

SNS – **SORCE News Source**

Solar Radiation and Climate Experiment Monthly Newsletter

September/October 2006



4th Annual SORCE Science Meeting Addresses “Earth’s Radiative Energy Budget Related to SORCE”

Solar radiation is the primary energy source for many processes in Earth’s environment and is responsible for driving the atmospheric and oceanic circulations. Since SORCE launched in 2003, it has measured solar irradiance at the top of the Earth’s atmosphere with unprecedented accuracy, precision, and spectral coverage across the ultraviolet, visible, and near-infrared regions of the spectrum. The magnitude and spectral distribution of solar radiation is modified from the SORCE-measured values via scattering and absorption within the atmosphere and at the surface.

Identifying and understanding those processes which perturb

the distribution of solar and terrestrial radiative energy is essential in determining the climate response to changes in concentrations of various gases and aerosol particles from natural and anthropogenic sources, as is discerning their associated feedback mechanisms.

There were four sessions to address the meeting topic:

- 1) SORCE Contributions to Earth’s Radiative Energy Budget
- 2) Radiative Energy Budget
- 3) Radiative Forcings
- 4) Climate Responses and Feedbacks

Approximately 60 scientists attended this year’s 2½-day SORCE Science Meeting, September 20-22. Following are some of the highlights from the meeting. The agenda, abstracts, and most of the presentations are available on the SORCE Meeting website: <http://lasp.colorado.edu/sorce/2006ScienceMeeting/index.htm>.



The SORCE Meeting was held at Rosario Resort on Orcas Island in the San Juan Islands off the Washington state coast.

(Photo by Mark Weber)



^^ Joe Rice (NIST) and George Lawrence (LASP) participated in both the SSI Intercomparison Workshop and the SORCE Science Meeting.

The SORCE Meeting began with a Welcoming Reception on Tuesday evening, Sept. 19. This reception began just as a SORCE Workshop on Solar Spectral Irradiance Intercomparison was concluding. The one-day SSI Workshop had two sessions which focused on: 1) Comparative Study of UV Instruments: Composite UV Solar Cycle Variability, and 2) Comparative Study of VIS/IR Instruments: Progress towards VIS/IR Reference Spectrum. A detailed workshop summary and most presentations can be found on the SORCE website at: <http://lasp.colorado.edu/sorce/workshops.htm>. (“Workshops” is under “News and Events” on the SORCE main web page.)



<< Peter Pilewskie (LASP) and Dominique Crommelynck (Royal Meteorological Institute of Belgium) both gave oral presentations at the SORCE Meeting.

Jim Coakley (Oregon State University) and Don Anderson (NASA Headquarters) attended the Tuesday evening Welcoming Reception.

v v



^^ Tony Slingo (University of Reading) and Brian Cairns (GISS, Columbia University) were both invited speakers at the 2006 SORCE Meeting.

Matt Deland (SSAI, Maryland) presented a poster. v v



Wednesday morning Tom Woods, *SORCE* Principal Investigator, kicked-off the Annual *SORCE* Meeting with an overview of the mission, its current status, and outlook for the future. Greg Kopp, Jerry Harder, Bill McClintock, and Marty Snow also spoke in Session 1, *SORCE Contributions to Earth's Radiative Energy Budget*.

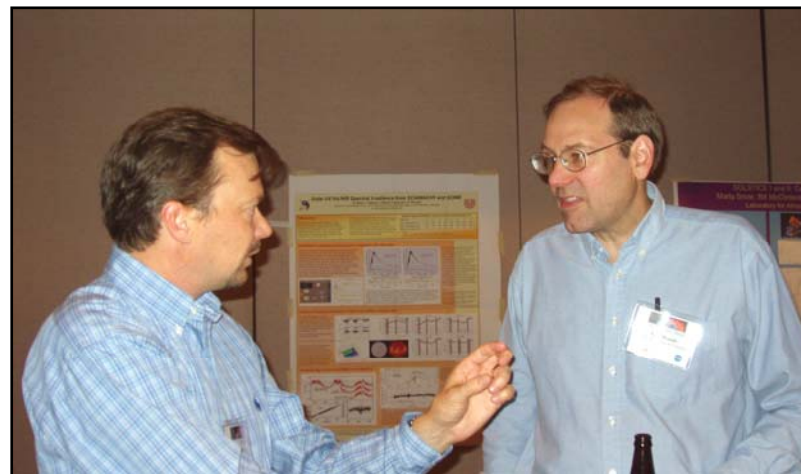
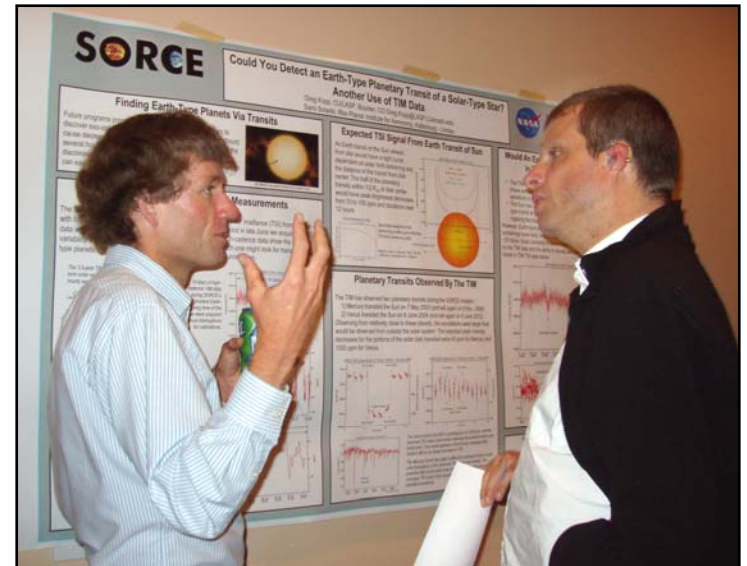


^^ Roger Davies (The University of Auckland, New Zealand) and Judith Lean (NRL, Washington DC).



^^ View of Eastsound Harbor from Rosario Resort. (Photo by Tom Sparr)

>> Greg Kopp (LASP, TIM Instrument Scientist) and Mark Weber (University of Bremen, Germany) discuss Greg's poster entitled, *Could You See an Earth-Type Planetary Transit of a Solar Type Star? Another Use of TIM Data*.



<< Don McMullin (NRL, Washington DC) and Tom Woods (LASP). As *SORCE* PI, Tom provided a *SORCE Mission Overview* to kick-off the meeting, as well as a *Meeting Summary* on Friday to close.

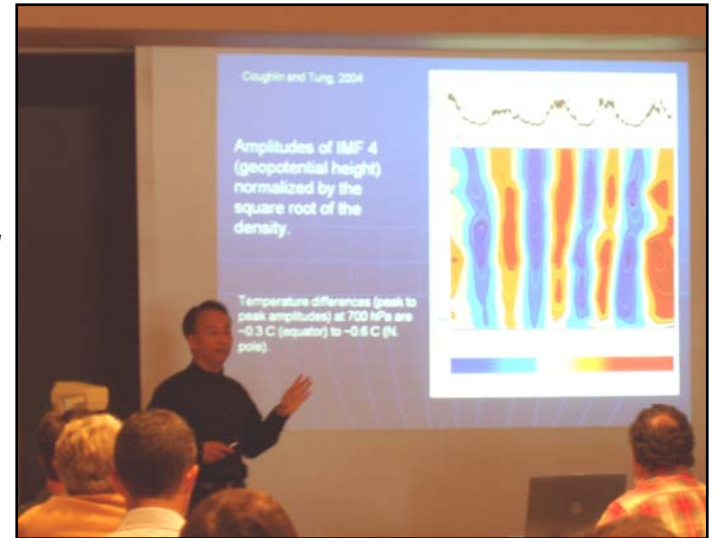
The afternoon session, *Radiative Energy Budget*, included presentations by Norm Loeb, Peter Pilewskie, Ellsworth Dutton, Tom Ackerman, Roger Davies, Steven Dewitte, and Tony Slingo. A special Poster Session/Reception completed the day.

Session 3, *Radiative Forcings – Dedicated to Yoram Kaufman*, began on Thursday morning. Bob Cahalan gave a very personal talk about Yoram, which set the stage for a productive thought-provoking day. Bob discussed five important life lessons he had learned from Yoram. Bob's *Tribute to Yoram Kaufman* is provided on the *SORCE Meeting website*, along with most of the meeting presentations.



^^ Yoram Kaufman was remembered at the *SORCE Meeting* for his passion and commitment to atmospheric research.

>> Speaker KK Tung (University of Washington) began the final session, *Climate Responses and Feedbacks*. KK's talk addressed climate sensitivity.



<< Mark Weber (University of Bremen) and Ray Roble (NCAR). Mark gave a talk on solar variability and its links to ozone-climate interaction, as well as participating in the *SSI Intercomparison Workshop*.



<< Gary Rottman (LASP, Original *SORCE PI*) attended his first *SORCE Science Meeting* since retiring one year ago. In the background are E.J. Zita (The Evergreen College, Washington) and Bob Kurucz (Harvard Smithsonian Center for Astrophysics).



^^ Roger Pielke Sr. (CIRES, University of Colorado), Jose Rial (University of North Carolina), and Judith Lean (NRL) each gave an oral presentation at the *SORCE Meeting*.



In addition to the many oral and poster presentations, attendees enjoyed a few special events. On Thursday evening participants took a ferry to Friday Harbor on San Juan Island for the **SORCE Science Dinner**. Prior to the dinner, people had a little time for optional activities, which included a tour of Luxel Corporation or a local Whale Museum tour.

Gary Rottman entertained attendees at the **SORCE Science Dinner** with a humorous look at Earth/Sun/Science funding connections. v v



^^ Rodney Viereck (NOAA) enjoyed dinner with Yvonne and Forbes Powell from Luxel Corporation. Attendees were offered a tour of Luxel, an industry leader in the development of ultra-thin foils for use as bandpass filters in the EUV and soft X-ray spectrum.

>> Marty Snow (LASP) looked over the whale skeleton on display at the Friday Harbor Whale Museum. During the **SORCE Meeting**, Marty gave a talk on the solar Mg II Index, as well as having two posters. (Photo by Barry Knapp)



^^ Friday Harbor. (Photo by Barry Knapp)



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Claus Froehlich (Physikalisch-Meteorologisches Observatorium Davos, Switzerland) and Jim McGuire (NPOESS).





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To end the 4th Annual SORCE Meeting there was an optional whale watching tour. The afternoon was perfect with an abundance of Sun, Orcas (killer whales) and breath-taking scenery.



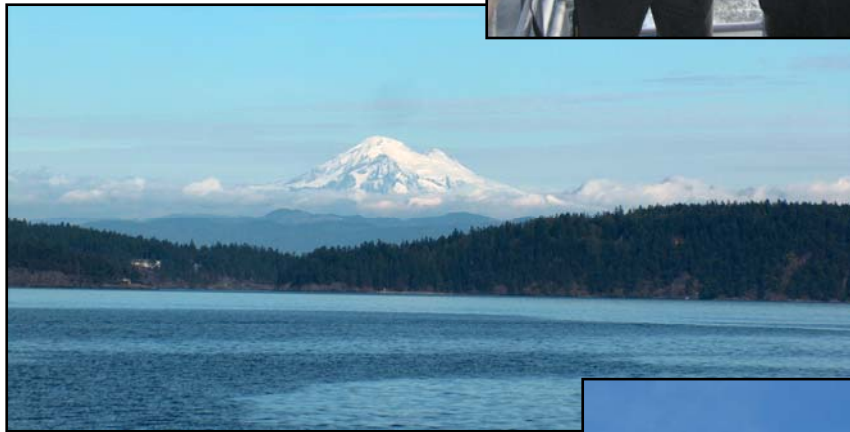
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Clockwise from top left – (1) Don McMullin, Jim Coakley, Bill Collins, (2) Greg Kopp, Claus Froehlich, (3) One of many whale sightings (photo by Marty Snow), (4) Jerry Harder, Vanessa George, (5) Don McMullin, (6) Gerard Thuillier, (7) Mark Weber, (8) Bob Cahalan, Guoyong Wen, (9) View of Mount Baker (photo by Marty Snow).

Mark your calendar: 2007 SORCE Science Meeting

The 2007 SORCE Science Meeting is in the planning stages. We are currently looking at Santa Fe, New Mexico for next September. Details will be posted on the SORCE website as soon as contracts are signed.

The SORCE meeting website is --

<http://lasp.colorado.edu/sorce/meetings.html>.



<< View of the Seattle Space Needle taken from a seaplane going from Rosario Resort to Lake Union in Seattle. (Photo by Barry Knapp)



^^ 2006 SORCE Meeting, Rosario Resort, Orcas Island, WA.

Upcoming Meetings / Talks –

SORCE scientists plan to present papers or attend the following 2006 meetings:

Coimbra Solar Physics Meeting, “The physics of chromospheric plasmas,” Oct. 9-13, Coimbra, Portugal

AGU Fall Meeting, Dec. 11-15, San Francisco, California



***For complete 2006 Meeting information visit –
<http://lasp.colorado.edu/sorce/2006ScienceMeeting/index.htm>.***

***The agenda, abstracts, and presentations are all on-line,
as well as a fun Photo Gallery!***