

***Mission Status Report 139***

***Reference Period: 16-31 Jul. 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.
* As planned, a major PDGS upgrade was put into operations on 19th July. This included the implementation of an improved Sulphur Dioxide product.
* Due to unavailability of auxiliary data (provided by the SUOMI-NPP VIIRS instrument) required for the Methane processing, data between orbits 29959 – 30038 (26-30 July) are not available or have severe quality degradation. The missing auxiliary data have also impact on the Aerosol Layer Height and Cloud products.

Level 1B / Level 2 processors

* The KNMI and DLR teams are working on the Level 2 processors (e.g. new Methane retrieval algorithm) that will be implemented in the operational PDGS until November 2023.

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 data access for all Copernicus products is being transferred to the new Copernicus Data Space Ecosystem. It is expected that the access for Sentinel-5P data will be provided by this new Ecosystem until September 2023.

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