SDO HMI Internal Weekly On-Orbit Report

Week of Monday, May 2, 2011 through Sunday, May 8, 2011

Summary

HMI successfully performed its weekly calibrations on Tuesday, May 3rd (flatfield observation mode-1, run by timed script) and on Wednesday, May 4th (flatfield calibration/observation mode-2, reduced focus sweep, run manually). On Wednesday, May 4th the spacecraft performed its sixth Delta H (Momentum Management) Maneuver at 11:03 UT. HMI did not perform any special operations. The spacecraft experienced high reaction wheel speeds leading up to the Delta H Maneuver, which caused some noise in the PZT voltages. However, there was no threat to the instrument or the science data. On Wednesday, May 4, there was a lunar transit at 07:13 UT, lasting approximately 30 minutes. HMI raised its cold duty cycles in zones 1-3 to 100% for the duration of the transit. On Friday, May 6th, the MOC successfully performed IONET security scans on all the JSOC workstations. HMI is performing nominally.

Weekly Calibrations

Calibration	Date/Time	Script	Ran by	Notes
Flat field (observation mode-1)	03-May-11 18:00 UT	2701	Timed Script	Timed scripts were initially set up to run Wednesday's weekly cals, but were subsequently cancelled and the cals were run manually to avoid interfering with the Delta H Maneuver.
Flat field (observation mode-1)	04-May-11 19:47 UT	2701	Manually	
Flat field (calibration mode)	04-May-11 19:54 UT	2702	Manually	
Reduced focus sweep	04-May-11 19:58 UT	2704	Manually	

Loads

None

Thermal Adjustments

None

S/C Calibrations/Maneuvers

1. **Delta H Maneuver #6**
   04-May-2011 at 11:03 UT
   Summary:

The spacecraft performed a Delta H (Momentum Management) Maneuver on Wednesday, May 4 at 11:03 UT. HMI did not perform any special operations.

Details:

04-May-2011 at 18:30:52 UTC
Author: S D Mitchell
HMI performed nominally during the Delta H maneuver. The ISS errors went up as expected. The scripts to open/close the ISS loops ran in response to the inertial/science INCs.

Additional Operations

None

Instrument Anomalies

None

Limit violations

None

Clock Adjustments

None

Long term Trends

1. **Corrupt Image FSN 469769216 (0x1C001C000)**
   Occurrences this week: None
   Occurrences to date: 31

2. **Corrupt Image FSN 9175180 (0x008C008C)**
   Occurrences this week: None
   Occurrences to date: 2

Other

1. **Lunar Transit**
   04-May-2011 at 07:13 UTC
   There was a lunar transit on Wednesday, May 4, at 07:13 UT. The transit lasted for approximately 30 minutes. HMI raised its cold duty cycles in zones 1-3 to 100% for the duration of the transit.

2. **High Spacecraft Reaction Wheel Speeds**
   Summary:

   The spacecraft experienced high reaction wheel speeds leading up to the Momentum Management Maneuver. HMI noticed some noise in the PZT voltage

signals due to these high speeds, but there was no threat to the instrument or the science data.

Details:

04-May-2011 at 18:27:52 UTC
Author: S D Mitchell
FYI: Zoe and I checked the RW RPM out of curiosity on the ASIST page and saw they are running around 630 RPM now.

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05-May-2011 at 17:48:03 UTC
Author: Zoe Frank
Just took a look at the ASIST page and RW3 (not RW4) is about -120 rpm and tripping yellow limits since about 11:00 UT.

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05-May-2011 (125 day of year) at 16:34:53
Operator: Zoe
From about 10:30 UT today there is a general increase in Y error signal with spikes to about 50 dn. Noise in the PZT voltages, too. Probably RW4 zero crossing ...

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06-May-2011 (126 day of year) at 16:13:18
Operator: Zoe
RW3 is about +110 rpm this morning so, it did cross zero.

3. Security Scan

06-May-2011
The MOC successfully performed IONET security scans on all the JSOC workstations on Friday, May 6. Though the scans did interrupt the spacecraft clock data flow, no major problems were encountered.