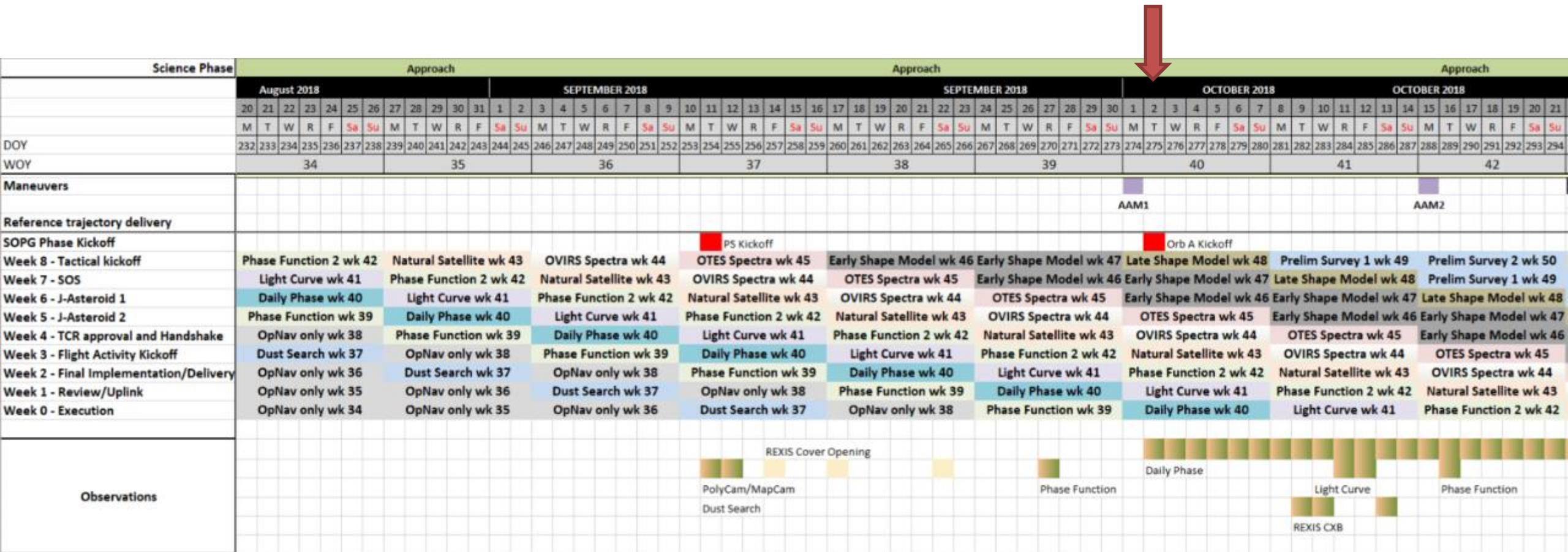




# Approach Phase Planning Waterfall





# xm1848: Late PolyCam Shape Model

→ Week 8 – Tactical Kickoff

Week 6 - J-Asteroid 1
Week 5 - J-Asteroid 2
Week 4 - TCR approval and Handshake
Week 3 - Flight Activity Kickoff
Week 2 - Final Implementation/Delivery
Week 1 - Review/Uplink
Week 0 - Execution

- Week 2018-48
- Week: 11/26/2018 (DOY 330) T12:00:00 – 12/3/2018 (DOY 337) T12:00:00
- SPT: Mathilde Westermann
- Ops Engineer: Chris Haberle
- WGs and Instruments: AltWG, OCAMS, AWG, OVIRS, OTES, PMWG
- SOS: Late PolyCam Shape Model SOCR-87, NavCam Natural Satellite Search SOCR-115
- OPSCHK:
- Science Activities:
  - 11/27/2018 (DOY 331) – PolyCam raster scan mosaics & short NavCam nadir point
  - 11/28/2018 (DOY 332) – PolyCam raster scan mosaics & short NavCam nadir point
  - 11/29/2018 (DOY 333) – short NavCam nadir point
  - 11/30/2018 (DOY 334) – short NavCam nadir point
  - 12/1/2018 (DOY 335) – PolyCam raster scan mosaics & short NavCam nadir point
  - 12/2/2018 (DOY 336) – PolyCam raster scan mosaics (plus OVIRS and OTES)
- Default attitude: Sun point
- Slew config: Approach 2



# xm1848 Planning Schedule

→ Week 8 – Tactical Kickoff

Week 6 - J-Asteroid 1
Week 5 - J-Asteroid 2
Week 4 - TCR approval and Handshake
Week 3 - Flight Activity Kickoff
Week 2 - Final Implementation/Delivery
Week 1 - Review/Uplink
Week 0 - Execution

Activity	Start Date	Finish Date	Status
SPT populates SOS from SPP	10/1/2018	10/1/2018	Complete
Tactical Kickoff	10/2/2018	10/2/2018	
IS populates SOS with input from WG	10/3/2018	10/8/2018	
Shape model: OCAMS	10/3/2018	10/3/2018	
Shape model: OTES	10/4/2018	10/4/2018	
Shape model: OVIRS	10/5/2018	10/5/2018	
J-Asteroid sandboxing and check of SOS	10/9/2018	10/15/2018	
OpNav Request	10/8/2018	10/8/2018	
SOS sent for review	10/12/2018	10/12/2018	
WG and IS review SOS	10/15/2018	10/22/2018	
New SOCR and kernel submission deadline	10/16/2018	10/16/2018	
SPT IS IE OpsEng build J-Asteroid Plan	10/17/2018	10/24/2018	
Deliver First Look CK to WG Leads	10/19/2018	10/19/2018	
SOCR approval	10/23/2018	10/23/2018	
Ops Eng deliver IS/IE review Material	10/25/2018	10/25/2018	
J-Asteroid Reconciliation with SPT OpsEngineer IS and IE.	10/26/2018	10/26/2018	
Week TCR for BG sequence and science populated	10/29/2018	10/29/2018	
Deliver OpNav Checklist to FDS	10/25/2018	10/25/2018	
TCR approval	10/31/2018	10/31/2018	
Handshake to Implementation	10/31/2018	10/31/2018	
Delivery to MSA	11/14/2018	11/14/2018	



# Data Product Completion Forecast

## Observation completion forecast dates:

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish
Approach	Obs_PolyCam	PolyCam Shape Model: PolyCam Images (REDUNDANT)	Prelim 75cm SM	678a	11/27/2018	11/27/2018	48
Approach	Obs_PolyCam	PolyCam Shape Model: PolyCam Images (PRIMARY)	Prelim 75cm SM	678a	11/28/2018	11/28/2018	48
Approach	Obs_PolyCam	PolyCam Shape Model: PolyCam Images (PRIMARY)	Prelim 75cm SM	678a	12/1/2018	12/1/2018	48
Approach	Obs_PolyCam	PolyCam Shape Model: PolyCam Images (REDUNDANT)	Prelim 75cm SM	678a	12/2/2018	12/2/2018	48
Approach	Obs_OTES	OTES Spectra (Optimized for OVIRS Phase Function)	SA-10, SA-11, TA-008	159, 544	12/2/2018	12/2/2018	48
Approach	Obs_OVIRS	OVIRS Phase: OVIRS Spectra	SA-28	149d	12/2/2018	12/2/2018	48

## Validated L2 Data available forecast dates (includes 1 weekday for Downlink)

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish
Approach	L2-from-PolyCam	PolyCam Shape Model: PolyCam Images (REDUNDANT) validated	Prelim 75cm SM	678a	11/19/2018	11/26/2018	48
Approach	L2-from-PolyCam	PolyCam Shape Model: PolyCam Images (PRIMARY) validated	Prelim 75cm SM	678a	11/23/2018	11/30/2018	48

## Science Data Product completion forecast dates:

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish
Approach	APWG	Astrometry of Confirmed Satellites (AP-8)	AP-8	144	11/19/2018	11/26/2018	48
Approach	APWG	Photometry of Confirmed Satellites (AP-9)	AP-9	144	11/19/2018	11/26/2018	48
Approach	APWG	Map of region around Bennu with faint detectable satellites (AP-11)	AP-11	144	11/19/2018	11/26/2018	48
Approach	SAWG	OVIRS Spot Resampled Radiance (SA-25)	SA-25	159	11/22/2018	11/27/2018	48
Approach	PMWG	Update Disk-Integrated panchromatic photometric model from MapCam		546	11/22/2018	11/29/2018	48



# Preliminary Survey Requests & Data Volume

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- SOCRs under review
  - Early Resolved Color Image Sets of Bennu SOCR-102
  - MapCam High Phase Angle Imaging in Preliminary Survey SOCR-107
- Sensitivity analysis showed that total number of images for shape model mosaics should increase
- Preliminary Survey timeline is highly constrained, with limited time for downlink of science
  - Based on tentative DSN schedule from last week and updated numbers from sensitivity analysis, data will be carried over throughout all of Preliminary Survey
- Discussion about relative priority of scheduled observations, changes for sensitivity analysis, and SOCR-102 and 107
- Possibility to LUT some observations, including NP1 shape model mosaics

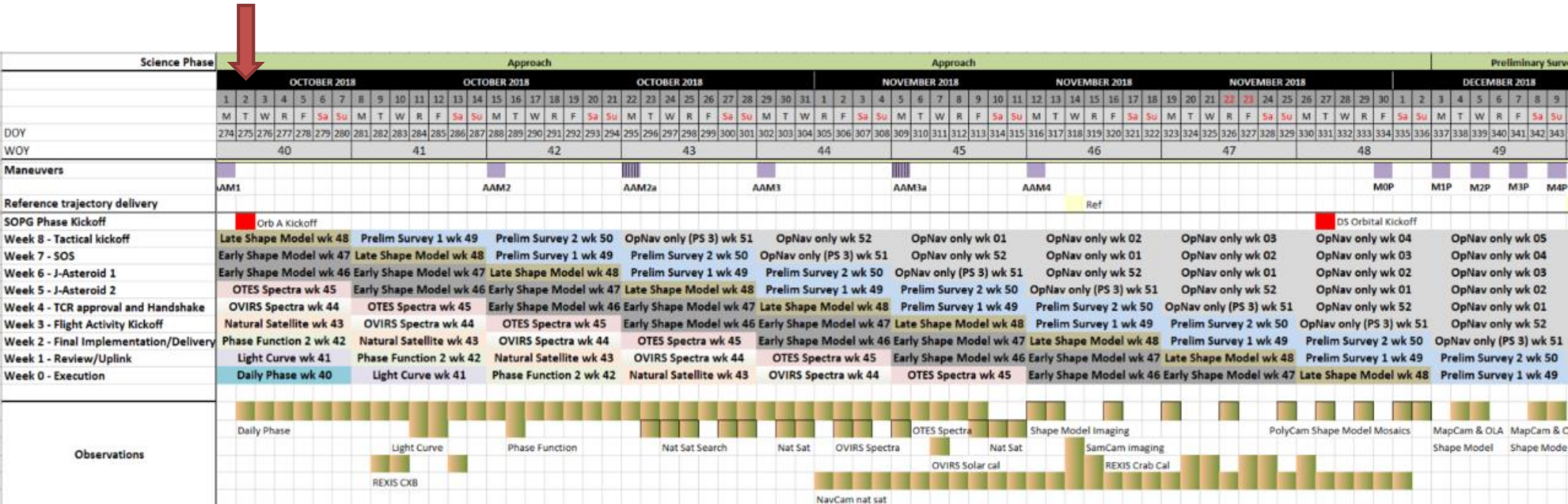


# Orbital A Phase Kickoff

- Orbital A Phase Kickoff
  - Scope and latest DSN schedule / status / severity-mitigations (Calloway)
  - Templates (Castro)
  - Mission Plan Workbook & deltas since TCR approval (Mink)
  - Navigation overview (Highsmith)
  - OpNav overview (Adam)
  - Planning Timeline and preview of Tactical Kickoff information (Polit)



# Orbital A Planning Timeline Part 1





# Orbital A Planning Timeline Part 2

Science Phase	Orbit A																																				Orbit A Schedule Slack																																					
	DECEMBER 2018						DECEMBER 2018						JANUARY 2019						JANUARY 2019						FEBRUARY 2019						FEBRUARY 2019																																											
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				
DOY	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	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	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48				
WOY	50						51						52						01						02						03						04						05		06		07																											
Maneuvers	M5P M6P M7P						M1A						M2A M3A																																																													
Reference trajectory delivery	Ref (revised GM)						Ref (Orb A insertion seq)						Ref (BBD)						Ref (E5)						Ref (Orb B - insertion + 2 weeks)																																																	
SOPG Phase Kickoff	DS BBD Kickoff																																				Science Team Mtg		DS ES Kickoff																																			
Week 8 - Tactical kickoff	OpNav only wk 06						OpNav only wk 07						BBD Orbital imaging 1						BBD Orbital imaging 2						BBD Flyby 1						BBD Flyby 2						BBD Flyby 3		BBD Flyby 4		BBD Flyby 5		BBD Flyby 6																															
Week 7 - SOS	OpNav only wk 05						OpNav only wk 06						OpNav only wk 07						BBD Orbital imaging 1						BBD Orbital imaging 2						BBD Flyby 1						BBD Flyby 2						BBD Flyby 3		BBD Flyby 4		BBD Flyby 5																											
Week 6 - J-Asteroid 1	OpNav only wk 04						OpNav only wk 05						OpNav only wk 06						OpNav only wk 07						BBD Orbital imaging 1						BBD Orbital imaging 2						BBD Flyby 1						BBD Flyby 2						BBD Flyby 3		BBD Flyby 4																							
Week 5 - J-Asteroid 2	OpNav only wk 03						OpNav only wk 04						OpNav only wk 05						OpNav only wk 06						OpNav only wk 07						BBD Orbital imaging 1						BBD Orbital imaging 2						BBD Flyby 1		BBD Flyby 2		BBD Flyby 3																											
Week 4 - TCR approval and Handshake	OpNav only wk 02						OpNav only wk 03						OpNav only wk 04						OpNav only wk 05						OpNav only wk 06						OpNav only wk 07						BBD Orbital imaging 1						BBD Orbital imaging 2						BBD Flyby 1		BBD Flyby 2																							
Week 3 - Flight Activity Kickoff	OpNav only wk 01						OpNav only wk 02						OpNav only wk 03						OpNav only wk 04						OpNav only wk 05						OpNav only wk 06						OpNav only wk 07						BBD Orbital imaging 1						BBD Orbital imaging 2						BBD Flyby 1		BBD Flyby 2																	
Week 2 - Final Implementation/Delivery	OpNav only wk 52						OpNav only wk 01						OpNav only wk 02						OpNav only wk 03						OpNav only wk 04						OpNav only wk 05						OpNav only wk 06						OpNav only wk 07						BBD Orbital imaging 1						BBD Orbital imaging 2						BBD Flyby 1		BBD Flyby 2											
Week 1 - Review/Uplink	OpNav only (PS 3) wk 51						OpNav only wk 52						OpNav only wk 01						OpNav only wk 02						OpNav only wk 03						OpNav only wk 04						OpNav only wk 05						OpNav only wk 06						OpNav only wk 07						OpNav only wk 07						BBD Orbital imaging 1		BBD Orbital imaging 2											
Week 0 - Execution	Prelim Survey 2 wk 50						OpNav only (PS 3) wk 51						OpNav only wk 52						OpNav only wk 01						OpNav only wk 02						OpNav only wk 03						OpNav only wk 04						OpNav only wk 05						OpNav only wk 06						OpNav only wk 06		OpNav only wk 07																	
Observations	OLA MapCam & OLA						MapCam & OLA																																																																			
	Shape Model						Shape Model																																																																			





# Data Product Completion Forecast

## Observation completion forecast dates:

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish	Completed?
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

## Validated L2 Data available forecast dates (includes 1 weekday for Downlink)

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish	Completed?
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

## Science Data Product completion forecast dates:

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish	Completed?
Approach	SAWG	OTES Rotationally Resolved Spot Mineral/Chemical Abundance (SA-23)	SA-23	159	1/7/2019	1/11/2019	2 (2019)	
Approach	SAWG	OVIRS Spot I/F (SA-27)	SA-27	159	12/24/2018	12/27/2018	52	
Approach	SAWG	OVIRS Rotationally Resolved I/F Spectra (SA-44)	SA-44	159	12/27/2018	1/1/2019	1 (2019)	
Approach	SAWG	OVIRS Rotationally Resolved Mineral/Chemical Parameter Strength (SA-31)	SA-31	159	1/7/2019	1/11/2019	2 (2019)	
Pre_Surv	FDS	Preliminary Survey Mass Estimation (2-percent Mass Determination) (FD-03)	FD-03	427	12/17/2018	12/27/2018	52	
Pre_Surv	ALTWG	Pre-Release 75cm SPC Global DTM (ALT-01)	ALT-01	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global OBJ (ALT-05)	ALT-05	678a, 132	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Normal Vector (ALT-08)	ALT-08	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Gravity Vector (ALT-09)	ALT-09	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Gravity Magnitude (ALT-10)	ALT-10	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Potential (ALT-11)	ALT-11	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Elevation (ALT-12)	ALT-12	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Slope (ALT-13)	ALT-13	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Facet Tilt (ALT-14)	ALT-14	678a	12/17/2018	12/31/2018	1 (2019)	



# Data Product Completion Forecast

## Science Data Product completion forecast dates:

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish	Completed?
Pre_Surv	ALTWG	75cm Global Mean Tilt (ALT-15)	ALT-15	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Tilt Variation (ALT-16)	ALT-16	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global DTM, DSK format (ALT-33)	ALT-33	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Facet Tilt Direction (ALT-35)	ALT-35	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Mean Tilt Direction (ALT-37)	ALT-37	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Tilt Direction Variation (ALT-39)	ALT-39	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Relative Tilt (ALT-41)	ALT-41	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Relative Tilt Direction (ALT-43)	ALT-43	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Facet Radius (ALT-45)	ALT-45	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Vertex Radius (ALT-47)	ALT-47	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	75cm Global Max Relative Height (ALT-49)	ALT-49	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	Facet Map (ALT-51)	ALT-51	678a	12/17/2018	12/31/2018	1 (2019)	
Pre_Surv	ALTWG	Global Parameters PCK from SPC_75_DRAFT (ALT-06)	ALT-06	124, 127, 128, 129	12/31/2018	1/1/2019	1 (2019)	
Pre_Surv	ALTWG	Official 75cm SPC Global DTM (ALT-01)	ALT-01	678a	12/31/2018	1/21/2019	4 (2019)	
Pre_Surv	ALTWG	75cm Global OBJ (ALT-05)	ALT-05	678a, 132	12/31/2018	1/21/2019	4 (2019)	
Pre_Surv	ALTWG	75cm Global Normal Vector (ALT-08)	ALT-08	678a	12/31/2018	1/21/2019	4 (2019)	
Pre_Surv	ALTWG	75cm Global Gravity Vector (ALT-09)	ALT-09	678a	12/31/2018	1/21/2019	4 (2019)	
Pre_Surv	ALTWG	75cm Global Gravity Magnitude (ALT-10)	ALT-10	678a	12/31/2018	1/21/2019	4 (2019)	
Pre_Surv	ALTWG	75cm Global Potential (ALT-11)	ALT-11	678a	12/31/2018	1/21/2019	4 (2019)	



# Data Product Completion Forecast

## Science Data Product completion forecast dates:

Source Phase	WG	Task Name	DP#	MRD	Start	Finish	WOY Finish Completed?
Pre_Surv	ALTWG	75cm Global Elevation (ALT-12)	ALT-12	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Slope (ALT-13)	ALT-13	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Facet Tilt (ALT-14)	ALT-14	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Mean Tilt (ALT-15)	ALT-15	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Global Tilt Variation (ALT-16)	ALT-16	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global DTM, DSK format (ALT-33)	ALT-33	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Facet Tilt Direction (ALT-35)	ALT-35	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Mean Tilt Direction (ALT-37)	ALT-37	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Tilt Direction Variation (ALT-39)	ALT-39	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Relative Tilt (ALT-41)	ALT-41	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Relative Tilt Direction (ALT-43)	ALT-43	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Facet Radius (ALT-45)	ALT-45	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Global Vertex Radius (ALT-47)	ALT-47	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	75cm Global Max Relative Height (ALT-49)	ALT-49	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	ALTWG	Facet Map (ALT-51)	ALT-51	678a	12/31/2018	1/21/2019	4 (2019)
Pre_Surv	RSWG	Bennu Ephemeris (RS-011)	RS-011	150	1/6/2019	1/6/2019	1 (2019)
Pre_Surv	RSWG	Bennu Pseudo-Ranging (RS-012)	RS-012	602	1/25/2019	1/25/2019	4 (2019)
Pre_Surv	ALTWG	Bennu Volume to within 0.9%		132	1/21/2019	1/21/2019	4 (2019)
Pre_Surv	ALTWG	Global Parameters PCK from PS_75_Official (ALT-06)	ALT-06	124, 127, 128, 129	1/21/2019	1/22/2019	4 (2019)
Pre_Surv	ALTWG	Bennu Coordinate System declared for global mapping (ALT-07)	ALT-07	125	1/21/2019	1/21/2019	4 (2019)
Det_Surv	FDS	(NFT) Global Tabulated Deliverability Map (DMAP-01)	DMAP-01_NFT	183b1	1/22/2019	2/14/2019	7 (2019)
Det_Surv	FDS	(LiDAR) Global Tabulated Deliverability Map (DMAP-01)	DMAP-01_LiDAR	183b1	1/22/2019	2/14/2019	7 (2019)
Det_Surv	FDS	(Hybrid) Global Tabulated Deliverability Map (DMAP-01)	DMAP-01_Hybrid	183b1	1/22/2019	2/14/2019	7 (2019)



# xm1852: Preliminary Survey/Orbital A

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- Week 2018-52
- Week: 12/24/2018 (DOY 358) T13:30:00 – 12/31/2018 (DOY 365) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Sun point
- Slew config: Default



# xm1852 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	10/30/2018	10/30/2018	
OpNav Request	11/5/2018	11/5/2018	
New SOCR and kernel submission deadline	11/13/2018	11/13/2018	
OpsEng builds J-Asteroid Plan	11/14/2018	11/21/2018	
Deliver OpNav Checklist to FDS	11/22/2018	11/22/2018	
J-Asteroid Reconciliation	11/22/2018	11/22/2018	
Week TCR for BG sequence and science populated	11/26/2018	11/26/2018	
TCR approval	11/28/2018	11/28/2018	
Delivery to MSA	12/12/2018	12/12/2018	



# xm1901: Orbital A

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- Week 2019-01
- Week: 12/31/2018 (DOY 365) T13:30:00 – 1/7/2019 (DOY 007) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Sun point through 1/1, Nadir Point after that
- Slew config: Default



# xm1901 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	11/6/18	11/6/18	
OpNav Request	11/12/18	11/12/18	
New SOCR and kernel submission deadline	11/20/18	11/20/18	
OpsEng builds J-Asteroid Plan	11/21/18	11/28/18	
Deliver OpNav Checklist to FDS	11/29/18	11/29/18	
J-Asteroid Reconciliation	11/29/18	11/29/18	
Week TCR for BG sequence and science populated	12/3/18	12/3/18	
TCR approval	12/5/18	12/5/18	
Delivery to MSA	12/19/19	12/19/18	



# xm1902: Orbital A

- Week 2019-02
- Week: 1/07/2019 (DOY 007) T13:30:00 – 1/14/2019 (DOY 014) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Nadir Point
- Slew config: Default





# xm1902 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	11/13/18	11/13/18	
OpNav Request	11/19/18	11/19/18	
New SOCR and kernel submission deadline	11/27/18	11/27/18	
OpsEng builds J-Asteroid Plan	11/28/18	12/5/18	
Deliver OpNav Checklist to FDS	12/6/18	12/6/18	
J-Asteroid Reconciliation	12/6/18	2/6/18	
Week TCR for BG sequence and science populated	12/10/18	12/10/18	
TCR approval	12/12/18	12/12/18	
Delivery to MSA	12/26/18	12/26/18	



# xm1903: Orbital A

- Week 2019-03
- Week: 1/14/2019 (DOY 014) T13:30:00 – 1/21/2019 (DOY 021) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Nadir Point
- Slew config: Default



# xm1903 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	11/20/18	11/20/18	
OpNav Request	11/26/18	11/26/18	
New SOCR and kernel submission deadline	12/4/18	12/4/18	
OpsEng builds J-Asteroid Plan	12/5/18	12/12/18	
Deliver OpNav Checklist to FDS	12/13/18	12/13/18	
J-Asteroid Reconciliation	12/13/18	12/13/18	
Week TCR for BG sequence and science populated	12/17/18	12/17/18	
TCR approval	12/19/18	12/19/18	
Delivery to MSA	1/2/19	1/2/19	



# xm1904: Orbital A

- Week 2019-04
- Week: 1/21/2019 (DOY 021) T13:30:00 – 1/28/2019 (DOY 028) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Nadir Point
- Slew config: Default



# xm1904 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	11/27/18	11/27/18	
OpNav Request	12/3/18	12/3/18	
New SOCR and kernel submission deadline	12/11/18	12/11/18	
OpsEng builds J-Asteroid Plan	12/12/18	12/19/18	
Deliver OpNav Checklist to FDS	12/20/18	12/20/18	
J-Asteroid Reconciliation	12/20/18	12/20/18	
Week TCR for BG sequence and science populated	12/24/18	12/24/18	
TCR approval	12/26/18	12/26/18	
Delivery to MSA	1/9/19	1/9/19	



# xm1905: Orbital A

- Week 2019-05
- Week: 1/28/2019 (DOY 028) T13:30:00 – 2/4/2019 (DOY 035) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Nadir Point
- Slew config: Default



# xm1905 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	12/4/18	12/4/18	
OpNav Request	12/10/18	12/10/18	
New SOCR and kernel submission deadline	12/18/18	12/18/18	
OpsEng builds J-Asteroid Plan	12/19/18	12/26/18	
Deliver OpNav Checklist to FDS	12/27/18	12/27/18	
J-Asteroid Reconciliation	12/27/18	12/27/18	
Week TCR for BG sequence and science populated	12/31/18	12/31/18	
TCR approval	1/2/19	1/2/19	
Delivery to MSA	1/16/19	1/16/19	



# xm1906: Orbital A

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- Week 2019-06
- Week: 2/4/2019 (DOY 035) T13:30:00 – 2/11/2019 (DOY 042) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Nadir Point
- Slew config: Default





# xm1906 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	12/11/18	12/11/18	
OpNav Request	12/17/18	12/17/18	
New SOCR and kernel submission deadline	12/25/18	12/25/18	
OpsEng builds J-Asteroid Plan	12/26/18	1/2/19	
Deliver OpNav Checklist to FDS	1/3/19	1/3/19	
J-Asteroid Reconciliation	1/3/19	1/3/19	
Week TCR for BG sequence and science populated	1/7/19	1/7/19	
TCR approval	1/9/19	1/9/19	
Delivery to MSA	1/23/19	1/23/19	



# xm1907: Orbital A

- Week 2019-07
- Week: 2/11/2019 (DOY 042) T13:30:00 – 2/18/2019 (DOY 049) T13:30:00
- SPT: N/A
- Ops Engineer:
- OPSCHK:
- Default attitude: Nadir Point
- Slew config: Default



# xm1907 Planning Schedule

Activity	Start Date	Finish Date	Status
Tactical Kickoff	12/18/18	12/18/19	
OpNav Request	12/24/18	12/24/18	
New SOCR and kernel submission deadline	1/1/19	1/1/19	
OpsEng builds J-Asteroid Plan	1/2/19	1/9/19	
Deliver OpNav Checklist to FDS	1/10/19	1/10/19	
J-Asteroid Reconciliation	1/10/19	1/10/19	
Week TCR for BG sequence and science populated	1/14/19	1/14/19	
TCR approval	1/16/19	1/16/19	
Delivery to MSA	1/30/19	1/30/19	