SDO HMI Internal Weekly On-Orbit Report

Week of Monday, July 11, 2011 through Sunday, July 17, 2011

Summary

HMI successfully performed its weekly calibrations on Tuesday, July 12th (obs-mode flatfield) and on Wednesday, July 13th (obs-mode flatfield, cal-mode flatfield, and reduced focus sweep), using timed scripts. On July 13th HMI took advantage of an EVE Cruciform maneuver to perform several operations without unnecessarily interrupting the science data. These included: a tuning table update and retune; an increase of the default exposure times of both cameras by about 4% to compensate for the observed intensity decrease over the last year; and a test of the Regulus Off-point frame list in preparation for a planned Regulus Off-point maneuver in August. HMI is performing nominally.

Weekly Calibrations

Calibration	Date/Time	Script	Ran by	Notes
Flat field (observation mode)	12-Jul-11 17:30 UT	2701	Timed Script	Cals were run earlier than usual to accommodate the EVE FOV maneuver, which started at 18:30. Cals were completed by 17:53.
Flat field (observation mode)	13-Jul-11 17:30 UT	2703	Timed Script	
Flat field (calibration mode)	13-Jul-11 17:38 UT	2701	Timed Script	
Reduced focus sweep	13-Jul-11 17:45 UT	2702	Timed Script	

Loads

1. **Retune and Regulus Testing Preparation**
   12-Jul-2011 at 21:34:48 UTC
   Loaded files for Retune and Regulus framelist testing tomorrow:
   H_CONF_V02
   H_FTS_V02

2. **Script 9000 update**
   13-Jul-2011 at 20:01:48 UTC
   Uploaded a new version of script 9000, which has the new nominal camera exposure index values.

Thermal Adjustments

None

S/C Calibrations/Maneuvers

3. **EVE Cruciform**
   13-July-2011
   18:30 – 23:30 UT
   HMI took advantage of the EVE Cruciform maneuver to make perform several operations without unnecessarily interrupting the science data. These included a retune, an exposure time increase, and a test of the Regulus Offpoint frame list. Details are below.

Additional Operations

1. **Retune**
   13-Jul-2011
   A retune was performed during the EVE Cruciform maneuver. An updated tuning table (FLIGHT_V02.s) was loaded prior to the maneuver and activated successfully during the maneuver.

2. **Default Exposure Time Increase**
   13-Jul-2011
   The default exposure times for both of HMI's cameras were increased to compensate for the observed intensity decrease over the last year. The new values are:
   - Camera 1 = 125 ms; 4.0% increase
   - Camera 2 = 135 ms; 3.8% increase

   These changes were made during the EVE Cruciform maneuver.

3. **Regulus Offpoint Framelist Test**
   13-Jul-2011
   A test-run of the Regulus Off point frame list was performed during the EVE Cruciform maneuver. A few necessary changes to the camera settings were overlooked, causing the instrument to generate a flood of error messages warning that the frame list timing was off. The sequencer was stopped, the settings were corrected, and the frame list was tested again successfully. These operations were performed during the EVE Cruciform, so there was no interruption to the science data.

Instrument Anomalies

None

Limit violations

None

Clock Adjustments

Date/Time (UT)	HMI WRT ground (ms)	Adjustment
07/11/11 @ 19:05	+11	HMI from 0x80026f to 0x80026e
07/15/11 @ 20:11	-14	HMI from 0x80026e to 0x80026f

Long term Trends

1. **Corrupt Image FSN 469769216 (0x1C001C000)**
   Occurrences this week: None
   Occurrences to date: 39

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

Other

None