

***Mission Status Report 144***

***Reference Period: 01-15 Oct. 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 Sentinel-5 Precursor Data Hub – <https://s5phub.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, acquisition, processing, and dissemination tasks were performed without major anomalies.
* The data access for all Copernicus products has been transferred to the new Copernicus Data Space Ecosystem at the end of September, and the previous dissemination center (Pre-ops Data Hub) will be closed at the end of October.

Level 1B / Level 2 processors

* The DLR team is working in optimizing 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).

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 the end of November 2023 to include improved KNMI and DLR processors for the Aerosol Layer Height, Cloud, and Methane products.

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