

SORCE Weekly Status Report – 8/13/2009 to 8/19/2009

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the week of Thursday, August 13, through Wednesday, August 19, 2009.

2. Spacecraft Summary (submitted by Deb McCabe, August 24)

08/13	08/14	08/15	08/16	08/17	08/18	08/19
225	226	227	228	229	230	231

An XPS calibration was performed 2009/226-12:18:42

There were zero MU read zero event this week.

Table 23 was loaded to the spacecraft to change the UV thresholds from 24/23 V to 23/24 V. This was done to proactively manage battery degradation. Half battery differential monitoring was also disabled.

GCI lockups:			(MINUTES)		
Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2009/230-01:07:32	2009/230-01:36:25	28.88	-34.6	-66.6
solstice_a	2009/231-15:33:02	2009/231-16:27:07	54.08	-20.2	-31.9
solstice_b	2009/225-06:28:57	2009/225-06:40:41	11.73	-14.9	-79.0
solstice_b	2009/225-18:54:27	2009/225-19:37:43	43.27	-25.8	-35.0
sim_a	2009/226-00:09:48	2009/226-00:27:36	17.80	-28.4	-10.6
sim_a	2009/227-01:58:14	2009/227-02:21:37	23.38	-34.9	-60.8
sim_a	2009/227-19:24:12	2009/227-19:38:38	14.43	-23.6	-59.3
sim_a	2009/228-19:53:05	2009/228-19:55:27	2.37	-39.9	-17.0
sim_a	2009/228-23:13:25	2009/228-23:40:59	27.57	-36.7	-38.6
sim_a	2009/230-02:52:00	2009/230-03:11:57	19.95	-21.3	-65.5
sim_a	2009/231-17:08:42	2009/231-17:31:43	23.02	-17.2	-60.5
sim_b	2009/225-20:51:07	2009/225-21:13:26	22.32	-35.5	21.7
sim_b	2009/226-05:09:40	2009/226-05:19:05	9.42	-9.7	-58.5
sim_b	2009/226-19:09:10	2009/226-19:21:55	12.75	-24.4	-47.7
sim_b	2009/228-03:56:52	2009/228-04:15:39	18.78	-24.2	-73.7
sim_b	2009/228-16:27:45	2009/228-16:41:17	13.53	-27.8	-13.3
sim_b	2009/228-18:04:06	2009/228-18:18:24	14.30	-26.5	-40.3
sim_b	2009/228-19:42:23	2009/228-19:55:31	13.13	-28.9	-60.6
sim_b	2009/228-21:32:20	2009/228-22:03:57	31.62	-39.6	-31.2
sim_b	2009/229-16:08:32	2009/229-16:58:05	49.55	39.4	-132.9
sim_b	2009/231-17:12:13	2009/231-17:31:48	19.58	-24.6	-50.0
tim	2009/225-20:26:24	2009/225-20:39:33	13.15	-14.8	-75.2
tim	2009/226-22:34:39	2009/226-23:08:47	34.13	-39.5	-53.2
tim	2009/227-01:57:19	2009/227-02:23:02	25.72	-35.9	-64.1
tim	2009/227-21:06:14	2009/227-21:13:10	6.93	-32.6	-67.1
tim	2009/228-04:04:15	2009/228-04:16:59	12.73	-8.0	-52.7
tim	2009/228-13:29:06	2009/228-13:59:42	30.60	-38.7	100.3
tim	2009/228-19:43:15	2009/228-19:52:51	9.60	-30.5	-57.4
tim	2009/230-01:13:25	2009/230-01:36:15	22.83	-24.7	-45.9
tim	2009/230-16:55:36	2009/230-17:12:17	16.68	-22.0	-43.6
XPS	2009/226-00:05:40			-35.0	-26.0
XPS	2009/227-17:46:14			-21.6	-37.6
XPS	2009/227-17:48:31			-26.3	-30.3
XPS	2009/228-23:16:04			-33.3	-27.9
XPS	2009/229-14:55:56			-5.7	-28.6
XPS	2009/229-18:22:49			-32.5	-38.7
XPS	2009/231-17:14:49			-29.6	-41.2
XPS	2009/231-20:45:55			-36.3	-18.9

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	7	10	2	2	9	8
Total	2073	2640	1431	1707	2299	2150

3. Ground Support / Contact Summary (submitted by D. McCabe)

Fifteen ground station contacts were performed over the past week, including one blind acquisition.

	Captured VCDUS	Recorded VCDUS	%
SC housekeeping	327054	327055	100
IM housekeeping	44825	44826	100
Science	324968	324969	100

4. Instrument Status

4.1. TIM (submitted by Greg Kopp, 19 August)

TIM operations during previous week

- Normal Ops (TSI data w/ Cavity B)
- Cavity A&B, A&C, B&D comparisons

Current work

- Normal operations
 - Version 9 data processing provides daily updated TSI values
- Updated dark model based on latest measurements
 - Updates will be included in next data version

TIM anomalies during previous week

- None

4.2. SIM (submitted by Jerry Harder, August 20)

For days 2009/225 (Aug. 13) to 2009/232 (Aug. 20):

- Calibration Activities:

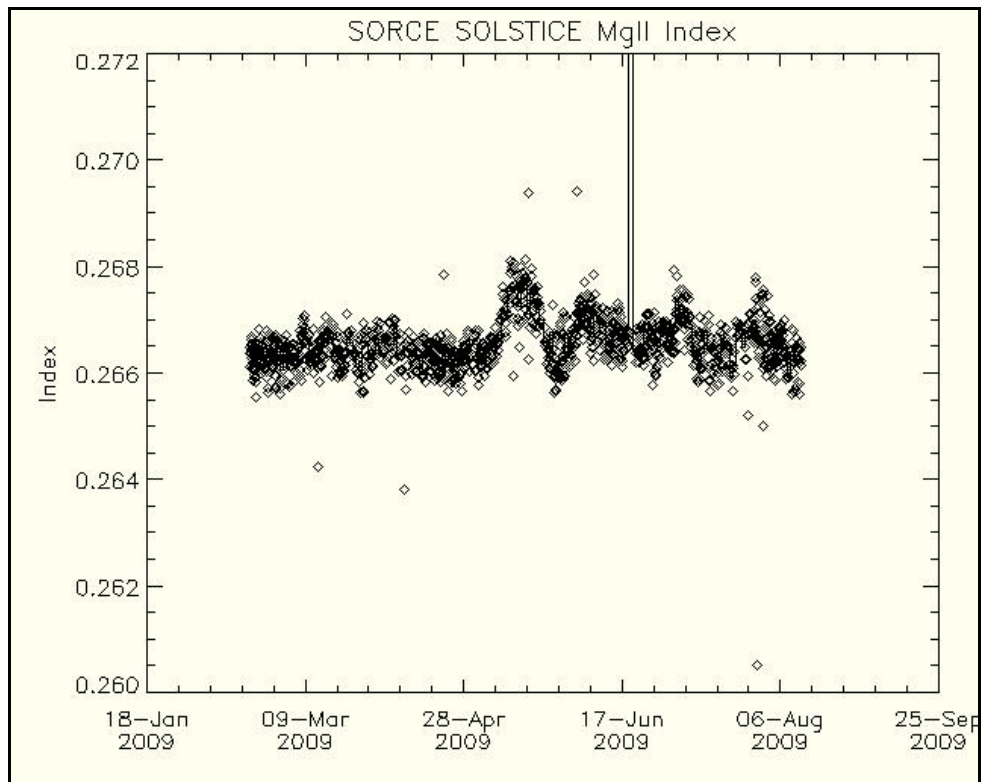
	<u>SIM A</u>	<u>SIM B</u>
-- Prism Calibration A_cal_B	0	0
-- Prism Calibration B_cal_A	0	0
-- CCDDump	2	2
-- Image Dark	1	0
-- Image Light	1	1
-- Servo Gain 20 sec half cycle	2	2
-- Servo Gain 50 sec half cycle	1	1
-- Cruciform Scans	0	0
-- FOV Maps	0	0
- Science Activities:

	<u>SIM A</u>	<u>SIM B</u>
-- ESR Full Scan Segments	0	0
-- ESR Table Scan Segments	7	7
-- 24-minute Scans	14	2
-- 24-minute Scans w/ HRT	0	0
-- IR scans	7	1

4.3. SOLSTICE (submitted by Marty Snow, Aug. 19)

For days 2009/224 (Aug 12) to 2009/231 (Aug. 19):

- SOLSTICE A grating drive errors: None
- SOLSTICE B grating drive errors:
2009/224, 22:36:39
- Data Gaps for SOLSTICE A (date, length in minutes):
2009/224, 20:58:45 46 minutes
2009/230, 01:37:23 30 minutes
- Data Gaps for SOLSTICE B (date, length in minutes):
2009/224, 04:47:19 18 minutes
2009/224, 22:35:48 44 minutes
2009/225, 06:41:28 13 minutes
2009/225, 19:38:30 44 minutes

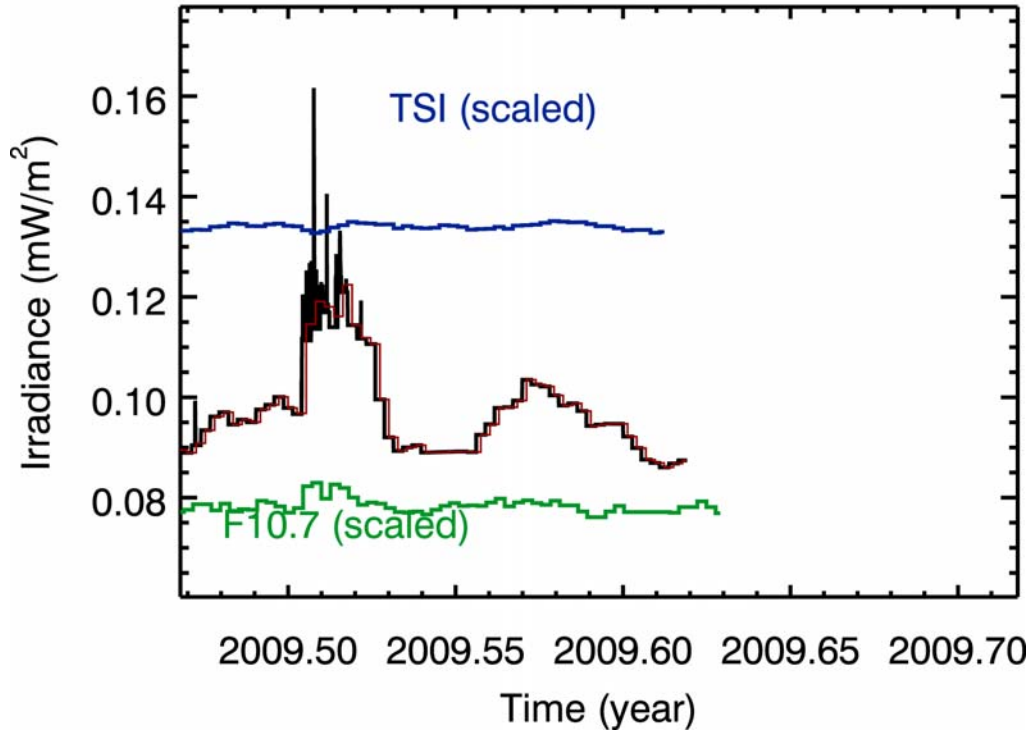


4.4. XPS (submitted by Tom Woods, 20 August)

For days 2009/219 (August 7) to 2009/230 (August 18):

- Number of XPS GCI errors: 10
- SORCE XPS Data Gaps: None
- SORCE XPS Calibration Experiment Duration:
1121.00 sec (19 integrations) at 2009/226 12:20
- Flares: None above class M1.0

SORCE XPS 0.0- 7.0 nm



5. **Planning** (automated report submitted by Jay Kominek, August 20)

Plans completed 13 August – 20 August:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	345	11:48
Stellar Rolls	486	14:22
Ram Avoidance	0	0:00
Solar Alignment	4	1:34
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	15	2:53
GCI Checks	830	0:13
State Vector Upload	7	0:21
MU Checksum	1	0:12

SIM A (Primary)

Solar Activity	Total	Total Time
ESR Mode	7	4:57
ESR Mode with HRT	0	0:00
IR Scan	7	6:38
Quick Scan	14	5:39
Quick Scan HRT	0	0:00
Calibration Activity		
Fixed Wavelength	0	0:00
Servo Gain Calibration	2	1:20
Solar Alignment	0	0:00
Field of View Map	0	0:00
Prism Calibration	0	0:00

Image Light	1	0:06
Image Dark	1	0:05
ESR Full Scan	0	0:00
Dark	28	0:21
Special Activity		
Power Cycle Checks	207	13:48

SIM B (Secondary)

Solar Activity	Total	Total Time
ESR Mode	7	4:57
ESR Mode with HRT	0	0:00
IR Scan	1	1:00
Quick Scan	2	0:48
Quick Scan HRT	0	0:00
Calibration Activity		
Fixed Wavelength	0	0:00
Servo Gain Calibration	2	1:20
Solar Alignment	0	0:00
Field of View Map	0	0:00
Prism Calibration	0	0:00
Image Light	1	0:06
Image Dark	1	0:05
ESR Full Scan	0	0:00
Dark	4	0:03
Special Activity		
Power Cycle Checks	207	13:30

SOLSTICE A (MUV)

Solar Activity	Total	Total Time
Normal Scan	93	66:39
Quick Scan	59	12:37
Mini Quick Scan	56	11:19
Stellar Activity		
Fixed Wavelength	0	0:00
Companion	0	0:00
Stellar Scan	0	0:00
Zero Order Scan	0	0:00
Number Unique Targets	0	0:00
Calibration Activity		
Filter Calibration	1	1:00
Fixed Wavelength	0	0:00
AB Comparison	1	0:52
Mini 64 Scan	7	6:38
MUV Solar Alignment	0	0:00
FUV Solar Alignment	0	0:00
MUV Stellar Alignment	0	0:00
FUV Stellar Alignment	0	0:00
MUV Field of View Map	0	0:00
FUV Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	104	4:28
Step Response Test	1	0:02

SOLSTICE B (FUV)

Solar Activity	Total	Total Time
Normal Scan	94	74:22
Quick Scan	61	9:11
Mini Quick Scan	55	8:02
Stellar Activity		

Fixed Wavelength	608	22:13
Companion	51	2:58
Stellar Scan	16	1:49
Zero Order Scan	394	11:38
Number Unique Targets	46	41:39
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	0:52
Mini 64 Seam	10	6:50
MUV Solar Alignment	0	0:00
FUV Solar Alignment	0	0:00
MUV Stellar Alignment	6	0:55
FUV Stellar Alignment	4	0:36
MUV Field of View Map	0	0:00
FUV Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	104	4:37
Step Response Test	1	0:02

TIM

Solar Activity	Total	Total Time
Normal Solar	101	86:38
Normal Eclipse	119	58:24
Calibration Activity		
Degradation A	1	0:52
Degradation C	0	0:00
Aliveness D	0	0:00
Gain Calibration AB	0	0:00
Gain Calibration CD	0	0:00
Solar Alignment	2	1:41
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	208	8:57

XPS

Calibration Activity		
Calibration	1	0:20

Since December 2005, XPS is activated for a continuous 1-min integration at filter wheel position 6 (0.1-18 nm range) and only has a monthly calibration experiment.

6. Data Processing Summary

TIM (submitted by Doug Lindholm, 20 Aug 2009)

- Status
 - Version 9 routine processing is ongoing.
 - Version 9 TSI data are available on LISIRD, the SORCE web site, and the GES DISC with the new LASP ASCII file format.
 - Dark irradiances have been processed and are being evaluated
- Work in progress
 - Preparing for version 10 reprocessing.
 - Code modifications (generalizations) to support Glory TIM data processing.
- Future Plans
 - Field of view analysis and pointing correction.

SOLSTICE (submitted by Doug Lindholm, 20 Aug 2009)

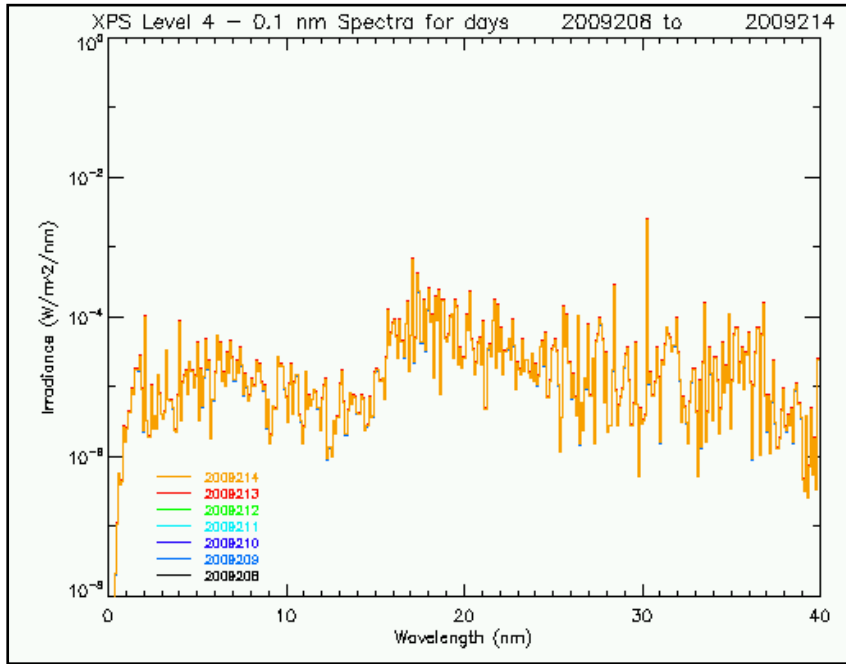
- Status
 - Version 10 reprocessing is underway, applying the new degradation corrections to the version 9 level 2 data.
 - Routine data processing is producing version 9 level 3 FUV and MUV SOLSTICE data products. These are available on the SORCE web site and LISIRD.
 - MgII index is being produced routinely and is available on the SORCE web site.
- Work in Progress
 - Debugging shift in wavelength correction.
 - Evaluating tasks for version 11 reprocessing.
 - Filter experiment analysis to improve dead time correction and filter transmission.
- Future Plans
 - Analysis of instrument misalignment calibration.
 - Analysis of level 3 uncertainties.
 - Improved Jan 2006 slit anomaly correction.
 - Improvement of field of view maps.

SIM (submitted by Doug Lindholm, 31 July 2009)

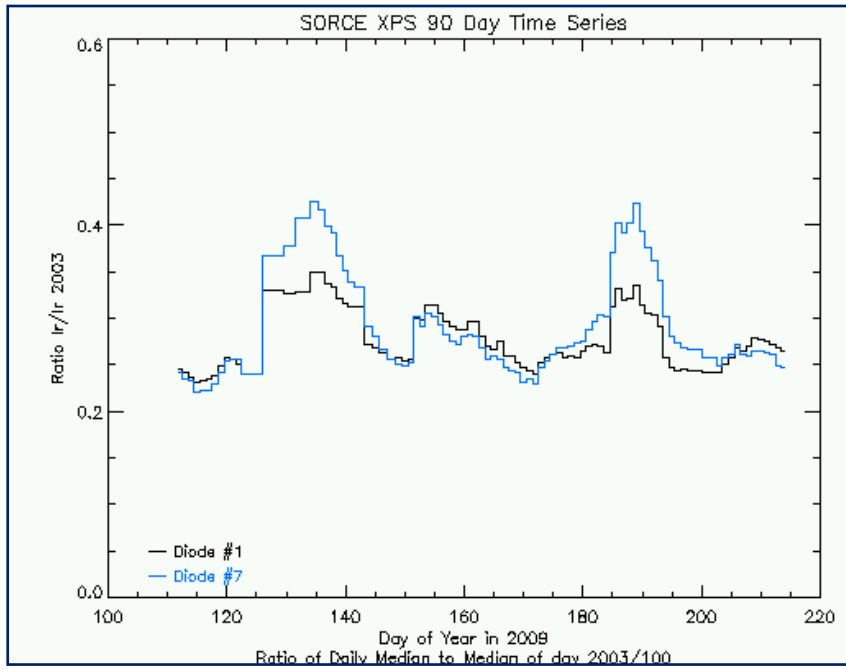
- Status
 - The routine processing of version 17 data is ongoing.
 - The level 3 data products are available on the SORCE web site and LISIRD.
- Work in Progress
 - Calibration to improve the quality of early mission data.
 - Testing of new SIM exposure time algorithm.
- Future Plans
 - Process SIM B.
 - Investigate UV degradation.
 - Consider field of view correction for data affected by the filter wheel anomaly.

XPS (submitted by Brian Templeman, 20 Aug 2009)

- Version 9 XPS data are being routinely reprocessed and released.
- The safe-hold events in January did not appear to affect data quality.
- SORCE XPS Data Processing Statistics for 2009/208 to 2009/214
 - Total level 1b Observations Processed: 21583
 - Percent used in level 2 Processing: 67.9007
 - Total level 3 Observations Processed: 14655



Weekly Image



Diode Time Series