



Mission Status Report 426

Reference Period: July-August 2023

sentinel-1

→ RADAR VISION FOR COPERNICUS

Mission status

- The Copernicus Sentinel-1A operations went on routinely during the reporting period.
- The Sentinel-1A spacecraft is in a stable state, operating in Nominal Mission Mode. No major S/C anomalies are to be reported.
- The Flight Operations Segment (FOS) ensured the monitoring, control and commanding of the satellites nominally.
 Orbit Control Maneuvers (OCM) are performed nominally once a week. During the reporting period, two Collision Avoidance Maneuver (CAM) were performed on S-1A with on 2023-08-03 and 2023-08-20 resulting in a limited data loss notified to the users through the <u>Copernicus Sentinel Operations Dashboard</u>.
- The Sentinel-1 Ground Segment operations have continued smoothly with no major anomaly to report.
- Access to the Sentinel-1 data is available through the new Copernicus Data Space Ecosystem. The Copernicus Data Hub is maintained up to September 2023 to ensure a smooth user migration.
- The pre-operational production of the ETAD product has restarted in August. ETAD products are planned to be made available to the public by October 2023.
- The spacecraft and downlink planning has been made successfully:
 - The use of the EDRS service by Sentinel-1A is on-going as part of the routine operations.
 - The detailed observation plan in the form of instrument acquisition segments has been <u>published</u>.
 - Wave Mode data is acquired globally over open oceans, systematically processed to Level-2 OCN products, and made available to CMEMS for operational assimilation.
 - Specific planning requests were placed to support:
 - Charter call mainly for 3 floods and 1 landslide
 - Monitoring of 5 Tropical cyclones systems
- S-1A Data Quality is nominal and is being checked routinely by the S-1 Mission Performance Center.
- The following articles related to Sentinel-1 were published during the reporting period:
 - Antarctica vulnerable to extreme events
 - Satellites map aftermath of Emilia-Romagna floods
 - Glacier surges mapped globally from space

Latest news

Other news regarding Sentinel-1 can be found <u>here</u>.

Sentinel-1B disposal

 The S-1B disposal activities have been paused following a safe mode entry, on the 25/07/2023 morning. The safe mode has been triggered by a degradation of the thruster performance generating a torque out of the acceptable limits. Analysis is on-going with S/C manufacturer.

The Safe mode has been successfully recovered on the same day evening and placed in safe, stable and CAM enable attitude.

The Reaction Control Thruster (RCT) A branch used for the disposal are considered not operational anymore. The RCT B-branch characterisation started end of August and is exhibiting nominal performance.







Meanwhile, a modification to the Fault Detection, Isolation and Recovery (FDIR) has been implemented by FOS and uploaded to avoid a safe mode re-entry upon re-occurrence of thrust imbalance.

Pending the outcome of the thruster manufacturer analysis, the disposal strategy will be re-assessed in the course of September.