

SORCE Weekly Status Report – 5/28/2009 to 6/3/2009

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the week of Thursday, May 28, through Wednesday, June 3, 2009.

2. Spacecraft Summary (submitted by Deb McCabe, June 8)

05/28	05/29	05/30	05/31	06/01	06/02	06/03
148	149	150	151	152	153	154

There was an XPS calibration at 2009/150-18:07:27

GCI lockups:			(MINUTES)		
Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2009/148-02:12:12	2009/148-02:29:55	17.72	-3.2	-30.6
solstice_a	2009/148-10:45:42	2009/148-12:12:39	86.95	-37.0	-49.1
solstice_a	2009/150-11:20:46	2009/150-12:46:18	85.53	-31.4	-53.6
solstice_a	2009/151-11:44:03	2009/151-13:03:06	79.05	-15.6	-38.9
solstice_a	2009/151-20:04:11	2009/151-21:08:43	64.53	19.3	-122.2
solstice_a	2009/152-11:59:40	2009/152-13:19:54	80.23	-15.0	-48.6
solstice_a	2009/153-08:54:23	2009/153-10:22:29	88.10	-28.8	-30.2
solstice_b	2009/148-12:27:32	2009/148-13:49:41	82.15	-30.3	-55.2
solstice_b	2009/149-02:29:57	2009/149-02:46:40	16.72	-8.9	-34.7
solstice_b	2009/149-11:03:16	2009/149-12:29:24	86.13	-34.5	-51.1
solstice_b	2009/151-08:10:19	2009/151-09:48:47	98.47	-39.6	-64.9
solstice_b	2009/151-11:41:33	2009/151-13:03:01	81.47	-21.0	-46.1
solstice_b	2009/152-03:25:39	2009/152-03:37:05	11.43	-29.0	-37.8
solstice_b	2009/154-00:57:13	2009/154-02:33:37	96.40	-38.6	53.4
sim_a	2009/149-11:08:30	2009/149-11:56:50	48.33	-25.5	-32.0
sim_a	2009/150-11:19:59	2009/150-12:13:31	53.53	-32.4	-56.1
sim_a	2009/151-13:23:59	2009/151-14:07:20	43.35	-8.7	-55.5
sim_a	2009/154-05:38:31	2009/154-05:46:22	7.85	-36.4	-64.4
sim_b	2009/148-12:34:36	2009/148-13:17:25	42.82	-16.2	-33.1
sim_b	2009/148-14:08:40	2009/148-14:54:31	45.85	-22.4	-66.2
sim_b	2009/149-05:48:07	2009/149-05:59:31	11.40	-18.3	-72.7
sim_b	2009/149-14:29:02	2009/149-15:11:09	42.12	-11.5	-62.6
sim_b	2009/150-11:25:43	2009/150-12:13:35	47.87	-21.9	-37.0
sim_b	2009/151-01:42:25	2009/151-02:47:37	65.20	-39.7	34.5
sim_b	2009/153-03:36:54	2009/153-03:52:29	15.58	-20.6	-61.9
sim_b	2009/153-05:18:20	2009/153-05:29:36	11.27	-29.4	-72.1
sim_b	2009/154-03:54:00	2009/154-04:09:19	15.32	-24.2	-67.0
tim	2009/150-11:24:34	2009/150-12:10:55	46.35	-24.3	-40.6
tim	2009/151-03:00:29	2009/151-03:20:13	19.73	-8.1	-56.5
tim	2009/151-09:52:41	2009/151-10:50:31	57.83	-38.9	-65.4
tim	2009/152-11:55:05	2009/152-12:44:25	49.33	-25.0	-62.4
tim	2009/153-03:38:40	2009/153-03:53:49	15.15	-24.4	-56.3
XPS	2009/148-07:15:48			-30.4	-67.4
XPS	2009/148-07:17:33			-33.1	-61.3
XPS	2009/150-08:08:21			-28.4	1.9
XPS	2009/151-03:25:09			-38.5	36.2
XPS	2009/154-10:50:52			-20.8	-52.3

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	4	9	7	7	5	5
Total	1990	2547	1374	1638	2206	2057

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	323236	323237	100
IM housekeeping	44911	44912	100
Science	324765	324766	100

4. Instrument Status

4.1. TIM (submitted by Greg Kopp, June 4)

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, June 4)

For days 2009/148 (May 28) to 2009/155 (June 4):

- Calibration Activities:

	<u>SIM A</u>	<u>SIM B</u>
-- 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:

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

4.3. SOLSTICE

4.4. XPS

5. **Planning** (automated report submitted by Jay Kominek, June 4)

Plans completed 28 May – 04 June:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	348	12:17
Stellar Rolls	430	14:15
Ram Avoidance	0	0:00
Solar Alignment	4	1:32
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	14	3:15
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	5:11
ESR Mode with HRT	0	0:00
IR Scan	7	6:31
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	1:40
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	1:40
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	66:21
Quick Scan	63	12:48
Mini Quick Scan	56	11:15
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	0:52
Fixed Wavelength	0	0:00
AB Comparison	1	0:52
Mini 64 Scan	7	6:38
MUV Solar Alignment	2	0:46
FUV Solar Alignment	2	0:46
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	73:55
Quick Scan	64	9:19
Mini Quick Scan	57	8:05
Stellar Activity		
Fixed Wavelength	551	21:47
Companion	66	3:51
Stellar Scan	28	3:53
Zero Order Scan	349	10:11
Number Unique Targets	41	41:00
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	0:52
Mini 64 Seam	10	6:49
MUV Solar Alignment	2	0:46
FUV Solar Alignment	2	0:46
MUV Stellar Alignment	4	0:36
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	98	82:37
Normal Eclipse	106	55:39
Calibration Activity		
Degradation A	1	0:51
Degradation C	1	0:51
Aliveness D	0	0:00

Gain Calibration AB	1	6:00
Gain Calibration CD	0	0:00
Solar Alignment	2	1:40
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	202	8:41

XPS

Calibration Activity

Calibration	1	0:20
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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.

6. Data Processing Summary

TIM (submitted by Doug Lindholm, 4 June 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, 4 June 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.

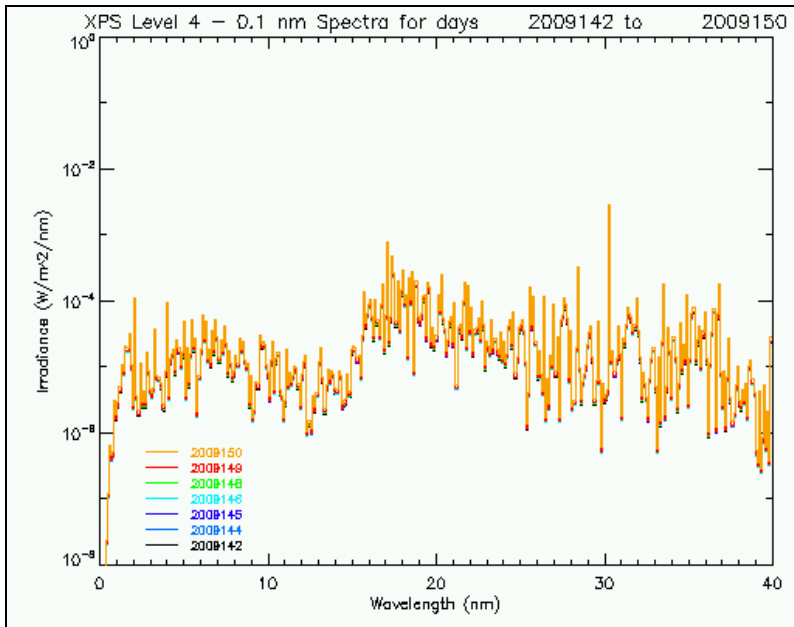
SIM (submitted by Doug Lindholm, 4 June 2009)

- 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.

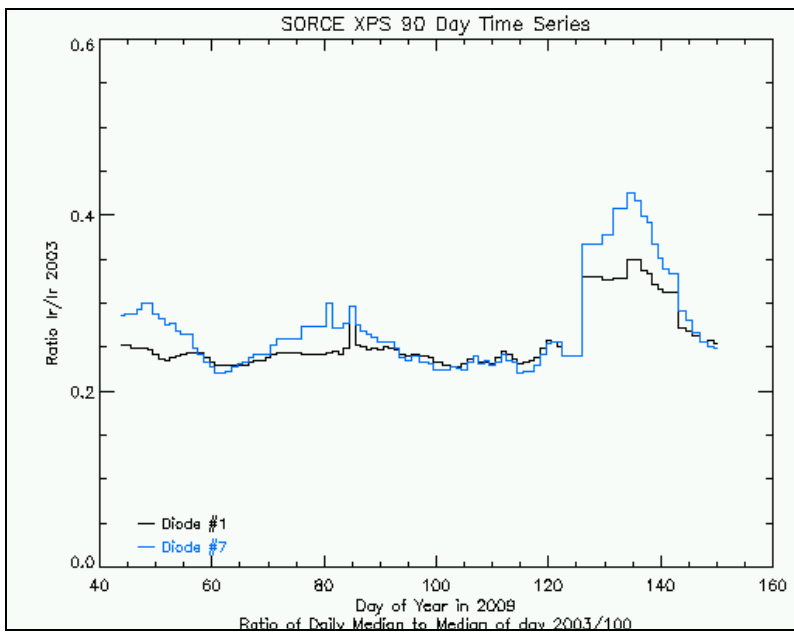
XPS (submitted by Brian Templeman, 5 June 2009)

- 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 2009/142 to 2009/150**

Total level 1b Observations Processed: 27028
Percent used in level 2 Processing: 54.9208
Total level 3 Observations Processed: 14844



Weekly image



Diode Time Series