Mission status

- The Sentinel-1A routine operations are on-going
- Sentinel-1B has been launched on 25 April 2016, the Commissioning Phase is on-going – see next page
- Sentinel-1A 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 areas worldwide for various applications. The observation plan also includes regular mapping of all land areas worldwide. Specific Sentinel-1A acquisitions are being temporarily planned to support the commissioning phase of Sentinel-1B for cross-calibration. 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 at: https://sentinels.copernicus.eu/web/sentinel/missions/sentinel-1/observation-scenario/acquisition-segments
- The operational use of Sentinel-1A data by the Copernicus Marine Environment Monitoring Service for sea-ice and iceberg monitoring activities is on-going
- The European Maritime Safety Agency (EMSA) has introduced in the CleanSeaNet service the use of Sentinel-1 imagery in quasi-real time, operations with EMSA service providers local stations are on-going
- The EDRS-A - Sentinel-1A user commissioning is on-going
- 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
- A satellite unavailability occurred on 10 July from 07:39 to 18:51 UTC. No SAR data were acquired during this period
- 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 Scientific Data Hub. 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
- Since 21 July 2015, 100% of the IW and SM data over land are systematically produced to level 1 SLC. SLC production has being extended to all data at global level, i.e. acquired over seas and sea-ice as well
- By 7 July 2016, a total of 39,554 users have self-registered on the Sentinels Scientific Data Hub; 4,760,618 product download have been made by users, corresponding to about 5.3 PB of data. At the time of publishing this report, more than 594,000 Sentinel-1A products are available on-line for download, representing 771 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-1A routine mission operations
- Continuation of EDRS-A - Sentinel-1A user commissioning

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Sentinel-1B Commissioning Phase

- Sentinel-1B was launched on 25 April 2016 from Kourou, French Guiana

- The Sentinel-1B launch time-lapse video has been made available at: http://www.esa.int/spaceinvideos/Videos/2016/05/Sentinel-1B_prepares_for_liftoff_April_2016

- The Launch and Early Orbit Phase (LEOP) was successfully completed on 28 April. All deployments were successfully performed during the first 10 hours after launch (i.e. SAR antenna and solar panels) and initial checks of the various Platform and Payload sub-systems were successfully executed

- The SAR payload was activated on 28 April, the first data takes were acquired at 05:37 UTC, only 56 hours after lift-off, and downloaded at the Matera station few minutes later. These data were immediately processed by the Payload Data Ground Segment

- The first Sentinel-1B images were published on 28 April, less than three days after lift-off. See more information at: http://www.esa.int/Our_Activities/Observing_the_Earth/Copernicus/Sentinel-1/Sentinel-1B_delivers

- The satellite Commissioning Phase started on 29 April. All equipment and sub-systems are nominal and running on the prime units

- The commissioning of the Platform subsystems has been completed

- The Optical Communication Payload (OCP) on-board verification has been completed

- Sentinel-1B reached its orbital location on 16 June 2016, synchronised with Sentinel-1A at 180 deg. in the same orbital plane and it is now under nominal orbital control, keeping it and Sentinel-1A, within the same ground track of +/-120 meters

- Sentinel-1B and Sentinel-A data were combined to form the first interferogram on the very first day of reaching the target orbit position. See more information at: http://www.esa.int/Our_Activities/Observing_the_Earth/Copernicus/Sentinel-1/Sentinel-1_satellites_combine_radar_vision

- The SAR Pointing measurements have been completed and data analysis is ongoing

- The SAR calibration, characterisation and performance verification activities are on-going, focusing mainly on SAR Cross-Calibration and Antenna Model verification activities

- The Sentinel-1B commissioning phase activities are planned to be completed by mid-September 2016

Outlook

- Continuation of the Sentinel-1B Commissioning Phase
- Continuation of SAR performance verification activities
- Continuation of Sentinel-1B/Sentinel-1A Cross-calibration