

***Mission Status Report 133***

***Reference Period: 16-30 Apr. 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

* Orbit Control Manoeuvre (OCM) activities were executed on:
	+ 18th April between 11:36 – 14:31, causing a temperature increase on the SWIR detector, SWIR grating and UVN detector.
	+ 20th April between 21:11 – 22:00, causing a slight temperature increase on the SWIR detector, SWIR grating and UVN detector.

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 full mission reprocessing of the Level 1B and all Level 2 products has been completed and all data sets have been publicly released.
* As a consequence of the manoeuvre execution, some data show quality degradation:
	+ The Formaldehyde product shows stripes in orbits 28561-28562 (18th April).
	+ The Methane and Carbon Monoxide products do not contain valid data in the orbit range 28561-28565 (18th April) and in orbit 28595 (20th April).

Level 1B / Level 2 processors

* The Sulphur Dioxide processor is being upgraded by DLR to include the Sulphur Dioxide Layer Height information into the product.

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 upgrade is planned during July (including an improved Sulphur Dioxide product.)

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