



SORCE Science Working Group Meeting Steamboat Springs, Colorado July 17-19, 2002

Abstracts / Hotel Reservations Due - June 10
Meeting Registration Due - June 20

The 2002 SORCE Science Working Group Meeting is scheduled for July 17-19, in Steamboat Springs, Colorado at the Steamboat Sheraton Resort and Conference Center. This EOS Solar Radiation and Climate Experiment (SORCE) meeting will focus on the variable Sun and its influence on the terrestrial environment. We encourage the interaction of solar scientists and scientists studying the Earth's atmosphere and climate. Our goal is to define our present understanding of solar/terrestrial variations and possible relationships. The SORCE satellite will launch in November 2002 - the count down begins now in SNS!

TECHNICAL SESSIONS

Session 1. Short-term (minutes to 2 years) solar variations and terrestrial variations.

Solar Phenomena: eruptive events (flares), oscillations, sunspots & active regions, solar rotation, tachocline
Oscillations.

Climate Phenomena: eruptive events (volcanoes), diurnal variations, 27-day solar-driven events, seasonal variations.

Session 2. Medium-term (1-30 years) solar variations and terrestrial variations.

Solar Phenomena: sunspot cycle, magnetic (dynamo) cycle.
Climate Phenomena: QBO, ocean circulation, 11-year
solar-driven events, anthropogenic changes.

Session 3. Long-term (> 30 years) solar variations and terrestrial variations.

Solar Phenomena: cycle-to-cycle variations, Maunder minimum, stellar evolution.
Climate Phenomena: droughts, ice ages, historical
records (tree rings, ice cores, etc.).

There will be a combination of invited and contributed presentations in each session. Depending on the number of abstracts submitted, there are options for oral or poster presentations for the contributed presentations. Abstracts for oral or poster presentations for the three sessions should be submitted by **June 10**. **Meeting Abstract Forms, Registration Forms, and detailed program information are available at:** <http://lasp.colorado.edu/sorce/July02ScienceMeeting.html>.

Countdown to Launch - November 30 (as of May 28, 2002):

187 Days

SORCE Mission Status

Things are moving quickly! Following a 2-day Instrument Module Pre-Ship Review with NASA in late February, SORCE sponsored an Open House and Press Conference to celebrate the completion of years of hard work done at LASP developing and building the four SORCE instruments. It was a time to reflect on the tremendous accomplishments that have been achieved on this project so far. For the Press Conference, local and state publications made a special effort to acknowledge this mission with detailed articles and photos. The press is committed to staying with us through the launch and beyond when we begin gathering and analyzing data.



George Lawrence at the SORCE Open House. The SORCE instruments were temporarily integrated on the MU in the clean room before going to Orbital Sciences Corporation.

A week later three of the four instruments (minus SIM) started their journey to Orbital Sciences Corporation in Dulles, Virginia. Packed in sealed containers free from dust and other contaminants, the instruments were loaded into a 15-foot rental truck for the 1600-mile journey across America. With 5 drivers from LASP (Mike Anfinson, Paul Bay, Rick Kohnert, Tom Sparr, and Pete Withnell) taking shifts, the truck and chase vehicle left early Sunday morning, March 3rd. Only stopping for fuel, food, and 2 overnights (Kansas



City, Kansas and Cleveland, Ohio), the hardy travelers made it to their destination in 3 short days. It would be nice to add an amusing anecdote at this point, but it was a wonderfully uneventful road trip with everyone and everything arriving safely.

The XPS, TIM, and SOLSTICE instruments were carefully unloaded off the truck in their special vibration and shock resistant metal containers. The instrument module was moved into the clean room area at Orbital, carefully unpacked, units powered up, and the integration and testing phase began.

SIM remained at LASP for a few more weeks to refurbish some parts, and then to be calibrated and tested. As soon as SIM arrived at Orbital the first week in April, the instrument alignment process began. The alignment required that pointing of only one of the five instruments be slightly adjusted. Throughout early April, parts issues required that a number of electronic boxes be moved back and forth between Orbital and LASP for rework, but by the end of April everything was back at Orbital and ready for Spacecraft Test. The SORCE MU and Flight Software Team loaded a new flight code in mid-April, and the code verification test passed with flying colors. On April 16th, the SORCE instrument module was successfully mated to the spacecraft bus.



The Instrument Module is mated to the Spacecraft.

At this point, the initial alignments for the SORCE spacecraft and instruments are complete, and the MAESTRO to OASIS conversion continues smoothly. The instruments are currently undergoing Comprehensive Performance Testing (CPT), and will be for the next month.

On May 7th, the SORCE Fault Detection and Correction (FDC) Review team met. They reviewed the fault detection

and correction implemented for the SORCE observatory. The Pre-Environmental Readiness Review (PERR) is tentatively scheduled for May 30. This review will focus on making sure that the spacecraft is ready to survive the actual launch and post launch environment. Different tests include vibration, EMI/EMC measurement, mass properties, pyroshock separation system, thermal vacuum, and acoustics.

There will be five months of additional testing at Orbital before the payload and launch vehicle are moved to the Kennedy Space Center (KSC). Once at KSC, the two will be mated and further testing done. The launch is currently set for November 30.

Once the SORCE satellite is launched from the Pegasus, LASP is preparing to operate and obtain data from the SORCE instruments for a period of 5 years (6 year goal). Within 48 hours of data capture, all science data with the associated instrument and spacecraft engineering data will be processed and available to mission scientists. Within 3 months of data acquisition, the final release of all validated science data including corrections for changes in instrument performance will be provided to the scientific community.

SORCE Science Team News

Congratulations to Greg Kopp who was recently appointed as a SORCE Co-Investigator.

A SORCE Science Working Group Meeting was held at NIST in Gaithersburg, Maryland, February 26 to 28. The meeting's agenda concentrated on the calibration and characterization of the SORCE instruments. SORCE would like to recognize and thank everyone for all the assistance SORCE has received from NIST personnel (Gaithersburg and Boulder) and from Goddard personnel.

Upcoming Meetings

SORCE scientists plan to present papers or attend the following 2002 meetings:

NEWRAD, May 20-24, Gaithersburg, MD May 20-24, 2002

AGU Spring Meeting, May 28-31, Washington, DC May 28-31, 2002

AAS / SPD, June 2-6, Albuquerque, NM

NIST Workshop on Satellite Instrument

Calibration, June 25-28, Gaithersburg, MD

SORCE Science Working Group, July 17-19,

Steamboat Springs, CO

COSPAR, October 10-19, Houston, TX

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To submit information to this newsletter, please contact:

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