

Mission Status Report 2

Reference Period: 20 – 26 Feb 2016

sentinel-3

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Mission status

- The overall Mission status is nominal.
- The Platform In-orbit Verification (P/F IOV) has been completed on 26 Feb 2016 (one day earlier than planned).
- The first in-plane maneuver to initiate the transition to the reference orbit has been successfully performed.
- Regular X-band acquisition at the Svalbard ground station has been successfully established with a small interruption due to a not planned update of the satellite pointing information.

Satellite

- All subsystems and units are operating nominally.
- The spacecraft (S/C) is in NORMAL mode, the high bit rate for telemetry and Attitude and Orbit Control System (AOCS) is in NOMINAL mode (geocentric guidance law).
- Thruster characterization and calibration has been performed for both sets of thrusters.
 - First thruster set 1 - which points opposite to the flight direction - has been calibrated and could then be successfully used for the first orbit control maneuver to lower the orbit to transit to the reference orbit.
 - Following that, also thruster set 2 which is pointing in flight direction and is intended to be used for future orbit raise maneuvers has been successfully characterized and calibrated.
- The Star trackers have been calibrated, i.e. the residual de-pointing measured after the calibration exercise has been corrected to allow for accurate pointing of the instruments.
- The Payload Data Handling Transmission (PDHT) chain has been successfully commissioned and the regular payload measurement and housekeeping data transmission via X-band has started.
- GNSS and DORIS measurement data transmission have successfully started, for both units the computed quality index is fully nominal.
- SLSTR decontamination heating and the transmission of SLSTR measurement data have started, mainly to validate the proper filling of the SLSTR packets (the current measurement data with the flip mirror in fixed position has no scientific meaning)
- OLCI, SRAL and MWR are OFF as per nominal end of P/F IOV configuration.

Ground Segment

- The FOS ground segment is nominal.
- As from 20 Feb, contacts scheduling has moved to the default commissioning pattern using 10 passes per day over Kiruna, Svalbard or Troll, with no combined Kiruna and Svalbard passes, and EUMETSAT has started to listen in.
- The Payload Data Ground Segment commissioning has started on 22 Feb with the first X-band acquisition at the Svalbard ground station on 23 Feb. An interruption of the X-band transmission occurred in the night from 24 Feb resulting in the loss of 5 X-band passes, the problem being linked to the update of the pointing information delivered to the stations.
- The Core Ground station (CGS) service is nominal.
- Housekeeping telemetry (HK TM) circulation to ESA and EUMETSAT FOS is nominal.
- L0 production for SLSTR, GNSS, DORIS has successfully started at the Core Ground Station in Svalbard and at EUMETSAT marine centre.
- Mission planning function has started on 22 Feb providing the first Nominal payload Planning file (NPPF) to allow the on-board commanding of data download to the X-band station. Following the first orbit control maneuvers, the NPPF has been uploaded again on 25 Feb to take into account the new orbit measured by Flight Dynamics.

Outlook

- S3A is ready to start Payload IOV commissioning on Monday 29 Feb.
- OLCI, SRAL and MWR switch-on, calibration and test.
- Start of SLSTR normal scanning mode, calibration and test while decontamination continues (no cool-down yet).
- Second in-plane maneuver to reach the reference orbit.

User interface and communication

- Users will be informed about the availability of sample data and their distribution in due time.