

sentinel-1

→ RADAR VISION FOR COPERNICUS

Mission Status Report 80

Reference Period: 3 November 2015 – 9 November 2015

Mission status

- The Sentinel-1A routine operations are on-going
- Sentinel-1 data can be accessed from: <https://sentinels.copernicus.eu>
- The observation scenario supports the systematic coverage of a first set of Copernicus Services areas of interest, of European land and coastal waters, of global tectonic/volcanic areas, as well as of other specific targets worldwide for various applications. The observation plan also includes regular mapping of all land areas worldwide. The dedicated campaign for Antarctica ice sheet monitoring, performed during local winter, has been completed. An overview of the observation scenario is available at: <https://sentinels.copernicus.eu/web/sentinel/missions/sentinel-1/observation-scenario>
- The detailed observation plan in the form of instrument acquisition segments is published on Sentinel Online at: <https://sentinels.copernicus.eu/web/sentinel/missions/sentinel-1/observation-scenario/acquisition-segments>
- The operational use of Sentinel-1A data by the Copernicus Marine Environment Monitoring Service for sea-ice and iceberg monitoring activities is on-going
- The European Maritime Safety Agency (EMSA) is gradually introducing in the CleanSeaNet service the use of Sentinel-1 imagery in quasi-real time. Preliminary operations with first EMSA local stations are on-going
- A Sentinel-1A In-Orbit Performance Review took place on 3-4 November in TAS-I Rome, Italy. The overall satellite health was confirmed to be nominal
- Numerous Sentinel-1 presentations were made at the CEOS Working Group on Calibration and Validation (WGCV - SAR Subgroup) workshop that took place on 27-29 October in ESA-ESTEC, Noordwijk, The Netherlands
- The Sentinel-1A spacecraft is in a stable state, operating in Nominal Mission Mode (NMM). The Flight Operations Segment (FOS) ensuring the monitoring, control and commanding of the satellite is operating nominally. Orbit control manoeuvres are performed once a week typically
- Data unavailability took place from 5 November 18:00 UTC to 6 November 12:30 UTC due to a misconfiguration in the PDGS planning files provided to FOS for satellite commanding
- A satellite unavailability occurred between 7 November 17:53 UTC and 8 November 12:10 UTC (nominal SAR operations resumed at 12:30 UTC) due to a PDHT software anomaly
- X-Band data acquisitions are routinely performed over Matera, Svalbard and Maspalomas X-band core stations. The acquired data are circulated within the PDGS, systematically processed to Level-0 and Level-1 products and archived
- Wave Mode data are regularly acquired over open oceans, systematically processed to Level-2 OCN products and made available. Sentinel-1 IW and EW Level-2 OCN products over regional ocean areas are available on the Scientific Data Hub since 26 July 2015. The operational qualification of Level-2 OCN products is on-going (geophysical validation)
- Operations are performed regularly at the Processing and Archiving Centres (DLR-PAC and UK-PAC). All other PDGS operational services (i.e. Mission Performance, Precise Orbit Determination, Wide Area Network) are operating nominally
- Testing activities with direct receiving collaborative stations are on-going
- Since 21 July, 100% of the IW data acquired over land are systematically produced to level 1 SLC, as shown at: <https://sentinels.copernicus.eu/web/sentinel/missions/sentinel-1/production-scenario>
- By 5 November, a total of 13,666 users have self-registered on the Sentinels Scientific Data Hub; 2,502,024 product download have been made by users, corresponding to 2.95 PB of data. At the time of publishing this report, more than 311,000 Sentinel-1A products are available on-line for download, representing 387 TB of data. Statistics of last 24 hours are available in real time at the Data Hub home page (<https://scihub.copernicus.eu>)

Outlook

- Continuation of routine mission operations
- Resume of Sentinel-1A - Alphasat TDP-1 inter-orbit link characterisation campaign

