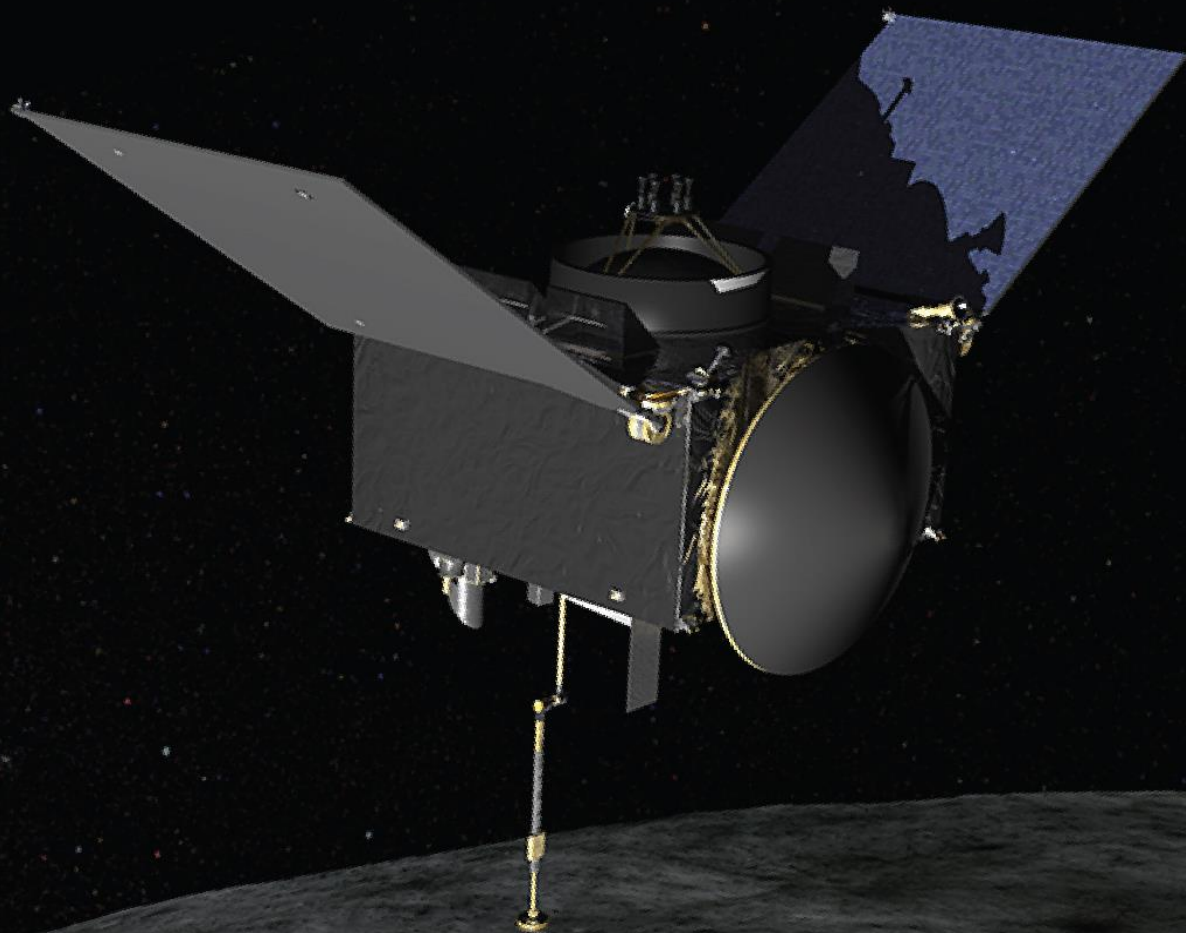




Daily Downlink Tagup

Monday, September 24, 2018 (DOY 267)

OSIRIS-REXTM
ASTEROID SAMPLE RETURN MISSION



Agenda & Logistics

- **Quicklook & Instrument Weekly Status**
- **DSN Schedule**
- **Observation Timeline**
- **Uplink/Execution/Downlink Summary**
- **Alarms, Watch items, ISAs, PFRs**
- **Need for Retransmit, need for Replay?**
- **Science / PI Comments**
- **Go-backs / Additional Comments**

Daily Downlink Slides available shortly after each Tagup at:

OSIRIS-REx Bennu Proximity Operations\Science Implementation\Downlink_Daily_Summary

Quicklook & Instrument Weekly Status

Team	Status	Comment
Spacecraft	G	No issues
<i>Electrical Power System</i>	G	No issues
<i>Flight Software</i>	G	No issues
<i>Fault Protection</i>	G	No issues
<i>G&NC</i>	G	No issues
<i>Mechanisms</i>	G	No issues
<i>Propulsion</i>	G	No issues
<i>Telecom</i>	G	No issues
<i>Thermal</i>	G	No issues
<i>Payload Interfaces</i>	G	No issues

	Health				Safety		Performance			Powered State	GO/NO-GO
OCAMS										ON	GO
OLA										OFF	GO
OTES										OFF	GO
OVIRS										OFF	GO
REXIS										OFF	GO
	Thermal	Power	Command Response	Alarms	Trending	Limited Life & Mechanisms	Data Completeness	Pipeline Status	Science Concurrence		

Quicklook & Instrument Weekly Status

- **OCAMS:** Based on latest data, instrument is operating nominally and in good health. Brightness may be slightly brighter than expected, still doing analysis. (Slides follow)
- **OLA:** Off, Quicklooks are nominal
- **OTES:** Off, Nominal
- **OVIRS:** Nominal
- **REXIS:** Off, temps nominal, cover heater not cycling (as intended). Continuing to monitor watch item.



OCAMS DAILY DOWNLINK
SEPT 24, 2018

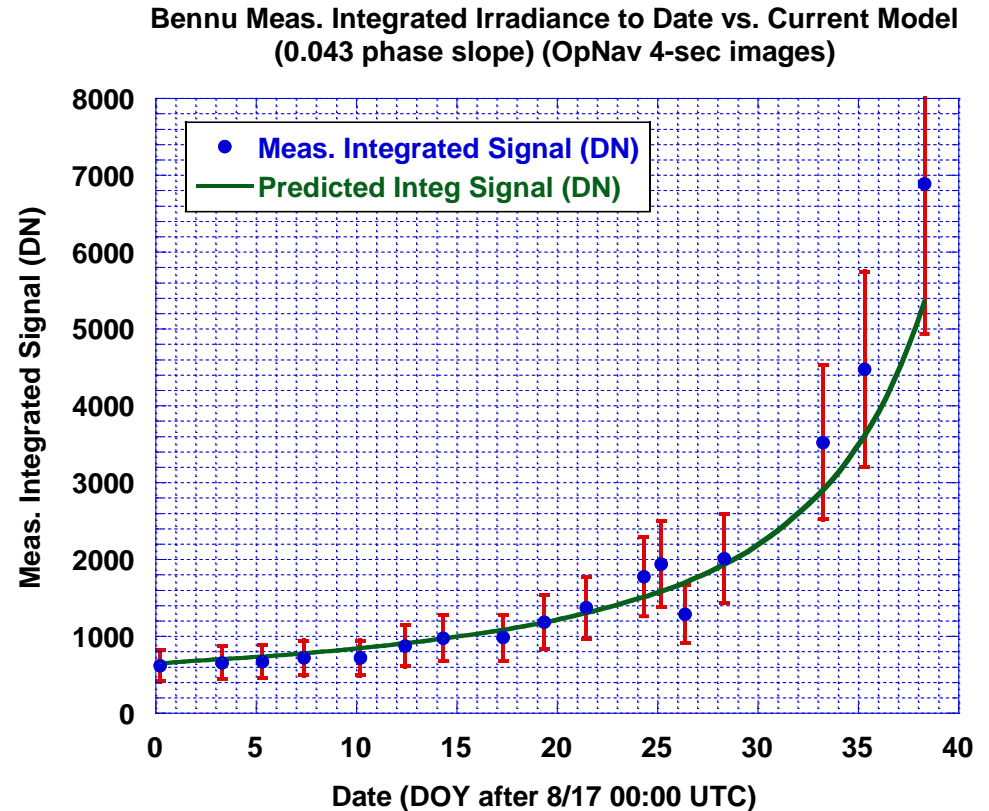
OSIRIS-REx™
ASTEROID SAMPLE RETURN MISSION

Bashar Rizk
Christian d'Aubigny
Mike Fitzgibbon



Predicted Signal based on original phase slope (0.043 Mv/deg)

- Error bars are formally 2σ and include
 - aliasing error
 - scatter in the data after aliasing correction
 - possibly due to jitter and/or asteroid brightness due to rotation
 - and measurement error (incl. shot noise)



Approach Phase Bennu Imaging to Date

DOY	Date	Start/End (UTC hh:mm)		Rng (M km)	B Sol Rng (AU)	Phase Angle (°)	V Mag	PC Pan Mag	Width (PC Pixel)	Pred Peak Sig (DN)	Obs Peak Sig (DN)	Pred Integ Sig (DN)	Obs Integ Sig (DN)	Obs Peak / IS .3049
229	8/17	5:30	7:30	2.18	1.27	26.7	13.0	12.58	0.017	178	230.4	589	618.1	0.366
232	8/20	7:25	7:35	2.04	1.26	28.6	12.91	12.49	0.018	194	173.2	644	655.2	0.256
234	8/22	7:25	7:35	1.94	1.25	30.0	12.86	12.44	0.019	204	144.6	676	668.9	0.210
236	8/24	9:00	9:30	1.84	1.25	31.4	12.80	12.38	0.020	217	187.6	716	717.6	0.256
239	8/27	4:30	5:00	1.71	1.24	33.3	12.70	12.29	0.021	236	219.8	782	718.4	0.294
241	8/29	10:00	11:00	1.61	1.24	34.8	12.63	12.21	0.023	256	242.6	846	876.5	0.272
243	8/31	7:25	7:35	1.53	1.23	36.2	12.56	12.14	0.024	274	278.1	906	975	0.279
246	9/3	7:10	7:20	1.39	1.22	38.3	12.44	12.02	0.026	308	248.2	1018	984.5	0.245
248	9/5	8:40	8:50	1.30	1.22	39.8	12.35	11.93	0.028	336	441.5	1112	1185	0.366
250	9/7	10:40	10:50	1.20	1.21	41.3	12.24	11.82	0.030	374	662.9	1238	1373	0.479
253	9/10	7:25	7:35	1.09	1.21	43.4	12.09	11.66	0.034	469	511.5	1551	1776	0.286
254	9/11	4:20	4:45	1.05	1.20	44.0	12.03	11.61	0.035	487	515	1635	1941	0.263

Downlink Schedule (times in UTC)

- **Current Data Rate: 916 kbps**

WOY	DOY	Start Date	HGA Start	End Date	HGA End	Duration	Note
38	265	2018-09-22	14:30	2018-09-22	20:00	05:30	COMPLETE
38	266	2018-09-23	14:30	2018-09-23	17:30	03:00	COMPLETE
39	267	2018-09-24	15:30	2018-09-24	18:15	2:45	COMPLETE
39	268	2018-09-25	15:30	2018-09-25	17:30	2:00	
39	269	2018-09-26	15:30	2018-09-27	18:35	3:05	
39	270	2018-09-27		2018-09-27			No DSN Pass
39	271	2018-09-28	15:00	2018-09-28	20:00	5:00	
39	272	2018-09-29	14:20	2018-09-29	17:15	2:55	
39	273	2018-09-30	14:25	2018-09-30	20:00	5:35	
39	274	2018-09-31	14:42	2018-09-31	19:40	4:58	

DSN Notes:

DSS65/ORX 266/1435Z DR M110834 Software/ULC Entered
 266/1716Z 0161
 Originating Site:MDSCC
 Controlling Site:MDSCC

RED EQUIPMENT STATUS: SPC/DSS EQUIPMENT ETRO -----
 DSS25 AWVR 264/2300z
 SPC40 DCC1 269/0023z
 DSS43 S400KW 275/0630z
 SPC60 VSR 300/1648z

No monitor data from UPL. UPL stop/start to no avail. Manual calibration at the TXR local panel 18.5 KW output. FEM disabled in order to provide CMD capability.

Approach: OpNavs & REXIS Cover Open Attempt 2 & 3

WOY 38 - COMPLETE

38	Monday							Tuesday							Wednesday																																										
	260 (09/17) Template AP4: OpNav and/or Daily Phase Function Day							261 (09/18) Template AP4: OpNav and/or Daily Phase Function Day							262 (09/19) Template AP4: OpNav and/or Daily Phase Function Day																																										
Template	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Sci Plan	HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hour																												
S/C Pointing	Earth Pt																					opn_at_18255a_01 af - Start 05:40:22, End 06:14:01																																			
OCAMS																																																									
OTES																																																									
OVIRS																																																									
OLA																																																									
REXIS	REXIS powered on 12:40 Frangbok timer reset REXIS powered off 15:34							NO DSN HGA TIME (DSN Madrid stations security scan downtime)							DDOR							RTS DEMO																																			
NAVCAM	1440-1740 55																					0200-0300 26/36 N/S							1800-2000 63																												

38	Thursday							Friday							Saturday																																	
	263 (09/20) Template AP4: OpNav and/or Daily Phase Function Day							264 (09/21) Template AP4: OpNav and/or Daily Phase Function Day							265 (09/22) Template AP4: OpNav and/or Daily Phase Function Day																																	
Template	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Sci Plan	DDOR window							HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hour							DDOR window																			
S/C Pointing	Earth Pt														opn_at_18255a_01 af - Start 07:10:00, End 07:44:01							Earth Pt																										
OCAMS																																																
OTES																																																
OVIRS																																																
OLA																																																
REXIS								DSN							DSN							REXIS Cover Open - 3rd Attempt, if needed																										
NAVCAM								1445-1730 65														1430-1650 54 Data cutoff AAM1 Final Design																										

38	Saturday							Sunday							Monday																																							
	266 (09/23) Template AP4: OpNav and/or Daily Phase Function Day							267 (09/24) Template AP4: OpNav and/or Daily Phase Function Day							268 (09/25) Template AP4: OpNav and/or Daily Phase Function Day																																							
Template	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11
Sci Plan	HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hour							DDOR window																																
S/C Pointing	Earth Pt														Earth Pt																																							
OCAMS																						opn_at_18255a_01 af - Start 07:10:00, ocm_weekly_reset.ref.NET 11:55:NT 11:30																																
OTES																																																						
OVIRS																																																						
OLA																																																						
REXIS																						Start of continuous coverage																																
NAVCAM	1430-2000 55														1430-1730 65																																							

Approach: OpNavs & MapCam Full Phase Function Part 1

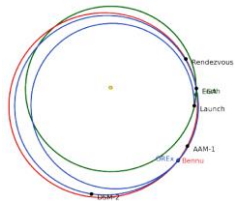
WOY 39

We are HERE

Monday (09/24) Template AP4: OpNav and/or Daily Phase Function Day																								Tuesday (09/25) Template AP4: OpNav and/or Daily Phase Function Day																								Wednesday (09/26) Template AP4: OpNav and/or Daily Phase Function Day																							
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
HGA Pass: 5-7 Hour								DDOR window								HGA Pass: 5-7 Hour								DDOR window								HGA Pass: 5-7 Hour																																							
DSN 1530-1815 54																DSN 1530-1730 65 *2hr*																DSN 1530-1835 55																																							
Earth Pt																Earth Pt																Earth Pt																																							
OCAMS																								opn_atl_18269a_01a1f Start:07:10:22, End:07:46:00																																															
OTES																																																																							
OVIRS																																																																							
OLA																																																																							
REXIS																																																																							
NAVCAM																																																																							

Thursday (09/27) AP1: Nominal Science Day																								Friday (09/28) Template AP4: OpNav and/or Daily Phase Function Day																								Saturday (09/29) Template AP4: OpNav and/or Daily Phase Function Day																							
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7																
DDOR window						ATL: 6 Hour, includes OpNav						HGA Pass: 5-7 Hour						DDOR window						HGA Pass: 5-7 Hour						DDOR window																																									
						NO DSN HGA TIME												DDOR						DSN																																															
																		0110-0210 24/36 N/S												1500-2000 65 AAM uplink opportunity																																									
Phase Function						sci_atl_18270a_01a1f Start:04:01:25, End:09:09:08												opn_atl_18269a_01a1f Start:07:10:22, End:07:46:00						Earth Pt																																															
OCAMS MapCam Full Phase Function Part 1 of 2 (736 images - was 621)																																																																							
OCAMS																																																																							
OTES																																																																							
OVIRS																																																																							
OLA																																																																							
REXIS																																																																							
NAVCAM																																																																							

Saturday (09/30)																								Sunday (09/30) Template AP4: OpNav and/or Daily Phase Function Day																								Monday (10/01) APS: Maneuver Day, with OpNav and/or Daily Phase Function																							
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11												
A						HGA Pass: 5-7 Hour						DDOR window						HGA Pass: 5-7 Hour						DDOR window						A																																									
						DSN						DDOR						DSN						DDOR																																															
						1420-1715 65 AAM uplink opportunity						0115-0215 14/34 N/S												1425-2000 54						0100-0200 24/34 N/S																																									
Earth Pt												Earth Pt												Earth Pt																																															
OCAMS																																																opn_atl_18269a_01a1f Start:06:55:00, End:07:31:00																							
OTES																																																Call ocams_pwr_off_iv_rflr_ep02_ocams+YES;XFER NET 11:RMLT 11:30																							
OVIRS																																																																							
OLA																																																																							
REXIS																																																																							
NAVCAM																																																																							



Statistics as of September 19, 2018, L+741 days

- Days until Arrival: 75 days
- Earth Range = 124,000,000 km (0.83 AU) (↑)
- Sun Range = 177,000,000 km (1.18 AU) (↓)
- Bennu Range = 729,000 km (↓)
- Sun-Probe-Earth Angle = 56.7 deg (↑)
- One Way Light Time = 00:06:52 hh:mm:ss (↑)
- Round Trip Light Time = 00:13:45 hh:mm:ss (↑)
- (↑ increasing, ↓ decreasing)

Uplink Summary

UPLINK

WOY 39 (2018/267 – 2018/274)

- xm1839 BGSeq and Sci Genies [uplinked 2018-264/14:49](#)

WOY 40 (2018/267 – 2018/274)

- xm1840 BGSeq and Sci Genies to be uplinked NET [2018-270](#)

Execution Summary

- **Instrument Status:**

- OCAMS is powered-on
- All other payloads remain powered off

Executed (times in UTC):

- **2018/264 (Friday, Sept 21)**
 - OpNav ATF kicked off at 07:10
 - 10 PolyCam opnav images (**# of images expected=10 / # of images received= 10**)
 - These OpNavs from today are the last set that will be folded in to the Nominal OD corresponding to the AAM1 final design
- **2018/265-266 (Saturday, Sept 22 & Sunday, Sept 23)**
 - No scheduled activities
- **2018/267 (Monday, Sept 24)**
 - 10 PolyCam opnav images (**# of images expected=10 / # of images received= 10**)
 - 11:15 ocams_weekly_reset
 - Transition to xm1839

Up Next (times in UTC):

- **2018/268 (Tuesday, Sept 25)**
 - No scheduled activities
- **2018/269 (Wednesday, Sept 26)**
 - 10 PolyCam opnav images

Downlink Summary

Current Data Rate: 916 kbps

DOWNLINK

- **Partition Status as of 19:00 UTC:**

	Part. Start Vol (MB)	New Data Vol (MB)	New Data Vol (Mb)	Expected Partition Fill (%)	Current Partition Fill (%)	Comments
<i>OpNav</i>	0.00	22.40	179.20	3.20	0.00	
<i>OTES</i>	0.00	0.00	0.00	0.00	0.00	
<i>REXIS</i>	0.00	0.00	0.00	0.00	0.00	
<i>OLA</i>	0.00	0.00	0.00	0.00	0.00	
<i>OVIRS</i>	0.00	0.00	0.00	0.00	0.00	
<i>OCAMS</i>	0.00	6.70	53.60	0.18	0.00	
<i>Tagcams/Overflow</i>	0.00	0.00	0.00	0.00	0.00	

DOY 267 OpNav Processing Issue

The OpNavs delivered today, 9/24/18, were 2 minutes late. This was due to a Spatial Index which had been put on the OCAMS images, to increase the speed of spatial queries. The index was in some way broken and prevented the data from going into the database and therefor prevented the images from being assembled. We will be looking into why this change passed testing and what the cause of the “broken” index was during live operations.

List of Unexpected Alarms, Watch Items, ISAs, PFRs

Alarms

Watch Items, ISA's and PFR's

Need for Retransmit? Need for Replay?

- SPOCFlight Reports showing we have all data down through DOY 266

Science Status and/or PI Status

Looking Ahead

	40							41							42							43						
	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301
	10/1	10/2	10/3	10/4	10/5	####	####	10/8	10/9	10/10	10/11	10/12	####	####	10/15	10/16	10/17	10/18	10/19	####	####	10/22	10/23	10/24	10/25	10/26	####	####
	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su	M	T	W	R	F	Sa	Su
Week 8 - Tactical kickoff	xm1848							xm1849 - Pre Surv Wk 1							xm1850 - Pre Surv Wk 2							xm1851 - Pre Surv Wk 3						
Week 7 - SOS	xm1847							xm1848							xm1849 - Pre Surv Wk 1							xm1850 - Pre Surv Wk 2						
Week 6 - J-A 1	xm1846							xm1847							xm1848							xm1849 - Pre Surv Wk 1						
Week 5 - J-A 2	xm1845							xm1846							xm1847							xm1848						
Week 4 - TCR approval, Handshake	xm1844							xm1845							xm1846							xm1847						
Week 3 - FA Kickoff	xm1843							xm1844							xm1845							xm1846						
Week 2 - Final Build/Delivery/Test	xm1842							xm1843							xm1844							xm1845						
Week 1 - Review/Uplink	xm1841							xm1842							xm1843							xm1844						
Week 0 - Execution	xm1840							xm1841							xm1842							xm1843						
Activities Currently Executing	Pol OpNav	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Light Curve	Pol OpNav, Light Curve	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Map OpNav, Phase Function	Map OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function, NSS	Pol OpNav, Daily Phase Function, NSS	Pol OpNav, Daily Phase Function	Pol OpNav, Daily Phase Function, NSS		

Observations completion forecast dates:

WG	Task Name	DP#	MRD	Start	Finish	WOY 2018 Finish
Obs_MapCam	Light Curve: MapCam Images		146, 149abc, 157	10/11/2018	10/12/2018	41
Obs_MapCam	Phase Function: MapCam Images		149abc, 158	10/16/2018	10/16/2018	42

Validated L2 Data available completion forecast dates:

WG	Task Name	DP#	MRD	Start	Finish	WOY 2018 Finish
L2-from-MapCam	Daily Phase Function: MapCam Images validated		149abc, 158	10/2/2018	10/9/2018	42
L2-from-MapCam	Light Curve: MapCam Images validated		146, 149abc, 157	10/11/2018	10/18/2018	42
L2-from-MapCam	Phase Function: MapCam Images validated		149abc, 158	10/16/2018	10/23/2018	43

Data Product completion forecast dates:

WG	Task Name	DP#	MRD	Start	Finish	WOY 2018 Finish
APWG	Bennu Photometry (AP-4)	AP-4	157	10/19/2018	10/25/2018	43
APWG	Temporal and Phased Light Curve Photometry (AP-12)	AP-12	146, 157	10/19/2018	10/25/2018	43
APWG	Light Curve Parameters (AP-13)	AP-13	146, 157	10/19/2018	10/25/2018	43

Go Backs / Additional Comments

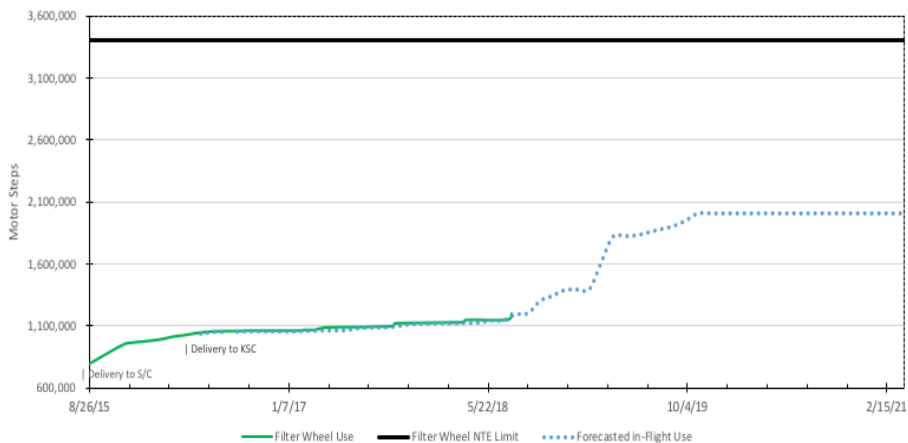
- **Daily Downlink Cancelled Tuesday (9/25)**
- **Next Daily Downlink Tagup Wednesday (9/26).**

Backup

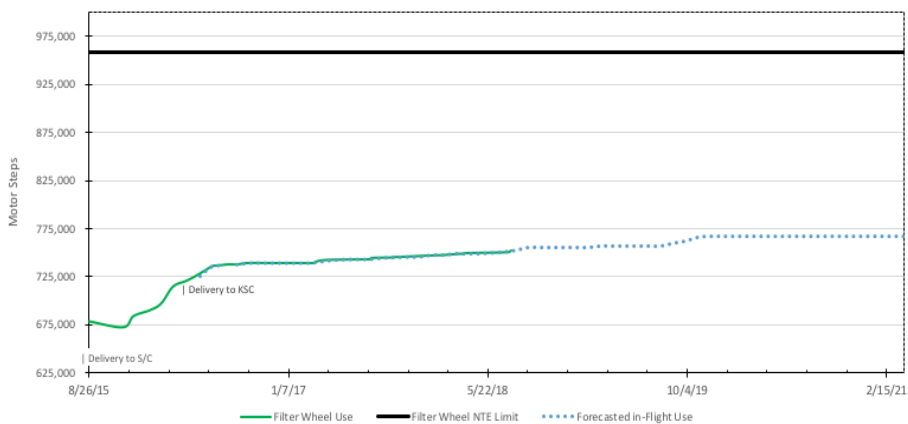
OCAMS Mechanism Life Tracking

Status as of September 14, 2018

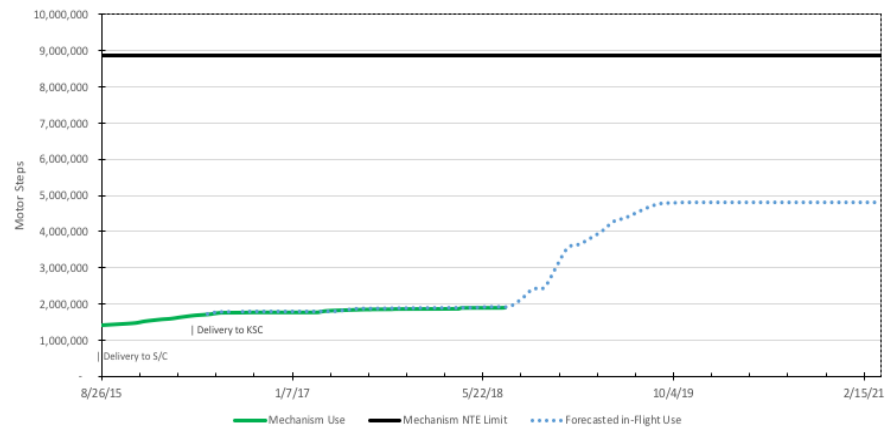
MapCam Flight Filter Wheel Margin



SamCam Flight Filter Wheel Margin



PolyCam Flight Focus Mechanism Margin

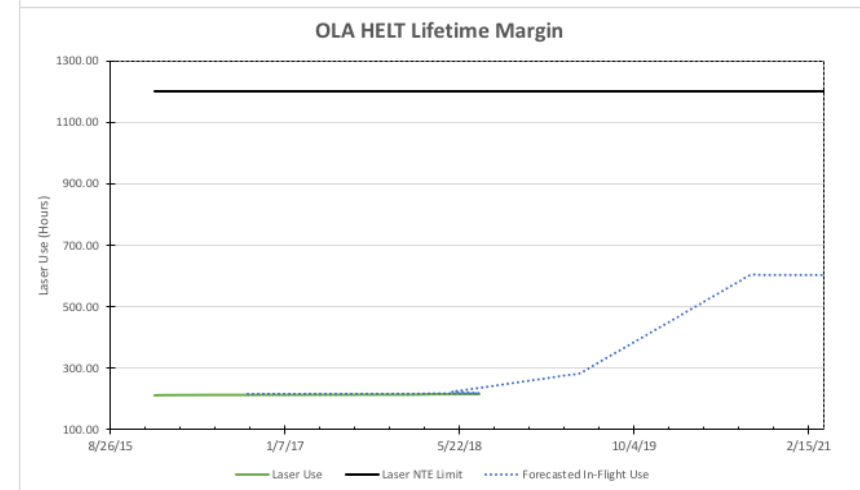
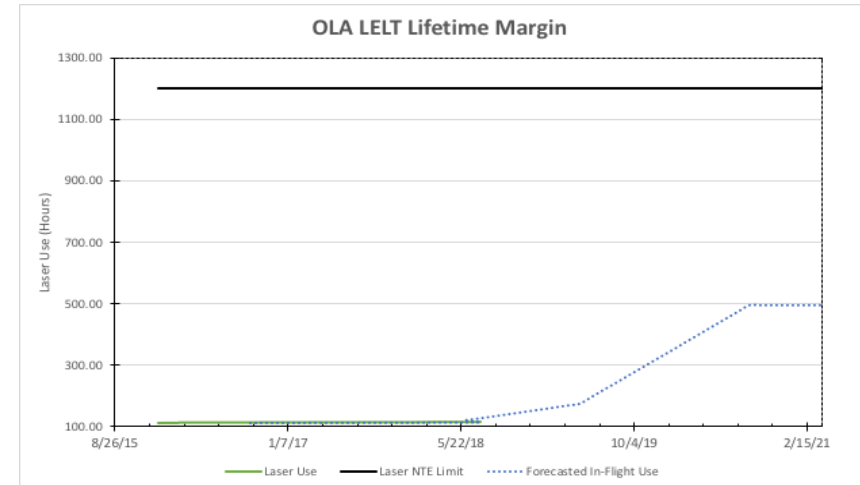


	Launch (steps)	Flight (steps)	NTE Margin (steps)
MapCam	1,057,475	139,099	2,464,384
SamCam	738,110	14,525	265,526
PolyCam	1,775,496	167,855	6,982,365

OLA Limited Life Laser Tracking

	Launch (hours)	Flight (hours)	NTE Margin (hours)
LELT	110.70	4.29	1,085.01
HELT	212.50	3.70	983.80

Status as of September 14, 2018



SPOC Watch Item List

Todays Date: 9/07/2018		SPOC Watch Item List									
Status	Date Added	Date Removed	Item ID	Instrument	Title	Watch Item Description	Impact Type	Watch Item Age	ISA # or TCR #	Watch Item Action	Watch Item Action Plan
Open	9/30/16		Item1	REXIS	CCD Hot Pixels	Some hot pixels were noted on the CCD array.	Hardware Performance	707		Watch	None as of now. If this item trends up, an assessment of masking pixels will need to be made. Update 08/06/2018: REXIS team reports that no additional hot pixels have been noted since the opening of this item, but they will continue to monitor.
Open	4/3/18		Item10	OLA	OLA T0 Intensity	L+10 day, L+6 mo, and L+10 mo On-orbit checkouts showed that OLA's T0 signal intensity (Return Intensity) is an order of magnitude lower than expected as compared with pre-launch spacecraft and stand-alone test data. The L+18 calibrations revealed that the T0 intensity is at pre-launch levels on both the Gold and Silver sides of OLA. SPOC has opted to close ISA 2257 and continue to monitor T0 intensity as a watch item.	Instrument Performance	157		Watch	Monitor the T0 Intensity at the L+22 and L+30 OLA checkouts Update 08/06/2018: Based on results from L+18 and L+22, OLA has not been able to discern a temperature dependency with t0 Intensity value. We will continue to watch, but may never fully understand the cause. OLA can still operate as expected despite the inconsistency seen in the t0 value.
Open	9/5/18		Item11	OCAMS	OCAMS Error on Polycam Startup	During power on of the OCAMS cameras there is the possibility of a 4 byte packet being created due to line noise. SPOCFLIGHT is unsure what to do with this packet, so flags it as an error. So far this has only occurred twice during flight, both times with Polycam but it is possible this could occur with any of the OCAMS cameras. As OCAMS has only been used sparingly during Cruise, it is not certain how frequently this error will occur.	Instrument Performance	2		Watch	Will monitor for future occurrences across all of the OCAMS cameras and assess if any action is warranted.

Anomaly Response & Status

ISA #	Date Created	Type	Priority	Title	Detailed Description - Action Plan	Notes	Status	Resolved Date	Need Date
5708	8/22/18	GroundMinor	Normal	FEDS not reconstructing packets that encounter a frame counter rollover	SPOC noticed a missing image line for one image. The image line had a packet in it which one of the frames within rolled over the frame counter. The packet was not reassembled and was not available from the FEDS at both LM and the SPOC.		In Progress	TBD	TBD
5855	9/5/18	Spacecraft Minor	Normal	OCAMS settings for OpNavs in Approach	The OCAMS performance specific to early Approach at low DN values warranted updates to previously delivered exposure settings in several OpNav Requests that was not necessarily expected or anticipated. This is relatively easily accommodated but is being captured more as a 'surprise' in the ISA then an anomaly or a problem, and as a place to capture the changes, the rationale for the changes, and any other implications or analyses that go with the exposure setting updates for posterity.		Draft	TBD	TBD
5854	9/5/18	Spacecraft Minor	Normal	Previously known OCAMS 'finger regions' implications on Nav solutions	Although this is not an issue for science because nominal observations are planned with pointing to avoid the finger regions when targeting or it's N/A due to the nature of the target and the scene entropy, there could be low probability but non-zero situations where the dispersion following a maneuver places Bennu in one of these less desirable locations overlapping a finger region causing bright blooming issues which can affect the center-finding algorithms. The project will likely document an acceptance of this low probability risk but the ISA is a logical place to capture any extra work, analysis, or implications this phenomenon can cause with other elements, particularly navigation.		Draft	TBD	TBD
5380	7/20/18	Ground Minor	Normal	SCLK SCET file error in rev 31	<p>The SCLK SCET file released on July 10 (rev 31) has an error in it that results in a 5 second offset due to an incorrect incorporation of the DUT.</p> <p>Rev 32 is in work to replace this file and remove the incorrect entry from the sclk-scet interpolation history.</p> <p>On Friday, 7/20 the SPOC was notified that the SCLKSCET kernel delivered on July 10, 2018 (FILENAME: ORX_SCLKSCET.00031), did not have the inclusion of Leap Seconds, therefore resulting in an ~5 second shortage in timing. This kernel had been applied to all the L+22 data up until notification late Friday afternoon.</p> <p>A new SCLKSCET has been released as of this morning 07/23/18 (FILENAME: ORX_SCLKSCET.00032) with this issue corrected. Please Note: SPOC will be kicking off reprocessing of all L+22 data using ORX_SCLKSCET.00032 after the conclusion of today's DSN pass (at ~21:00 UTC) 07/23/18.</p>		In Progress	TBD	TBD
5285	6/11/18	Ground Minor	Normal	OVIRS encountered two missed aliveness checks after a RESET	During the OVIRS L+22 BPM and LUT loads and checkouts OVIRS experience two instances of two missed Aliveness Checks. Three would have safed the instrument. This occurred after the RESET post loading of the BPM and LUT files. It did not occur after the first RESET prior to loading the files. It was consistent for both the Super Pixel 2 and 8 loads.		In Progress	TBD	9/7/18

Anomaly Response & Status

ISA #	Date Created	Type	Priority	Title	Detailed Description - Action Plan	Notes	Status	Resolved Date	Need Date
4861	5/12/18	Ground Minor	Normal	Planning Complications with Early ATL Stop	<p>During ORT 4/5, we ran into a previously unrecognized complication of stopping a re-usable ATL early.</p> <p>As it processes the ATL, the FSW will load each next target at the end of the current target. The result is that if an ATL is stopped before the end of the full target list, there will be one more target loaded that will execute after the stop. (The original design of the ATL was based on absolute times so there was no plan to stop a running ATL outside of Safe Mode.)</p> <p>If we want to be able to stop an ATL early, the MSA needs to send the ATL Stop command in the window between the load of the last desired target (4 seconds before the target time of the penultimate target) and the load of the next target (4 seconds before the target time of the last target). This time cannot be calculated by the MSA until the MSA has received the ATF and UPBL so the load times can be resolved. Alternatively, the relative ATL could be truncated at the appropriate times to avoid this.</p>	7/19/18: MSA has identified all needed apps, they will require implementation to close this ISA.	In Progress	TBD	TBD
4762	5/3/18	Ground Minor	Normal	JAsteroid and ATARPS FOV disagreement	JAsteroid did not show that Bennu was in the star tracker field of view but ATARPS did, even when using the same initial conditions. There is concern that this may also extend past just the ST FOV. This needs further investigation.	6/15/18: All data has been provided to MSA for analysis	In Progress	TBD	TBD

Current ISA Status

#	Status	Priority	Subject	Assignee	Updated
5855	Draft	Normal	OCAMS settings for OpNavs in Approach		9/5/18 22:07
5854	Draft	Normal	Previously known OCAMS 'finger regions' implications on Nav solutions		9/5/18 21:55
5786	In Progress	High	Corruption of local disk and OS on NavMSA iMac workstations	Michael Moreau	9/5/18 21:44
5708	In Progress	Normal	FEDS not reconstructing packets that encounter a frame counter rollover	Mark Fisher	8/23/18 12:31
5701	In Progress	Normal	Missing Downlink Table during Station 55 pass on 18229	Andy Calloway	8/23/18 12:54
5506	In Progress	Normal	TAGSAM Convoluted Tube (flex hose)	Beau Bierhaus	8/9/18 7:15
5380	In Progress	Normal	SCLK SCET file error in rev 31	Mark Fisher	7/23/18 9:48
5285	In Progress	Normal	OVIRS encountered two missed aliveness checks after a RESET	Allen Lunsford	7/19/18 9:48
4868	In Progress	Normal	Dropped data during STL run	Mike Skeen	5/25/18 9:45
4861	In Progress	Normal	Planning Complications with Early ATL Stop	Olivia Billett	8/3/18 14:40
4762	In Progress	Normal	JAsteroid and ATARPS FOV disagreement	Sandy Freund	9/5/18 21:42