CM SAF Newsletter 43
November 2021

EUMETSAT CM SAF CLIMATE MONITORING

Change in used satellite combination for ICDR AVHRR products due to end-of-life of Metop-A satellite

The CM SAF ICDR AVHRR is based on a combination of AVHRR data from different NOAA and Metop satellites. From the start of the time series in January 2019 until 31 October 2021 AVHRR data from NOAA-15, NOAA-18, NOAA-19 and Metop-A has been used. With the end-of life of the Metop-A satellite in mid-November 2021 (see the respective EUMETSAT news for details), CM SAF changed the satellite combination accordingly and is processing Metop-B data instead of Metop-A in combination with the data from the three NOAA satellites for products from 1 November 2021 onwards. There are no changes to e.g. the algorithms at that time. Users can find information on the used satellite combination in the global attributes of the netCDF-files (attribute "CMSAF_platform_and_orbits").

Bug in longitude information in CLARA-A2, CLARA-A2.1 and ICDR AVHRR products for Southern Polar Region products

A bug in the longitude information in CLARA-A2, CLARA-A2.1 and ICDR AVHRR products for the Southern Polar region has been identified (area identifier "SP" in filename). The longitude information is erroneously flipped relative to the data fields of cloud properties and surface albedo. The following products are affected:

Product name	Temporal resolution	CM-identifier	Product family
CFC – Fractional cloud cover	daily and monthly mean	CM-11011 CM-11015 CM-6010	CLARA-A ed. 2 CLARA-A ed. 2.1 ICDR AVHRR
CPH – Cloud phase	daily and monthly mean	CM-11041 CM-11045	CLARA-A ed. 2 CLARA-A ed. 2.1
CTO – Cloud top parameters CTT, CTP and CTH	daily and monthly mean	CM-11031 CM-11035 CM-6030	CLARA-A ed. 2 CLARA-A ed. 2.1 ICDR AVHRR
IWP – Ice water path	daily and monthly mean	CM-11061 CM-11065	CLARA-A ed. 2 CLARA-A ed. 2.1
LWP – Liquid water path	daily and monthly mean	CM-11051 CM-11055	CLARA-A ed. 2 CLARA-A ed. 2.1
SAL – Surface albedo	pentad and monthly mean	CM-11221 CM-11225 CM-6220	CLARA-A ed. 2 CLARA-A ed. 2.1 ICDR AVHRR

The longitude information can easily be corrected by flipping the longitude fields, e.g. in PYTHON syntax for a file with filename <*filename.nc*>:

```
import numpy
import xarray

file = xarray.open_dataset('<filename.nc>')
lon = file['lon']
lon_corrected = numpy.flip(lon, axis=1)  # flip the X-axis
```

Only the products for the area “Southern Polar Region” (identifier “SP” in filename) are affected. The longitude information for the global coverage (“GL”) as well as for the Northern Polar areas (“NP”) is correct.

Update of CM SAF R Toolbox: version 3.3.0 available

Since our last newsletter further updates of the CM SAF R Toolbox became available. Besides adding even more operators, users can now also open data via an URL in the “prepare”-step.
Some further application examples including tutorials how to reproduce the analysis have been made available via the CM SAF R Toolbox website. Here you can also find all information on the latest updates of the software packages,

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