

# *Day of Year*

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## **Day 287 (10/14/19)**

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### Status Summary:

All spacecraft subsystems and payloads are nominal. OVIRS, OTES, and OCAMS are powered on. OD190a is on board. M5R executed on Sunday to depart the Osprey/DL06 flyover leg.

The team successfully executed a “super late” update on Saturday (12 October, DOY 285), using the first OpNavs that came down during that pass to build a late update and uplink it during the same pass—condensing a nominally 24-hour process into less than 4 hours. This effort was critical to ensure that we captured the target candidate sample site, Osprey/DL06.

All of the OCAMS data for the Osprey site have been received on the ground, as well as all context imaging of Gargoyle collected during the same flyover. Remaining OCAMS image data from this flyover, namely bonus observations of Nightingale/DL15, will come down next. All OTES data from the flyover are expected to be down by the end of the pass on Wednesday (16 October, DOY 289), and all OVIRS data by the end of the pass on Friday (18 October, DOY 291). See the slides for a detailed downlink forecast.

Bashar Rizk showed example images of Gargoyle and Osprey collected during the flyover.

Looking ahead: M6R will take place tomorrow (Tuesday 15 October, DOY 288) and M7R on Thursday (17 October, DOY 290) to put the spacecraft on track for the high flyover of Kingfisher/CQ13 on Saturday (19 October, DOY 292). Criticality-2 OpNavs are expected on Wednesday and Friday to reconstruct the two burns. Throughout the week, we will continue to collect OpNavs and ride-along particle monitoring images. We will kick off WOY 47 (5-week planning schedule) at the SOPG meeting tomorrow.

## **Day 288 (10/15/19)**

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### Status Summary:

All spacecraft subsystems and payloads are nominal. OVIRS, OTES, and OCAMS are powered on. OD191 is on board. M6R is taking place today.

Twenty OCAMS images from the Osprey flyover have gaps, and seven are missing altogether. The gaps may be related to a degraded DSN connection due to weather. Once the frame gap report is received, we will be submitting a retransmit request.

The retransmit request will delay the downlink of OTES and OVIRS data from the Osprey flyover. OTES data are expected to be fully down by the end of the pass tomorrow (Wednesday 16 October, DOY 289), and OVIRS data are expected to be fully down by the end of the pass Friday (18 October, DOY 291). See the slides for detailed downlink forecasts for Osprey, as well as for Kingfisher, coming up this weekend.

Looking ahead: M7R will take place on Thursday (17 October, DOY 290) to put the spacecraft on track for the high flyover of Kingfisher/CQ13 on Saturday (19 October, DOY 292). Criticality-2 OpNavs are expected tomorrow and Friday to reconstruct M6R and M7R. Throughout the week, we will continue to collect OpNavs and ride-along particle monitoring images.

## **Day 289 (10/16/19)**

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### Status Summary:

All spacecraft subsystems and payloads are nominal. OVIRS, OTES, and OCAMS are powered on. OD191 is on board. DSN station 65 is green again. M6R executed nominally yesterday.

Today's criticality-2 OpNavs were received after a slight delay in initiating processing of the MapCam OpNavs. The retransmit request to fill in the gaps identified in OCAMS DOY 285 data was uplinked.

All OCAMS and OTES data for the Osprey flyover (including context observations) are now down. The remainder of the OVIRS data is expected by the end of tomorrow's pass.

Looking ahead: M7R will take place tomorrow (Thursday 17 October, DOY 290) to put the spacecraft on track for the high flyover of Kingfisher/CQ13 on Saturday (19 October, DOY 292). Criticality-2 OpNavs are expected Friday to reconstruct this burn. M8R will follow the science activity, on Sunday. We will continue to collect OpNavs and ride-along particle monitoring images daily.

## **Day 291 (10/18/19)**

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#### Status Summary:

All spacecraft subsystems and payloads are nominal (going forward, this will be taken as implied unless otherwise noted in the written summary). OVIRS, OTES, and OCAMS are powered on. OD192 is on board.

Today's pass was nominal. Criticality-2 OpNavs were received as expected and are being used by the navigation team to build the late update for tomorrow's science activity and the burn that will follow it (M8R). The partitions are empty.

OVIRS data for Osprey are nominal and have been blessed. An OVIRS single-bit error alarm was received this morning. It will persist in SPOCflight until OVIRS power-cycles tomorrow. No data are affected.

Looking ahead: The spacecraft will execute the high flyover of Kingfisher/CQ13 tomorrow (Saturday 19 October, DOY 292). This activity also includes context observations of Osprey (topo; before the prime Kingfisher observation) and DL08 (color/sampleability; after the prime Kingfisher observation). After this activity, on Sunday, the spacecraft will execute M8R to depart from the Kingfisher flyover leg. Most imaging data for the Kingfisher site are expected to come down Monday and Tuesday, with spectrometer data (beginning with OTES) starting to downlink on Wednesday. OVIRS Kingfisher data may not be entirely down before the Nightingale flyover activity next week. See the slides for a detailed downlink forecast.