**Day of Year**

Day 175 (06/24/19)

*Status Summary:*

All spacecraft subsystems and payloads are nominal. All payloads are powered off. OD156 is onboard the spacecraft.

Over the weekend, an issue with DSN station 55 led to the loss of Doppler data; science data were not affected. All data expected on Saturday and Sunday were received on the ground. However, the gap in particle images from DOY 170 and 171 (reported at the last downlink tag-up on DOY 172) was unable to be filled via retransmit because some of the images had been overwritten owing to the image-delete command, which is currently in operation to prevent partition overfill.

In addition, we did not receive NavCam images as expected this morning. The problem originates with an error in writing the first image received after yesterday's pass to flash. This apparently also prevented the subsequent images from writing to flash, although the problem is thought to be related to the first image only. The root cause is not known at this time. NavCam appears to be healthy. A test image was taken and received today, which appears nominal. We will transfer a subset of 17 images to the DVR during the pass this afternoon, and we expect to see these come down. However, the other images (143 particle monitoring images) will probably be lost owing to the image-delete command. ISA-10466 has been opened.

Looking ahead: This week, we will continue with the same NavCam OpNav and particle monitoring cadence from last week, except that we will add OCAMS (MapCam) OpNav support starting tomorrow (DOY 176). We are expecting to receive criticality-2 OpNavs on Wednesday (26 June, DOY 177). Other payloads will begin powering on or preheating toward the end of this week in preparation for Global Mapping next week.

Day 177 (06/26/19)

*Status Summary:*

All spacecraft subsystems and payloads are green. OCAMS is powered on. OD157 is onboard the spacecraft.
M4B executed nominally yesterday. This was the first maneuver to be performed with the LTR thrusters. Performance was in family with previous burns.

Today’s pass was short but at the higher data rate. We received all of the criticality-2 OpNavs for today and most of the particle monitoring images (we are expecting about 145 of 152). The OpNavs include images from both NavCam and MapCam. We also received all the OpNavs and particle images that were expected yesterday.

We are still receiving TAGCAMS alarms because the flash error reported on Monday for NavCam has not cleared. Camera performance has been nominal since the error occurred. The cause remains under investigation.

Bashar Rizk reported that the first OCAMS OpNav image was so dark that it prompted concerns about the shutter having been left on. However, subsequent images were normal, and analysis of the first image’s signal strength and location on Bennu indicate that it is dark because it captured an area that was in shadow. We should expect similarly dark images of shadowed regions during Global Mapping. The MapCam and NavCam OpNavs are well aligned.

The DPI reminded the team that significant loss of data, as in the case of the particle monitoring images last week and early this week, constitutes a missed observation and needs to be evaluated in terms of the risk of not meeting requirements.

Looking ahead: Other payloads will begin powering on or preheating toward the end of this week in preparation for Global Mapping next week.

Day 179 (06/28/19)

Status Summary:

All spacecraft subsystems and payloads are green. OCAMS is powered on. OD158 is onboard the spacecraft. M5B executed yesterday.

All expected data have been received, and the partitions are empty. The images brought down for today reflect a temporarily reduced cadence (about half the total number of NavCam images that we had been bringing down). We will return to the cadence of 9 OpNavs and 152 particle monitoring images for the weekend.

Following up on the report of a dark OCAMS image at Wednesday’s downlink tag-up (DOY 177), Bashar Rizk reported today that we received another OCAMS OpNav image (also the first of its set) that was dark. As with the previous image, analysis of this image’s signal strength and location on Bennu indicates that it is showing an area that is completely in shadow.
Looking ahead: Next week will be the first week of Global Mapping with OCAMS, OLA, OTES, and REXIS. The OLA-LIDAR cross-calibration will take place next weekend.