

SORCE Weekly Status Report – 5/21/2009 to 5/27/2009

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the week of Thursday, May 21, through Wednesday, May 27, 2009.

2. Spacecraft Summary (submitted by Deb McCabe, 28 May)

05/21	05/22	05/23	05/24	05/25	05/26	05/27
141	142	143	144	145	146	147

There was a SOLSTICE B grating drive error that was recovered by TMON/RTS response on DOY 141 at 13:28:07

GCI lockups:			(MINUTES)		
Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2009/142-14:14:20	2009/142-15:21:23	67.05	-20.1	-25.1
solstice_a	2009/143-09:15:10	2009/143-10:47:20	92.17	-34.2	-55.7
solstice_a	2009/144-07:47:26	2009/144-07:50:19	2.88	-23.2	-63.1
solstice_a	2009/144-12:57:05	2009/144-14:18:54	81.82	-38.0	-61.2
solstice_a	2009/146-13:36:22	2009/146-14:53:05	76.72	-25.5	-50.1
solstice_a	2009/147-05:20:33	2009/147-05:27:15	6.70	-25.0	-42.1
solstice_b	2009/141-15:35:22	2009/141-16:40:51	65.48	-21.4	-41.2
solstice_b	2009/143-14:27:37	2009/143-15:38:43	71.10	-24.4	-41.8
solstice_b	2009/145-04:41:10	2009/145-04:53:09	11.98	-6.2	-45.5
solstice_b	2009/145-13:19:46	2009/145-14:35:59	76.22	-27.8	-43.8
solstice_b	2009/146-15:16:44	2009/146-16:30:08	73.40	-18.6	-64.7
sim_a	2009/142-08:59:56	2009/142-10:01:01	61.08	-34.3	-44.9
sim_a	2009/143-12:43:13	2009/143-13:31:45	48.53	-36.5	-44.2
sim_a	2009/144-04:37:34	2009/144-05:42:45	65.18	-31.1	0.4
sim_a	2009/144-18:03:22	2009/144-18:39:32	36.17	-10.8	-83.7
sim_a	2009/145-04:45:36	2009/145-04:51:38	6.03	-16.3	-33.7
sim_a	2009/146-05:06:06	2009/146-05:08:42	2.60	-26.8	-28.7
sim_a	2009/146-13:36:38	2009/146-14:21:18	44.67	-24.8	-49.1
sim_a	2009/147-07:03:06	2009/147-08:09:26	66.33	-34.4	-47.3
sim_b	2009/142-07:16:03	2009/142-08:24:00	67.95	-22.2	-43.8
sim_b	2009/142-12:22:21	2009/142-13:15:19	52.97	-40.0	-57.6
sim_b	2009/142-14:06:33	2009/142-14:52:25	45.87	-34.3	-51.6
sim_b	2009/143-14:22:46	2009/143-15:08:55	46.15	-33.2	-59.1
sim_b	2009/146-05:00:32	2009/146-05:08:47	8.25	-15.2	-45.4
sim_b	2009/146-06:50:47	2009/146-07:52:58	62.18	-38.1	-23.4
sim_b	2009/146-13:34:52	2009/146-14:21:23	46.52	-28.3	-55.1
sim_b	2009/146-15:13:03	2009/146-15:58:29	45.43	-26.2	-76.0
sim_b	2009/147-06:58:24	2009/147-07:02:53	4.48	-26.6	-64.2
tim	2009/141-07:00:18	2009/141-08:04:46	64.47	-21.7	-34.1
tim	2009/141-10:18:50	2009/141-11:18:59	60.15	-30.2	-68.9
tim	2009/141-17:12:52	2009/141-17:47:25	34.55	-20.4	-64.5
tim	2009/142-08:55:29	2009/142-09:58:27	62.97	-27.1	-60.6
tim	2009/144-06:05:50	2009/144-06:13:00	7.17	-13.4	-51.5
tim	2009/145-11:40:42	2009/145-12:25:05	44.38	-31.3	-26.0
tim	2009/146-08:23:49	2009/146-09:27:25	63.60	-33.3	-64.5
tim	2009/146-15:17:45	2009/146-15:55:49	38.07	-16.4	-61.9
XPS	2009/144-04:31:36			-19.4	-19.2
XPS	2009/145-06:23:47			-19.1	-54.7
XPS	2009/147-10:32:29			-34.3	-29.6

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	8	9	6	5	8	3
Total	1986	2538	1367	1631	2201	2052

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

Sixteen ground station contacts were performed over the past week.

	Captured VCDUS	Recorded VCDUS	%
SC housekeeping	333186	333187	100
IM housekeeping	45033	45034	100
Science	327535	327536	100

4. Instrument Status

4.1. TIM (submitted by Greg Kopp, 29 May)

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

TIM anomalies during previous week

- None

4.2. SIM (submitted by Jerry Harder, May 28)

For days 2009/141 (May 21) to 2009/148 (May 28):

- 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	6
-- 24-minute Scans	14	2
-- 24-minute Scans w/ HRT	0	0
-- IR scans	7	1
- Additional Activities:

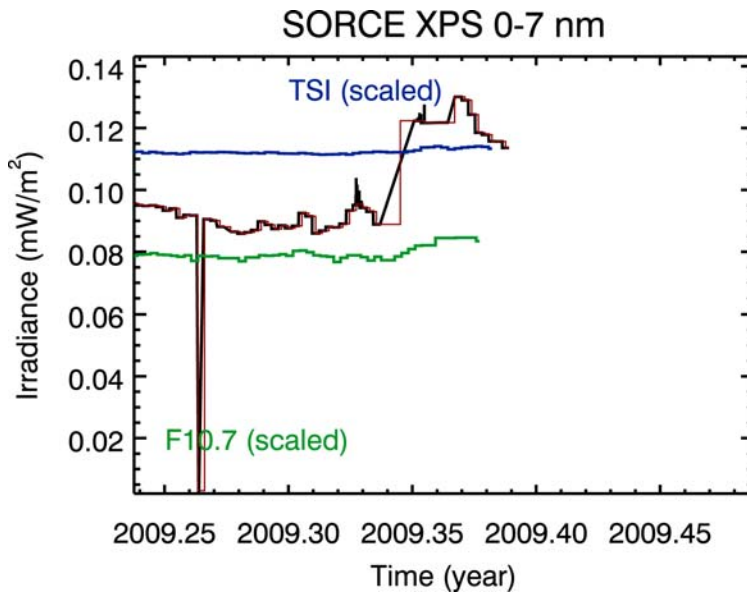
The LISIRD web site (http://lasp.colorado.edu/lisird/data_access.htm) now correctly reflects the Version 17 data processing products that appear on the SORCE web page (http://lasp.colorado.edu/cgi-bin/ion-p?page=input_data_timeseries.ion).

4.3. SOLSTICE

4.4. XPS (submitted by Tom Woods, 27 May)

For days 2009/135 (15 May) to 2009/146 (26 May):

- Number of XPS GCI errors: 15
- 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, May 28)

Plans completed 21 May – 28 May:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	398	12:41
Stellar Rolls	395	13:53
Ram Avoidance	0	0:00
Solar Alignment	4	1:26
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	16	3:27
GCI Checks	838	0:13
State Vector Upload	7	0:21
MU Checksum	1	0:12

SIM A (Primary)

Solar Activity	Total	Total Time
ESR Mode	7	5:31
ESR Mode with HRT	0	0:00
IR Scan	7	7:17
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	209	13:56

SIM B (Secondary)

Solar Activity	Total	Total Time
ESR Mode	6	5:24
ESR Mode with HRT	0	0:00
IR Scan	1	1:03
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	209	13:38

SOLSTICE A (MUV)

Solar Activity	Total	Total Time
Normal Scan	93	75:28
Quick Scan	41	11:34
Mini Quick Scan	35	10:04
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	1:01
Fixed Wavelength	0	0:00
AB Comparison	1	1:01
Mini 64 Scan	7	7:16
MUV Solar Alignment	2	0:43
FUV Solar Alignment	2	0:42
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	83:12
Quick Scan	43	8:04
Mini Quick Scan	37	6:54
Stellar Activity		
Fixed Wavelength	415	19:27
Companion	81	4:43
Stellar Scan	12	1:18
Zero Order Scan	408	11:54
Number Unique Targets	36	37:42
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	1:01
Mini 64 Seam	7	7:16
MUV Solar Alignment	2	0:43
FUV Solar Alignment	2	0:42
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	4:37
Step Response Test	1	0:02

TIM

Solar Activity	Total	Total Time
Normal Solar	103	108:58
Normal Eclipse	135	53:07
Calibration Activity		
Degradation A	1	1:02
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	1:31
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	208	8:57

XPS

Calibration Activity		
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, 30 April 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
 - 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, 14 May 2009)

- Status
 - Modifications of software are being made to fix problems in the version 10 data. Reprocessing will begin soon.
 - 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
 - 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, 14 May 2009)

- Status
 - Version 17 data products have been evaluated and released.
 - The routine processing of version 17 data will resume soon.
 - 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, 9 April 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 2009/088 to 2009/094

Total level 1b Observations Processed:	27026
Percent used in level 2 Processing:	53.8259
Total level 3 Observations Processed:	14547