

Day 267 (9/24/18)

Status Summary:

OCAMS is on and operating nominally. Following up on the Science Weekly discussion last Thursday (20 September, DOY 263), Bashar Rizk showed brightness data that are up to date as of this morning. It continues to look like Bennu is brightening more than expected, but there's still a lot of scatter in the data.

All other instruments are powered off and nominal. The REXIS stray-light issue raised at the downlink tag-up Friday (21 September, DOY 264) is continuing to be monitored as Watch Item #1 until the CXB calibration. The performance will be further evaluated to see if additional analysis or characterization activities are needed.

DSN stations 25 and 43 remain red, but no issues are currently anticipated because we are primarily on station 65. We will have DSN passes every day this week except Thursday.

The OpNav images which were expected to be received were not immediately processed by Ingest. When Ingest attempted to insert an OCAMS Image Header line, the relevant database index failed, causing all of the image header packets to be marked in the ERROR state. Root cause is yet to be determined precisely, but is related to the SPOCFlight deployment on 21 September.

The SW development team discovered and addressed the issue quickly this morning; today's 10 OpNav images were delayed for 2 minutes beyond the 30-minute requirement for downloading and processing. We have received all images on the ground, and data reprocessing is not required. PFR-27 has been opened to track this issue and document root cause.

Looking ahead: No scheduled activities or downlink tag-up tomorrow; the next tag-up will be Wednesday (26 September, DOY 269). The OpNav cadence continues on Wednesday, Friday, and Monday. MapCam Full Phase Function part 1 is slated for Thursday (27 September, DOY 270). OCAMS will power off next Monday (1 October, DOY 274) ahead of AAM-1.

Day 269 (9/26/18)

Status Summary:

All instruments are green; OCAMS is the only instrument on. OCAMS was reset Monday and will be powered off this coming Monday 1 October (DOY 274) ahead of AAM-1. We acquired 18 PolyCam OpNav images today (up from the previous 10 per observation date).

OCAMS Full Phase Observation part 1 occurs tomorrow (Thursday 27 September, DOY 270); this ~5.5-hour activity will collect ~735 images, including 60 darks. There is no scheduled DSN pass tomorrow, so most of the data will be coming down on Friday, along with the scheduled PolyCam OpNav images; we have staffing support Saturday to make sure that the remaining data come down successfully.

[PFR-27 \(OpNav Image Processing Failure 2018-09-24\)](#), which was described at the last downlink meeting, is open. Because of the workaround solution (removing the error-causing spatial index), we are not currently experience problems. The permanent fix will require reinstating the spatial index.

Yesterday, an issue with DSN station 65 caused a short outage that resulted in a 1.5-minute gap in OCAMS housekeeping data (details in slides). The gap does not affect science data. Because the number of frames lost (8) was below the retransmit request threshold (20), we did not request a retransmit.

Looking ahead: The next downlink tag-up is tomorrow. There is no Science Weekly meeting this week. AAM-1 is scheduled for Monday 1 October (DOY 274), with the opportunity on Friday 5 October (DOY 278) for a contingency burn.

Day 270 (9/27/18)

Status Summary:

All instruments are green; OCAMS is the only instrument on.

MapCam Full Phase Function part 1 completed earlier today. There is no DSN pass today, so the data from this activity will come down Friday and Saturday (28 and 29 September, DOY 271 and 272), along with Friday's PolyCam OpNav images.

[PFR-27 \(OpNav Image Processing Failure 2018-09-24\)](#) is still open, but as discussed yesterday, the problematic index was temporarily removed, preventing further problems.

Bashar Rizk gave an update on the latest OCAMS data from ahead of the Full Phase Function observations. The monotonic brightening trend appears to be continuing, with measurements generally brighter than expected based on the current model with the original phase slope. When the model is modified with a new phase slope, Bashar expects better agreement between predictions and measurements.

Looking ahead: The next downlink tag-up is tomorrow. PolyCam OpNav image collection continues tomorrow and Monday (1 October, DOY 271) with 18 images per date. AAM-1 is scheduled for Monday; OCAMS will be powered off ahead of this maneuver after collecting OpNav images.

Day 271 (9/28/18)

Status Summary:

All instruments are green; OCAMS is the only instrument on. No new issues or alarms to report.

Today's 18 PolyCam OpNav images have been received on the ground. Most of the data from yesterday's MapCam Full Phase Function part 1 observations (657 of 735 images at the time of tag-up) have come down as well, and the rest will come down over the weekend. The OCAMS partition was about halfway full at the start of today's downlink, consistent with expectations; the partition is now at <12%.

Looking ahead: No downlink tag-ups over the weekend; the next will be Monday (1 October, DOY 274). On Monday, PolyCam OpNav images will be collected as usual, after which OCAMS will be powered off and AAM-1 will take place. Daily Phase Function observations begin Tuesday (2 October, DOY 275).