

## **SDO HMI Weekly Report**

**Week of Monday, October 11, 2010 through Sunday, October 17, 2010**

### **Summary**

HMI successfully performed their weekly calibrations on Wednesday, October 13<sup>th</sup> (flatfields, focus sweep, detune), including a leg alignment this week. There were several nominal clock adjustments made throughout the week. HMI adjusted heater zone 3 on Wednesday. New scripts were loaded on Friday for next week's S/C calibration/maneuvers. There was one corrupt image seen on Saturday for HMI making a total of 12 corrupt images seen on-orbit (out of roughly 9.5 million images total).

The HMI Roll Maneuver occurred on Tuesday, October 12<sup>th</sup> at 18 UT. AIA and HMI performed nominally. Thorough data analysis of the results will take place over the next few weeks.

### **Weekly Calibration Results**

Wednesday October 13, 2010 @ 11:33 am PST

Operations performed today:

- 1) Clock adjustment, from 0x800272 to 0x800273, 18:33:00 UT
- 2) Leg alignment (AL1, AL2) = (-1, 0), 18:35:00 UT, FSN 12247380
- 3) Obs mode flat field, FTS 3001, 18:38:00 UT, FSN 12247460
- 4) Cal mode flat field, FTS 3002, 18:42:00 UT, FSN 12247604
- 5) Focus Sweep (reduced), FTS 3000, 18:46:50 UT, FSN 12247745
- 6) Detune, FTS 3007, 18:51:15, FSN 12247888
- 7) Obs mode flat field (2), FTS 3001, 18:55:55 UT, FSN 12248033

### **Additional Operations**

12-Oct-2010 at 17:56:15 UTC

Author: Sarah Gregory

Shutting down hmimoc-cmd.

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15-Oct-2010 at 21:07:47 UTC

Author: Brett & Emma

Tested scripts:

20:30 - ran 7001

20:39 - ran 9000

20:43 - ran 7003

20:48 - ran 9060

Tests were successful; we are ready for EVE Cruciform maneuver.

### **Anomalies**

13-Oct-2010

Operator: Sarah Gregory

Reporting Time Frame: 9hours.

Checklist completed at: 14:35:25

Operational Heater Zone Cycling: There was a sharp drop in ring 1 and 2 and telescope just before 6UT. Doesn't appear that they cycled, they just drop and recover. Did I miss another maneuver after the roll that caused this?

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13-Oct-2010 at 20:12:46 UTC

Author: Jesper

The dip in the temperatures of zones 1-3 around 6UT was due to zone 3 hitting the top of the deadband.

### **Limit violations**

#### **Clock Information**

<b>Date/Time (UT)</b>	<b>HMI wrt S/C (ms)</b>	<b>S/C Time Offset (ms)</b>	<b>HMI wrt GND</b>	<b>S/C or Inst. Adjustment?</b>
10/11/10 @ 00:30	+7.5	0.0	+7.5	S/C reset to 0
10/11/10 @ 12:30	+13.5	0.0	+13.5	S/C reset to 0
10/11/10 @ 17:11	+13.7	+1.9	+15.6	HMI from 0x800274 to 0x800273.
10/12/10 @ 17:46	+17.0	-0.33	+16.7	HMI from 0x800273 to 0x800272.
10/13/10 @ 18:33	+5.2	-5.9	-0.7	HMI from 0x800272 to 0x800273.
10/14/10 @ 17:38	+13.15	-17.4	-4.25	HMI from 0x800273 to 0x800274.
10/14/10 @ 18:30	-4.2	0.0	-4.2	S/C reset to 0

10/15/10 @ 17:11	+0.8	+0.1	+0.9	HMI from 0x800274 to 0x800273.
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### **Thermal Adjustments**

13-Oct-2010 at 19:24:27 UTC

Author: Emma

Raised heater zone 3 deadband high from 30.5 C to 31.0 C following the HMI calcs at ~19:00:00.

### **Sequencer Changes**

None

Date/Time of Change	New Sequence	Notes

### **S/C Calibrations/Maneuvers**

12-Oct-2010 at 18:13:35 UTC

Author: S D Mitchell

The HMI Roll Maneuver started at 18:00 UT. HMI ran script 7005 as designated in the ATS. The loop has been opening and closing as expected. We will check in throughout the day.

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12-Oct-2010 at 18:14:54 UTC

Author: Zoe

Just looking in on roll. Loop opened at 18:05 UT and closed at 18:12 UT or near then. Hard to see in the images without sunspots, though. :)

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12-Oct-2010 at 18:20:00 UTC

Author: Zoe

Duh, AR 11112 shows up with a zoom. Roll is 180 degrees now loop is open again.

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13-Oct-2010 at 00:59:55 UTC

Author: Emma

Roll Maneuver ended; all was nominal. Loops are closed.

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### **Pointing Adjustments**

None

### **Long term Trends**

Corrupt Image FSN 469769216 (**0x1C001C000**) occurrences (this week / mission to date):

1. (1/12) 2010-10-02 @ 23:23:37
2. (2/12) 2010-10-16 @ 00:49:41

### **Loads**

15-Oct-2010 at 21:07:47 UTC

Author: Brett & Emma

Uploaded Scripts:

7001 (Eve cruciform)

7003(HMI offpoint maneuver)

9060 (End of offpoint maneuver)

Updated framelist for Eve Cruciform

**Notes:**