



sentinel-1

→ RADAR VISION FOR COPERNICUS

Mission Status Report 81

Reference Period: 10 November 2015 – 16 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
- The final presentations of the two parallel InSARAP studies, focusing on Sentinel-1 interferometry aspects, took place on 9 November at ESA-ESRIN, Italy. Excellent interferometric performance and great potential of the mission for InSAR applications were confirmed at the meeting
- Scientific results related to ice loss over the past decades of the Zachariae Isstrom glacier in northeast Greenland have been published by researchers. The Polar Space Task Group (PSTG), composed of scientists and space agencies operating SAR missions, ensures, among others, coordination in SAR acquisitions over ice sheets. Sentinel-1 is becoming a main contributor to this concerted effort, ensuring yearly observation campaigns over Greenland and Antarctica. More information at:
 http://www.esa.int/Our_Activities/Observing_the_Earth/Copernicus/Sentinel-1/International_effort_reveals_Greenland_ice_loss
- 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
- 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
- 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
- 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 12 November, a total of 14,098 users have self-registered on the Sentinels Scientific
 Data Hub; 2,569,303 product download have been made by users, corresponding to 3.05
 PB of data. At the time of publishing this report, more than 318,000 Sentinel-1A products
 are available on-line for download, representing 396 TB of data. Statistics of last 24 hours
 are available in real time at the Data Hub home page (https://scihub.copernicus.eu)
- The overall operations mission performance is nominal

Outlook

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

