

***Mission Status Report 146***

***Reference Period: 01-15 Nov. 2023***

***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); Aerosol Absorbing Index, Aerosol Layer Height, Carbon Monoxide, Cloud, Formaldehyde, Nitrogen Dioxide, Ozone Profile, Sulphur Dioxide, and Total Ozone products (Offline and Near Real Time) are available to the public via the Copernicus Data Space Ecosystem - <https://dataspace.copernicus.eu/>.

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 Payload Data Ground Segment (PDGS) has been nominal. Routine scheduling, data acquisition, processing, and dissemination tasks were performed without major anomalies.

Level 1B / Level 2 processors

* The DLR team has delivered the new processor (version 2.6.1) which optimizes the co-registration between the bands that are used for the Cloud retrieval (band 3/4 and 6), by using the S-NPP VIIRS cloud data. With this improvement, the first ground pixel will be processed for the products Cloud, Formaldehyde, Sulphur Dioxide, and Total Ozone Column (that was not processed in previous processor versions).
* Top of Form
* Bottom of Form

Cal/Val Activities

* The routine validation activities continued nominally for all products.

PAL Activities

* Six pre-operational products (Aerosol Optical Thickness, Bromine Monoxide, Glyoxal, Sun-Induced Fluorescence, Water Vapour, and a Sulphur Dioxide product using the new Covariance-Based Retrieval Algorithm (COBRA) are being provided to the public via <https://data-portal.s5p-pal.com>.

***Outlook***

* The next PDGS update release is planned around end of November 2023. The new versions of the KNMI (2.6.0) and DLR (2.6.1) processors, both already delivered, will be put into operations including the functionality to generate a methane product without the need for VIIRS cloud information and to enable improved Aerosol Layer Height and Cloud products processing.

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