



# Daily Downlink Tagup

Friday, October 19, 2018 (DOY 292)

**OSIRIS-REX™**  
ASTEROID SAMPLE RETURN MISSION



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**NOTICE: Beginning 10/16/18, Daily Downlink Tagup meeting audio will be recorded.**

# Agenda & Logistics

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- **Quicklook**
- **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 + Weekly Instrument Status *(see backup for Instrument Status)*

Team	Status	Comment
<b>Spacecraft</b>	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&amp;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										<b>ON</b>	<b>GO</b>
OLA										<b>OFF</b>	<b>GO</b>
OTES										<b>OFF</b>	<b>GO</b>
OVIRS										<b>OFF</b>	<b>GO</b>
REXIS										<b>OFF</b>	<b>GO</b>
	Thermal	Power	Command Response	Alarms	Trending	Limited Life & Mechanisms	Data Completeness	Pipeline Status	Science Concurrence		

# Downlink Schedule (times in UTC)

- **Current Data Rate: 916 kbps**

WOY	DOY	Start Date	HGA Start	End Date	HGA End	Duration	Note
41	288	2018-10-15	13:55	2018-10-15	16:37	02:40	COMPLETE
41	288	2018-10-15	17:39	2018-10-15	19:51	02:12	COMPLETE
42	289	2018-10-16	16:00	2018-10-16	20:00	04:00	COMPLETE
42	290	2018-10-17	16:00	2018-10-17	20:00	04:00	COMPLETE
42	291	2018-10-18	15:30	2018-10-18	16:45	01:45	COMPLETE
42	292	2018-10-19	13:50	2018-10-19	17:05	03:15	COMPLETE
42	293	2018-10-20	13:50	2018-10-20	19:30	05:40	
42	294	2018-10-21	13:45	2018-10-21	19:30	05:45	

## DSN Notes:

SPC/DSS

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DSS25  
DSS54  
DSS43  
SPC60

EQUIPMENT

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AWVR  
ND-S  
HEMT-S1  
VSR

ETRO

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292/2300z  
296/1530z  
299/0600z  
300/1648z

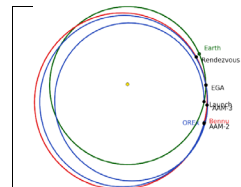
# AAM2, MapCam Phase Function 2, SMM3, TAG Cover Release, SMM4 WOY 42

42	Monday 289 (10/15) AP5: Maneuver Day, with OpNav and/or Daily Phase Function											Tuesday 289 (10/16) AP1: Nominal Science Day											Wednesday 290 (10/17) AP11: Spacecraft Activity with OpNav and/or Daily Phase Function Day																														
	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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Template	HGA: 5-7 Hr Burn											DDOR window											HGA Pass: 5-7 Hour																														
Sci Plan	DSN Level 3 Coverage 1355-2000 65, Dual receivers, critical support OpNav d/i feeds post burn contingency ephem build											DDOR 0125-0225 26/35 N/S 0340-0930 35											DSN L4 Ops Eng/NOPE On-call TAG ARM CVR EKT 1620-1955 54, Dual receivers Contingency ephem uplink, OpNav d/i feeds post burn contingency ephem build																														
S/C Pointing	ocams_cvr_onNET 288-2100.00ML1 285-03:00:00											Nadir Point											12 hr cooldown at Sun Pt.																														
OCAMS												ocaml_R229a_01.af Start: 09:42:38 End: 10:18:12 (MapCam OpNav)											ocaml_R229a_01.af Start: 04:00:00 End: 09:02:00																														
OTES																																																					
OVIRES																																																					
OLA	ALL PAYLOADS OFF DURING AAM 2																																																				
REXIS																																																					
NAVCAM																																																					

We are HERE

42	Thursday 291 (10/18) AP11: Spacecraft Activity with OpNav and/or Daily Phase Function Day											Friday 292 (10/19) Template AP4: OpNav and/or Daily Phase Function Day																																						
	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
Template	DDOR window											HGA Pass: 5 Hour																																						
Sci Plan	0450-1150 36											DSN NWDOT no DSN 1700-2300 1530-1645 63 AAM2 C1 u/i opportunity																																						
S/C Pointing	12 hr cooldown at Sun Pt.																																																	
OCAMS	SMM4											ocaml_R229a_01.af Start: 11:27:51 End: 12:09:27 (MapCam OpNav + MapCam Daily Phase Function)																																						
OTES																																																		
OVIRES																																																		
OLA												Potential AAM2-C1 All Payloads Powered Off if Needed																																						
REXIS																																																		
NAVCAM																																																		

42	Saturday 293 (10/20) Template AP4: OpNav and/or Daily Phase Function Day											Sunday 294 (10/21) Template AP4: OpNav and/or Daily Phase Function Day											Monday 295 (10/22) AP5: 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
Template	DDOR window											HGA Pass: 5-7 Hour											HGA Pass: 5-7 Hour																																				
Sci Plan	0400-1115 35											DSN 1350-1930 55 1st AAM u/i opportunity											0050-0825 34																																				
S/C Pointing	ocaml_R229a_01.af Start: 08:52:51 End: 09:34:27 (PolyCam OpNav + MapCam Daily Phase Function)																						ocaml_R229a_01.af Start: 08:52:51 End: 09:34:27 (PolyCam OpNav + MapCam Daily Phase Function)																																				
OCAMS																							ocaml_R229a_01.af Start: 08:52:51 End: 09:34:27 (PolyCam OpNav + MapCam Daily Phase Function)																																				
OTES																																																											
OVIRES																																																											
OLA																																																											
REXIS																																																											
NAVCAM																																																											



**Statistics as of October 17, 2018, L+769 day**

Days until Arrival: 47 days  
 Earth Range = 131,000,000 km (0.87 AU) (↑)  
 Sun Range = 164,000,000 km (1.09 AU) (↓)  
 Bennu Range = 6,000 km (↓)  
 Sun-Probe-Earth Angle = 59.5 deg (↑)  
 One Way Light Time = 00:07:15 hh:mm:ss (↑)  
 Round Trip Light Time = 00:14:31 hh:mm:ss (↑ increasing, ↓ decreasing)

# Natural Satellite Search 1

## WOY 43

43	Monday							Tuesday							Wednesday																																
	295 (10/22) AFS-Maneuver Day, with OpNav and/or Daily Phase Function							296 (10/23) AP1: Nominal Science Day							297 (10/24) AP1: Nominal Science Day																																
	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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Template	HGA: 5-7 Hr							DDOR window							HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hr																		
Sci Plan	<b>DSN Level 4 Coverage</b> 1350-2000 54, dual receivers backup u/l opportunity for burn							2210-0140 14							<b>DDOR</b> 0225-0325 14/34 N/S    0600-1300 35							<b>DSN L4 Ops Eng/ NOPE On-call NAT SAT SEARCH</b> 1530-2000 54 1st opnav d/f to reconstruct AAM2a							2220-0120 26							<b>DDOR</b> 0205-0305 26/35 N/S    0420-0640 35 u/l ephem reconstruct of AAM2a											
S/C Pointing								PolyNSS							scL_atl_18236a_01.af Start: 04:01:14, End:09:07:58							PolyNSS							scL_atl_18236a_01.af Start: 04:01:14, End:09:07:58																		
OCAMS								scL_atl_18236b_01.af Start: 10:00:00, End:10:41:20 (Poly OpNav + Map Daily Phase Function)														scL_atl_18236b_01.af Start: 10:00:00, End:10:41:20 (Poly OpNav + Map Daily Phase Function)																									
OTES																																															
OVIRS																																															
OLA																																															
REXIS																																															
NAVCAM																																															

43	Thursday							Friday																											
	298 (10/25) AP1: Nominal Science Day							299 (10/26) Template AP4: OpNav and/or Daily Phase Function Day																											
	18	19	20	21	22	23	24	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Template	DDOR window							HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hour													
Sci Plan	2045-2320 24 <b>DSN L4 Ops Eng/ NOPE On-call NAT SAT SEARCH</b> 1740-2000 55, dual receivers							TAGSAM Arm Release / Deployment							<b>DSN - TAG ARM RELEASE</b> 1745-2005 54							<b>DDOR</b> 0150-0250 25/36 N/S							<b>DSN L4 Ops Eng/ NOPE On-call TAG ARM BKUP</b> 1335-2005 63 Ephemeris LU- science driven ephem update, 1st AAM uplink opportunity						
S/C Pointing								PolyNSS							PolyNSS							PolyNSS													
OCAMS	scL_atl_18236a_01.af Start: 04:01:14, End:09:07:58							TAGSAM Arm Release & Deploy							scL_atl_18236a_01.af Start: 04:01:14, End:09:07:58							scL_atl_18236b_01.af Start: 10:00:00, End:10:41:20 (Poly OpNav + Map Daily Phase Function)													
OTES																																			
OVIRS																																			
OLA																																			
REXIS																																			
NAVCAM																																			

43	Saturday							Sunday							Monday																											
	300 (10/27) AP1: Nominal Science Day							301 (10/28) AP1: Nominal Science Day							302 (10/29) AFS 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	24	25	26	27	28	29	30	31										
Template	DDOR window							HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hour							DDOR window							HGA Pass: 5-7 Hour						
Sci Plan	0100-0355 26							<b>DSN NOPE heightened awareness notification NAT SAT SEARCH</b> 1335-1905 54 science driven uplink opportunity							0500-1255 35							<b>DSN NOPE heightened awareness notification NAT SAT SEARCH</b> 1440-1935 55 backup opportunity for burn u/l, nominal ephem u/l							2040-0030 25							<b>DDOR</b> 0115-0215 25/35 N/S    0330-1145 35						
S/C Pointing	PolyNSS							PolyNSS							PolyNSS							PolyNSS							ocm_weekly_reset.net:11:15:06:1:11:30													
OCAMS	scL_atl_18300a_01.af Start: 04:01:14, End:09:07:58							scL_atl_18300a_01.af Start: 04:01:14, End:09:07:58							scL_atl_18300b_01.af Start: 10:00:00, End:10:41:20 (Poly OpNav + Map Daily Phase Function)							scL_atl_18300b_01.af Start: 10:00:00, End:10:41:20 (Poly OpNav + Map Daily Phase Function)							scL_atl_18302a_01.af Start: 10:00:01, End:10:52:13													
OTES																																										
OVIRS																																										
OLA																																										
REXIS																																										
NAVCAM																																										

# Uplink Summary

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## UPLINK

### WOY 42 (2018/288 – 2018/295)

- AAM2 config file uplinked 2018-285/15:12
- xm1842 BGSeq and Sci Genies uplinked 2018-285/15:28
- Express command for early Downlink STOP uplinked 2018-285/16:55
- tagsam\_cover\_eject\_lgo.r01 uplinked 2018-290/16:46

### Ephemeris Updates

- Ephemeris Update : od049 uplinked 2018-290/16:27

# Execution Summary

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- **Instrument Status:**
  - OCAMS Powered ON, all other payloads powered OFF

## Executed (times in UTC):

- **2018/289 (Tuesday, Oct 16)**
  - 04:00 MapCam Full Phase Function part 2
    - # of images expected/**received** = 755 images / **613 images**
  - 09:42 MapCam OpNavs (critical for AAM2 reconstruct)
    - # of images expected/**received** = 18 / **18 images**
- **2018/290 (Wednesday, Oct 17)**
  - 07:00 SMM3
  - 11:27 Start MapCam OpNavs and MapCam Daily Phase Function Ride-along
    - # of images Expected/**received** = 18 OpNav + 69 Phase Function = 87 / **18 OpNav + 18 Phase Function**
  - ~17:10 TAGSAM Cover Deploy (occurred out of S/C contact)
- **2018/291 (Thursday, Oct 18)**
  - 07:00 SMM4
  - 11:27 Start PolyCam OpNavs and MapCam Daily Phase Function Ride-along
    - # of images Expected/**received** = 18 OpNav + 69 Phase Function = 87/ **18 OpNav + 0 Phase Function**
- **2018/292 (Friday, Oct 19)**
  - 08:52 Start PolyCam OpNavs and MapCam Daily Phase Function Ride-along
    - # of images Expected = 18 OpNav + 69 Phase Function = 87

## Up Next (times in UTC):

- **2018/293 (Saturday, Oct 20)**
  - 08:52 Start PolyCam OpNavs and MapCam Daily Phase Function Ride-along
    - # of images Expected = 18 OpNav + 69 Phase Function = 87
- **2018/294 (Sunday, Oct 21)**
  - 08:52 Start PolyCam OpNavs and MapCam Daily Phase Function Ride-along
    - # of images Expected = 18 OpNav + 69 Phase Function = 87

# Downlink Summary

- **Current Data Rate: 916 kbps**

## Downlink

- Expected Partition Status for today's pass, scheduled for DOY 292:

	Part. Start Vol (MB)	New Data Vol (MB)	New Data Vol (Mb)	Expected Partition Fill (%)	Current End Partition (%)	Comments
<i>OpNav</i>	0.00	40.00	40.00	5.71	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>	721.78	154.00	875.78	0.76	0.00	10 Frames Unsent
<i>Tagcams/Overflow</i>	0.00	0.00	0.00	0.00	0.00	

# Need for Retransmit? Need for Replay?

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- No outstanding data gaps identified through DOY 292



# List of Unexpected Alarms, Watch Items, ISAs, PFRs

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## Alarms

- Some spacecraft alarms relating to uplink. Resolved by end of contact

## Watch Items, ISA's and PFR's

# Science Status and/or PI Status

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# Looking Ahead

	42								43						44						45							
	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
	10/15	10/16	10/17	10/18	10/19	###	###	10/22	10/23	10/24	10/25	10/26	###	###	10/29	10/30	10/31	11/1	11/2	###	###	11/5	11/6	11/7	11/8	11/9	###	###
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	xm1850 - Pre Surv Wk 2							xm1851 - Pre Surv Wk 3							xm1852 - Trans to Orbital A						xm1901 - Orbital A							
Week 7 - SOS	xm1849 - Pre Surv Wk 1							xm1850 - Pre Surv Wk 2							xm1851 - Pre Surv Wk 3						xm1852 - Trans to Orbital A							
Week 6 - J-A 1	xm1848							xm1849 - Pre Surv Wk 1							xm1850 - Pre Surv Wk 2						xm1851 - Pre Surv Wk 3							
Week 5 - J-A 2	xm1847							xm1848							xm1849 - Pre Surv Wk 1						xm1850 - Pre Surv Wk 2							
Week 4 - TCR approval, Handshake	xm1846							xm1847							xm1848						xm1849 - Pre Surv Wk 1							
Week 3 - FA Kickoff	xm1845							xm1846							xm1847						xm1848							
Week 2 - Final Build/Delivery/Test	xm1844							xm1845							xm1846						xm1847							
Week 1 - Review/Uplink	xm1843							xm1844							xm1845						xm1846							
Week 0 - Execution	xm1842							xm1843							xm1844						xm1845							

## Observation completion forecast dates:

Source Phase	WG	Task Name	Related DP #	MRD	Forecast Finish	WOY 2018 Finish
Approach	Obs_MapCam	Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/16/2018	42
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/17/2018	42
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/18/2018	42
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/19/2018	42
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/20/2018	42
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/21/2018	42
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/22/2018	43
Approach	Obs_MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/23/2018	43
Approach	Obs_MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/24/2018	43
Approach	Obs_MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/25/2018	43
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/26/2018	43
Approach	Obs_MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/27/2018	43
Approach	Obs_MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/28/2018	43
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/29/2018	44
Approach	Obs_MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/30/2018	44
Approach	Obs_MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/31/2018	44
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	11/1/2018	44
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	11/2/2018	44
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	11/2/2018	44
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	11/3/2018	44
Approach	Obs_MapCam	Daily Phase Function: MapCam Images	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	11/4/2018	44
Approach	Obs_PolyCam	Daily Phase Function: PolyCam Images	AP-8, AP-9, AP-11, AP-14, AP-15, AP-19	144, 148, 158	10/23/2018	43
Approach	Obs_PolyCam	Daily Phase Function: PolyCam Images	AP-8, AP-9, AP-11, AP-14, AP-15, AP-19	144, 148, 158	10/30/2018	44
Approach	Obs_PolyCam	Daily Phase Function: PolyCam Images	AP-8, AP-9, AP-11, AP-14, AP-15, AP-19	144, 148, 158	10/31/2018	44
Approach	Obs_PolyCam	Nat Sat Search: PolyCam Images	AP-8, AP-9, AP-11	144, 148	10/24/2018	43
Approach	Obs_PolyCam	Nat Sat Search: PolyCam Images	AP-8, AP-9, AP-11	144, 148	10/25/2018	43
Approach	Obs_PolyCam	Nat Sat Search: PolyCam Images	AP-8, AP-9, AP-11	144, 148	10/27/2018	43
Approach	Obs_PolyCam	Nat Sat Search: PolyCam Images	AP-8, AP-9, AP-11	144, 148	10/28/2018	43
Approach	Obs_PolyCam	PolyCam Shape Model: PolyCam Images	Pre-Rel 75cm Shape model	678a	11/2/2018	44
Approach	Obs_PolyCam	PolyCam Shape Model: PolyCam Images	Pre-Rel 75cm Shape model	678a	11/3/2018	44
Approach	Obs_OTES	OTES Spectra (Optimized for OVIRS)	SA-10, SA-11, TA-008	159, 544	11/2/2018	44
Approach	Obs_OTES	OVIRS Full Disk Spectra: OTRS Spectra (Optimized for OVIRS)	SA-10, SA-11, TA-008	159, 544	11/3/2018	44
Approach	Obs_OVIRS	OVIRS Full disk spectra: OVIRS Spectra (Optimized for OVIRS)	SA-25	159	11/2/2018	44
Approach	Obs_OVIRS	OVIRS Full disk spectra: OVIRS Spectra (Optimized for OVIRS)	SA-25	159	11/3/2018	44

# Looking Ahead

<b>Validated Data available forecast dates (includes 1 weekday for Downlink)</b>						
Source Phase	WG	Task Name	Related DP #	MRD	Forecast Finish	WOY 2018 Finish
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/15/2018	42
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/15/2018	42
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/15/2018	42
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/17/2018	42
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/17/2018	42
Approach	Val-from-MapCam	Light Curve: MapCam Images validated	AP-4, AP-12, AP-13, IP-13	146, 148, 149a, 149b, 149c, 158	10/22/2018	43
Approach	Val-from-MapCam	Light Curve: MapCam Images validated	AP-4, AP-12, AP-13, IP-13	146, 148, 149a, 149b, 149c, 158	10/22/2018	43
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/22/2018	43
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/22/2018	43
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/22/2018	43
Approach	Val-from-MapCam	Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/23/2018	43
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/24/2018	43
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/25/2018	43
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/26/2018	43
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/29/2018	44
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/29/2018	44
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/29/2018	44
Approach	Val-from-MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/30/2018	44
Approach	Val-from-MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	10/31/2018	44
Approach	Val-from-MapCam	Daily Phase Fcn & Nat. Sat. Search: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	11/1/2018	44
Approach	Val-from-MapCam	Daily Phase Function: MapCam Images validated	AP-14, AP-15, AP-19, IP-13	149a, 149b, 149c, 158	11/2/2018	44
Approach	Val-from-PolyCam	Daily Phase Function: PolyCam Images validated	AP-18, AP-19	144, 148, 158	10/30/2018	44
Approach	Val-from-PolyCam	Nat Sat Search: PolyCam Images validated	AP-8, AP-9, AP-11	144, 148	10/31/2018	44
Approach	Val-from-PolyCam	Nat Sat Search: PolyCam Images validated	AP-8, AP-9, AP-11	144, 148	11/1/2018	44
<b>Science Data Product completion forecast dates:</b>						
Source Phas	WG	Task Name	DP #	MRD	Forecast Finish	WOY 2018 Finish
Approach	APWG	Bennu Photometry (AP-4)	AP-4	157	10/26/2018	43
Approach	APWG	Temporal and Phased Light Curve Photometry (AP-12)	AP-12	146, 157	10/26/2018	43
Approach	APWG	Light Curve Parameters (AP-13)	AP-13	146, 157	10/26/2018	43

# Go Backs / Additional Comments

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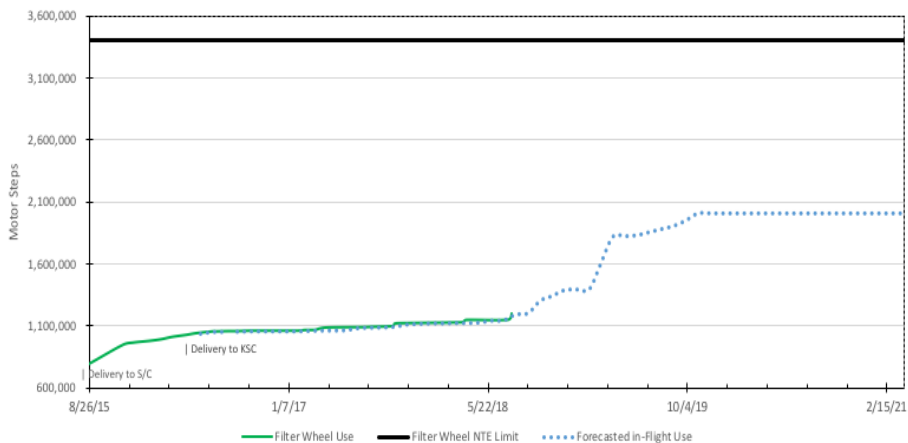
# Backup

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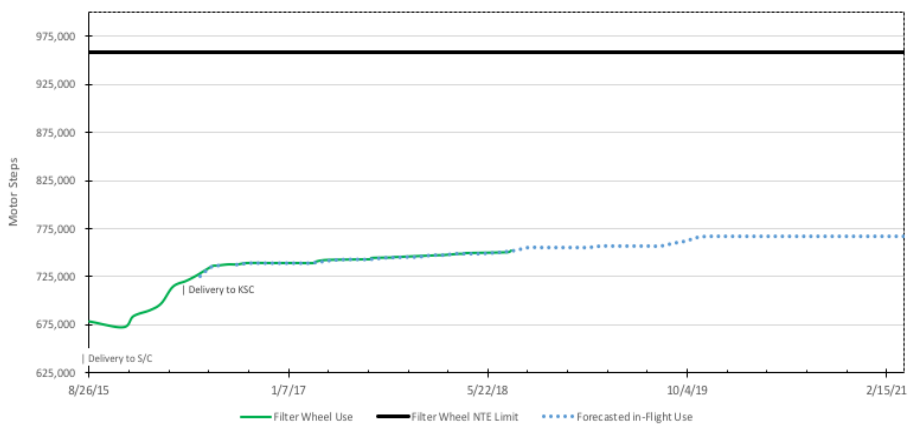
# OCAMS Mechanism Life Tracking

Status as of October 12, 2018

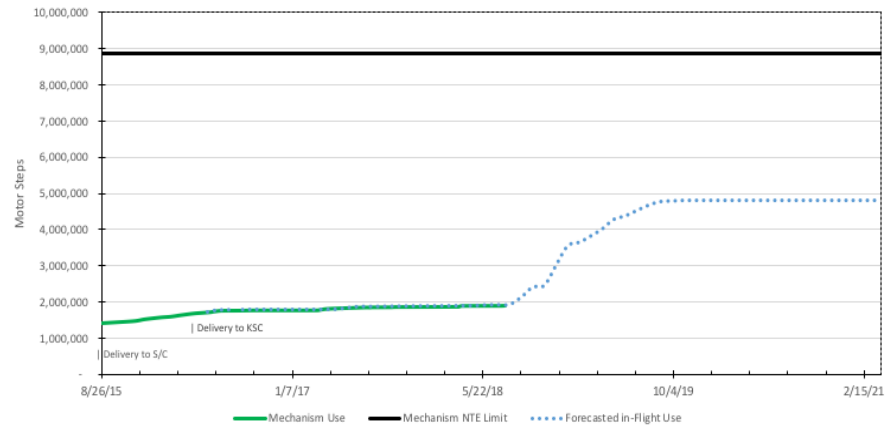
MapCam Flight Filter Wheel Margin



SamCam Flight Filter Wheel Margin



PolyCam Flight Focus Mechanism Margin

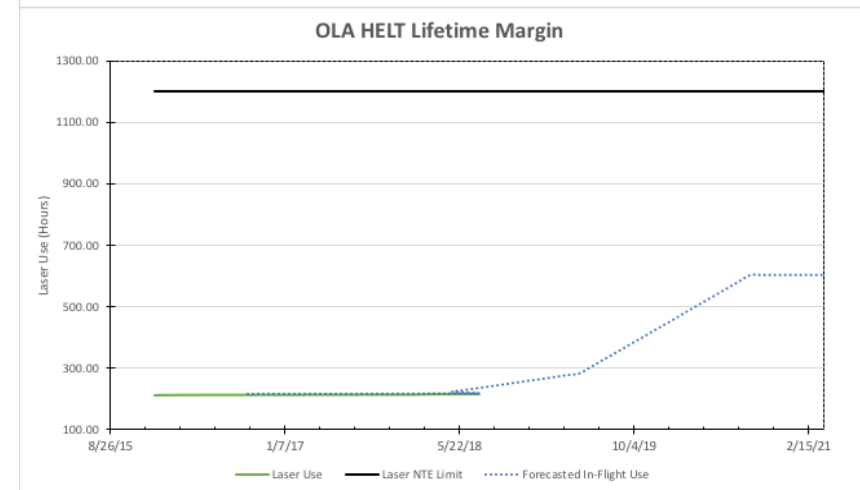
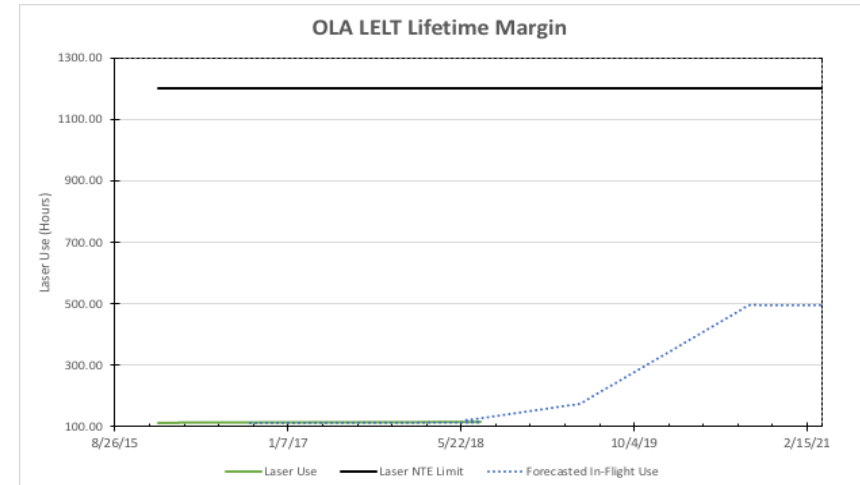


	Launch (steps)	Flight (steps)	NTE (steps)
MapCam	1057475	344577	3400320
SamCam	738110	14525	958384
PolyCam	1775496	193811	8876160

# 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 October 12, 2018



# Anomaly Response & Status

ISA #	Date Created	Type	Priority	Title	Detailed Description - Action Plan	Notes	Status	Resolved Date	Need Date
6292	10/9/18	Ground Minor	Normal	Issues accessing OREx Redmine via RAMP	There have been a number of issues accessing Redmine via RAMP (direct access without having to go the Citrix). Problems such as certain actions on a particular issue number being persistently blocked for a user by the firewall. This is a running ISA to report and log individual instances:		New	TBD	TBD
6291	10/9/18	Ground Minor	Normal	Issues accessing OREx Redmine via Citrix Receiver	There have been a number of issues accessing Redmine via the Citrix Receiver. Mostly the problems occur when opening Citrix. This is a running ISA to report and log individual instances:  ASIST hung twice on the RTO machine, causing a few issues were seen over the past weekend that should be corrected.  1 - When the RTO machine was rebooted after the first hung ASIST instance, it was brought up under a FSW account. It turns out that there are some processes that are tied to a Sys account so they did not run (ie, mid-pass queries, etc).  2 - ASIST hung a second time between Friday & Saturday, so did not kick off auto-ork in time for Saturday's HGA pass. This required GDS to come in to fix the machine, restart ASIST, and manually run a playback and the post-pass queries. The alert process is tied to auto-ork so GDS was not notified.  Two resolutions need to be worked. - The RTO machine is due for a refresh and the continued hanging of ASIST may be resolved by this. - Monitoring tools should be set up on a separate machine to ensure that the key components of auto-ork run as expected: -- station binding occurs and data flows -- mid-pass query executes and posts to the FOB -- post-pass queries execute and post to the FOB		New	TBD	TBD
6242	10/8/18	Ground Minor	Normal	ASIST issues during AAM-2 OD downlink	There was an EVR seen in the 1841 STL test due to an attempt to load an OCAMS sequence while the previous sequence is still running in the same engine. This overlap did not occur in SS or OLVM. It appears that, in the STL, a delay is being introduced each time the ocm_map_filter_alt_other block cycles. This delay is only ~100ms each time, but the block runs hundreds of times throughout the ATL, so the total delay is ~27 seconds by the time the next OCAMS sequence tries to load. From preliminary investigation, it appears to be related to spacecraft time being used in a delay.		New	TBD	TBD
6163	9/29/18	Spacecraft Minor	Normal	Delay in execution of OCAMS block	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.		New	TBD	TBD
5855	9/5/18	Spacecraft Minor	Normal	OCAMS settings for OpNavs in Approach			In Progress	TBD	TBD

# Anomaly Response & Status

ISA #	Date Created	Type	Priority	Title	Detailed Description - Action Plan	Notes	Status	Resolved Date	Need Date
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.		In Progress	TBD	TBD
5708	8/22/18	GroundMino	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
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

# Current ISA Status

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#	Status	Priority	Subject	Assignee	Updated
6320	In Progress	Normal	Delay in data processing at the SPOC	Karl Harshman	10/12/18 7:46
6292	Monitor	Normal	Issues accessing OREx Redmine via RAMP - Multiple Instances	OSIRIS-REx Mission Management	10/12/18 12:51
6291	Monitor	Normal	Issues accessing OREx Redmine via Citrix Receiver - Multiple Instances	OSIRIS-REx Mission Management	10/12/18 7:45
6242	In Progress	Normal	ASIST issues during AAM-2 OD downlink	Paul Falkenstern	10/12/18 7:48
6163	In Progress	Normal	Delay in execution of OCAMS block	Andy Calloway	10/12/18 7:47
5854	In Progress	Normal	Previously known OCAMS 'finger regions' implications on Nav solutions	Brent Bos	10/12/18 10:01
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
4868	In Progress	Normal	Dropped data during STL run	Mike Skeen	5/25/18 9:45
4762	Monitor	Normal	JAsteroid and ATARPS FOV disagreement	Sandy Freund	10/12/18 13:01

# SPOC Watch Item List

Todays Date: 10/15/2018		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	745		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	195		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	40		Watch	Will monitor for future occurrences across all of the OCAMS cameras and assess if any action is warranted.