

SORCE Weekly Status Report – 4/09/2009 to 4/22/2009

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the weeks of Thursday, April 9, through Wednesday, April 22, 2009. Since the SORCE scientists are attending an ESA Solar EUV-IR Workshop and the EGU Conference during this time, this report will combine two weeks of information. The dates when items were submitted are given.

2a. Spacecraft Summary (submitted by Deb McCabe, 16 April)

04/09	04/10	04/11	04/12	04/13	04/14	04/15
099	100	101	102	103	104	105

There were four MU Read 0 events reported during the past week.

2009/099-04:12:09
 2009/099-18:15:55
 2009/100-13:23:55
 2009/101-15:33:28
 2009/102-11:23:18

GCI lockups:

(MINUTES)

Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2009/099-04:33:43	2009/099-06:11:26	97.72	-39.8	-16.9
solstice_a	2009/103-02:11:34	2009/103-02:28:27	16.88	-32.6	-51.8
solstice_a	2009/104-07:42:54	2009/104-09:14:23	91.48	-19.0	-36.9
solstice_a	2009/105-06:17:29	2009/105-07:54:36	97.12	-26.7	-34.2
solstice_b	2009/099-23:41:14	2009/099-23:59:49	18.58	-19.3	-19.1
solstice_b	2009/101-01:37:55	2009/101-01:54:01	16.10	-27.9	-41.0
sim_a	2009/100-02:56:09	2009/100-03:12:35	16.43	-21.4	-65.7
sim_a	2009/100-09:56:21	2009/100-10:48:09	51.80	-16.5	-41.2
sim_a	2009/103-00:32:29	2009/103-00:49:42	17.22	-29.3	-34.3
sim_a	2009/103-09:02:48	2009/103-10:03:12	60.40	-22.4	-55.9
sim_a	2009/104-23:08:35	2009/104-23:17:59	9.40	10.5	-80.9
sim_a	2009/105-07:53:23	2009/105-09:00:58	67.58	-28.9	-63.0
sim_b	2009/100-08:11:42	2009/100-09:11:05	59.38	-31.6	-41.0
sim_b	2009/101-01:38:01	2009/101-01:52:35	14.57	-28.2	-40.4
sim_b	2009/102-10:25:33	2009/102-11:23:01	57.47	-20.2	-67.0
sim_b	2009/103-00:32:50	2009/103-00:49:47	16.95	-29.9	-33.1
sim_b	2009/104-02:27:26	2009/104-02:44:15	16.82	-33.2	-60.7
sim_b	2009/104-07:35:14	2009/104-08:43:35	68.35	-33.4	-62.6
tim	2009/099-11:14:21	2009/099-12:05:27	51.10	-24.2	-66.2
tim	2009/100-09:51:07	2009/100-10:45:35	54.47	-27.2	-57.0
tim	2009/100-23:57:42	2009/101-00:16:47	19.08	-21.6	-26.4
tim	2009/102-10:30:58	2009/102-11:20:21	49.38	-7.8	-51.7
tim	2009/103-00:31:34	2009/103-00:51:07	19.55	-27.5	-37.8
tim	2009/103-07:26:57	2009/103-08:23:27	56.50	-19.9	-27.6
tim	2009/104-07:37:29	2009/104-08:40:55	63.43	-29.6	-54.0
tim	2009/104-23:19:14	2009/104-23:48:38	29.40	-14.6	-52.7
XPS	2009/099-04:25:40			-35.3	-52.3
XPS	2009/099-09:35:07			-28.3	-48.5
XPS	2009/100-06:29:56			-37.7	-35.5
XPS	2009/100-08:13:57			-27.8	-33.4
XPS	2009/101-01:32:16			-16.1	-58.5
XPS	2009/102-00:16:03			-27.4	-27.5
XPS	2009/102-03:34:31			-34.7	-60.7
XPS	2009/104-09:16:24			-26.3	-72.5
XPS	2009/105-01:05:16			-32.4	-48.6
XPS	2009/105-02:48:51			-39.4	-45.6

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	6	6	4	2	8	10
Total	1936	2482	1337	1591	2159	1984

2b. Spacecraft Summary (submitted by Deb McCabe, 23 April)

04/16	04/17	04/18	04/19	04/20	04/21	04/22
106	107	108	109	110	111	112

The SIM instruments were not performing science operations for approximately seven hours beginning at DOY 107-12:00. This is due to an operations error where the incorrect load was sent to the spacecraft. DOY 106 products were loaded to both SIM A and SIM B instead of the products for DOY 107. When the DOY 106 sequence went to call DOY 107 load, there was nothing to start. The correct products were loaded and started when the error was detected. SIM B science operations were not affected as there were no experiments planned during this period.

There was one MU Read 0 events reported during the past week.
2009/111-19:42:08

GCI lockups:		(MINUTES)			
Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2009/106-01:28:53	2009/106-01:43:24	14.52	-39.9	-24.1
solstice_a	2009/106-04:55:09	2009/106-04:57:43	2.57	-28.0	-22.4
solstice_a	2009/108-22:46:40	2009/108-23:21:27	34.78	-20.8	-61.6
solstice_a	2009/110-23:22:14	2009/110-23:56:08	33.90	-29.9	-67.3
solstice_a	2009/112-03:08:25	2009/112-03:27:40	19.25	-36.2	-55.9
solstice_b	2009/106-04:49:17	2009/106-04:57:38	8.35	-36.8	-44.6
solstice_b	2009/106-23:49:13	2009/107-00:23:37	34.40	-12.6	-76.0
solstice_b	2009/109-04:47:03	2009/109-05:50:00	62.95	36.9	116.1
solstice_b	2009/109-19:42:26	2009/109-20:24:27	42.02	-8.0	-38.6
solstice_b	2009/110-19:58:24	2009/110-20:41:45	43.35	-9.3	-47.5
solstice_b	2009/112-01:37:12	2009/112-01:50:26	13.23	-27.1	-9.3
sim_a	2009/106-01:18:11	2009/106-01:41:49	23.63	-28.2	-67.8
sim_a	2009/106-20:37:26	2009/106-21:07:47	30.35	-17.6	-20.3
sim_a	2009/107-01:37:04	2009/107-01:59:16	22.20	-33.8	-65.8
sim_a	2009/107-10:32:17	2009/107-11:12:55	40.63	36.1	-14.6
sim_a	2009/107-22:37:34	2009/107-23:02:24	24.83	-32.5	-30.2
sim_a	2009/108-05:26:21	2009/108-05:31:04	4.72	-27.5	-42.3
sim_a	2009/109-04:02:04	2009/109-04:11:20	9.27	-32.2	-37.8
sim_a	2009/109-07:26:02	2009/109-08:33:05	67.05	-12.2	-55.8
sim_a	2009/110-20:09:54	2009/110-20:40:15	30.35	-32.7	-11.7
sim_b	2009/107-06:47:26	2009/107-06:50:51	3.42	-28.6	-58.6
sim_b	2009/108-03:39:01	2009/108-03:53:59	14.97	-39.7	-59.2
sim_b	2009/109-03:56:50	2009/109-04:11:25	14.58	-38.4	-58.9
sim_b	2009/109-07:22:36	2009/109-07:25:44	3.13	-20.0	-65.7
sim_b	2009/109-21:32:18	2009/109-22:00:11	27.88	-34.0	-22.5
sim_b	2009/109-23:04:51	2009/109-23:07:27	2.60	-26.4	-63.4
sim_b	2009/110-02:36:41	2009/110-02:51:39	14.97	-37.1	-38.4
tim	2009/106-22:15:57	2009/106-22:46:22	30.42	-21.2	-40.2
tim	2009/107-03:22:46	2009/107-03:37:51	15.08	-39.9	-52.9
tim	2009/107-05:07:23	2009/107-05:15:01	7.63	-33.5	-44.7
tim	2009/108-05:28:56	2009/108-05:32:29	3.55	-22.6	-34.2
tim	2009/108-07:06:29	2009/108-07:09:38	3.15	-21.4	-57.2
tim	2009/108-23:26:45	2009/109-00:24:46	58.02	1.6	83.1
tim	2009/109-05:37:58	2009/109-05:49:55	11.95	-33.9	-66.7
tim	2009/110-21:44:03	2009/110-22:18:49	34.77	-27.8	-46.6
tim	2009/111-20:15:36	2009/111-20:24:31	8.92	-13.4	-53.2
XPS	2009/106-01:23:48			-36.7	-46.2

XPS	2009/106-06:36:13	-20.1	-34.5
XPS	2009/108-00:12:56	-29.7	-61.1
XPS	2009/108-05:28:36	-23.2	-35.3
XPS	2009/109-03:54:57	-39.5	-67.1
XPS	2009/110-09:10:25	-29.2	-115.7
XPS	2009/110-19:58:36	-9.7	-47.0
XPS	2009/110-23:26:54	-36.6	-49.4

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	9	7	5	6	9	8
Total	1945	2489	1342	1598	2169	1994

3a. Ground Support / Contact Summary (submitted by D. McCabe, 16 April 2009)

Fourteen ground station contacts were performed over the past week.

	Captured VCDUS	Recorded VCDUS	%
SC housekeeping	316828	316829	100
IM housekeeping	43062	43063	100
Science	310587	310588	100

3b. Ground Support / Contact Summary (submitted by D. McCabe, 23 April 2009)

Sixteen ground station contacts were performed over the past week. Extra contacts were performed due to a planned outage at Wallops Ground Station that necessitated an extra transition to the Santiago Ground Station then back to Wallops.

	Captured VCDUS	Recorded VCDUS	%
SC housekeeping	316647	316648	100
IM housekeeping	43327	43328	100
Science	313236	313237	100

4. Instrument Status

4.1. TIM

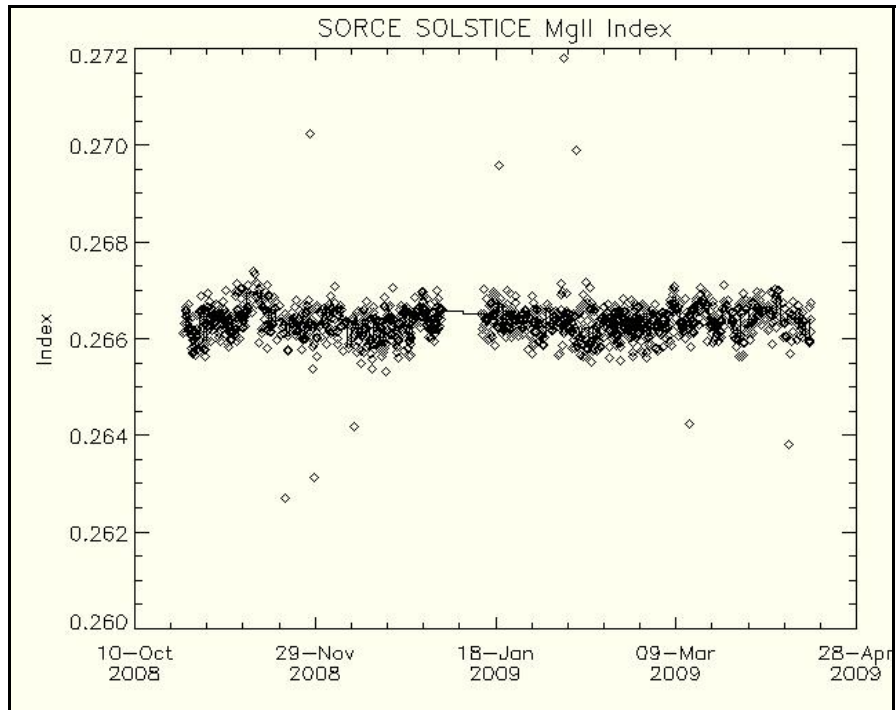
4.2. SIM

4.3. SOLSTICE (submitted by Marty Snow, 22 April)

For days 2009/105 (April 15) to 2009/112 (April 22):

- SOLSTICE A grating drive errors:
2009/108, 23:23:05

- SOLSTICE B grating drive errors:
2009/105, 20:53:31
- Data Gaps for SOLSTICE A (date, length in minutes):
2009/105, 07:55:23 98 minutes
2009/106, 01:44:11 15 minutes
2009/106, 04:58:36 3 minutes
2009/108, 23:22:14 36 minutes
2009/110, 23:56:55 35 minutes
- Data Gaps for SOLSTICE B (date, length in minutes):
2009/105, 20:52:36 28 minutes
2009/106, 04:58:40 9 minutes
2009/107, 00:24:25 35 minutes
2009/109, 05:51:03 64 minutes
2009/109, 20:25:14 43 minutes
2009/110, 20:42:32 44 minutes



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

For days 2009/105 (15 April) to 2009/116 (26 April):

- Number of XPS GCI errors: 19
- SORCE XPS Data Gaps: None
- SORCE XPS Calibration Experiment Duration: None
1121.00 sec (19 integrations) at 2009/116 5:7
- Flares: No GOES data for checking on flare magnitude

5a. **Planning** (automated report submitted by Jay Kominek, 16 April)

Plans completed 09 April – 16 April:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	452	13:10
Stellar Rolls	540	17:11
Ram Avoidance	0	0:00
Solar Alignment	4	1:13
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	14	3:12
GCI Checks	827	0:13
State Vector Upload	7	0:21
MU Checksum	1	0:12

SIM A (Primary)

Solar Activity	Total	Total Time
ESR Mode	7	4:51
ESR Mode with HRT	0	0:00
IR Scan	7	7:10
Quick Scan	14	5:39
Quick Scan HRT	1	0:24
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	30	0:22
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	1	0:24
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	2	0:01
Special Activity		
Power Cycle Checks	207	13:30

SOLSTICE A (MUV)

Solar Activity	Total	Total Time
Normal Scan	92	73:09
Quick Scan	41	11:37
Mini Quick Scan	36	10:11
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	7:10
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	103	4:26
Step Response Test	1	0:02

SOLSTICE B (FUV)

Solar Activity	Total	Total Time
Normal Scan	95	81:14
Quick Scan	42	8:00
Mini Quick Scan	37	6:52
Stellar Activity		
Fixed Wavelength	543	18:54
Companion	36	2:05
Stellar Scan	50	7:22
Zero Order Scan	233	6:50
Number Unique Targets	46	36:22
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	1:01
Mini 64 Seam	7	7:10
MUV Solar Alignment	0	0:00
FUV Solar Alignment	0	0:00
MUV Stellar Alignment	5	0:45
FUV Stellar Alignment	1	0:09
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	102	106:31
Normal Eclipse	112	55:38
Calibration Activity		
Degradation A	1	1:03
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	1:17
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	207	8:54

XPS

Calibration Activity

Calibration	0	0:00
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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.

5b. Planning (automated report submitted by Jay Kominek, 23 April)

Plans completed 16 April – 23 April:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	434	12:47
Stellar Rolls	453	16:27
Ram Avoidance	0	0:00
Solar Alignment	4	1:28
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	16	3:22
GCI Checks	832	0:13
State Vector Upload	7	0:21
MU Checksum	1	0:12

SIM A (Primary)

Solar Activity	Total	Total Time
ESR Mode	7	5:20
ESR Mode with HRT	0	0:00
IR Scan	7	7:09
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	208	13:52

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	208	13:34

SOLSTICE A (MUV)

Solar Activity	Total	Total Time
Normal Scan	93	74:01
Quick Scan	42	11:35
Mini Quick Scan	35	10:02
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	0:58
Mini 64 Scan	7	7:09
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	104	4:28
Step Response Test	1	0:02

SOLSTICE B (FUV)

Solar Activity	Total	Total Time
Normal Scan	94	81:44
Quick Scan	44	8:06
Mini Quick Scan	36	6:51
Stellar Activity		
Fixed Wavelength	557	21:34
Companion	51	2:58
Stellar Scan	16	1:36
Zero Order Scan	287	8:25
Number Unique Targets	42	36:20
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	0:58
Mini 64 Seam	7	7:09
MUV Solar Alignment	2	0:44
FUV Solar Alignment	2	0:44

MUV Stellar Alignment	3	0:27
FUV Stellar Alignment	6	0:55
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	105:01
Normal Eclipse	118	54:51
Calibration Activity		
Degradation A	1	1:02
Degradation C	1	1:02
Aliveness D	1	1:02
Gain Calibration AB	0	0:00
Gain Calibration CD	0	0:00
Solar Alignment	2	1:34
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, 2 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, 2 April 2009)

- Status
 - Version 10 reprocessing is underway.
 - 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, 2 April 2009)

- Status
 - Evaluating version 17 reprocessing with improved corrections after the May 2007 OBC anomaly.
 - The routine release of version 16 data products after the January 2009 safe-hold events has been put on hold. The data require a wavelength shift correction.
 - The level 3 data products are available on the SORCE web site and LISIRD.
- Work in Progress
 - Development of a wavelength shift correction.
 - Calibration to improve the quality of early mission data.
 - Testing of new SIM exposure time algorithm.
 - Reviewing the phase detected data number server
- Future Plans
 - Processing of SIM B.

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.