



Mission Status Report 287

Reference Period: 7 January 2020 – 13 January 2020

→ RADAR VISION FOR COPERNICUS

Mission status

- The Copernicus Sentinel-1A and Sentinel-1B routine operations are on-going
- The Copernicus 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 areas worldwide for various applications. The observation plan also includes a regular mapping of all land areas worldwide.
- World maps as of May 2019 providing a high level description of the 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 (CMEMS) for sea-ice, iceberg and swell monitoring activities is on-going
- The European Maritime Safety Agency (EMSA) operationally uses Sentinel-1 imagery in quasi-real time for CleanSeaNet services; operations with EMSA service providers local stations are ongoing.
- The Copernicus Global Land Service operationally uses Sentinel-1 imagery for the generation of Surface Soil Moisture products, over Europe
- Specific Sentinel-1 observations were planned in response to the call 735 from the International Charter Space and Major Disasters on 7 January 2020, related to floods and landslides in and around Jakarta, Indonesia
- Specific Sentinel-1 observations were planned in response to the call 736 from the International Charter Space and Major Disasters on 13 January 2020, related to the eruption of Taal volcano, Philippines. See more information at: https://sentinels.copernicus.eu/web/sentinel/news
- 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
- The use of the EDRS-A service by Sentinel-1A and -1B is on-going as part of the routine operations
- 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 operations of the systematic generation and
 distribution of Sentinel-1 level-2 OCN products derived from IW, EW and SM modes over seas at
 global level is on-going since 15 November 2017 (relevant for the Wind component OWI). The
 operational qualification of the Level-2 the OCN Radial Surface Velocity (RVL) component is on going.
- 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 9th January 2020, a total of 303,130 users have self-registered on the Sentinels Open Access data Hub; 24 million Sentinel-1 product download have been made by users, representing 30 PB of data. 4.8 million Sentinel-1 products are available on-line for download, representing 7.6 PB of data. Statistics of last 24 hours are available in real time at the Open Data Hub home page: https://scihub.copernicus.eu

Outlook

Continuation of Sentinel-1 constellation routine operations

