

sentinel-1

Mission Status Report 147

Reference Period: 14 March 2017 – 20 March 2017

→ RADAR VISION FOR COPERNICUS

Mission status

- The Sentinel-1A and Sentinel-1B routine operations are on-going
- The Sentinel-1 observation scenario supports the systematic coverage of Copernicus Services areas of interest, of European land and coastal waters, of global tectonic/volcanic areas, as well as of other specific areas worldwide for various applications. The observation plan also includes a regular mapping of all land areas worldwide, with a frequency largely increased with Sentinel-1B in operations. Starting on 26 September 2016, the Sentinel-1 observation plan is implemented with the combined use of Sentinel-1A and Sentinel-1B
- World maps providing a high level description of the overall Sentinel-1 constellation observation scenario, in terms of SAR modes, polarisation, observation geometry, revisit and coverage frequency are available at: <https://sentinels.copernicus.eu/web/sentinel/missions/sentinel-1/observation-scenario>
- The detailed observation plan in the form of instrument acquisition segments, for both Sentinel-1A and Sentinel-1B is published at: <https://sentinels.copernicus.eu/web/sentinel/missions/sentinel-1/observation-scenario/acquisition-segments>
- The operational use of Sentinel-1 data by the Copernicus Marine Environment Monitoring Service for sea-ice and iceberg monitoring activities is on-going
- The European Maritime Safety Agency (EMSA) operationally uses Sentinel-1 imagery in quasi-real time in the CleanSeaNet services; operations with EMSA service providers local stations are on-going
- The World Cover 2017 Conference, organized at ESA/ESRIN from 14 to 16 March 2017, put in evidence the great potential of Sentinel-1 to support land cover monitoring applications at global level
- The use of the EDRS-A service by Sentinel-1A is on-going as part of the routine operations, allowing to further increase the overall mission capacity
- The Sentinel-1B optical link commissioning using Alphasat TDP-1 is on-going. The start of EDRS service for Sentinel-1B is planned on 23 March 2017
- Both Sentinel-1A and -1B spacecraft are in a stable state, operating in Nominal Mission Mode (NMM). The Flight Operations Segment (FOS) ensuring the monitoring, control and commanding of the satellites 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 Payload Data Ground Segment (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 Data Hubs. The operational qualification of Level-2 OCN products is on-going (geophysical validation of the Radial Surface Velocity component)
- 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
- By 16 March 2017, a total of 72,928 users have self-registered on the Sentinels Scientific Data Hub; 7,281,916 product download have been made by users, corresponding to about 8.6 PB of data. More than 1.1 million Sentinel-1 products are available on-line for download, representing 1.6 PB 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 Sentinel-1 constellation routine operations
- Start of EDRS service for Sentinel-1B

