

SORCE Weekly Status Report – 8/6/2009 to 8/12/2009

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the week of Thursday, August 6, through Wednesday, August 12, 2009.

2. Spacecraft Summary (submitted by Deb McCabe, August 14)

08/06	08/07	08/08	08/09	08/10	08/11	08/12
218	219	220	221	222	223	224

There were three MU read zero event this week:

2009/218-15:18:52

2009/222-09:06:18

2009/224-08:56:42

GCI lockups:			(MINUTES)		
Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2009/219-22:15:16	2009/219-22:46:31	31.25	-29.4	-40.0
solstice_a	2009/219-23:54:17	2009/220-00:23:40	29.38	-32.9	-56.9
solstice_a	2009/221-03:35:36	2009/221-03:55:12	19.60	-39.1	-65.8
solstice_a	2009/223-06:00:58	2009/223-06:06:41	5.72	-8.4	-50.5
solstice_a	2009/224-20:12:48	2009/224-20:57:58	45.17	-19.0	-59.4
solstice_b	2009/218-01:01:20	2009/218-01:26:13	24.88	-34.1	-57.8
solstice_b	2009/219-06:27:40	2009/219-06:34:56	7.27	-27.4	-59.2
solstice_b	2009/219-22:12:02	2009/219-22:46:26	34.40	-23.4	-50.4
solstice_b	2009/220-06:44:52	2009/220-06:52:11	7.32	-23.9	-63.9
solstice_b	2009/221-05:23:37	2009/221-05:32:16	8.65	-23.0	-48.1
solstice_b	2009/222-04:01:43	2009/222-04:12:20	10.62	-23.7	-35.0
solstice_b	2009/222-23:08:25	2009/222-23:38:02	29.62	-38.5	-43.8
solstice_b	2009/223-05:55:48	2009/223-06:06:37	10.82	-20.1	-64.9
solstice_b	2009/224-04:29:34	2009/224-04:46:32	16.97	-29.5	-65.9
solstice_b	2009/224-21:52:02	2009/224-22:35:01	42.98	-23.5	-77.6
sim_a	2009/218-07:56:12	2009/218-09:00:15	64.05	-12.7	-52.7
sim_a	2009/219-06:30:15	2009/219-06:33:27	3.20	-22.4	-51.1
sim_a	2009/219-22:14:41	2009/219-22:44:56	30.25	-28.5	-41.7
sim_a	2009/220-20:48:31	2009/220-20:54:33	6.03	-19.5	-41.7
sim_a	2009/220-22:29:15	2009/220-22:31:41	2.43	-26.9	-55.1
sim_a	2009/221-22:47:00	2009/221-23:19:22	32.37	-31.2	-57.1
sim_a	2009/224-04:31:48	2009/224-04:45:02	13.23	-25.1	-58.0
sim_b	2009/219-04:41:26	2009/219-04:56:22	14.93	-39.3	-71.3
sim_b	2009/221-19:20:36	2009/221-19:34:33	13.95	-5.0	-44.8
sim_b	2009/221-22:42:23	2009/221-22:48:49	6.43	-22.5	-72.6
sim_b	2009/222-04:00:38	2009/222-04:10:55	10.28	-25.7	-38.3
sim_b	2009/222-21:41:09	2009/222-21:59:29	18.33	-36.5	24.9
sim_b	2009/223-04:13:48	2009/223-04:28:03	14.25	-29.9	-56.4
sim_b	2009/223-21:44:20	2009/223-22:16:35	32.25	-36.2	-39.6
sim_b	2009/224-01:05:44	2009/224-01:30:51	25.12	-39.9	-56.7
tim	2009/218-00:59:52	2009/218-01:26:08	26.27	-31.8	-63.5
tim	2009/218-09:35:55	2009/218-10:34:49	58.90	-6.5	-70.3
tim	2009/219-20:32:08	2009/219-20:34:52	2.73	-17.4	-34.1
tim	2009/219-22:12:04	2009/219-22:46:21	34.28	-23.4	-50.4
tim	2009/221-21:08:22	2009/221-21:43:38	35.27	-28.4	-38.1
tim	2009/222-00:31:56	2009/222-00:57:57	26.02	-39.6	-49.6
tim	2009/222-07:23:09	2009/222-07:26:33	3.40	-7.1	-63.3
tim	2009/222-21:17:03	2009/222-21:26:01	8.97	-14.4	-69.1
tim	2009/224-20:17:52	2009/224-20:22:42	4.83	-29.0	-43.6
XPS	2009/218-04:39:20			-18.9	-11.2
XPS	2009/218-21:54:05			-17.9	-47.7
XPS	2009/221-00:26:30			-33.8	4.8

XPS	2009/222-18:06:51	-22.8	-8.4
XPS	2009/223-04:18:04	-21.9	-42.7
XPS	2009/223-06:02:45	-4.5	-46.1

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	7	8	5	10	9	6
Total	2066	2630	1429	1705	2290	2142

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

Fifteen ground station contacts were performed over the past week.

	Captured VCDUS	Recorded VCDUS	%
SC housekeeping	326870	326871	100
IM housekeeping	44749	44750	100
Science	319363	319365	100

4. Instrument Status

4.1. TIM (submitted by Greg Kopp, 11 August)

TIM operations during previous week

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

Current work

- Normal operations
 - Version 9 data processing provides daily updated TSI values

TIM anomalies during previous week

- None

4.2. SIM (submitted by Jerry Harder, August 13)

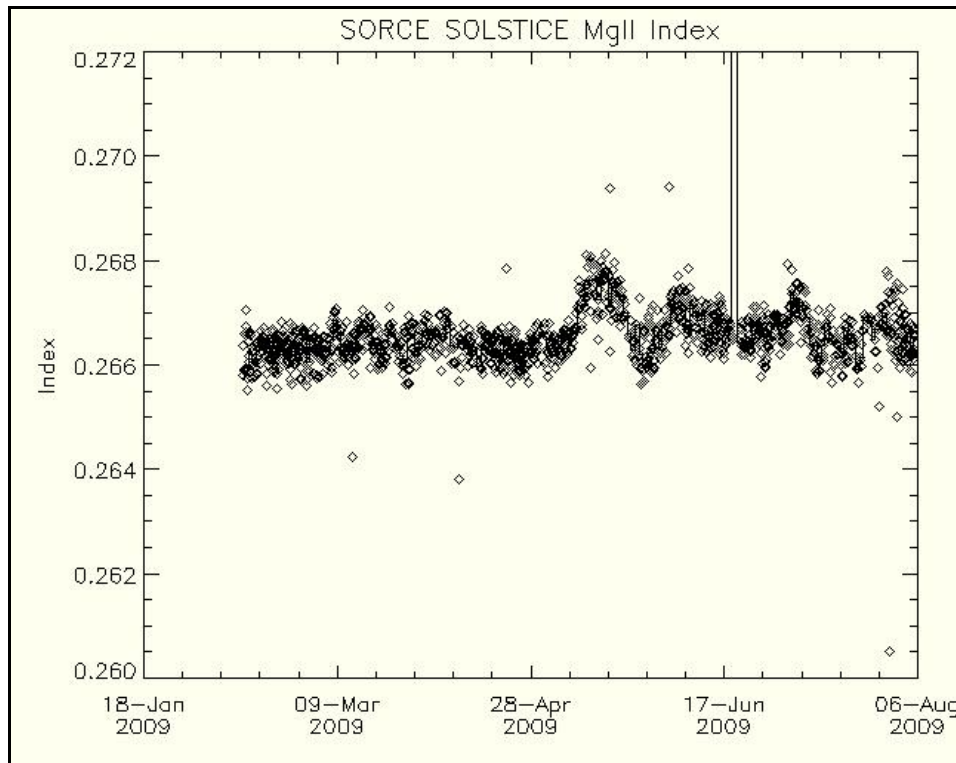
For days 2009/218 (Aug. 6) to 2009/225 (Aug. 13):

• 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	5	0
-- 24-minute Scans	14	0
-- 24-minute Scans w/ HRT	0	0
-- IR scans	7	0

4.3. SOLSTICE (submitted by Marty Snow, Aug. 12)

For days 2009/217 (Aug 5) to 2009/224 (Aug. 12):

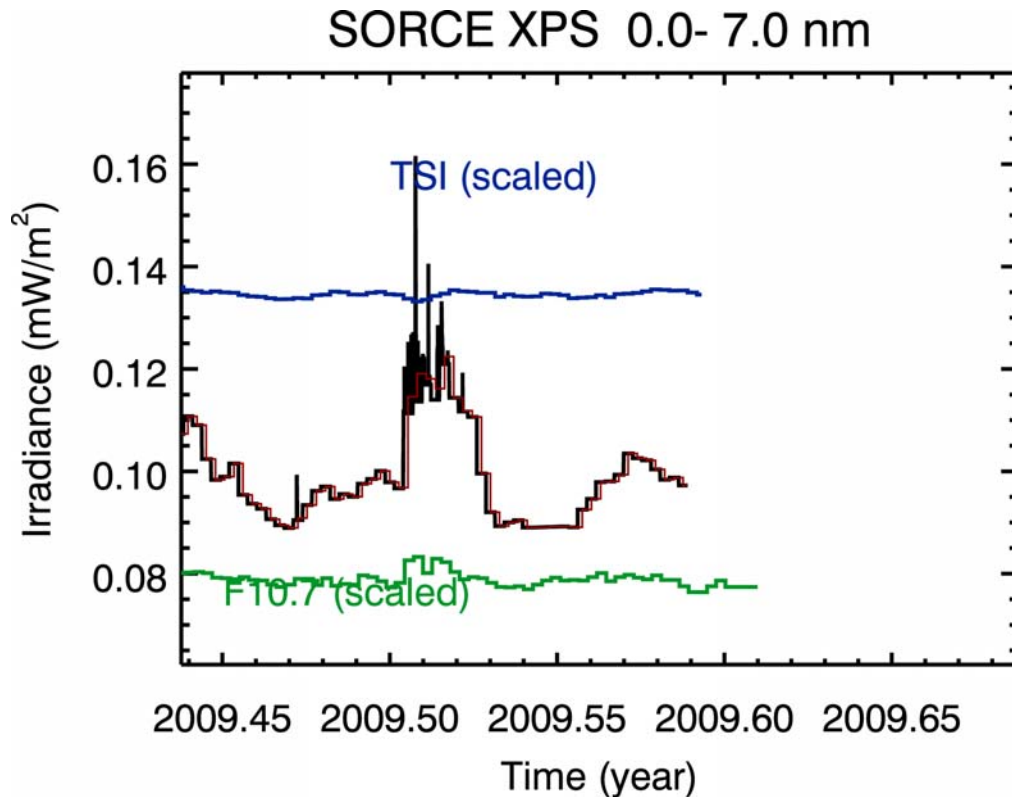
- SOLSTICE A grating drive errors:
2009/223, 06:08:24
- SOLSTICE B grating drive errors:
2009/219, 06:35:56
2009/223, 06:08:37
- Data Gaps for SOLSTICE A (date, length in minutes):
2009/217, 06:01:24 9 minutes
2009/217, 09:15:36 98 minutes
2009/219, 22:47:35 32 minutes
2009/220, 00:24:27 30 minutes
2009/221, 03:55:59 20 minutes
2009/223, 06:07:33 7 minutes
- Data Gaps for SOLSTICE B (date, length in minutes):
2009/217, 06:01:28 8 minutes
2009/218, 01:27:14 26 minutes
2009/219, 06:35:43 8 minutes
2009/219, 22:47:37 36 minutes
2009/220, 06:52:58 8 minutes
2009/221, 05:33:03 9 minutes
2009/222, 04:13:08 11 minutes
2009/222, 23:38:49 30 minutes
2009/223, 06:07:39 12 minutes



4.4. **XPS** (submitted by Tom Woods, 12 August)

For days 2009/212 (July 31) to 2009/223 (August 11):

- Number of XPS GCI errors: 18
- SORCE XPS Data Gaps: None
- SORCE XPS Calibration Experiment Duration: None
- Flares: None above class M1.0



5. **Planning** (automated report submitted by Jay Kominek, August 13)

Plans completed 06 August – 13 August:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	356	11:48
Stellar Rolls	537	16:58
Ram Avoidance	0	0:00
Solar Alignment	4	1:29
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	15	3:23
GCI Checks	828	0:13
State Vector Upload	7	0:21
MU Checksum	1	0:12

SIM A (Primary)

Solar Activity	Total	Total Time
ESR Mode	7	5:16
ESR Mode with HRT	0	0:00
IR Scan	7	7:05
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	0	0:00
ESR Mode with HRT	0	0:00
IR Scan	0	0:00
Quick Scan	0	0:00
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	0	0:00
Special Activity		
Power Cycle Checks	207	13:30

SOLSTICE A (MUV)

Solar Activity	Total	Total Time
Normal Scan	92	71:58
Quick Scan	42	11:31
Mini Quick Scan	37	10:05
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	0:59
Mini 64 Scan	7	7:05
MUV Solar Alignment	2	0:44
FUV Solar Alignment	2	0:44
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	103	4:26
Step Response Test	1	0:02

SOLSTICE B (FUV)

Solar Activity	Total	Total Time
Normal Scan	93	79:40
Quick Scan	43	8:02
Mini Quick Scan	37	6:52
Stellar Activity		
Fixed Wavelength	589	20:47
Companion	45	2:37
Stellar Scan	39	6:16
Zero Order Scan	249	7:23
Number Unique Targets	42	38:32
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	0:59
Mini 64 Seam	7	7:05
MUV Solar Alignment	2	0:44
FUV Solar Alignment	2	0:44
MUV Stellar Alignment	0	0:00
FUV Stellar Alignment	2	0:18
MUV Field of View Map	0	0:00
FUV Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	103	4:34
Step Response Test	1	0:02

TIM

Solar Activity	Total	Total Time
Normal Solar	100	98:38
Normal Eclipse	120	55:24
Calibration Activity		
Degradation A	1	0:52
Degradation C	1	0:52
Aliveness D	1	0:52
Gain Calibration AB	0	0:00
Gain Calibration CD	0	0:00
Solar Alignment	2	1:36
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	207	8:54

XPS

Calibration Activity	Total	Total Time
Calibration	0	0:00

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, 31 July 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.
- Work in progress

- Processing dark irradiances.
- 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, 31 July 2009)

- Status
 - Modifications of software are being evaluated to fix wavelength shift problems in the new, unreleased version 10 data. If a resolution is not found soon, we will reprocess level 3 version 10 data by 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.

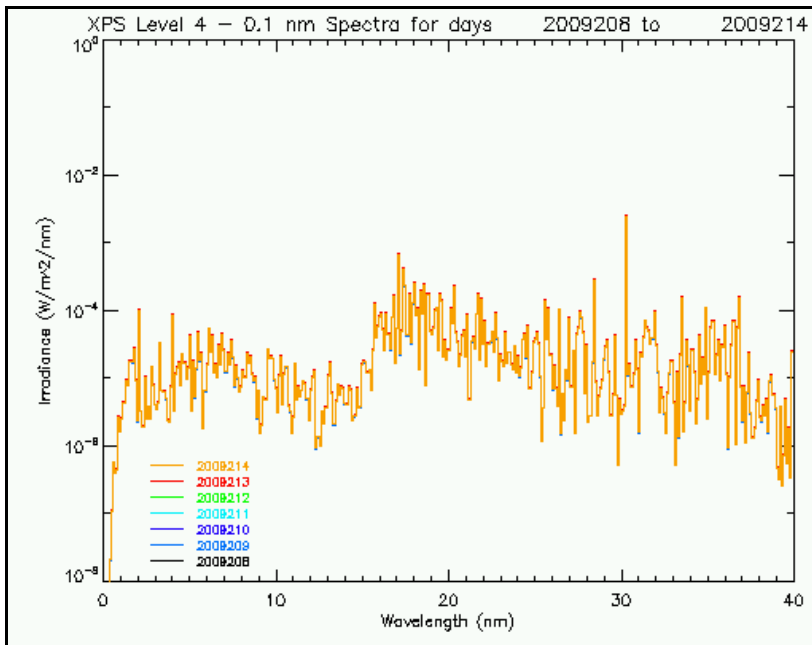
SIM (submitted by Doug Lindholm, 31 July 2009)

- 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.

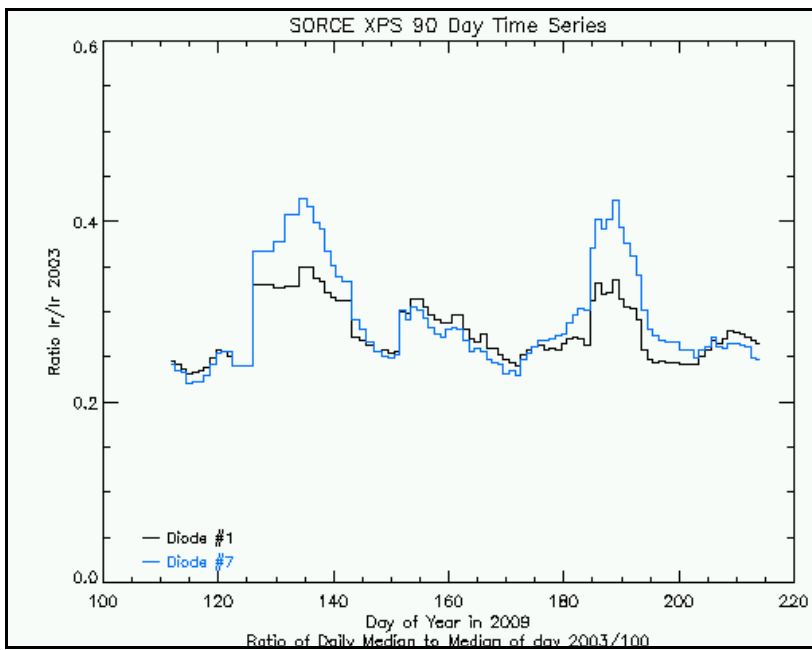
XPS (submitted by Brian Templeman, 06 August 2009)

- 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