



Review of Solar Storm Period: September 4-17, 2005

By Tom Woods

During the first half of September 2005, a period of increased solar activity occurred that rivaled the number and magnitude of flares produced during the "Halloween" storm in October-November of 2003. The presence of NOAA active region 808 produced a total of 115 flares of GOES C-class or higher, including 26 M-class and 10 X-class flares (see Figure 1 below). The largest of the flares, a GOES X17.0 flare that occurred on September 7, 2005, was the largest flare that has occurred since the X28+ flare on November 4, 2003, and was just smaller than the X17.2 flare that occurred on October 28, 2003. This X17.0 flare was the 4th largest observed X-ray flare since GOES started making flare observations in 1986.

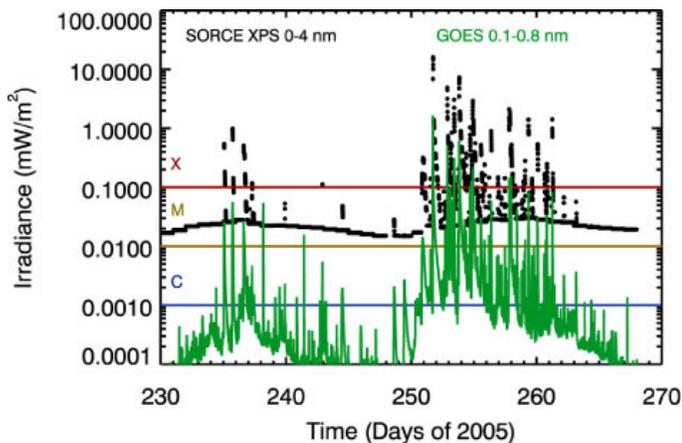


Figure 1. SORCE XPS 0.1-7 nm and GOES XRS 0.1-0.8 nm time series during the September 2005 solar storm period. Note that Sept. 1 is DOY 244.

Many of the flares that occurred during this storm period were observed by SORCE at various stages of the flare evolution. The large X17.0 flare was observed by both the TIM and XPS instruments aboard SORCE as shown in Figures 1 and 2.

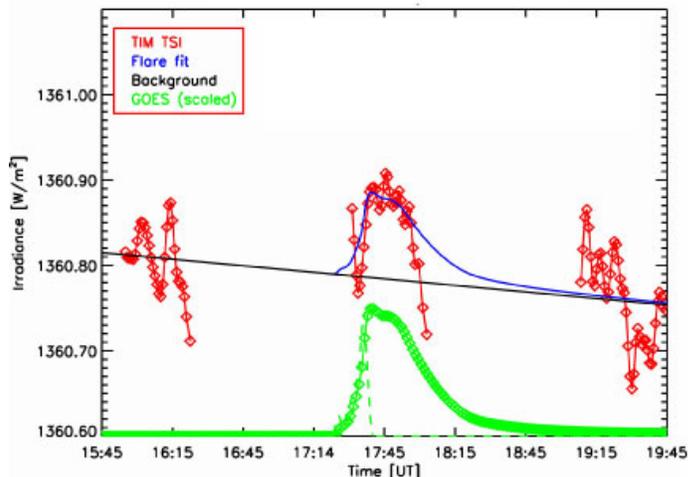


Figure 2. Variation of the total solar irradiance (TSI) during the X17 flare on 7 Sept. 2005.

The irradiance observations of the solar flares during this storm period add to the solar flare data set already obtained by SORCE and are helping researchers to determine the temporal and spectral evolution of the irradiance changes during a solar flare. The knowledge gained from this research has far reaching implications ranging from solar and flare physics to atmospheric applications.

Gary Rottman Retires –

It is official – Gary Rottman has retired from LASP and has stepped down from the role of SORCE Principal Investigator. After over a year of planning, Gary's final day was Friday, Oct. 7, 2005.



Enjoying his Retirement Party, Gary is surrounded by (left to right) Heather Reed Withnell, Gary, Emily CoBabe-Ammann, and Pete Withnell.



Gary started at LASP on June 5, 1972, after earning his Ph.D. in Physics from Johns Hopkins University. His impressive history in space research includes:

- PI, NPOESS TSIS, 2003 to present
- PI, EOS SORCE Mission, 1999 to present
- PI, SOLSTICE/EOS Program, 1989 to 1999
- PI, SOLSTICE/UARS Program, 1980 to 2005
- PI, Solar EUV SPARTAN Program, 1985 to 1991
- PI, Solar EUV Rocket Program, 1977 to 1991
- Co-I, EVE Experiment on SDO, 2002 to present
- Co-I, SEE Experiment on TIMED Mission, 1993 to present
- Co-I, Solar-Mesosphere Explorer, 1975 to 1989
- Co-I, OSO-8, 1975 to 1979
- Sounding Rocket Experiments, 1969 to 1991



Tom Woods wishes Gary and his wife, Ann, the best in their next phase of life.

One of Gary's top priorities over the past year has been to ensure a smooth transition of his responsibilities and programs. He meticulously planned his departure making sure each area was adequately prepared for the future. With disbelief and serious denial, his co-workers took on new responsibilities to ensure that nothing would be dropped in his absence. So far (1 week!), nothing appears to have fallen through the cracks yet, but we are very aware that things are not the same. Of course, Gary's brilliant mind and amazing way of getting things accomplished will be greatly missed and can never be replaced.

As of September 2005, Tom Woods is officially the new SORCE Principal Investigator. His new position will require increased management responsibilities, while still maintaining his current role as the LASP Project Scientist for SORCE Mission. In addition to taking on the SORCE PI responsibilities for Gary, Tom has also accepted Gary's former position as LASP Associate Director of Technical Divisions. Gary will

remain involved with the SORCE Mission as a Co-Investigator.

Gary departed in style with a dinner celebration at the Hotel Boulderado on September 29. Surrounded by family and long-time LASP friends and colleagues, everyone wished him well in his next adventure. As for his future plans, Gary is taking his retirement seriously and plans to travel, raft, fish, and catch-up on research that he has wanted to do for years but has never had time for. He and his wife Ann are building a home just outside of Durango, Colorado, where the beautiful views and peaceful surroundings are perfect for concentrating on combining long-term solar irradiance data sets.

Pre-SORCE Meeting: Special Session for Gary Rottman –



Gary Rottman's Session attendees included (left to right) Dick White, Tom Woods, Phil Judge, Randy Meisner, Jerry Harder, Marty Snow, Larry Puga, George Lawrence, Don Hassler, Chris Pankratz, Rodney Viereck, Rashid Akmaev, George Mount, Gary Rottman, Jim Klimchuk, Erik Richard, Greg Kopp, Lika Guhathakurta, Bill McClintock, Hua Lu, Peter Pilewskie, Skip Reber, Judith Lean, Alexander Ruzmaiken, Dominique Crommelynck, and Kunihiro Kodera.

The third annual SORCE science meeting was held in Durango, Colorado on 14-16 September 2005. On the afternoon before the meeting began, there was a special session in recognition of Gary Rottman's retirement. A few colleagues and his former graduate students shared science and personal experiences in working with Gary, and how they had been influenced by his leadership.

142,618

Hits to the SORCE Website
(Since 4/21/03, As of 9/30/05)

***Upcoming Meetings / Talks –
SORCE scientists plan to present papers or attend
the following 2005-2006 meetings:***

NASA Solar and Space Physics and the Vision for
Space Exploration Conference, October 16-20,
Wintergreen, Virginia
NEWRAD 2005: 9th International Conference on New
Developments and Applications in Optical Radi-
ometry, October 17-19, Davos, Switzerland
AGU Fall Meeting, Dec. 5-9, San Francisco, California
SCOSTEP STP-11, March 6-10, Rio de Janeiro, Brazil



In a more casual moment just prior to the session, Gary catches up with an old friend, George Mount from Washington State University.

Session speakers included:

Tom Woods, LASP, University of Colorado
George Mount, Washington State University
Jim Klimchuk, U.S. Naval Research Laboratory
Don Hassler, Southwest Research Institute
Lika Guhathakurta, NASA Headquarters
Skip Reber, NASA Goddard Space Flight Center

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Gary catches up with two of his former Ph.D. students, Lika Guhathakurta and Jim Klimchuk.

This memorable afternoon concluded with a reception to wish Gary well and kick-off the 3rd Annual SORCE Meeting. A summary of the SORCE Meeting, ***Paleo Connections Between the Sun, Climate, and Culture***, will appear in the October SORCE Newsletter. Many of the presentations from the meeting can be found currently on the SORCE Meeting website:

<http://lasp.colorado.edu/sorce/2005ScienceMeeting/>