

***Mission Status Report 111***

***Reference Period: 16-31 May 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.
* During the Satellite In-Orbit Performance (SIOP) meeting held in Stevenage on 30-31 May the excellent status of the TROPOMI instrument and the Sentinel-5 Precursor (S5P) satellite has been confirmed.

Data 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>.
* 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).

Platform

* All platform subsystems performed nominally.

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 PDGS has been nominal. Routine scheduling, acquisition, processing and dissemination tasks were performed without major anomalies.
* The production of the Test Data Set (TDS) with updated Level 1B and Level 2 processors (generated in preparation for the full mission reprocessing campaign and the next operational PDGS upgrade) has finished on 20th May.
* The updated Level 1B and Level 2 processors used for the generation of the TDS, are currently being integrated into the PDGS operational environment.

Level 1B / Level 2 processors

* The teams have continued to analyze the TDS that is being produced by the PDGS for processors qualification. No problems have been found so far during the ongoing analysis of the generated test data.

Cal/Val Activities

* The routine validation activities continued nominally for all products.

***Outlook***

* A major PDGS upgrade is planned during end of June 2022, which includes updated processors for all products (under testing) to be used for a full mission reprocessing campaign until the end of 2022.

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