

OTES Observation Timeline					
Epoch	YR	DOY	UTC Date and Time (approx.)	# ifgms	Description
Launch + 14 day Checkout	2016	264	2016-09-20 21:42:00	1440	Instrument functional and radiometric tests at op and non-op set-points
Launch + 6 mo. Checkout and Jitter Test	2017	76	2017-03-17 19:46:00	1880	Instrument functional and radiometric tests at op and non-op set-points; assess impact of s/c noise sources on OTES data at different servo velocities
Launch + 10 mo. Checkout	2017	214	2017-08-02 18:24:00	1440	Instrument functional and radiometric tests at op and non-op set-points
Earth Gravity Assist + 1 day Observations	2017	265	2017-09-22 22:44:00	1840	Earth observations, calibration using deep space and internal cal target
Earth Gravity Assist + 3 day Observations - Moon	2017	268	2017-09-25 00:00:00	1119	Moon observations, calibration using deep space and internal cal target
Earth Gravity Assist + 3 day Observations - Earth	2017	268	2017-09-25 04:21:00	873	Earth observations, calibration using deep space and internal cal target
Earth Gravity Assist + 6 day Observations	2017	271	2017-09-28 00:03:00	1173	Earth observations, calibration using deep space and internal cal target
Earth Gravity Assist + 10 day Observations	2017	275	2017-10-02 00:00:00	3939	Earth observations, calibration using deep space and internal cal target
Launch + 18 mo. Checkout	2018	71	2018-03-12 04:02:00	1440	Instrument functional and radiometric tests at op and non-op set-points
Launch + 22 mo. Checkout	2018	197	2018-07-16 09:03:00	720	Instrument functional and radiometric tests at op and non-op set-points
Approach	2018	306	2018-11-02 04:00:00	8396	Whole-disk observations, OVIRS-optimized
Approach	2018	307	2018-11-03 04:00:00	8451	Whole-disk observations, OVIRS-optimized
Approach	2018	309	2018-11-05 04:00:00	8675	Whole-disk observations, OTES-optimized
Approach	2018	312	2018-11-08 04:01:00	8675	Whole-disk observations, OTES-optimized
Approach	2018	313	2018-11-09 04:01:00	8675	Whole-disk observations, OTES-optimized
Approach	2018	336	2018-12-02 04:35:00	8240	Spatially resolved equatorial observations (OTES ride-along)
Preliminary Survey	2018	338	2018-12-04 04:21:00	8616	Spatially resolved N. polar observations (OTES ride-along)
Preliminary Survey	2018	338	2018-12-04 17:54:00	17680	Spatially resolved N. polar observations (OTES ride-along)
Preliminary Survey	2018	342	2018-12-08 02:24:00	8561	Spatially resolved N. polar observations (OTES ride-along)
Preliminary Survey	2018	342	2018-12-08 17:55:00	8526	Spatially resolved N. polar observations (OTES ride-along)
Preliminary Survey	2018	343	2018-12-09 02:26:00	8520	Spatially resolved N. polar observations (OTES ride-along)
Preliminary Survey	2018	346	2018-12-12 04:15:00	8376	Spatially resolved equatorial observations (OTES ride-along)
Preliminary Survey	2018	347	2018-12-13 00:14:00	8796	Spatially resolved equatorial observations (OTES ride-along)
Preliminary Survey	2018	350	2018-12-16 02:20:00	8476	Spatially resolved S. polar observations (OTES ride-along)
Preliminary Survey	2018	350	2018-12-16 17:55:00	8496	Spatially resolved S. polar observations (OTES ride-along)
Preliminary Survey	2018	351	2018-12-17 02:30:00	8390	Spatially resolved S. polar observations (OTES ride-along)
Detailed Survey	2019	53	2019-02-22 19:19:00	31669	Orbital imaging (OTES ride-along)
Detailed Survey	2019	54	2019-02-23 19:19:00	31669	Orbital imaging (OTES ride-along)
Detailed Survey	2019	55	2019-02-24 19:19:00	31669	Orbital imaging (OTES ride-along)
Detailed Survey	2019	56	2019-02-25 19:19:00	31669	Orbital imaging (OTES ride-along)
Detailed Survey	2019	57	2019-02-26 19:19:00	31669	Orbital imaging (OTES ride-along)
Detailed Survey	2019	58	2019-02-27 19:19:00	31669	Orbital imaging (OTES ride-along)
Detailed Survey - Baseball Diamond #1	2019	66	2019-03-07 16:59:00	8469	12:30 pm rectangular raster scan (equatorial) (OTES ride-along)
Detailed Survey - Baseball Diamond #2	2019	73	2019-03-14 17:23:00	8723	12:30 pm point and stare (equatorial) (OTES ride-along)
Detailed Survey - Baseball Diamond #3	2019	80	2019-03-21 17:23:00	8363	10:00 am linear scan (OTES ride-along)
Detailed Survey - Baseball Diamond #4a	2019	87	2019-03-28 17:09:00	8355	10:00 am linear scan (S. hemisphere) (OTES ride-along)
Detailed Survey - Baseball Diamond #4b	2019	88	2019-03-29 17:19:00	8356	10:00 am linear scan (N. hemisphere) (OTES ride-along)
Launch +30 mo. Checkout	2019	91	2019-04-01 14:35:00	1581	Instrument functional and radiometric tests at op and non-op set-points
Launch +30 mo. Checkout	2019	93	2019-04-03 14:00:00	1710	Instrument functional and radiometric tests at op and non-op set-points
Detailed Survey - Baseball Diamond #5a	2019	94	2019-04-04 17:36:00	8491	12:30 pm rectangular raster scan (N. hemisphere) (OTES ride-along)
Detailed Survey - Baseball Diamond #5b	2019	95	2019-04-05 17:14:00	8364	12:30 pm pointing to 10:30 am sun line scan (S. hemisphere) (OTES ride-along)
Launch +30 mo. Checkout	2019	97	2019-04-07 14:00:00	3499	Instrument functional and radiometric tests at op and non-op set-points
Detailed Survey - Baseball Diamond #6a	2019	101	2019-04-11 17:34:00	8493	12:30 pm rectangular raster scan (S. hemisphere) (OTES ride-along)
Detailed Survey - Baseball Diamond #6b	2019	102	2019-04-12 17:07:00	8369	12:30 pm pointing to 10:30 am sun line scan (N. hemisphere) (OTES ride-along)
Detailed Survey - Baseball Diamond #7a	2019	108	2019-04-18 16:38:00	8663	12:30 pm point and stare (N. hemisphere) (OTES ride-along)
Detailed Survey - Baseball Diamond #7b	2019	109	2019-04-19 16:53:00	8663	12:30 pm point and stare (S. hemisphere) (OTES ride-along)
Detailed Survey - Equatorial Station #1	2019	115	2019-04-25 17:19:00	10493	3:00 pm linear and zig-zag scans
Detailed Survey - Equatorial Station #2	2019	122	2019-05-02 17:41:00	10660	3:20 am nadir and off-nadir linear scans
Detailed Survey - Equatorial Station #2	2019	123	2019-05-03 05:00:00	5600	3:20 am annulus/point and stare hybrid
Detailed Survey - Equatorial Station #3	2019	129	2019-05-09 15:45:00	9315	12:30 pm linear scans
Detailed Survey - Equatorial Station #3	2019	131	2019-05-11 02:01:00	8834	12:30 pm zig-zag scans
Detailed Survey - Equatorial Station #4	2019	136	2019-05-16 17:22:00	10556	10:00 am linear and zig-zag scans
Detailed Survey - Equatorial Station #5	2019	143	2019-05-23 15:45:00	11439	6:00 am linear scans
Detailed Survey - Equatorial Station #5	2019	146	2019-05-26 02:00:00	8631	6:00 am zig-zag scans
Detailed Survey - Equatorial Station #6	2019	150	2019-05-30 17:20:00	10426	8:40 pm linear and zig-zag scans
Detailed Survey - Equatorial Station #6	2019	151	2019-05-31 05:00:00	5900	8:40 pm point and stare hybrid
Detailed Survey - Equatorial Station #7	2019	157	2019-06-06 17:50:00	10816	6:00 pm linear and zig-zag scans
Orbital B	2019	182	2019-07-01 21:01:00	29061	terminator orbit

Epoch	YR	DOY	UTC Date and Time (approx.)	# ifgms	Description
Launch + 14 day Checkout	2016	264	2016-09-20 21:42:00	1440	Instrument functional and radiometric tests at op and non-op set-points
Orbital B	2019	184	2019-07-03 02:10:00	19806	terminator orbit sequence 1
Orbital B	2019	184	2019-07-03 21:01:00	29061	terminator orbit sequence 2
Orbital B	2019	186	2019-07-05 07:53:00	9687	terminator orbit sequence 1
Orbital B	2019	186	2019-07-05 21:01:00	29061	terminator orbit sequence 2
Orbital B	2019	188	2019-07-07 21:01:00	29061	terminator orbit
Orbital B	2019	189	2019-07-08 21:01:00	29061	terminator orbit
Orbital B	2019	190	2019-07-09 21:01:00	29061	terminator orbit
Orbital B	2019	191	2019-07-10 21:01:00	29061	terminator orbit
Orbital B	2019	192	2019-07-11 21:01:00	29061	terminator orbit
Orbital B	2019	193	2019-07-12 21:01:00	29061	terminator orbit
Orbital B	2019	195	2019-07-14 21:01:00	29061	terminator orbit
Orbital B	2019	196	2019-07-15 21:01:00	29061	terminator orbit
Orbital B	2019	197	2019-07-16 21:01:00	29061	terminator orbit
Orbital B	2019	198	2019-07-17 21:01:00	29061	terminator orbit
Orbital B	2019	200	2019-07-19 07:53:00	9687	terminator orbit sequence 1
Orbital B	2019	200	2019-07-19 21:01:00	29061	terminator orbit sequence 2
Orbital B	2019	202	2019-07-21 21:01:00	29060	terminator orbit
Orbital B	2019	203	2019-07-22 21:01:00	29061	terminator orbit
Orbital B	2019	204	2019-07-23 21:01:00	29061	terminator orbit
Orbital B	2019	205	2019-07-24 21:01:00	29061	terminator orbit
Orbital B	2019	206	2019-07-25 21:01:00	5580	terminator orbit
Orbital B	2019	207	2019-07-26 00:07:00	23481	terminator orbit sequence 1
Orbital B	2019	207	2019-07-26 21:01:00	29061	terminator orbit sequence 2
Orbital B	2019	209	2019-07-28 21:01:00	29061	terminator orbit
Orbital B	2019	210	2019-07-29 21:01:00	29061	terminator orbit
Orbital B	2019	211	2019-07-30 21:01:00	29061	terminator orbit
Orbital B	2019	212	2019-07-31 21:01:00	29061	terminator orbit
Orbital B	2019	214	2019-08-02 07:53:00	9687	terminator orbit
Orbital B	2019	216	2019-08-04 21:01:00	25884	terminator orbit
Orbital B	2019	217	2019-08-05 04:36:00	3177	terminator orbit
Re-fly Detailed Survey BBD Flyby 2	2019	269	2019-09-26 17:17:00	8103	point and stare
Recon A High Pass Flyby 1 EX07 Sandpiper	2019	278	2019-10-05 18:18:00	3633	elliptical raster scans and point and stare (ride-along)
Recon A High Pass Flyby 2 DL06 Osprey	2019	285	2019-10-12 20:57:00	3880	elliptical raster scans and point and stare (ride-along)
Recon A High Pass Flyby 3 CQ13 Kingfisher	2019	292	2019-10-19 20:40:00	3805	elliptical raster scans and point and stare (ride-along)
Recon A High Pass Flyby 4 DL15 Nightingale	2019	299	2019-10-26 20:00:00	3758	elliptical raster scans and point and stare (ride-along)
Orbital R	2019	315	2019-11-11 19:01:00	32181	terminator orbit
Orbital R	2019	316	2019-11-12 19:01:00	32181	terminator orbit
Orbital R	2019	317	2019-11-13 19:01:00	32181	terminator orbit
Orbital R	2019	318	2019-11-14 19:01:00	32181	terminator orbit
Orbital R	2019	319	2019-11-15 19:01:00	32181	terminator orbit
Orbital R	2019	320	2019-11-16 19:01:00	32181	terminator orbit
Orbital R	2019	321	2019-11-17 19:01:00	32181	terminator orbit
Orbital R	2019	322	2019-11-18 19:01:00	32181	terminator orbit
Orbital R	2019	323	2019-11-19 19:01:00	32181	terminator orbit
Orbital R	2019	324	2019-11-20 19:01:00	32181	terminator orbit
Orbital R	2019	326	2019-11-22 07:18:00	10727	terminator orbit
Orbital R	2019	326	2019-11-22 19:01:00	32181	terminator orbit
Orbital R	2019	327	2019-11-23 19:01:00	32181	terminator orbit
Orbital R	2019	328	2019-11-24 19:01:00	32181	terminator orbit
Recon B Medium Pass Flyby 1 Nightingale	2020	21	2020-01-21 22:15:00	5264	elliptical raster scans and point and stare (ride-along)
Recon B Medium Pass Flyby 1 Osprey	2020	42	2020-02-11 19:55:28	5770	elliptical raster scans and point and stare (ride-along)
Recon C Nightingale Low Sortie	2020	63	2020-03-03T20:21:00	2710	elliptical raster scan and point and stare (ride-along)
Checkpoint Rehearsal	2020	105	2020-04-14T18:52:00	4165	nadir point (ride-along)
Recon C Osprey Low Sortie	2020	147	2020-05-26T21:46:00	3465	nadir point (ride-along)
Matchpoint Rehearsal	2020	224	2020-08-11T18:28:00	4326	nadir point (ride-along)
TAG	2020	294	2020-10-20T17:42:00	4525	nadir point (ride-along)
Post-TAG calibration	2020	323	2020-11-18T00:42:00	720	Instrument functional and radiometric tests at op and non-op set-points
Bennu Farewell Tour	2021	97	2021-04-07T03:14:00	11263	nadir point (ride-along)