

SDO HMI Internal Weekly On-Orbit Report

Week of Monday, April 25, 2011 through Sunday, May 1, 2011

Summary

HMI successfully performed its weekly calibrations on Tuesday, April 26th (flatfield observation mode-1) and on Wednesday, April 27th (detune, flatfield calibration/observation mode-2, reduced focus sweep) using timed scripts. On Thursday, April 28th, at 15:00 UT, AIA performed a GT/PZT Calibration, which went as planned. HMI did not perform any special operations. Also on Thursday, the high speeds of RWs 1 and 4 reached about 850 RPM and caused small amounts of noise in the HMI PZT voltages and AIA ISS errors, but did not reach the limit of 900 RPM when it could begin to affect the science data. A meeting was held with the FOT and it was decided to proceed with the previously scheduled Momentum Management Maneuver on May 4th rather than performing the maneuver early to reduce the wheel speeds. HMI is performing nominally.

Weekly Calibrations

Calibration	Date/Time	Script	Ran by	Notes
Flat field (observation mode-1)	26-Apr-11 17:36 UT	2701	Timed Script	
Detune	27-Apr-11 17:28 UT	2703	Timed Script	
Flat field (observation mode-1)	27-Apr-11 17:36 UT	2701	Timed Script	
Flat field (calibration mode)	27-Apr-11 17:44 UT	2702	Timed Script	
Reduced focus sweep	27-Apr-11 17:52 UT	2704	Timed Script	

Loads

None

Thermal Adjustments

None

S/C Calibrations/Maneuvers

1. AIA GT/PZT Calibration

28-Apr-2011

15:00 UT

AIA performed a GT/PZT Calibration on Thursday, April 28th at 15:00 UT. All went as planned.

Additional Operations

None

Instrument Anomalies

None

Limit violations

None

Clock Adjustments

Date/Time (UT)	HMI WRT ground (ms)	Adjustment
04/26/11 @ 17:47	+12	HMI from 0x800271 to 0x800272
04/29/11 @ 19:31	-9	HMI from 0x800272 to 0x800271

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. High Rotation Wheel Speeds

28-April-2011

Spacecraft rotation wheels RW1 and RW4 reached ~830 RPM on Thursday, April 28th. Once the wheels reach 850 RPM, the FLAG_ACS_APTFAILED mnemonic in the Ancillary Science Data Packet is set to “YES” as a result of the FLAG_RWA_JITTERGOOD_[1-4] = NO (which will trigger yellow limits in the MOC). The science images start being affected at 900 RPM.

A meeting with the FOT was held to ensure that the high speeds would not have any affect on the science data or data processing, and it was decided to proceed with the Momentum Management (Delta H) Maneuver at the pre-determined date on DOY 124 (Wednesday, May 4). By Sunday, May 1 the speeds had reached about 850 RPM. The high rotation speeds caused a minor amount of noise in the HMI PZT voltages.