

## Mission Status Report 232

Reference Period: 20 November 2018 – 26 November 2018

# sentinel-1

→ 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 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 in the CleanSeaNet services; operations with EMSA service providers local stations are on-going.
- **Specific actions were implemented (NRT data provision from already planned acquisitions) in response to the activation 679 from the International Charter Space and Major Disasters related to floods in Iraq**
- **Specific additional Sentinel-1 acquisitions have been planned over the French island of Mayotte (and will be continued over the next weeks), to support the monitoring of an unusual geological phenomenon currently taking place offshore of the island**
- **Copernicus Sentinel-1B was unavailable on 26 November 2018 from 09:58 to 11:43 UTC, due to the need to perform a reset of the on-board PDHT memory. No SAR observations took place during this period. Data acquired few hours before this period may also have been affected. Some issues have been encountered on some Copernicus Sentinel-1B SAR data between 25 November 2018 at 09:56 UTC and the above mentioned PDHT reset, due to degraded data downlinks.**
- 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 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 22<sup>nd</sup> November 2018, a total of 195,696 users have self-registered on the Sentinels Open Access data Hub; 17.3 million Sentinel-1 product download have been made by users, representing than 22.7 PB of data. 3.3 million Sentinel-1 products are available on-line for download, representing 5.2 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

