



Mission Status Report 421

Reference Period: 1st to 15th of February 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.
- 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.
- Ground Segment operations have continued smoothly as part of the on-going Payload Data Ground Segment (PDGS) service operations.
- <u>The Copernicus Data Space Ecosystem</u> has been rolled-out in its first version and is operational.
- X-Band data acquisitions were routinely performed over Matera, Svalbard, Maspalomas and Neustrelitz
 X-band core stations. The acquired data are circulated within the PDGS, systematically processed to
 Level-0, Level-1 and Level-2 products and archived.
- The use of the EDRS-A service by Sentinel-1A is on-going as part of the routine operations.
- Wave Mode data is globally acquired over open oceans, systematically processed to Level-2 OCN products, and made available to CMEMS for operational assimilation.
- Support to the M 7.8 Turkey earthquake. Sentinel-1 data has been successfully used by different national
 geological surveys and operational services to derive 3D deformation maps using the two overpasses
 that were acquired at few days distance from the event.

Spacecraft planning

- The spacecraft and X-band downlink planning station has been made successfully. Current planning is ensured up to the 4th of March 2023.
- The detailed observation plan in the form of instrument acquisition segments is published twice a week and made available.
- Two specific Sentinel-1A observations were planned to support the monitoring of cyclone Darian over Indian Ocean on 23rd of January 2023.
- Specific actions were performed to support
 - International Disasters Charter:
 - Charter Call 919 Earthquakes in Turkey fully covered by the observation planning
 - Charter Call 920 Earthquakes in Syrian Arab Republic fully covered by the observation planning
 - Charter Call 921 Wildfire in Chile, from Talca to Valdivia fully covered by observation planning
 - Charter Call 922 Flash Flood, Flood (large area) in Eswatini requires to extend a couple of passe
 - Copernicus EMS: rush planning action to support EMSR650
 - Tropical cyclone monitoring over Southern Indian Ocean

Unavailability

- On 2023-02-02 03:00, the S1A SAR suffered an unplanned availability for ~9 consecutive hours due to a recurrent SAR anomaly.
- The POD restituded orbits have been temporarily not distributed to the users between the 30/01/23 to 06/03/23 due to an issue on the GNSS hub. This had no impact on the data generated by the PDGS.

Collision avoidance maneuver

No CAM event were monitored during the reporting period

Data quality

- S-1A Data Quality is nominal.
- No strong RFI event has been noticed over the Ukrainian/Russian conflict area.

Latest news

Sentinel-1 news regarding Sentinel-1 have been published during the reporting period.

Sentinel-1B disposal

- The Sentinel-1B <u>end of mission</u> has been declared by ESA and the European Commission. The full archive of Sentinel-1B data is maintained and is accessible to users.
- S-1B engineering and analyses activities are now completed. The activities are now encompassing refinement of the overall plan, preparation and testing of necessary procedures.







