## SDO HMI Weekly Report Week of Monday, October 25, 2010 through Sunday, October 31, 2010

#### <u>Summary</u>

HMI successfully performed their weekly calibrations on Wednesday, October 27<sup>th</sup> (flatfields, focus sweep, detune), including a leg alignment this week. There was two nominal clock adjustments made on Tuesday and Friday and one heater zone adjustment made on Friday. Script loads were made in preparation for the Lunar Transit next weekend. HMI performed nominally during the EVE FOV and AIA/HMI Offpoints on Tuesday and the AIA GT Calibration maneuver on Thursday.

#### Weekly Calibration Results

27-Oct-2010 at 19:47:47 UTC Author: Zoe

HMI calibrations performed today:

1) Detune, FTS 3007, 18:32:20 UT, FSN 12890430

2) Leg alignment\*, AL1 60, AL2 48, 19:03:00 UT, FSN 12891399

3) Obs mode flat field, FTS 3001, 19:07:00 UT, FSN 12891500

4) Cal mode flat field, FTS 3002, 19:11:35 UT, FSN 12891650

5) Focus sweep (reduced), FTS 3000, 19:16:00 UT, FSN 12891793

6) Obs mode flat field (2), FTS 3001, 19:22:46, FSN12892006

\*Error by operator (Zoe) set leg positions to 0 (using hmi\_leg\_center), then repositioned to (60,48) with correct procedure (hmi\_iss\_leg\_center).

## **Additional Operations**

None.

## **Instrument Anomalies**

None.

#### Limit violations

None.

## **Clock Information**

Date/Time (UT)	HMI wrt S/C	S/C Time	HMI wrt	S/C or Inst.
	(ms)	Offset (ms)	GND	Adustment?
10/25/10 @ 11:44	+5.0	0.0	+5.0	S/C reset to 0
10/26/10 @ 20:47	+17.4	-4.5	+12.9	HMI from
				0x800274 to
				0x800273
10/27/10 @ 12:55	+4.2	0.0	+4.2	S/C reset to 0

10/29/10 @ 18:41	-6.1	-3.3	-9.4	HMI from
_				0x800273 to
				0x800274

#### **Thermal Adjustments**

29-Oct-2010 at 20:32:13 UTC Author: Zoe & Emma

Raised heater zone 1 high deadband limit from 31 C to 32 C.

## Sequencer Changes

None

Date/Time of Change	New Sequence	Notes

#### S/C Calibrations/Maneuvers

26-Oct-2010 at 13:29:39 UTC Author: jake wolfson

EVE FOV cal in process and looks nominal (for both instruments) in that a) received INCc b) receiving Slew Starts in timely manner c) observe solar image displacements d) FTS ID's changed e) exposure times changed; I gather HMI is taking interleaved darks which might be a good idea for AIA as well f) loops are open ETC Would be nice to have clear documentation of what each coordinated calibration does exactly re movements and dwells and more.

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26-Oct-2010 at 15:55:22 UTC Author: Sarah Gregory

Looks like the first maneuver is complete. All is well, we just got the cal maneuver end INC about 8 minutes ago at 15:46UT.

The screen snaps haven't updated since 15:30UT with the latest ISS and seq ID status, appears that we are still running 4011 with the loop open.

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26-Oct-2010 at 16:25:35 UTC Author: Emma

AIA/HMI offpoint maneuver started at 16:12UT. Everything looks nominal so far.

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26-Oct-2010 at 19:03:46 UTC Author: Rock Bush

The offpoint maneuver end INC and the science mode transition INC have been received.

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26-Oct-2010 at 19:23:11 UTC Author: Rock Bush

HMI loop is closed and the standard observing program is running.

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28-Oct-2010 at 16:23:13 UTC Author: jake wolfson

The GT Cal has been going on since about 15 UT; and is reflected in the ISS/PZT plots.

Pointing Adjustments

None

Long term Trends Corrupt Image FSN 469769216 (0x1C001C000) occurrences (this week / mission to date): 1. (0/12) No new occurrences

## <u>Loads</u>

29-Oct-2010 at 20:32:13 UTC Author: Zoe & Emma

Loaded eclipse scripts for lunar transit (H\_2064.scr, H\_2065.scr). We did not tag cmd file for orbit which produced an error. Cleared error, uploaded file, and configured INC's.

# <u>Other</u>

27-Oct-2010 at 18:35:09 UTC Author: S D Mitchell

Tried to connect on SDOIOC-SPR for commanding HMI but got a NAK03 reply error message. Called the FOT and they are looking into what they need to do to set up H3 to work.

Meanwhile, Emma and Zoe are moving forward with doing the detune on HMIIOC-CMD. We will try to do the other weekly calibrations on SDOIOC-SPR if they FOT can figure things out on their end. Stand by.

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27-Oct-2010 at 19:02:13 UTC Author: S D Mitchell

Re: connecting for commanding on SDOIOC-SPR

The FOT switched to the secondary FEDS with the updated config file (HMIMOC-MON workstation name updated to SDOIOC-SPR) to have us test connecting on viper to the FEDS. This did the trick. The primary FEDS config file needs updating and the FOT will do so after the command window today. We should have the ability to connect on stingray and command from the SDOIOC-SPR tomorrow. We will be sure not do this during the GT calibration.

Emma and Zoe are moving forward with doing the rest of HMI's weekly calibrations on HMIIOC-CMD.

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29-Oct-2010 at 20:32:13 UTC Author: Zoe & Emma

A few operations today:

We tested the SDOioc\_SPR machine for connecting to command for HMI. We were successful in connecting and sending hmi\_nop commands but there were a few issues.
a) We found global variables not defined when trying to send the no-op (perf hmi flt global set to fix that)

b) Pop-up STOL logs were not being written (so, though a log window came up, nothing was written to the window) however the main logs were written. There is a blank space being added to the filename for the history log. Gary Heymann determined that this is the problem, though we don't know the source of the space yet.

c) Also, cvs update did not work (just hung).

d) Due to the above problems, we switched to the h2 machine for further commanding.