CASSINI SOST SEGMENT

Rev 276 Handoff Package

Segment Boundary 2017-149T11:59:00 to 2017-151T18:22:00

Dec 2016

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Science Highlights

Notes & Liens

Science Highlights SOST 276

DOY 149:
The two PIEs ISS_276EN_PLUME001_PIE and ISS_276EN_PLUME002_PIE are part of the plume monitoring campaign tracking the plume brightness with Enceladus's mean anomaly and looking for long term variations in the plume. The first of these observations covers a mean anomaly for which the plume has been highly variable in the recent past and will help us better characterize the variation. The second covers a region that has not been well covered in the past, near the peak of the plume brightness. In between the plume observations, UVIS performs a full ring radial occultation of a bright star at low elevation angle. The low elevation angle allows measurement of low-optical-depth regions. In particular this occultation gives full coverage of the C ring which has not been as well-sampled as other regions. Ingress starts just outside C ring, so there are two passes through the C ring. We also perform a Titan monitoring observation.

DOY 150:
ISS_276IA_LOWPHASE011_PRIME, the final Iapetus observation in the mission, is a follow up for the rev 264 zero phase observation. It provides Iapetus data at approx. 11 deg phase angle which is important to get a better constraint on the opposition effect to be measured in rev 264. The spatial resolution of the NAC will be 15 km/pxl. Not surprisingly, the sub-Saturn side and the north-polar area of Iapetus will be visible. UVIS then targets to sigma Orionis. This is a mid-latitude occ, not a plume occ, to probe gas at non-polar latitude. Finally the ISS_276OT_BEBPOL050_PRIME request is the third of six requests between revs 272 and 282 to determine the pole-axis orientation, object shape, and sidereal period of irregular moon Bebhionn through disk-integrated lightcurve observations. Bebhionn is one of the few objects which might have a binary or contact-binary nature, and the observation also tries to address this.

Y bias windows & data volume

Before the doy 151 Canberra 34M downlink there is no YGAP per ISS request for full rotation period for Bebion. We are already carrying over data to XD, if you want to put a YBIAS here and shorten the downlink it will be fine especially in the VCUT run.

Notes

- Pointing:
  - Nothing of note
- Data Volume:
  - carryover from Rings 276 to do dual playback. Carryover of 792 Mb to XD because we end on a 34M station (may now be available due to Juno changes but the carryover was already in place)
- DSN:
  - Nothing
- Resource checker:
  - One PPL complaint as the Rings part 2 of dual playback is in this segment
- Opmodes:
  - None
- Hydrazine:
  - NA
- Special Activities:
  - None

Sequence Liens (should all be SPLAT items):

- None