

***Mission Status Report 117***

***Reference Period: 16-31 Aug. 2022***

***Mission Status***

Overall

* The mission, in Phase E2 (Operations Phase) since 24th April 2018, has reached routine operations capacity at the beginning of March 2019.

Operational Products availability and access

* Level 1B Radiance/Irradiance, Level 2 Methane, Tropospheric Ozone (Offline); Carbon Monoxide, Formaldehyde, Nitrogen Dioxide, Sulphur Dioxide, Total Ozone, Ozone Profile, Aerosol Absorbing Index, Aerosol Layer Height and Cloud products (Offline and Near Real Time) are available to the public via the Copernicus Sentinel-5 Precursor Data Hub – <https://s5phub.copernicus.eu>.

Platform

* Due to a collision risk identified for the Sentinel-5 Precursor satellite, a Collision Avoidance Manoeuvre (CAM) was executed on 22nd Aug 06:45 – 08:30. As the CAM took place during the eclipse side of the orbit product data quality was not affected.

TROPOMI Payload

* The TROPOMI instrument continues measuring in nominal operations baseline with a 360 orbit repeat cycle and since 6th August 2019 with a spatial resolution of about 5.5 km along-track and 3.5 km across-track.

Ground Segment

* The status of both Flight Operations Segment (FOS) and Payload Data Ground Segment (PDGS) has been nominal. Routine scheduling, acquisition, processing and dissemination tasks were performed without major anomalies.
* There are many small data gaps during the time period 18:37 – 18:52 on 18th August due to acquisition problems (strong wind gusts affecting a receiving antenna).
* Due to an unavailability of the S-NPP satellite that is producing auxiliary data for the Methane processing the data quality of the Methane product is poor from orbit 24790 (26th July) until orbit 25271 (29st August).
* The full mission reprocessing of the Level 1B products has been completed on 27th July. The reprocessing of the Level 2 S-NPP TROPOMI products has started on 4th August and continued during the reporting period.

Level 1B / Level 2 processors

* All processors have been updated and tested/qualified and have been implemented into the PDGS. These processors are being used for the full mission reprocessing campaign that is ongoing.

Cal/Val Activities

* The routine validation activities continued nominally for all products.

PAL Activities

* Since 15th December 2021 a new Nitrogen Dioxide dataset reprocessed with the Sentinel-5P Product Algorithm Laboratory (PAL) using the official processor Version 2.3.1 is available to the users to allow consistent long-term data analysis (e.g., trends in air pollution based on COVID-19 impact). It covers the time period 1st May 2018 to 14th November 2021 and is available at <https://data-portal.s5p-pal.com>. It is planned to replace this data set during 2022 by an upgraded product reprocessed with the Payload Data Ground Segment (PDGS).
* Three new pre-operational products (Water Vapour, Bromine Monoxide, and Aerosol Optical Thickness) are being provided to the public via <https://data-portal.s5p-pal.com>.

***Outlook***

* The full mission reprocessing campaign for all operational products has started and is foreseen to finish before the end of this year (2022).

 *Report prepared by the ESA Sentinel-5 Precursor Team*