

SORCE Weekly Status Report – 9/10/2009 to 9/16/2009

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the week of Thursday, September 10, through Wednesday, September 16, 2009.

2. Spacecraft Summary (submitted by Deb McCabe, September 20)

09/10	09/11	09/12	09/13	09/14	09/15	09/16
253	254	255	256	257	258	259

An XPS calibration was performed 2009/257-22:48:46.

There was one MU read zero event this week.

2009/259-01:39:53

GCI lockups:			(MINUTES)		
Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2009/254-06:54:32	2009/254-08:31:46	97.23	-21.6	-47.4
solstice_a	2009/255-02:29:31	2009/255-03:57:22	87.85	-38.3	55.7
solstice_a	2009/256-12:38:18	2009/256-13:56:59	78.68	-35.0	-52.9
solstice_a	2009/256-14:20:04	2009/256-15:34:06	74.03	-27.6	-60.5
solstice_b	2009/255-14:05:56	2009/255-15:17:10	71.23	-25.2	-46.1
solstice_b	2009/259-11:54:07	2009/259-13:09:57	75.83	-23.6	-35.8
sim_a	2009/254-13:50:50	2009/254-14:28:21	37.52	-24.4	-34.4
sim_a	2009/255-10:33:53	2009/255-11:30:43	56.83	-37.6	-71.2
sim_a	2009/256-07:27:04	2009/256-08:33:05	66.02	-25.1	-63.0
sim_a	2009/256-16:01:21	2009/256-16:38:36	37.25	-18.8	-71.8
sim_a	2009/257-13:00:48	2009/257-13:40:59	40.18	-22.7	-38.3
sim_a	2009/258-09:57:01	2009/258-10:43:22	46.35	-32.2	-16.9
sim_b	2009/254-15:30:06	2009/254-16:05:33	35.45	-20.0	-52.6
sim_b	2009/255-08:54:29	2009/255-09:53:43	59.23	-35.0	-56.1
sim_b	2009/255-14:08:42	2009/255-14:45:01	36.32	-19.3	-37.4
sim_b	2009/256-12:45:38	2009/256-13:24:29	38.85	-22.2	-27.2
sim_b	2009/256-14:18:10	2009/256-15:01:35	43.42	-30.8	-66.9
sim_b	2009/258-13:13:48	2009/258-13:57:40	43.87	-27.4	-56.4
sim_b	2009/258-20:09:38	2009/258-20:26:06	16.47	32.5	-74.7
sim_b	2009/259-02:54:26	2009/259-03:25:52	31.43	34.5	-102.1
sim_b	2009/259-06:42:41	2009/259-07:45:53	63.20	-35.8	-45.9
tim	2009/254-05:18:04	2009/254-06:20:15	62.18	-22.7	-21.2
tim	2009/255-13:59:45	2009/255-14:42:21	42.60	-35.4	-68.4
tim	2009/258-04:40:30	2009/258-04:47:38	7.13	-18.3	-44.3
tim	2009/259-06:36:35	2009/259-06:41:26	4.85	-25.7	-68.5
XPS	2009/254-06:59:55			-31.7	-29.6
XPS	2009/254-12:10:56			-30.0	-19.7
XPS	2009/255-10:36:20			-39.4	-60.2
XPS	2009/255-12:28:16			-26.5	-23.5
XPS	2009/258-04:41:17			-19.7	-42.4

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	6	9	4	2	4	5
Total	2114	2682	1453	1730	2329	2178

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	336574	336575	100
IM housekeeping	45929	45930	100
Science	315235	315236	100

4. **Instrument Status**

4.1. **TIM** (submitted by Greg Kopp, September 18)

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
- Preparing for Version 10 data reprocessing
 - Updated cavity inter-comparisons show continued exponentially decreasing degradation, similar to what is applied to current Version 9 data
 - Servo gain calibrations showing continued stability

TIM anomalies during previous week

- None

4.2. **SIM**

4.3. **SOLSTICE**

Marty Snow is out of the office this week participating in the Solar Analogs II Workshop in Flagstaff, Arizona.

4.4. **XPS**

Tom Woods is out of the office this week participating in the SOHO-23 Meeting, "Understanding a Peculiar Solar Minimum", in Maine.

5. **Planning** (automated report submitted by Jay Kominek, September 17)

Plans completed 10 September – 17 September:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	362	11:05
Stellar Rolls	458	13:35
Ram Avoidance	0	0:00
Solar Alignment	4	1:33
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00

Station Contacts	16	3:32
GCI Checks	832	0:13
State Vector Upload	7	0:21
MU Checksum	1	0:12

SIM A (Primary)

	Total	Total Time
Solar Activity		
ESR Mode	7	5:15
ESR Mode with HRT	0	0:00
IR Scan	7	6:49
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)

	Total	Total Time
Solar Activity		
ESR Mode	7	5:15
ESR Mode with HRT	0	0:00
IR Scan	1	1:01
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	208	13:34

SOLSTICE A (MUV)

	Total	Total Time
Solar Activity		
Normal Scan	93	69:25
Quick Scan	54	12:12
Mini Quick Scan	47	10:38
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	0:53
Fixed Wavelength	0	0:00

AB Comparison	1	1:00
Mini 64 Scan	7	6:48
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	77:00
Quick Scan	55	8:43
Mini Quick Scan	48	7:28
Stellar Activity		
Fixed Wavelength	503	21:18
Companion	63	3:39
Stellar Scan	17	2:47
Zero Order Scan	453	13:15
Number Unique Targets	38	41:26
Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	1:00
Mini 64 Seam	9	6:55
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	4:37
Step Response Test	1	0:02

TIM

Solar Activity	Total	Total Time
Normal Solar	101	94:20
Normal Eclipse	132	56:42
Calibration Activity		
Degradation A	1	0:50
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	1:40
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	208	8:57

XPS

Calibration Activity	Total	Total Time
Calibration	1	0:20

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, 20 Aug 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.
 - Dark irradiances have been processed and are being evaluated
- 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, 10 September 2009)

- Status
 - Version 10 Solstice data has been release!
 - Routine data processing is producing version 10 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, 10 September 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, 10 September 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 2009/243 to 2009/249
 - Total level 1b Observations Processed: 27031
 - Percent used in level 2 Processing: 54.3598
 - Total level 3 Observations Processed: 14694