

HMI Weekly Report Summaries: May 2011

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

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.

Week of Monday, May 9, 2011 through Sunday, May 15, 2011

HMI successfully performed its weekly calibrations on Tuesday, May 10th (obs-mode flatfield) and on Wednesday, May 11th (obs-mode flatfield, cal-mode flatfield, reduced focus sweep, detune). HMI had one corrupt image this week (type: FSN= 469769216), for an on-orbit total of 34. There was a bit more noise than usual in the PZT voltage signals this week. The noise is still very small and not a cause for concern, but the operations team will continue to monitor it closely. HMI is performing nominally.

Week of Monday, May 16, 2011 through Sunday, May 22, 2011

HMI successfully performed its weekly calibrations on Tuesday, May 17th (obs-mode flatfield) and on Wednesday, May 18th (obs-mode flatfield, cal-mode flatfield, full focus sweep). HMI had one corrupt image this week (type: FSN= 469769216), for an on-orbit total of 35. There continued to be extra noise in the PZT voltage signals this week, indicating jitter in the ISS. The noise is still very low and not a cause for concern, but the operations team will continue to monitor it closely and investigate possible causes. HMI is performing nominally.

Week of Monday, May 23, 2011 through Sunday, May 29, 2011

HMI successfully performed its weekly calibrations on Tuesday, May 24th (obs-mode flatfield) and on Wednesday, May 25th (obs-mode flatfield, cal-mode flatfield, reduced focus sweep, detune). On May 23 the extra noise that has been showing up in the PZT voltages over the past few weeks stopped very abruptly at 21:00 UT. The FOT is investigating the cause of this noise. On May 25th, the duty cycles for the front window heaters were lowered, in order to decrease the front zone temperatures and raise the best focus setting, which has been dropping over the past several months. The adjustments resulted in a temperature change of about -0.4 degrees C, and a focus change of about + 0.17 steps, which is what was hoped for. On May 26th, the spacecraft performed an AIA GT/PZT calibration between 15:00 and 16:42 UT. HMI performed nominally. On May 27th, a zero-crossing of RWA 1 created noise in the AIA ISS y error and the HMI PZT voltages from about 03:00 – 06:00 UT. HMI is performing nominally.

Week of Monday, May 30, 2011 through Sunday, June 5, 2011

HMI successfully performed its weekly calibrations on Tuesday, May 31st (obs-mode flatfield) and on Wednesday, June 1st, (obs-mode flatfield, cal-mode flatfield, reduced focus sweep) using timed scripts. There was one corrupt image this week (type FSN=469769216) for an on-orbit total of 36. HMI is performing nominally.