

# sentinel-1

→ RADAR VISION FOR COPERNICUS

## Mission Status Report 73

Reference Period: 15 September 2015 – 21 September 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 is nominally on-going and will run till early October 2015 indicatively. 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 use of Sentinel-1A data by the Copernicus Marine Environment Monitoring Service for sea-ice and iceberg monitoring activities is on-going
- Sentinel-1 have responded to the activations from the Copernicus Emergency Management Service (EMS) and from the International Charter on Space and Major Disasters related to the major earthquake in Chile that occurred on 16 September. Scientists, making use of Sentinel-1A products openly available on the Sentinel Scientific Data Hub, have generated interferograms characterising the ground displacement created by the earthquake. See examples at: [http://www.esa.int/spaceinimages/Images/2015/09/Chile\\_earthquake\\_on\\_the\\_radar](http://www.esa.int/spaceinimages/Images/2015/09/Chile_earthquake_on_the_radar) and: <https://twitter.com/FraxInSAR>
- The European Maritime Safety Agency (EMSA) is gradually introducing in the CleanSeaNet service the use of Sentinel-1 imagery. Preliminary operations with first EMSA local stations have been on-going since June 2015
- 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 typically
- The Sentinel-1A – Alphasat TDP-1 inter-orbit link characterisation phase is on-going
- 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
- Wave Mode data are regularly acquired over open oceans and systematically processed to Level-2 OCN products. Sentinel-1 IW and EW Level-2 OCN products over regional ocean areas are available to users on the Scientific Data Hub since 26 July 2015. The operational qualification of Level-2 OCN products 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
- Testing activities with direct receiving collaborative stations are on-going
- 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 17 September, a total of 11,314 users have self-registered on the Sentinels Scientific Data Hub; 2,066,605 product download have been made by users, corresponding to 2.41 PB of data. At the time of publishing this report, more than 261,500 Sentinel-1A products are available on-line for download
- The overall operations mission performance is nominal

### Outlook

- Continuation of routine mission operations

