



Mission Update –

As we pass four months since launch, SORCE continues to make excellent daily solar observations, with nightly stellar observations for calibration. The spacecraft is performing exceptionally well, and all instruments are operating in normal mode. Scientists and engineers are busy verifying the instrument calibrations and data processing software so the measurements can be certified valid and ready for distribution to the science community. The first results will be delivered by the end of this month.

SORCE Instrument and Data Validation Workshop –

The SORCE Instrument and Data Validation Workshop was held April 28–30 in Boulder to examine and critique the first solar data. Techniques to validate the data were proposed and plans to refine data processing were formulated. Through collaboration on validation campaigns,



attendees hope to ensure that all solar irradiance measurements make the most significant contribution possible towards the universal use of these important data products. The workshop accomplished its intent, in that researchers were able to share their experience and suggest improvements to the SORCE measurement scheme. Bringing this international group together to brainstorm the possibilities was very exciting, and attendees departed on a high note eagerly anticipating validated SORCE results.



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Conveners Greg Kopp and Jerry Harder set the agenda, which stimulated discussion leading to many interesting and lively discussions. Gary Rottman began the workshop with a brief review of the past six months, including the January 25th launch. He presented a broad overview of the current SORCE status, which is very positive. The four LASP instrument scientists (TIM – Greg Kopp, SIM – Jerry Harder, SOLSTICE – Bill McClintock, XPS – Tom Woods) continued with individual instrument overviews. This included early on orbit commissioning activities; a description of both the normal operating modes and special calibration modes; a review of preliminary measurement collection methods, results, and concerns; and a summary of ongoing validation methods and plans.

For intercomparison purposes, outside speakers and representatives from various different space missions proposed data availability and results from their projects. These included ACRIM III, SOHO (DIARAD and PMOD), ERBE, SOLSPEC, SBUV/2, UARS (SUSIM and SOLSTICE), and TIMED. The discussion provided a solid foundation of data compatibility and suitability. Attendees now have a solid foundation to press forward with SORCE data validation.

There was also discussion of various laboratory campaigns that will be extremely valuable in the data validation effort. For example, the aperture intercomparison activity that is underway at NIST will have a major impact on SORCE and the other programs as well.

The meeting then broke into splinter groups based on the different SORCE observations to discuss specific instrument and data validation concepts. One overall goal for the workshop was to define a plan for the SORCE instrument and data validation. With this in mind, people shared their



experiences, advice, opinions, and desires about what they believed the direction for the SORCE instruments and data validation process should be.

Chris Pankratz from LASP gave an overview of the SORCE data production and data access. The SORCE data products produced by the Science Data System located at the LASP Science Operations Center are total solar irradiance (TSI) and spectral solar irradiance (SSI). The various Data Product Levels (0 - 4) were described, along with the availability information. He concluded with a summary of the Goddard Distributed Active Archive Center (DAAC) access sites and other Goddard Earth Sciences DAAC services. SORCE data products will be available to the public at the end of May through the DAAC.

The workshop closed with a summary from each of the SORCE instrument scientists on where they saw the validation process heading and how they hoped to get from here to there. The input and interactions from the attendees was extremely useful. Overall, it was a very positive meeting and brought issues, solutions, and priorities into focus. It was a general consensus that the SORCE measurements will have a major impact on future studies of the Sun and its influence on our environment.

The SORCE team is beginning to plan for a broad and general Science Team Meeting to be held next fall. This meeting is tentatively scheduled for early December and logistical details will be coming out in June, when exact dates and a location are determined. The agenda will be set later in the summer.

SORCE Web Site –

Just a reminder that the SORCE web site is an extremely valuable resource for all of your SORCE questions. Team members are producing a weekly SORCE



Gary Rottman congratulates Judith Lean on her appointment to the National Academy of Sciences. She is a Co-Investigator for the SORCE mission and participated the Instrument and Data Validation Workshop.

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Status Report to document progress during the mission. It summarizes the spacecraft activity, ground contacts, the instrument measurements, spacecraft and instrument planning, and data processing. The SORCE web site is at <http://lasp.colorado.edu/sorce>.

Upcoming Meetings

SORCE scientists plan to present papers or attend the following 2003 meetings:

- AAS, Solar Physics Division, June 16-20, APL, Laurel, Maryland
- SCOSTEP Intl. Solar Cycle Studies Symposium 2003, June 23-28, Tatranska Lomnica, Slovakia
- IUGG Assembly 2003, June 30-July 11, Sapporo, Japan
- SPIE - Optical Science and Technology, Aug. 3-8, San Diego, California
- Radiometric Calibration Conference, Sept. 15-18, Logan, Utah
- SORCE Science Team Meeting, Dec. 2003, location – tbd
- AGU Fall Meeting, Dec. 8-12, San Francisco, California

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