik Richard (right), and Marty Snow.

Ariana Giorgi (Lafayette College) is studying some of the stellar occultation observations from SOLSTICE. The measurements at 250 nm can be used to measure ozone density in the upper atmosphere. Ariana is concentrating on a subset of the observations that show

an unexpected emission at an altitude of 150 km. She had the good fortune to consult with one of our collaborators from France about similar occultation observations on Mars from the SPICAM instrument.



Aurélie Reberac from CNRS, France (left), REU Student Ariana Giorgi from Lafayette College (center) and Marty Snow (right) are discussing SOLSTICE and SPICAM stellar occultation data.



4,018,783
Hits to the SORCE Website
(Since 4/21/03, As of 05/04/12)

Upcoming Meetings / Talks –

SORCE scientists plan to present papers or attend the following 2012 meetings/workshops:

Intl. Radiation Symposium (IRS2012), Aug. 6-10,
 Berlin, Germany

CALCON Conference, Aug. 27-30, Logan, Utah

SORCE Science Meeting, Sept. 18-19,
 Annapolis, Maryland

SDO EVE Conference, Oct. 30-Nov. 1, Yosemite, Cal.

Intl. AGU Chapman Conference, Ethiopia, Nov. 11-17

Fall AGU Meeting, Dec. 3-7, San Francisco, Cal.