

SDO HMI Internal Weekly On-Orbit Report

Week of Monday, November 29, 2010 through Sunday, December 5, 2010

Summary

HMI successfully performed their weekly calibrations on Tuesday, November 30th (flatfield observation mode-1) and Wednesday, December 1st (flatfield calibration/observation mode-2, focus sweep). There were two nominal clock adjustments made this week and no thermal adjustments. There was also a corrupt image seen on Wednesday making an on-orbit mission total of 18 of that version. HMI continues to perform nominally.

Patches provided by Sun for the gnome desktop crash seemed to have fixed the problem as shown by a security scan this week on 2 of the workstations (one of which had previously crashed consistently). The patches will be installed on the rest of the workstations next week. One final successful security scan of all of the workstations should close the issue.

There was a lunar transit on Monday, December 6th UT (Sunday, December 5th PT). HMI made deadband duty cycle adjustments on heater zones 1-3 during the transit which were reset when the transit ended. HMI performed nominally.

Calibrations

Calibration	Date/Time	Ran by	Notes
Flat field (observation mode-1)	30-November-2010 19:32 UT	Emma	FSN 14450411
Flat field (calibration mode)	1-December-2010 18:15 UT	Emma	FSN 14494043
Focus Sweep (reduced)	1-December-2010 18:17 UT	Emma	FSN 14494120
Flat field (observation mode - 2)	1-December-2010 18:19 UT	Emma	FSN 14494188

Additional Operations

None

Instrument Anomalies

None

Limit violations

None

Clock Information

Date/Time (UT)	HMI WRT S/C (ms)	S/C WRT ground (ms)	HMI WRT ground	Adjustment
11/29/10 @ 21:48	+14.04	+1.7	+15.74	HMI from 0x800275 to 0x800274
12/3/10 @ 18:17	-12.25	+5.6	-6.65	HMI from 0x800274 to 0x800275

Thermal Adjustments

None

Sequencer Changes

None

Date/Time of Change	New Sequence	Notes

S/C Calibrations/Maneuvers

None

Pointing Adjustments

None

Long term Trends**1. Corrupt Image FSN 469769216 (0x1C001C000)**

Occurrences this week:

1. 2010-12-01 @ 21:31:32

Occurrences to date: 18

2. Corrupt Image FSN 9175180 (0x008C008C)

Occurrences this week:

1. No new occurrences

Occurrences to date: 3

Loads

None

Other

1. BMW Router Down

29-Nov-2010

18:00 UT - A firewall crash brought down the BMW (FEDS#3) router, stopping telemetry on the AIAIOC-CMD, HMIIOC_CMD, AIAMOC-MON, and HMISDP-MON machines. BMW was brought back online at 21:18 UT.

TIMELINE:

21:00 UT - HMISDP-mon connected to AUDI to enable telemetry reception. (Hao Thai)

21:18 UT – BMW is back online and nominal (Brett Sapper)

21:24 UT – JSOC-IOC CMD workstations are reconnected to BMW (Sarah M.)

21:31 UT – HMISDP-MON machine is reconnected to AUDI (Hao Thai)

30-Nov-10 16:42 UT – MOC CMD machines are reconnected to BMW

2. Stanford Network Outage

4-Dec-2010

The new 10gbps link at Stanford went down between the closet and the Stanford network (but remained up from the machine room to the network closet). Brian Roberts filed a report with the Stanford network, and the connection was restored on the 1g link at 10:09 am on 12/5/10.

From Phil Scherrer (pscherrer@solar.stanford.edu):

Sun 12/5/2010 11:13 AM

“[The 1g link] is all we had until a week or so ago when they connected the 10gig line with its "automatic" failover to the redundant line - which was supposed to be another 10gig line but they were not able to get that working, the reason it took 6 months to get the 10gig line installed - they never did get it working and we agreed to go ahead with a 1gig line as the backup. And it appears that that is not really very automatic. This will be discussed with networking on Monday.”

TIMELINE:

12/4/10 17:31 PST - level 1.5 data is stopped

12/4/10 19:22 PST – level 0 streaming to cache is stopped

12/5/10 10:09 PST – Connection is restored on 1g link

3. Lunar Transit

5-Dec-2010 (6-Dec-2010 UT time)

A lunar transit occurred from 02:59 - 03:21 UT on December 6, 2010. The eclipse entry INC was received at 02:58:46 UT. Script 2064 ran as expected. The Dead Band High duty cycles on zone 1-3 increase to 100%, 100% and 50% respectively. FTS 3010 went to priority 2.

The Eclipse Exit INC was received at 03:25:04 UT. Script 2065 started. The dead band cold duty cycle on zone 1-3 was set to 40%, 16% and 32%. Loops were closed.

Everything ran nominally.