



PROGRAMME OF  
THE EUROPEAN UNION



## TECHNICAL NOTE

# ESA EO Operations Framework (EOF) – CSC - Copernicus Sentinel Data Portfolio

**Prepared by**  
**Reference**  
**Issue/Revision**  
**Date of Issue**  
**Status**

**CSC Operations Team**  
**ESA-EOPG-EOPGC-TN-12**  
**1.4**  
**01/10/2024**  
**Issued**

# APPROVAL

|                                                                 |                          |
|-----------------------------------------------------------------|--------------------------|
| <b>Title</b> Copernicus Space Component Sentinel Data Portfolio |                          |
| <b>Issue Number</b> 1                                           | <b>Revision Number</b> 4 |
| <b>Author</b> CSC Operations Team                               | <b>Date</b> 01/10/2024   |
| <b>Reviewed By</b>                                              | <b>Date of Approval</b>  |
| Copernicus GS Systems Team (EOP-GCY)                            |                          |
| <b>Approved By</b>                                              | <b>Date of Approval</b>  |
| H/EOP-GCY                                                       |                          |
| <b>Authorised By</b>                                            | <b>Date of Approval</b>  |
| H/EOP-GC                                                        |                          |

# CHANGE LOG

| Reason for change                                                                                                     | Issue Nr. | Revision Number | Date      |
|-----------------------------------------------------------------------------------------------------------------------|-----------|-----------------|-----------|
| Alignment of Sentinel-5P product types                                                                                | 1         | 1               | Jan. 2021 |
| Alignment and Update for CSC GS Checkpoint                                                                            | 1         | 2               | Dec. 2021 |
| Update with new product types and alignment with EOF CSC Data Flow Configuration document                             | 1         | 3               | Mar. 2024 |
| Addition of Sentinel-1 AIS product type and implementation of clarifications for TM_o_NAT and L2_FRESCO product types | 1         | 4               | Oct. 2024 |

# CHANGE RECORD

| <b>Issue Number</b> 1                                                                                                         | <b>Revision Number</b> 1 |       |              |
|-------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------|--------------|
| Reason for change                                                                                                             | Date                     | Pages | Paragraph(s) |
| Sentinel-5p: removal of L2_O3_TPR product type and addition of HKTM, Calibration and Overpass Engineering Level product types | Jan. 2021                | 12    | 5            |

| Issue Number 1                                                     | Revision Number 2 |       |              |
|--------------------------------------------------------------------|-------------------|-------|--------------|
| Reason for change                                                  | Date              | Pages | Paragraph(s) |
| Sentinel-2: classification of LO and L1B as Engineering Level Data | Dec. 2021         | 9     | Table 3-1    |

| Issue Number 1                                                                                    | Revision Number 3 |       |              |
|---------------------------------------------------------------------------------------------------|-------------------|-------|--------------|
| Reason for change                                                                                 | Date              | Pages | Paragraph(s) |
| Addition of Sentinel-1 BUFR product type                                                          | Mar. 2024         | 9     | Table 2-1    |
| Addition of ZE_RAW__oS Noise Characterisation product and streamlining of Notch Mode products     | Mar. 2024         | 9     | Table 2-1    |
| Removal of Sentinel-1 PSCalibration product types                                                 | Mar. 2024         | 9     | Table 2-1    |
| Alignment of Sentinel-2 User Level Data and Engineering Data, including addition of User Products | Mar. 2024         | 9     | Table 3-1    |
| Replacement of SR_1_SRA__ with SR_1_LAN_RD                                                        | Mar. 2024         | 12    | Table 4-1    |
| Addition of SRAL Thematic products for Sentinel-3                                                 | Mar. 2024         | 12    | Table 4-1    |
| Removal of Sentinel-5P L2__FRESCO product type                                                    | Mar. 2024         | 14    | Table 5-1    |

| Issue Number 1                                                                                    | Revision Number 4 |       |              |
|---------------------------------------------------------------------------------------------------|-------------------|-------|--------------|
| Reason for change                                                                                 | Date              | Pages | Paragraph(s) |
| Addition of Sentinel-1 AI_RAW__o_ product type                                                    | Oct. 2024         | 9     | Table 2-1    |
| Sentinel-3 TM_o_NAT__ products to be managed as Engineering Level Data by the Data Access service | Oct. 2024         | 12    | Table 4-1    |
| Addition of Sentinel-5P L2__FRESCO product type                                                   | Oct. 2024         | 14    | Table 5-1    |

## Table of contents:

|          |                                   |           |
|----------|-----------------------------------|-----------|
| <b>1</b> | <b>INTRODUCTION.....</b>          | <b>5</b>  |
| 1.1      | Purpose and Scope .....           | 5         |
| 1.2      | Reference Documents .....         | 6         |
| 1.3      | Acronyms and Abbreviations.....   | 6         |
| <b>2</b> | <b>SENTINEL-1 PRODUCTS.....</b>   | <b>7</b>  |
| <b>3</b> | <b>SENTINEL-2 PRODUCTS .....</b>  | <b>9</b>  |
| <b>4</b> | <b>SENTINEL-3 PRODUCTS .....</b>  | <b>10</b> |
| <b>5</b> | <b>SENTINEL-5P PRODUCTS .....</b> | <b>12</b> |

## 1 INTRODUCTION

### 1.1 Purpose and Scope

The purpose of this document is to provide an exhaustive list of all data operationally produced by the CSC Ground Segment for all Sentinel missions.

The data generated by the CSC Ground Segment is classified as belonging to one of the following categories:

- ***Sentinel User Level Data:*** Sentinel payload data generated by the CSC Ground Segment from instrument observations and available to users.
- ***Sentinel Engineering Level Data:*** Sentinel payload data generated by the CSC Ground Segment for instrument performance monitoring, calibration activities or as input for the processing of User Level Data. This data is used for operational purposes and is typically not available to users.
- ***Satellite Housekeeping Telemetry:*** Sentinel satellite data generated by the CSC Ground Segment for satellite telemetry monitoring purposes. This data is not available to users.

Note: Auxiliary Data (used in support to the generation of the User Level Data, Engineering Level Data or Housekeeping Telemetry) are not within the scope of this document.

## 1.2 Reference Documents

| ID     | Document Reference   | Document Title                                                  |
|--------|----------------------|-----------------------------------------------------------------|
| [RD-1] | S1PD.SP.00110.ASTR   | Sentinel-1 Level-0 Product Format Specifications                |
| [RD-2] | S1-RS-MDA-52-7441    | Sentinel-1 Product Specification                                |
| [RD-3] | S2-PDGS-TAS-DI-PSD   | Sentinel-2 Products Specification Document                      |
| [RD-4] | S3IPF.PDS.001        | Sentinel-3 Product Data Format Specification - Level 0 Products |
| [RD-5] | S3IPF.PDS.002        | Product Data Format Specification - Product Structures          |
| [RD-6] | ESA-EOPG-EOPGC-TN-58 | Copernicus Ground Segment Sentinels Data Flow Configuration     |

**Table 1-1 – Reference Documents**

## 1.3 Acronyms and Abbreviations

| Acronym | Description                 |
|---------|-----------------------------|
| CSC     | Copernicus Space Component  |
| GS      | Ground Segment              |
| HKTM    | House-Keeping Telemetry     |
| ICD     | Interface Control Document  |
| PDGS    | Payload Data Ground Segment |

**Table 1-2 – Acronyms and Abbreviations**

## 2 SENTINEL-1 PRODUCTS

The table below provides the complete list of data that may be generated by the CSC Operations, for the various instrument modes, product levels and product types. It indicates for each product, to what data category it corresponds to.

| Payload        | Mode            | Level | Type | Product Type Code | User Level     | Engineering Level | Satellite HKTM |
|----------------|-----------------|-------|------|-------------------|----------------|-------------------|----------------|
| SAR Instrument | SM <sup>1</sup> | Lo    | RAW  | S[1..6]_RAW__oS   | X              |                   |                |
|                |                 |       |      | S[1..6]_RAW__oC   |                | X                 |                |
|                |                 |       |      | S[1..6]_RAW__oN   |                | X                 |                |
|                |                 |       |      | S[1..6]_RAW__oA   |                | X                 |                |
|                |                 | L1    | SLC  | S[1..6]_SLC__1S   | X              |                   |                |
|                |                 |       |      | S[1..6]_SLC__1A   |                | X                 |                |
|                |                 |       | GRD  | S[1..6]_GRDF_1S   | X              |                   |                |
|                |                 |       |      | S[1..6]_GRDF_1A   |                | X                 |                |
|                |                 |       |      | S[1..6]_GRDH_1S   | X              |                   |                |
|                |                 |       |      | S[1..6]_GRDH_1A   |                | X                 |                |
|                |                 |       |      | S[1..6]_GRDM_1S   | X              |                   |                |
|                |                 |       |      | S[1..6]_GRDM_1A   |                | X                 |                |
|                |                 |       | RTC  | S[1..6]_RTC__1S   | X <sup>2</sup> |                   |                |
|                |                 | L2    | OCN  | S[1..6]_OCN__2S   | X              |                   |                |
|                |                 |       |      | S[1..6]_OCN__2A   |                | X                 |                |
|                | IW              | Lo    | RAW  | IW_RAW__oS        | X              |                   |                |
|                |                 |       |      | IW_RAW__oC        |                | X                 |                |
|                |                 |       |      | IW_RAW__oN        |                | X                 |                |
|                |                 |       |      | IW_RAW__oA        |                | X                 |                |
|                |                 | L1    | SLC  | IW_SLC__1S        | X              |                   |                |
|                |                 |       |      | IW_SLC__1A        |                | X                 |                |
|                |                 |       | GRD  | IW_GRDH_1S        | X              |                   |                |
|                |                 |       |      | IW_GRDH_1A        |                | X                 |                |
|                |                 |       |      | IW_GRDM_1S        | X              |                   |                |
|                |                 |       |      | IW_GRDM_1A        |                | X                 |                |
|                |                 |       | RTC  | IW_RTC__1S        | X <sup>2</sup> |                   |                |
|                |                 | L2    | OCN  | IW_OCN__2S        | X              |                   |                |
|                |                 |       |      | IW_OCN__2A        |                | X                 |                |

<sup>1</sup> Note: for SM (Strip-Map) mode the product type code S[1..6]\_<Type> means that there are six different codes one per each number (e.g.: S[1..6]\_RAW\_\_oS → S1\_RAW\_\_oS, S2\_RAW\_\_oS, S3\_RAW\_\_oS, S4\_RAW\_\_oS, S5\_RAW\_\_oS and S6\_RAW\_\_oS).

<sup>2</sup> Currently not part of the CSC operations baseline (i.e. not produced)

| Payload | Mode                                                      | Level                           | Type | Product Type Code          | User Level     | Engineering Level | Satellite HKTM |  |
|---------|-----------------------------------------------------------|---------------------------------|------|----------------------------|----------------|-------------------|----------------|--|
|         | EW                                                        | Lo                              | RAW  | EW_RAW__oS                 | X              |                   |                |  |
|         |                                                           |                                 |      | EW_RAW__oC                 |                | X                 |                |  |
|         |                                                           |                                 |      | EW_RAW__oN                 |                | X                 |                |  |
|         |                                                           |                                 |      | EW_RAW__oA                 |                | X                 |                |  |
|         |                                                           | L1                              | SLC  | EW_SLC__1S                 | X              |                   |                |  |
|         |                                                           |                                 |      | EW_SLC__1A                 |                | X                 |                |  |
|         |                                                           |                                 | GRD  | EW_GRDH__1S                | X              |                   |                |  |
|         |                                                           |                                 |      | EW_GRDH__1A                |                | X                 |                |  |
|         |                                                           |                                 |      | EW_GRDM__1S                | X              |                   |                |  |
|         |                                                           |                                 |      | EW_GRDM__1A                |                | X                 |                |  |
|         |                                                           |                                 | RTC  | EW_RTC__1S                 | X <sup>2</sup> |                   |                |  |
|         |                                                           | L2                              | OCN  | EW_OCN__2S                 | X              |                   |                |  |
|         |                                                           |                                 |      | EW_OCN__2A                 |                | X                 |                |  |
|         | WV                                                        | Lo                              | RAW  | WV_RAW__oS                 |                | X                 |                |  |
|         |                                                           |                                 |      | WV_RAW__oA                 |                | X                 |                |  |
|         |                                                           |                                 |      | WV_RAW__oC                 |                | X                 |                |  |
|         |                                                           |                                 |      | WV_RAW__oN                 |                | X                 |                |  |
|         |                                                           | L1                              | SLC  | WV_SLC__1S                 | X              |                   |                |  |
|         |                                                           |                                 |      | WV_SLC__1A                 |                | X                 |                |  |
|         |                                                           |                                 | GRD  | WV_GRDM__1S                | X              |                   |                |  |
|         |                                                           |                                 |      | WV_GRDM__1A                |                | X                 |                |  |
|         |                                                           | L2                              | OCN  | WV_OCN__2S                 | X              |                   |                |  |
|         |                                                           |                                 |      | WV_OCN__2A                 |                | X                 |                |  |
|         |                                                           |                                 |      | BUFR <sup>3</sup> products | X              |                   |                |  |
|         |                                                           | RF Characterisation             | Lo   | RAW                        | RF_RAW__oS     |                   | X              |  |
|         |                                                           | Elevation Notch Mode            | Lo   | RAW                        | EN_RAW__oS     |                   | X              |  |
|         | Azimuth Notch Mode                                        | Lo                              | RAW  | N[1..6]_RAW__oS            |                | X                 |                |  |
|         | Noise Characterisation Mode (for SM, IW, EW, WV in order) | Lo                              | RAW  | Z[1..6]_RAW__oS            |                | X                 |                |  |
|         |                                                           |                                 |      | ZI_RAW__oS                 |                | X                 |                |  |
|         |                                                           |                                 |      | ZE_RAW__oS                 |                | X                 |                |  |
|         |                                                           |                                 |      | ZW_RAW__oS                 |                | X                 |                |  |
|         | -                                                         | Orbit and Burst Synchronisation |      | OBS_SS__                   |                | X                 |                |  |
| GPS     | -                                                         | Lo                              | RAW  | GP_RAW__o_                 |                | X                 |                |  |
| HKTM    | -                                                         | Lo                              | RAW  | HK_RAW__o_                 |                |                   | X              |  |

<sup>3</sup> Provided only to authorised Meteo centres



| Payload | Mode | Level | Type | Product Type Code       | User Level | Engineering Level | Satellite HKTM |
|---------|------|-------|------|-------------------------|------------|-------------------|----------------|
| AIS     | AIS  | Lo    | RAW  | AI_RAW__o_ <sup>4</sup> |            | X                 |                |

**Table 2-1 – Sentinel-1 Data List**

### 3 SENTINEL-2 PRODUCTS

The table below provides the complete list of data that may be generated by the CSC Operations, for the various instrument modes, product levels and product types. It indicates for each product, to what data category it corresponds to.

| Payload                         | Level | Type                              | Product Type Code | User Level Data | Engineering Data | Satellite HKTM |
|---------------------------------|-------|-----------------------------------|-------------------|-----------------|------------------|----------------|
| Multi-Spectral Instrument (MSI) | Lo    | Level-0 Datastrip                 | MSI_Lo_DS         |                 | X                |                |
|                                 |       | Level-0 Granule                   | MSI_Lo_GR         |                 | X                |                |
|                                 |       | Level-0 User Product              | MSILOP            |                 | X                |                |
|                                 | L1    | Level-1A Datastrip                | MSI_L1A_DS        |                 | X                |                |
|                                 |       | Level-1A Granule                  | MSI_L1A_GR        |                 | X                |                |
|                                 |       | Level-1A User Product             | MSIL1A            |                 | X                |                |
|                                 |       | Level-1B Datastrip                | MSI_L1B_DS        |                 | X                |                |
|                                 |       | Level-1B Granule                  | MSI_L1B_GR        |                 | X                |                |
|                                 |       | Level-1B User Product             | MSIL1B            |                 | X                |                |
|                                 |       | Level-1C Datastrip                | MSI_L1C_DS        |                 | X                |                |
|                                 |       | Level-1C Tile                     | MSI_L1C_TL        |                 | X                |                |
|                                 |       | Level-1C True Colour Image        | MSI_L1C_TC        |                 | X                |                |
|                                 |       | Level-1C Single Tile User Product | MSIL1C            | X               |                  |                |
|                                 | L2    | Level-2A Datastrip                | MSI_L2A_DS        |                 | X                |                |
|                                 |       | Level-2A Tile                     | MSI_L2A_TL        |                 | X                |                |
|                                 |       | Level-2A True Colour Image        | MSI_L2A_TC        |                 | X                |                |
|                                 |       | Level-2A Single Tile User Product | MSIL2A            | X               |                  |                |
| HKTM                            | -     | Housekeeping Telemetry Data       | PRD_HKTM__        |                 |                  | X              |
| SAD                             | AUX   | Satellite Ancillary Data          | AUX_SADATA        |                 | X                |                |

**Table 3-1 – Sentinel-2 Product Data Items**

<sup>4</sup> Only applicable to Sentinel-1C and Sentinel-1D

## 4 SENTINEL-3 PRODUCTS

The table below provides the complete list of data that may be generated by the CSC Operations, for the various instrument modes, product levels and product types. It indicates for each product, to what data category it corresponds to.

| Payload | Level | Description                                                          | Product Type Code | User Level | Engineering Level | Satellite HKTM |
|---------|-------|----------------------------------------------------------------------|-------------------|------------|-------------------|----------------|
| DORIS   | Lo    |                                                                      | DO_o_DOP____      |            | X                 |                |
|         |       | Doris Navigation packets including Doppler datation and test packets | DO_o_NAV____      |            | X                 |                |
| GNSS    | Lo    |                                                                      | GN_o_GNS____      |            | X                 |                |
| MWR     | Lo    |                                                                      | MW_o_MWR____      |            | X                 |                |
|         | L1    | Level 1 calibration and monitoring MWR data                          | MW_1_CAL____      |            | X                 |                |
|         |       |                                                                      | MW_1_MWR____      |            | X                 |                |
| OLCI    | Lo    | Calibration with no spectral relaxation                              | OL_o_CRo____      |            | X                 |                |
|         |       | Calibration with spectral relaxation                                 | OL_o_CR1____      |            | X                 |                |
|         |       | Full Resolution ISPs                                                 | OL_o_EFR____      |            | X                 |                |
|         | L1    | Full Resolution top of atmosphere                                    | OL_1_EFR____      | X          |                   |                |
|         |       | Reduced Resolution top of atmosphere                                 | OL_1_ERR____      | X          |                   |                |
|         |       | Dark offset and gain coefficients from radiometric calibration       | OL_1_RAC____      |            | X                 |                |
|         |       | Wavelength characterization from spectral calibration                | OL_1_SPC____      |            | X                 |                |
|         | L2    | Full Resolution Land and Atmosphere parameters                       | OL_2_LFR____      | X          |                   |                |
|         |       | Reduced Resolution Land and Atmosphere parameters                    | OL_2_LRR____      | X          |                   |                |
| SLSTR   | Lo    | Full Resolution ISPs                                                 | SL_o_SLT____      |            | X                 |                |
|         | L1    | Brightness temperatures and radiances                                | SL_1_RBT____      | X          |                   |                |
|         | L2    | Land Surface Temperature Parameters                                  | SL_2_LST____      | X          |                   |                |
|         |       | 1 km Fire Radiative Power measurements                               | SL_2_FRP____      | X          |                   |                |

| Payload                | Level | Description                                                                            | Product Type Code | User Level | Engineering Level | Satellite HKTM |
|------------------------|-------|----------------------------------------------------------------------------------------|-------------------|------------|-------------------|----------------|
| SRAL                   | Lo    | ISPs raw data and calibration                                                          | SR_o_SRA____      |            | X                 |                |
|                        |       | Calibration level 0 from SRAL ISPs                                                     | SR_o_CAL____      |            | X                 |                |
|                        | L1    | Level 1 SRAL calibration parameters                                                    | SR_1_CAL____      |            | X                 |                |
|                        |       | L1b Echos parameters for LRM and PLRM mode                                             | SR_1_LAN_RD       |            | X                 |                |
|                        |       | Unpacked Lo complex echoes, sorted and calibrated                                      | SR_1_SRA_A_       | X          |                   |                |
|                        | L2    | 1-Hz and 20-Hz Ku and C bands parameters (LRM/SAR/PLRM), waveforms. Over Land Hydro    | SR_2_LAN_HY       | X          |                   |                |
|                        |       | 1-Hz and 20-Hz Ku and C bands parameters (LRM/SAR/PLRM), waveforms. Over Sea Ice       | SR_2_LAN_SI       | X          |                   |                |
|                        |       | 1-Hz and 20-Hz Ku and C bands parameters (LRM/SAR/PLRM), waveforms. Over Land Ice      | SR_2_LAN_LI       | X          |                   |                |
| Synergy (OLCI + SLSTR) | L1    | Colocation grids between OLCI L1/SLSTR L1 and OLCI Acquisition Reference Grid          | SY_1_MISR__       |            | X                 |                |
|                        | L2    | Surface Reflectances and Aerosol parameters over Land                                  | SY_2_SYN____      | X          |                   |                |
|                        |       | 1 km VEGETATION Like product (~VGT-S10) 10days synthesys surface reflectances and NDVI | SY_2_V10____      | X          |                   |                |
|                        |       | 1 km VEGETATION Like product (~VGT-S1) 1day synthesys surface reflectances and NDVI    | SY_2_VG1____      | X          |                   |                |
|                        |       | 1 km VEGETATION Like product (~VGT-P) - TOA Reflectances (mapped on plate carrè).      | SY_2_VGP____      | X          |                   |                |
|                        |       | 1 km VEGETATION Like product (~VGT-P) - TOA Reflectances (on OLCI Acquisition grid)    | SY_2_VGK____      |            | X                 |                |

| Payload        | Level | Description                       | Product Type Code | User Level | Engineering Level | Satellite HKTM |
|----------------|-------|-----------------------------------|-------------------|------------|-------------------|----------------|
|                |       | SYNERGY Global Aerosol parameters | SY_2_AOD____      | X          |                   |                |
| Telemetry Data | Lo    | Housekeeping Telemetry Data       | TM_o_HKM____      |            |                   | X              |
|                |       | Housekeeping Telemetry Data       | TM_o_HKM2__       |            |                   | X              |
|                |       | Housekeeping Telemetry Data       | TM_o_NAT____      |            |                   | X <sup>5</sup> |

**Table 4-1 – Sentinel-3 Products List**

## 5 SENTINEL-5P PRODUCTS

| Payload | Level | Product Type Code | User Level | Engineering Level | Satellite HKTM |
|---------|-------|-------------------|------------|-------------------|----------------|
| TROPOMI | Lo    | Lo__ENG_A__       |            | X                 |                |
|         |       | Lo__ODB_1__       |            | X                 |                |
|         |       | Lo__ODB_2__       |            | X                 |                |
|         |       | Lo__ODB_3__       |            | X                 |                |
|         |       | Lo__ODB_4__       |            | X                 |                |
|         |       | Lo__ODB_5__       |            | X                 |                |
|         |       | Lo__ODB_6__       |            | X                 |                |
|         |       | Lo__ODB_7__       |            | X                 |                |
|         |       | Lo__ODB_8__       |            | X                 |                |
|         |       | Lo__PDQ____       |            | X                 |                |
|         |       | Lo__SAT_A__       |            | X                 |                |
|         | L1    | L1B_CA_SIR        |            | X                 |                |
|         |       | L1B_CA_UVN        |            | X                 |                |
|         |       | L1B_ENG_DB        |            | X                 |                |
|         |       | L1B_IR_SIR        | X          |                   |                |
|         |       | L1B_IR_UVN        | X          |                   |                |
|         |       | L1B_RA_BD1        | X          |                   |                |
|         |       | L1B_RA_BD2        | X          |                   |                |
|         |       | L1B_RA_BD3        | X          |                   |                |
|         |       | L1B_RA_BD4        | X          |                   |                |

<sup>5</sup> Although TM\_o\_NAT\_\_\_\_ are HKTM data, for the purpose of distribution via the Data Access service they are considered Engineering Level data

|  |             |                         |   |   |  |
|--|-------------|-------------------------|---|---|--|
|  |             | L1B_RA_BD5              | X |   |  |
|  |             | L1B_RA_BD6              | X |   |  |
|  |             | L1B_RA_BD7              | X |   |  |
|  |             | L1B_RA_BD8              | X |   |  |
|  | L2          | L2__AER_AI              | X |   |  |
|  |             | L2__AER_LH              | X |   |  |
|  |             | L2__CH4__               | X |   |  |
|  |             | L2__CLOUD_              | X |   |  |
|  |             | L2__CO__                | X |   |  |
|  |             | L2__HCHO__              | X |   |  |
|  |             | L2__NO2__               | X |   |  |
|  |             | L2__NP_BD3              | X |   |  |
|  |             | L2__NP_BD6              | X |   |  |
|  |             | L2__NP_BD7              | X |   |  |
|  |             | L2__O3__                | X |   |  |
|  |             | L2__O3__PR              | X |   |  |
|  |             | L2__O3_TCL              | X |   |  |
|  |             | L2__SO2__               | X |   |  |
|  |             | L2__FRESCO <sup>6</sup> |   | X |  |
|  | Calibration | ICM_CA_SIR              |   | X |  |
|  |             | ICM_CA_UVN              |   | X |  |
|  |             | ICM_CKDSIR              |   | X |  |
|  |             | ICM_CKDUVN              |   | X |  |
|  | VDAF        | L2VOAER_AI              |   | X |  |
|  |             | L2VOAER_LH              |   | X |  |
|  |             | L2VO_CH4__              |   | X |  |
|  |             | L2VO_CLOUD_             |   | X |  |
|  |             | L2VO_CO__               |   | X |  |
|  |             | L2VOHCHO__              |   | X |  |
|  |             | L2VONO2__               |   | X |  |
|  |             | L2VOO3_TCL              |   | X |  |
|  |             | L2VOO3__PR              |   | X |  |
|  |             | L2VOO3__                |   | X |  |
|  |             | L2VOSO2__               |   | X |  |
|  | PyCAMA      | MPC_AER_AI              |   | X |  |
|  |             | MPC_AER_LH              |   | X |  |
|  |             | MPC_CH4__               |   | X |  |
|  |             | MPC_CLOUD_              |   | X |  |

<sup>6</sup> L2\_\_FRESCO is produced and disseminated as Level-2 product by the Sentinel-5P PDGS. However, it is handled as Auxiliary data by the Data Access.

|      |   |             |  |   |   |
|------|---|-------------|--|---|---|
|      |   | MPC_CO____  |  | X |   |
|      |   | MPC_FRESCO  |  | X |   |
|      |   | MPC_HCHO__  |  | X |   |
|      |   | MPC_NO2____ |  | X |   |
|      |   | MPC_O3_TCL  |  | X |   |
|      |   | MPC_O3____  |  | X |   |
|      |   | MPC_O3__PR  |  | X |   |
|      |   | MPC_SO2____ |  | X |   |
|      |   | MPC_NP_BD3  |  | X |   |
|      |   | MPC_NP_BD6  |  | X |   |
|      |   | MPC_NP_BD7  |  | X |   |
| HKTM | - | HK_CRT_Son  |  |   | X |
|      |   | HK_RAW_Son  |  |   | X |
|      |   | TLM__XHK__  |  |   | X |

**Table 5-1 – Sentinel-5P Products List**