SDO HMI Weekly Report

Week of Monday, October 4, 2010 through Sunday, October 10, 2010

Weekly Calibration Results

Wednesday October 6, 2010 @ 11:20 am PST Operations performed today: 1) Obs mode flat field, FTS 3001, 18:19:50 UT, FSN 11924393 2) Cal mode flat field, FTS 3002, 18:24:30 UT, FSN 11924538 3) Focus Sweep (reduced), FTS 3000, 18:28:50 UT, FSN 11924681 4) Obs mode flat field (2), FTS 3001, 18:33:15 UT, FSN 11924824 5) Clock Adjustment, from 0x800272 to 0x800274, 18:37:35 No leg alignment performed today.

Additional Operations

08-Oct-2010 at 19:47:35 UTC Author: Zoe

Ran Full Focus Sweep, FTS 3003, FSN 12019192, 19:43:04 UT (Hope temps are stable enough for focus ...)

Anomalies

Operator: Brett Allard Reporting Time Frame: 12hours. Checklist completed at: 04:59:00

Note: 48 plots of the motor current look odd around 22:00 like telemetry is missing around the same time of the SK maneuver. Checked in the JSOC and the plots are similar with a much reduced telemetry rate.

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07-Oct-2010 at 11:42:49 UTC Author: jake wolfson

The lunar transit is rolling along, taking bites out of the Sun. The only excitement has been a text message about the clock delta that came shortly before the transit started and shortly before (I guess) they did a clock adjustment. We should inquire what this was all about.

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07-Oct-2010 at 12:52:36 UTC Author: jake wolfson

The lunar transit is over and things seem nominal, although one should look in awhile when all plots are up to date. The one item of note is that the forward thermal settings are now different from what they were before (and during) the eclipse. I vaguely remember Brett saying that would be the case and they aren't enough different to require a phone call to him at this point in time.

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07-Oct-2010 at 15:47:02 UTC Author: John Serafin

The S/C clock was adjusted about 34ms at about 11:00UTC and looks like it is still losing about 20ms per day.

The AIA and HMI clock increments should probably each increased by one and the drift rate checked again tomorrow.

The S/C rate was adjusted a couple of days ago, but probably needs another change. It is going to be difficult to understand the instrument clock behavior with the S/C clock drifting so quickly.

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08-Oct-2010 at 15:53:42 UTC Author: Brett Allard

At ~11:55UT and ~12:50UT the ISS PZT B & C had roughly a 6 Volt transient that took about 10 mins to decay back to normal. The ISS error signal were flat at that time.

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09-Oct-2010 at 16:40:39 UTC Author: Jesper

Clock was at -11.5 when they jammed at 2300UT and -6 when they jammed at 1600, so not a lot of drift. At this rate we will be around +10 Monday morning. Clock temperatures seem to have leveled out.

But I will leave it to an expert to decide what to do today, if anything.

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08-Oct-2010 at 15:59:58 UTC Author: Brett Allard

It appears that Heater zone 7 cycled at the same time we see the ISS react as described below. We may need to relax the dead band high for that zone.

Limit violations

S/C clock hit yellow limit a handful of times this week, but no local HMI limit violations.

<u>Clock Information</u>				
Date/Time (UT)	HMI wrt S/C	S/C Time	HMI wrt	S/C or Inst.
	(ms)	Offset (ms)	GND	Adustment?
10/4/10 @ 15:58	+3.6	-8.2	-4.6	No change.
10/5/10 @ 14:50	-10.5	0.0	-10.5	S/C reset to 0
10/6/10 @ 16:10	-9.2	-14.3	-23.5	No change.
10/6/10 @ 17:10	-9.8	-14.9	-24.7	No change.
10/6/10 @ 19:00	-10.0	-13.7	-23.7	HMI from
				0x800272 to
				0x800274.
10/7/10 @ 11:00	-24.0	0.0	-24.0	S/C reset to 0
10/7/10 @ 16:12	-21.0	+1.5	-19.5	No change
10/7/10 @ 20:21	-19.7	-2.0	-21.7	HMI from
_				0x800274 to
				0x80027b
10/7/10 @ 20:21	-9.2	-3.0	-12.2	HMI from
_				0x80027b to
				0x800274
10/8/10 @ 13:35	-12.5	0.0	-12.5	S/C reset to 0
10/8/10 @ 16:09	-14.5	-0.7	-15.2	No change.
10/8/10 @ 17:10	-15.3	+1.9	-13.4	HMI from
				0x800274 to
				0x800275
10/8/10 @ 20:16	-17.0	+5.2	-11.8	No change.
10/8/10 @ 20:34	-17.25	+6.0	-11.25	HMI from
				0x800275 to
				0x800274
10/9/10 @ 16:00	-6.0	0.0	-6.0	S/C reset to 0

Thermal Adjustments

08-Oct-2010 at 17:28:19 UTC Author: Emma & Zoe

Made changes to heater settings due to battery voltage adjust: Zone 1: Dur/DC = 37/22Zone 2: Dur/DC = 26/4Zone 3: Dur/DC = 26/19Zone 4: Dur/DC = 18/37Zone 5: Dur/DC = 15/47, High Limit = 21.5 Zone 6: Dur/DC = 25/4, High Limit = 21.5 Zone 7: Dur/DC = 15/87, High Limit = 21.5

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08-Oct-2010 at 17:29:58 UTC Author: Zoe

Just to note, the S/C battery voltage change was from 33.1 V to 31.5 V.

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08-Oct-2010 at 18:58:32 UTC Author: Zoe

I made an error on zone 4 earlier corrected it. Zone 4 should be 25/10 so all 7 zones are:

Zone 1: Dur/DC = 37/22 Zone 2: Dur/DC = 26/4 Zone 3: Dur/DC = 26/19 Zone 4: Dur/DC = 25/10 Zone 5: Dur/DC = 15/47 Zone 6: Dur/DC = 25/4 Zone 7: Dur/DC = 15/87

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08-Oct-2010 at 20:49:19 UTC Author: Zoe & Emma

Changed limits and targets for heater zones 1, 2, 3: Zone 1: L/T/H = 27.5/28.5/31.0Zone 2: L/T/H = 28.0/29.0/31.0Zone 3: L/T/H = 27.5/28.5/30.0

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08-Oct-2010 at 22:12:20 UTC Author: Zoe

Changed Cold Deadband Duty Cycle on Zones 1 & 2. Currently: Zone 1: DBCold = 40 Zone 2: DBCold = 16 Zone 3: DBCold = 32 Zone 4: DBCold = 100 Zone 5: DBCold = 100 Zone 6: DBCold = 100 Zone 7: DBCold = 100

Sequencer Changes

None

Date/Time of Change	New Sequence	Notes

S/C Calibrations/Maneuvers

06-Oct-2010 at 23:27:49 UTC Author: S D Mitchell

The station-keeping maneuver went fine. The loops opened and closed and the INCs were received as expected.

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Pointing Adjustments

None

Long term Trends

Corrupt Image FSN 469769216 (**0x1C001C000**) occurrences (this week / mission to date): 1. 0/10 (no new corrupt images)

<u>Loads</u>

04-Oct-2010 at 21:01:04 UTC Author: Emma & Zoe

Reconfigured eclipse entry script for tonight's eclipse. HMI will use script 2064 tonight instead of 4064.

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05-Oct-2010 at 20:02:00 UTC Author: Brett Allard

Configured HMI script entry to 9064. Current plan is to come in tonight and change to script 3064, but if commanding is not available the system will run with the default 9064.

06-Oct-2010 at 18:56:22 UTC Author: Emma

Loaded eclipse scripts for Brett. Script updated to H_Eclipse.1.15.GZ.

07-Oct-2010 at 05:45:18 UTC Author: Brett Allard

H2 is connected for commanding

Configured HMI to run script 3064 for tonight's eclipse

Notes: