

# Day of Year

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## Day 365 (12/31/18)

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### Status Summary:

[No downlink tag-up; slides only.]

Century Link outage update: One of the two main lines between Denver and JPL was restored overnight on Friday (28 December, DOY 362), and we were able to successfully uplink and downlink from the MSA over the weekend. As of Sunday (30 December, DOY 364), both lines between Denver and JPL are up and running to Lockheed Martin.

As of today, OSIRIS-REx is officially in orbit around Bennu, breaking at least two aerospace records:

- Smallest planetary body ever orbited by spacecraft
- Closest orbit of any planetary body

Insertion burn and orbit parameters:

- Burn time 19:43:56 UTC
- 8 sec burn
- 1.84 km semimajor axis (approximately 1.5x2km orbit)
- 4.5 cm/s apoapsis velocity
- 62 hour orbit period

- **Day 2 (1/2/19)**

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- Status Summary:

- All systems are green. All science payloads are powered off. OD083 has been uplinked.
- The CenturyLink outage (ISA-7518) has been resolved, and the SPOC is now receiving data nominally. The SPOC is still reviewing gap reports to determine if any gaps exist; none are apparent in the Frame\_Retrans\_Report through this morning's pass.
- All NavCam OpNavs from the past several days have been received on the ground. The partitions are empty. The SPOC is looking into NavCam engineering data packets that were marked as "error".
- We are now in the first week of Orbital A. Today we transitioned to nadir-point as the default attitude.

- M3A executed with good performance to put the spacecraft in orbit around Bennu on 31 December. The team will determine next week whether trim burns are needed. An issue with subsecond conversion in Maneuver Automation added 1.8 seconds to the start time of the burn; ISA-7533 has been opened.
- Looking ahead: Each day this week, we will collect NavCam OpNavs every 2 hours during observation windows, all of which will be criticality-5. Because of the short HGA pass on Friday (4 January, DOY 4), a minor fraction of the OpNav data is expected to stay onboard the spacecraft that day.
- Upcoming meetings: There will be a Science Weekly this Thursday (3 January). Science Team Meeting #14 is happening next week. Downlink tag-ups will take place only on Mondays, Wednesdays, and Fridays during Orbital A.

- **Day 4 (1/4/19)**

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- Status Summary:
- All systems are green. All science payloads are powered off.
- We collected 36 NavCam OpNavs today. We have received 31 (+1 partial) of these on the ground, as expected owing to today's short HGA pass. The remaining images will come down during tomorrow's pass, along with tomorrow's OpNavs. A correction: Today's images are criticality-3 (not criticality-5 as stated at the previous downlink tag-up). However, we do not anticipate any impacts from not receiving all 36 on the ground today.
- Looking ahead: We will collect 36 NavCam OpNavs per day through the weekend and next week—except on Friday (11 January, DOY 11), we will collect only 20 to allow for the scheduled maneuver.
- Upcoming meetings: STM14 is happening next week (7 to 11 January). Downlink tag-ups will take place only on Monday, Wednesday, and Friday next week (and throughout Orbital A). Instrument teams are asked to report instrument status next Monday (7 January) as usual.