

sentinel-1

Mission Status Report 125

Reference Period: 20 September 2016 – 26 September 2016

→ RADAR VISION FOR COPERNICUS

Mission status

- The Sentinel-1A and Sentinel-1B routine operations are on-going
- Sentinel-1B routine operations have started on 26 September, with data accessible from the same hubs as data from Sentinel-1A. See at: <https://sentinels.copernicus.eu/web/sentinel/news/-/article/sentinel-1b-products-available-from-26-september-2016>
- 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 areas worldwide for various applications. The observation plan also includes a regular mapping of all land areas worldwide, which is largely increased with Sentinel-1B coming into operations. Starting on 26 September 2016, the Sentinel-1 observation plan is implemented with the combined use of Sentinel-1A and Sentinel-1B
- 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>.
See additional information at: <https://sentinels.copernicus.eu/web/sentinel/news/-/article/sentinel-1b-planned-acquisition-segments-publication-and-change-to-file-name-convention>
- Specific planning has been prepared with both Sentinel-1A and Sentinel-1B to support the activation EMSR-0184 from the Copernicus Emergency Rapid Mapping Service for major floods in Australia. Relevant products already generated were also made available quickly and used by the service. See an example at: http://emergency.copernicus.eu/mapping/system/files/components/EMSR184_04HILLSTONFMP_DELINEATION_OVERVIEW_v0_200dpi.jpg
- 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 EDRS-A - Sentinel-1A user commissioning is on-going, with a target start of service currently foreseen in November 2016
- 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 22 September 2016, a total of 46,902 users have self-registered on the Sentinels Scientific Data Hub; 5,441,416 product download have been made by users, corresponding to 6.1 PB of data. At the time of publishing this report, more than 700,000 Sentinel-1A products are available on-line for download, representing about 927 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 Sentinel-1 constellation routine operations
- Continuation of EDRS-A - Sentinel-1A user commissioning

