

SORCE Weekly Status Report – 2/7/2008 to 2/13/2008

1. Introduction

This status report addresses the performance of the SORCE spacecraft, instruments, and ground assets during the week of Thursday, Feb. 7, through Wednesday, Feb. 13, 2008. Due to the SORCE Science Meeting, Feb. 5-7, some of the information below is from the previous week as well.

2a. Spacecraft Summary (submitted by D. McCabe, 11 Feb.)

01/31	02/01	02/02	02/03	02/04	02/05	02/06
031	032	033	034	035	036	037

Approximately 17:26 hours of spacecraft housekeeping data was lost from 2008/032-21:34:35.070 to 2008/033-15:00:00 due to the datasets on the recorder not getting cleared on the last contact of the day.

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

2008/032-20:57:29

2008/034-01:57:55

2008/035-04:21:10

GCI lockups:

(MINUTES)

Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2008/031-00:39:42	2008/031-01:05:25	25.72	-31.4	-64.2
solstice_a	2008/032-11:30:21	2008/032-12:45:35	75.23	37.1	-38.4
solstice_a	2008/032-15:31:22	2008/032-16:00:05	28.72	-35.4	73.6
solstice_a	2008/034-05:03:20	2008/034-05:16:41	13.35	-25.1	-51.6
solstice_a	2008/034-20:51:47	2008/034-21:28:53	37.10	-32.7	-28.8
solstice_b	2008/031-00:38:32	2008/031-01:05:20	26.80	-29.4	-68.4
solstice_b	2008/033-03:11:58	2008/033-03:20:48	8.83	90.0	0.0
solstice_b	2008/033-22:09:55	2008/033-22:47:41	37.77	-27.1	-54.7
solstice_b	2008/034-03:19:38	2008/034-03:39:23	19.75	-36.1	-51.5
solstice_b	2008/034-06:47:30	2008/034-06:53:50	6.33	-9.6	-55.6
solstice_b	2008/034-20:39:26	2008/034-21:28:47	49.35	-7.5	-66.7
solstice_b	2008/036-02:20:14	2008/036-02:38:23	18.15	-25.6	-23.8
solstice_b	2008/036-19:42:18	2008/036-20:27:22	45.07	-26.5	-37.7
solstice_b	2008/036-21:25:58	2008/036-22:04:33	38.58	-36.7	-37.7
solstice_b	2008/037-04:10:59	2008/037-04:33:14	22.25	-28.9	-64.8
sim_a	2008/034-19:08:03	2008/034-19:24:35	16.53	-20.4	-26.2
sim_a	2008/034-22:21:58	2008/034-22:38:48	16.83	-19.9	-76.3
sim_a	2008/036-05:33:04	2008/036-05:51:15	18.18	-27.9	-77.3
sim_a	2008/037-18:19:27	2008/037-18:37:27	18.00	-23.8	-27.8
sim_a	2008/037-19:55:16	2008/037-20:14:35	19.32	-21.3	-56.2
sim_b	2008/031-00:33:21	2008/031-00:45:03	11.70	-19.2	-84.8
sim_b	2008/031-00:45:53	2008/031-01:03:55	18.03	-38.7	-39.4
sim_b	2008/031-23:19:28	2008/031-23:25:15	5.78	-33.2	-45.7
sim_b	2008/033-20:27:18	2008/033-20:44:59	17.68	-15.3	-47.1
sim_b	2008/033-23:51:54	2008/033-23:59:15	7.35	-35.1	-61.4
sim_b	2008/034-03:21:51	2008/034-03:37:59	16.13	-32.9	-42.3
sim_b	2008/034-06:42:38	2008/034-06:52:25	9.78	-20.7	-69.6
sim_b	2008/034-20:47:27	2008/034-21:01:47	14.33	-25.1	-43.8
sim_b	2008/035-22:45:41	2008/035-22:55:35	9.90	-34.7	-58.6
sim_b	2008/036-05:37:16	2008/036-05:51:19	14.05	-19.6	-64.2
sim_b	2008/036-21:22:40	2008/036-21:35:09	12.48	-32.5	-50.2
tim	2008/031-19:55:36	2008/031-20:08:17	12.68	-14.1	-27.6
tim	2008/034-20:47:17	2008/034-20:59:07	11.83	-24.8	-44.3
tim	2008/034-22:27:17	2008/034-22:36:13	8.93	-30.3	-59.1

tim	2008/035-21:01:43	2008/035-21:15:49	14.10	-22.6	-58.2
tim	2008/037-04:17:03	2008/037-04:33:09	16.10	-16.7	-46.2
tim	2008/037-19:54:59	2008/037-20:11:59	17.00	-21.0	-56.7
XPS	2008/031-07:32:53			-20.8	-63.0
XPS	2008/036-00:25:13			-37.5	-73.2
XPS	2008/037-19:59:15			-29.2	-43.3
XPS	2008/037-23:20:54			-38.8	-62.6

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	5	11	5	10	6	4
Total	1529	1915	1030	1204	1677	1490

2b. Spacecraft Summary (submitted by D. McCabe, 14 Feb.)

02/07	02/08	02/09	02/10	02/11	02/12	02/13
038	039	040	041	042	043	044

An XPS calibration was performed 2008/043-19:43:01

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

2008/039-10:24:22

2008/041-14:01:57

2008/041-14:02:17

GCI lockups:

(MINUTES)

Instrument	Lockup Time	Response Time	Duration	Lat	Lon
solstice_a	2008/038-02:46:18	2008/038-03:13:38	27.33	-34.2	-62.8
solstice_a	2008/039-18:47:56	2008/039-19:42:24	54.47	-18.2	-56.7
solstice_a	2008/041-19:23:40	2008/041-20:16:31	52.85	-27.7	-63.3
solstice_a	2008/043-16:40:48	2008/043-17:36:07	55.32	-27.7	-34.7
solstice_a	2008/043-23:28:22	2008/044-00:04:36	36.23	-34.3	-51.7
solstice_a	2008/044-15:19:41	2008/044-16:15:51	56.17	-28.6	-18.9
solstice_b	2008/040-05:02:30	2008/040-05:25:10	22.67	-19.3	-81.0
solstice_b	2008/041-00:15:16	2008/041-00:50:50	35.57	-38.2	-59.7
solstice_b	2008/041-17:45:48	2008/041-18:39:19	53.52	-26.0	-41.5
solstice_b	2008/042-02:19:26	2008/042-02:44:57	25.52	-19.7	-53.1
solstice_b	2008/043-00:58:23	2008/043-01:24:45	26.37	-18.7	-37.4
solstice_b	2008/043-23:26:01	2008/044-00:04:31	38.50	-37.2	-61.2
solstice_b	2008/044-01:10:16	2008/044-01:41:39	31.38	-26.3	-59.3
solstice_b	2008/044-02:48:05	2008/044-03:18:46	30.68	-24.8	-81.4
sim_a	2008/039-20:31:38	2008/039-20:47:48	16.17	-31.3	-59.7
sim_a	2008/040-01:38:18	2008/040-02:09:24	31.10	-36.8	-67.4
sim_a	2008/041-00:19:37	2008/041-00:49:20	29.72	-33.2	-42.0
sim_a	2008/042-23:16:12	2008/042-23:46:07	29.92	-28.9	-28.8
sim_b	2008/040-04:06:57	2008/040-04:53:27	46.50	32.8	87.6
sim_b	2008/040-17:40:04	2008/040-17:50:18	10.23	-39.2	7.5
sim_b	2008/043-15:09:34	2008/043-15:26:09	16.58	-36.6	12.1
sim_b	2008/043-16:42:15	2008/043-17:03:16	21.02	-30.4	-29.5
sim_b	2008/043-23:34:35	2008/044-00:03:07	28.53	-23.6	-30.2
sim_b	2008/044-01:14:38	2008/044-01:40:15	25.62	-17.3	-46.1
sim_b	2008/044-16:56:04	2008/044-17:20:05	24.02	-27.3	-46.0
tim	2008/039-20:28:13	2008/039-20:45:13	17.00	-25.1	-71.4
tim	2008/040-19:18:06	2008/040-19:24:45	6.65	-39.7	-12.8
tim	2008/042-19:40:50	2008/042-19:58:07	17.28	-30.5	-68.2
tim	2008/043-02:32:38	2008/043-03:01:48	29.17	-24.6	-70.8
tim	2008/044-15:21:45	2008/044-15:40:17	18.53	-32.0	-11.8
XPS	2008/038-02:49:11			-29.5	-51.8
XPS	2008/038-18:31:23			-16.2	-48.9
XPS	2008/039-03:07:09			-25.3	-54.7
XPS	2008/039-19:00:56			-38.8	-9.5
XPS	2008/041-21:08:11			-38.1	-59.2

XPS	2008/041-22:58:16	-33.0	-27.2
XPS	2008/042-14:47:41	-27.0	-0.9
XPS	2008/044-01:16:16	-13.6	-41.4
XPS	2008/044-15:18:48	-26.7	-22.3

	SIM A	SIM B	SOL A	SOL B	TIM	XPS*
Week	4	6	6	8	5	9
Total	1533	1922	1036	1212	1682	1499

3a. Ground Support / Contact Summary (submitted by D. McCabe, 11 Feb.)

15 Ground station contacts were performed over the past week (Jan. 31-Feb.6).

	Captured VCDUS	Recorded VCDUS	%
SC housekeeping	219090	291091	100
IM housekeeping	41884	41885	100
Science	312834	312835	100

3b. Ground Support / Contact Summary (submitted by D. McCabe, 14 Feb.)

15 Ground station contacts were performed over the past week.

	Captured VCDUS	Recorded VCDUS	%
SC housekeeping	320988	320989	100
IM housekeeping	45266	45267	100
Science	323252	323253	100

4. Instrument Status

4.1. **TIM**

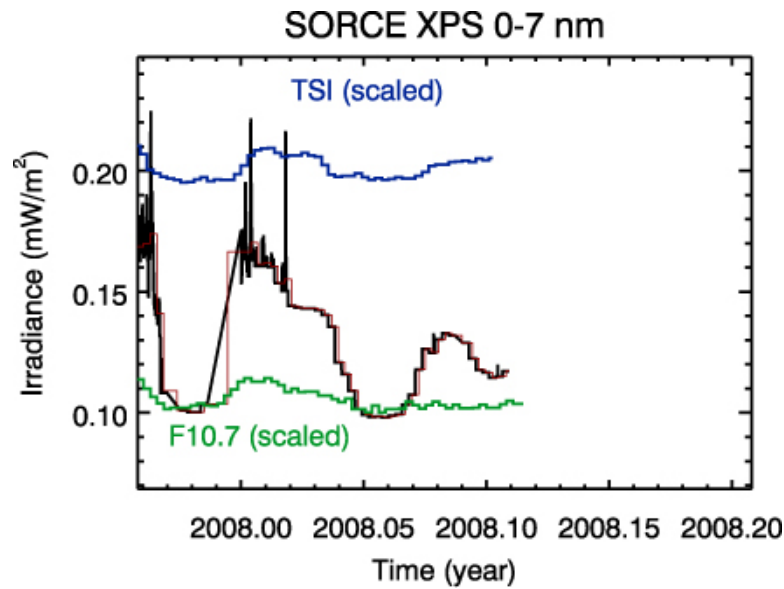
4.2. **SIM**

4.3. **SOLSTICE**

4.4. **XPS** (submitted by Tom Woods, 14 Feb.)

For days 2008/033 (Feb. 2) to 2008/044 (Feb. 13):

- Number of XPS GCI errors: 12
- SORCE XPS Data Gaps:
 - 2008/033 for 11.144 hours
- SORCE XPS Calibration Experiment Duration:
 - 1121.00 sec (19 integrations) at 2008/43, 1945
- Flares: None above class M1.0



5. Planning (submitted by Jay Kominek, 14 Feb.)

Plans completed 07 February – 14 February:

SORCE Spacecraft

Activity	Total	Total Time
Solar Rolls	374	9:36
Stellar Rolls	495	12:23
Ram Avoidance	0	0:00
Solar Alignment	0	0:00
Stellar Alignment	0	0:00
Field of View Maps	0	0:00
FSS Calibration	0	0:00
Station Contacts	15	2:53
GCI Checks	821	0:12
State Vector Upload	7	0:21
MU Checksum	1	0:12

SIM A (Primary)

Solar Activity	Total	Total Time
ESR Mode	7	5:18
ESR Mode with HRT	0	0:00
IR Scan	7	6:58
Quick Scan	14	5:37
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	0:07
Image Dark	1	0:05
ESR Full Scan	0	0:00
Dark	28	0:26
Special Activity		
Power Cycle Checks	207	13:48

SIM B (Secondary)

	Total	Total Time
Solar Activity		
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	0:07
Image Dark	1	0:05
ESR Full Scan	0	0:00
Dark	0	0:00
Special Activity		
Power Cycle Checks	207	13:29

SOLSTICE A (MUV)

	Total	Total Time
Solar Activity		
Normal Scan	93	70:47
Quick Scan	49	12:02
Mini Quick Scan	42	10:27
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	1:00
Fixed Wavelength	0	0:00
AB Comparison	1	1:01
Mini 64 Scan	7	6:59
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	4:27
Step Response Test	1	0:03

SOLSTICE B (FUV)

	Total	Total Time
Solar Activity		
Normal Scan	94	78:32
Quick Scan	50	8:30
Mini Quick Scan	43	7:17
Stellar Activity		
Fixed Wavelength	489	19:56
Companion	144	8:24
Stellar Scan	10	1:10
Zero Order Scan	442	12:46
Number Unique Targets	43	43:10

Calibration Activity		
Fixed Wavelength	0	0:00
AB Comparison	1	1:01
Mini 64 Seam	8	7:03
MUV Solar Alignment	0	0:00
FUV Solar Alignment	0	0:00
MUV Stellar Alignment	4	0:36
FUV Stellar Alignment	2	0:18
MUV Field of View Map	0	0:00
FUV Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	103	4:33
Step Response Test	1	0:03

<u>TIM</u>		
Solar Activity	Total	Total Time
Normal Solar	97	91:54
Normal Eclipse	131	54:59
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	1:41
Field of View Map	0	0:00
Special Activity		
Power Cycle Checks	200	8:32

<u>XPS</u>		
Calibration Activity		
Calibration	1	0:20

Since December 2005, the Planning and Scheduling group activates XPS for a continuous 1-min integration at filter wheel position 6 (0.1-18 nm range) and only plans a monthly calibration experiment.

6. Data Processing Summary

TIM (submitted by Doug Lindholm, 14 February 2008)

- Status
 - Normal routine daily processing of v. 7 data continues.
 - TIM data is sent to the Goddard Earth Sciences DAAC on a daily basis.
 - TIM data products are now being processed on new Linux servers.
- Work in progress
 - Preparing for v. 8 mission-length reprocessing (new gain and degradation calibrations)
- Future Plans
 - Code modifications (generalizations) to support Glory TIM data processing.

SOLSTICE (submitted by Doug Lindholm, 14 February 2008)

- Status
 - Routine data processing is routinely 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.
- Field of view maps from recent experiments have been processed.
- Work in Progress
 - Filter experiment analysis to Improve dead time correction and filter transmission.
 - Improvement of alignment analysis from cruciform scans.
 - Porting to new hardware.
 - Update of the degradation calibrations.
- Future Plans
 - Analysis of instrument misalignment calibration.
 - Analysis of level 3 uncertainties.
 - Jan 2006 slit anomaly correction.
 - Improvement of field of view maps.

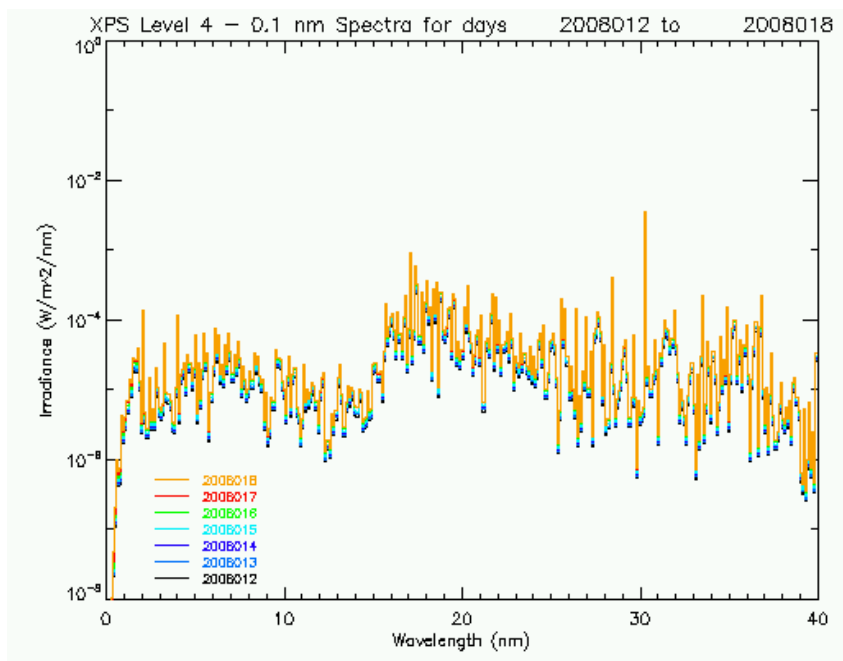
SIM (submitted by Doug Lindholm, 14 February 2008)

- Status
 - Level 2 and level 3 products have been reprocessed as version 15 and are being processed daily.
 - Version 15 level 3 products are available on the SORCE web site.
 - SIM data products are now being processed on new Linux servers.
- Work in Progress
 - Review of SIM exposure time algorithm.
 - Review of phase detected data number algorithm.
 - Investigation of residual degradation to account for differences in SIM/TIM TSI comparison is under way (wavelength shifts, column determination with 1AU corrected accumulated exposure times). Comparisons are also being checked against overlapping SOLSTICE wavelengths and an independent processing effort.
- Future Plans
 - Processing of SIM B.
 - Calibration to improve the quality of early mission data.

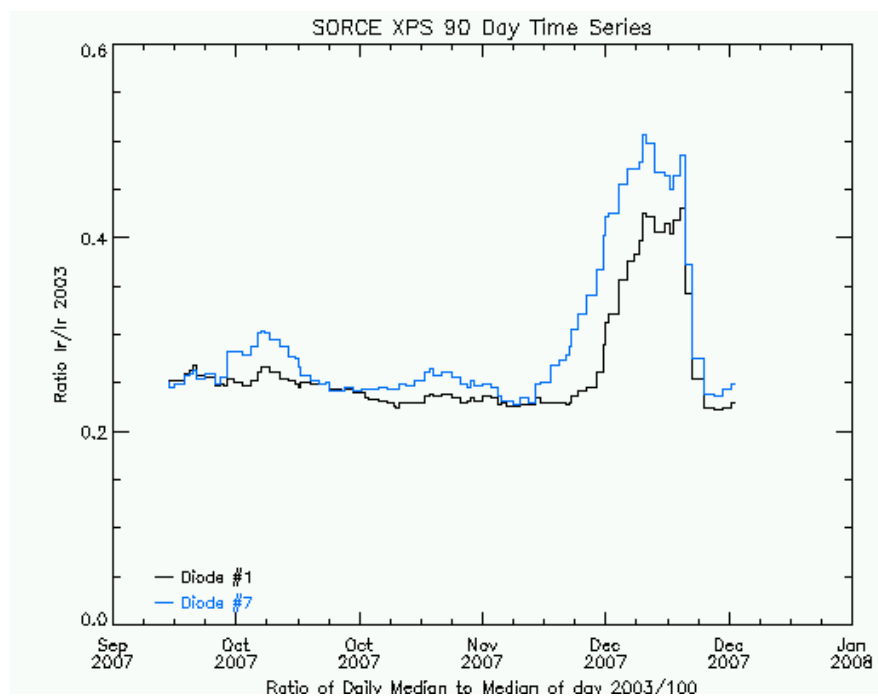
XPS (submitted by Brian Templeman, 14 January 2008)

- SORCE XPS Data Processing Statistics for 2008/012 to 2008/018:

Total level 1b Observations Processed:	29742
Percent used in level 2 Processing:	49.1830
Total level 3 Observations Processed:	14628



Weekly Image



Diode Time Series