SORCE Weekly Status Report – 4/30/2009 to 5/06/2009

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the week of Thursday, April 30, through Wednesday, May 6, 2009.

2. Spacecraft Summary (submitted by Deb McCabe, 07 May)

04/30	05/01	05/02	05/03	05/04	05/05	05/05
120	121	122	123	124	125	126

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

2009/120-03:30:45
2009/122-17:26:12

GCI lockups:

Instrument	Lockup Time	Response Time	(MINUTES) Duration	Lat	Lon
solstice_a	2009/120-14:33:39	2009/120-15:25:02	51.38	-23.3	-10.2
solstice_a	2009/122-00:55:11	2009/122-01:24:10	28.98	-31.1	-71.9
solstice_a	2009/122-18:19:17	2009/122-19:12:16	52.98	-24.9	-78.0
solstice_a	2009/125-00:12:02	2009/125-00:36:33	24.52	-16.0	-54.4
solstice_a	2009/126-14:33:11	2009/126-15:26:57	53.77	-30.9	-34.6
solstice_b	2009/122-01:01:13	2009/122-01:24:05	22.87	-19.4	-52.3
solstice_b	2009/123-17:00:30	2009/123-17:51:34	51.07	-30.1	-54.4
solstice_b	2009/124-15:36:11	2009/124-16:30:58	54.78	-25.0	-49.3
solstice_b	2009/126-12:54:14	2009/126-13:49:45	55.52	-27.4	-16.8
solstice_b	2009/126-14:28:33	2009/126-15:26:51	58.30	-22.1	-50.0
sim_a	2009/120-16:06:00	2009/120-16:29:38	23.63	-13.1	-48.5
sim_a	2009/120-21:13:39	2009/120-21:21:00	7.35	-39.5	-63.5
sim_a	2009/120-23:08:12	2009/120-23:28:59	20.78	-20.6	-18.9
sim_a	2009/121-23:19:05	2009/121-23:45:29	26.40	-29.6	-44.2
sim_a	2009/124-19:01:37	2009/124-19:14:44	13.12	-39.6	-54.1
sim_b	2009/120-00:24:02	2009/120-00:49:35	25.55	-31.6	-52.3
sim_b	2009/120-16:09:54	2009/120-16:29:43	19.82	-21.5	-37.6
sim_b	2009/122-20:13:20	2009/122-20:17:45	4.42	-38.6	-33.1
sim_b	2009/122-23:31:41	2009/123-00:02:04	30.38	-34.0	-64.7
sim_b	2009/123-15:17:00	2009/123-15:43:22	26.37	-17.2	-50.1
sim_b	2009/124-12:26:24	2009/124-12:46:14	19.83	-32.5	14.6
sim_b	2009/126-14:28:58	2009/126-14:58:09	29.18	-23.1	-48.5
tim	2009/120-16:09:46	2009/120-16:27:03	17.28	-21.2	-38.1
tim	2009/120-17:50:50	2009/120-18:04:11	13.35	-29.2	-49.4
tim	2009/124-22:23:25	2009/124-22:26:27	3.03	-36.7	-69.6
tim	2009/126-12:45:48	2009/126-13:18:19	32.52	-9.5	-41.2
XPS	2009/120-02:03:36			-27.3	-68.3
XPS	2009/120-03:46:21			-15.1	-75.2
XPS	2009/121-00:43:30			-24.1	-48.8
XPS	2009/122-14:57:43			-8.3	-50.4
XPS	2009/123-16:59:12			-27.7	-59.0
XPS	2009/123-17:15:47			-37.7	10.8
XPS	2009/124-15:38:21			-29.1	-42.1
XPS	2009/125-17:33:23			-33.2	-68.0
XPS	2009/126-14:26:31			-17.8	-55.9
XPS	2009/126-17:54:09			-39.0	-56.0

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	5	7	5	5	4	10
Total	1956	2503	1352	1613	2179	2019

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	316550	316551	100
IM housekeeping	44469	44470	100
Science	314752	314754	100

4. Instrument Status

4.1. TIM (submitted by Greg Kopp, 08 May)

TIM operations during previous week
- Normal Ops (TSI data w/ Cavity B)
- Cavity A&B comparisons
- Gain AB Calibration

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 8)

For days 2009/120 (April 30) to 2009/126 (May 6):

- Calibration Activities:

	SIM A	SIM B
-- Prism Calibration A_cal_B	25	25
-- Prism Calibration B_cal_A	25	25
-- 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	2	2
-- FOV Maps	0	0

- Science Activities:

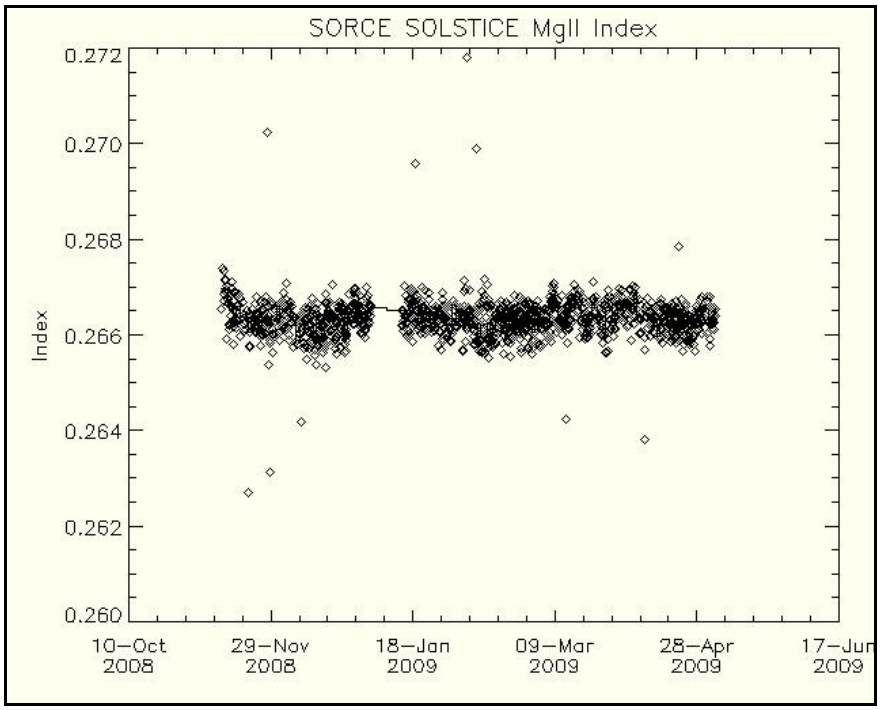
	SIM A	SIM B
-- ESR Full Scan Segments	0	0
-- ESR Table Scan Segments	7	0
-- 24-minute Scans	12	0
-- 24-minute Scans w/ HRT	0	0
-- IR scans	6	0

- Additonal Activities:

4.3. SOLSTICE (submitted by Marty Snow, May 8)

For days 2009/124 (May 4) to 2009/131 (May 11):

- SOLSTICE A grating drive errors: None
- SOLSTICE B grating drive errors:
  2009/124, 16:32:36
- Data Gaps for SOLSTICE A (date, length in minutes):
  2009/125, 00:37:20 25 minutes
  2009/126, 15:27:49 55 minutes
  2009/130, 11:43:06 63 minutes
  2009/130, 14:57:22 61 minutes
- Data Gaps for SOLSTICE B (date, length in minutes):
  2009/124, 16:31:45 56 minutes
  2009/126, 13:50:32 56 minutes
  2009/126, 15:27:54 59 minutes
  2009/127, 12:29:58 61 minutes
  2009/128, 14:23:43 65 minutes
  2009/130, 16:34:25 52 minutes



4.4. XPS (submitted by Tom Woods, 08 May)

For days 2009/119 (29 April) to 2009/130 (10 May):

- Number of XPS GCI errors: 21
- SORCE XPS Data Gaps: None
- SORCE XPS Calibration Experiment Duration: None
- Flares: No GOES data for checking on flare magnitude

5. Planning (automated report submitted by Jay Kominek, May 7)

Plans completed 30 April – 07 May:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	394	13:21
Stellar Rolls	452	14:32
Ram Avoidance	0	0:00
Solar Alignment	4	1:11
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	14	2:35
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	5:13
ESR Mode with HRT	0	0:00
IR Scan	7	7:10
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	2	1:15
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	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	2	1:15
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	209	13:38

SOLSTICE A (MUV)

Solar Activity	Total	Total Time
Normal Scan	93	74:24
Quick Scan	41	11:40
Mini Quick Scan	36	10:13
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	1:02
Fixed Wavelength	0	0:00
AB Comparison	1	1:01
Mini 64 Scan	7	7:11
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	96	82:34
Quick Scan	42	8:00
Mini Quick Scan	35	6:48
Stellar Activity		
Fixed Wavelength	438	17:09
Companion	111	6:28
Stellar Scan	24	3:19
Zero Order Scan	370	10:49
Number Unique Targets	43	38:16
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	1:01
Mini 64 Seam	7	7:11
MUV Solar Alignment	0	0:00
FUV Solar Alignment	0	0:00
MUV Stellar Alignment	2	0:18
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	99	100:29
Normal Eclipse	102	53:51
Calibration Activity		
Degradation A	1	1:05
Degradation C	1	1:05
Aliveness D	0	0:00

Gain Calibration AB	1	6:00
Gain Calibration CD	0	0:00
Solar Alignment	2	1:15
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	202	8:41

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, 30 April 2009)

- Status
  - Version 10 reprocessing is being evaluated.
  - 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, 30 April 2009)

- Status
  - Evaluating version 17 reprocessing.
  - 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.
- 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