

Changes in SEVIRI based routinely provided EDR products

CM SAF will change the processing of the currently available SEVIRI-based EDR products (cloud fraction (CFC), cloud top products (CTO), surface incoming shortwave (SIS) and surface incoming direct (SID) radiation) with the beginning of 2018 in order to be more consistent with the corresponding TCDRs ([CLAAS v2](#) for cloud products and [SARAH v2](#) for the surface radiation products). Additionally, the direct normalized irradiance (DNI) will become available. With this change, our environmental data records (EDRs) will become so-called “Interim Climate Data Records” (ICDRs). The underlying algorithm will be identical with the algorithms used in the generation of the corresponding TCDRs, thus it can be seen as a continuous extension of the TCDRs. The main difference will be in the calibration of the satellite data, which cannot be as thorough as for the TCDRs because of the timeliness constraints. Additionally, the employed background NWP data will be switched to forecast data (ECMWF IFS) instead of reanalysis data (ERA interim). The output format as well as the spatial resolution and projection of the ICDRs will be the same for the TCDRs. The list below gives a summary of the main changes compared to the currently available EDR parameters:

- Change in algorithm using the identical algorithms as in the corresponding TCDRs (SARAH-2 and CLAAS-2)
- Change from hdf5-format to netcdf4-format as standard output format
- Identical spatial resolution and projection as TCDR (regular lat/lon grid instead of sinusoidal projection)
- Improved timeliness requirement (5 days instead of 2 months)

The change in procedures is reflected in a change in version number (new version: 400). Additionally, the data source and gridding is coded in the file name according to the [CM SAF naming convention](#).

In order to help users adjust their applications to the new formats, test data are available on the (anonymous) CM SAF ftp server at

ftp://ftp-cmsaf.dwd.de/ICDR_SEVIRI.

For the cloud parameters the following test files are provided for June (xx=06) and December (xx=12) of 2015 (yyyy=2015) as well as September 2017 (yyyy=2017,xx=09) in the subdirectory clouds:

CFCdmyyyyxx*.nc (Daily Mean Cloud Fraction)
CTOdmyyyyxx*.nc (Daily Mean Cloud Top Properties)
CFCmmyyyyxx*.nc (Monthly Mean Cloud Fraction)
CFCmdyyyyxx*.nc (Monthly Mean Diurnal Cycle Cloud Fraction)
CTOmmyyyyxx*.nc (Monthly Mean Cloud Top Properties)
CTOmdyyyyxx*.nc (Monthly Mean Diurnal Cycle Cloud Top Properties)

For the surface radiation parameters the following test files are provided for June 2015 (yyyy=2015, xx=06) and September 2017 (yyyy=2017, xx=09) (subdirectory radiation):

SISdmyyyyxx*.nc (Daily Mean Surface Incoming Shortwave Radiation)
SIDdmyyyyxx*.nc (Daily Mean Surface Incoming Direct Radiation)
SISmmyyyyxx*.nc (Monthly Mean Surface Incoming Shortwave Radiation)
SIDmmyyyyxx*.nc (Monthly Mean Surface Incoming Direct Radiation)
DNIdmyyyyxx*.nc (Daily Mean Direct Normalized Irradiance)
DNImmyyyyxx*.nc (Monthly Mean Direct Normalized Irradiance)

The respective example files for September 2017 hold the final set of metadata that will become available from January 2018 onwards.

Users should be aware that the latitude/longitude grid of the cloud and surface ICDR radiation parameters are not identical and are slightly shifted relative to each other. However, the grids are consistent with the respective TCDR products.

For more information on the products such as the underlying algorithms and data format please check the Algorithm Theoretical Basis Documents (ATBDs) and Product User Manuals (PUMs) of the respective climate data records (Please be aware that there are minor differences in the metadata for the ICDR product compared to the respective TCDR parameters (e.g. no DOI entry)).

For the cloud products these are available via the DOI of the CLAAS-2 data record:
[DOI:10.5676/EUM_SAF_CM/CLAAS/V002](https://doi.org/10.5676/EUM_SAF_CM/CLAAS/V002)

The radiation parameters are based on the SARA-2 climate data record:
[DOI:10.5676/EUM_SAF_CM/SARAH/V002](https://doi.org/10.5676/EUM_SAF_CM/SARAH/V002)

Updated PUMs will be made available once the ICDRs become available.

The processing of the currently available SEVIRI based EDR product version will be stopped with the products for December 2017.

CM SAF presentations at upcoming conferences

Presentations on CM SAF topics will be given at a number of upcoming conferences presenting the latest results of our work, among others:

- 29 Nov – 5 Dec 2017, [International TOVS Study Conference](#) XXI (ITSC-XXI), Darmstadt, Germany

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