EarthCARE Status – May 2021

EVDC – ESA Atmospheric Validation Data Centre

2nd ESA EarthCARE Validation Workshop

25-28 May 2021 (online)

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Outline

About EVDC

EVDC for data submitters and users

- New functionalities

- Support systems

- Data formatting pages

- Overpass tool

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EVDC - ESA atmospheric Validation Data Centre

The ESA atmospheric Validation Data Centre

is the official ESA repository for validation and campaign datasets

URL: https://evdc.esa.int

Cal/Val database for in-situ campaign data

from **ENVISAT, Sentinel-5P, Aeolus**

and **EarthCARE**

Network data from projects and

monitoring programs such as **NDACC,**

EARLINET, PGN, TCCON, COCCON,

ACTRIS

Data provision to CAMS

EVDC - ESA atmospheric Validation Data Centre

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is the official ESA repository for validation and campaign datasets

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EVDC **serves the needs of both data**
submitters (e.g. Cal/Val campaign teams)
and data users (i.e. both Cal/Val campaign
teams and international science community).

EarthCARE Cal/Val is considered
for 'campaign use',
which implies that data will only be circulated
within the EarthCARE Cal/Val Team (ECVT).

Support for Cal/Val Teams

Access to Satellite Data:

From front page of EVDC – Search Satellite Data

Aeolus L1B Preliminary Wind Product

   and L2B Scientific Wind Product

Sentinel-1,2,3,5p

Download data, save search, access the data processing capabilities (subsetting, merging, viewing metadata).

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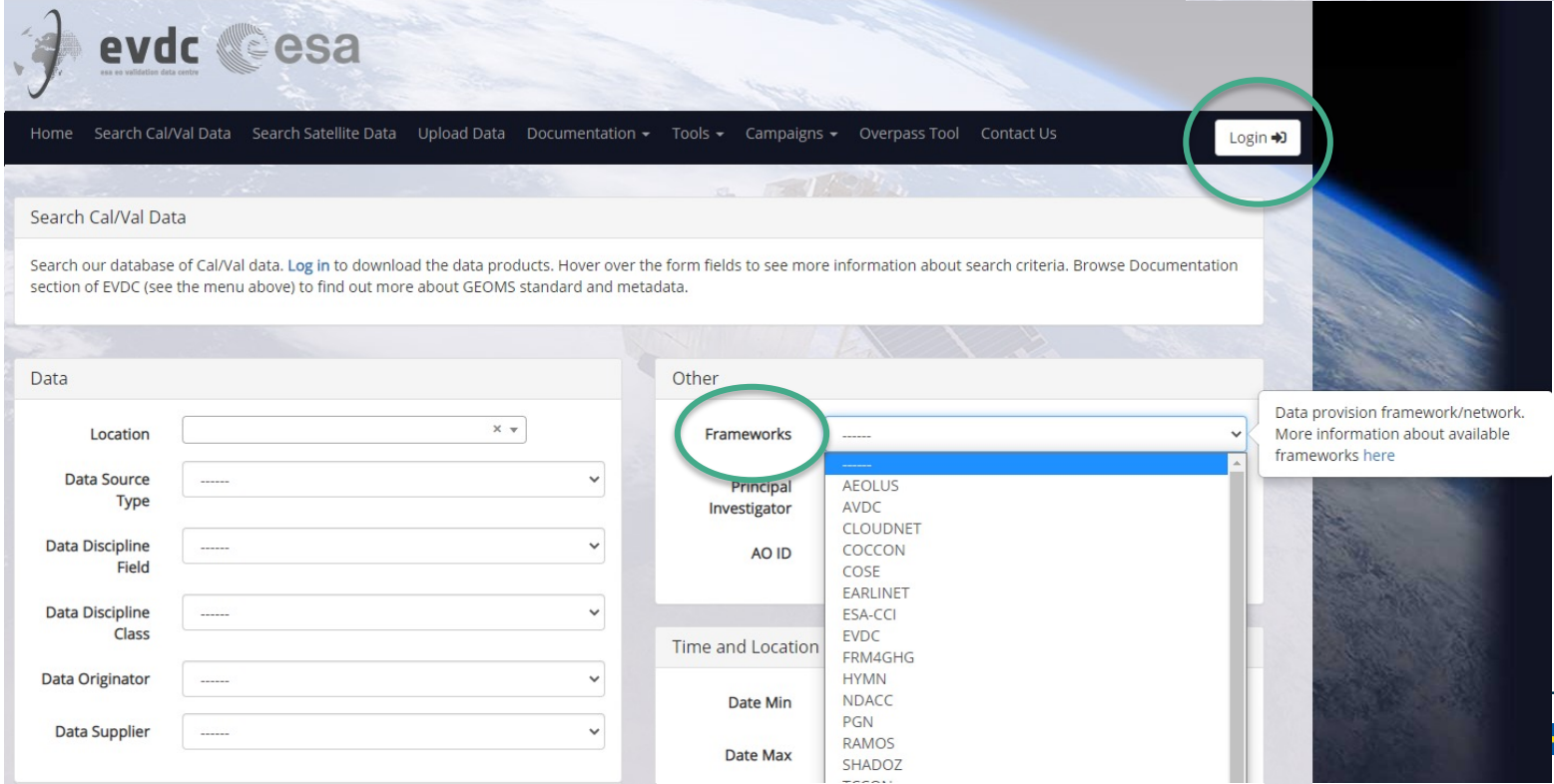# Support for Cal/Val Teams

Access to Cal/Val data:

From front page of EVDC – Search Cal/Val Data

GEOMS and non-GEOMS data

   from a long list of projects and campaigns

Access to «My EVDC»

   Personal user space

   Data access

   Harp Operations

   Search history

   Orders

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Support for Cal/Val Teams

Map functionality for publications, presentations, overview…

File viewer functionality

Support for Cal/Val Teams

«Eye» functionality

Support for Cal/Val Teams

GEOMS Tool and Data Formatting Templates

Data hosted in EVDC or linked from primary archieve; support for GEOMS data formatting and upload

The **GEOMS Tool** is a set of functionalities to support data submitters with the data upload to EVDC, hereunder

- **Create GEOMS compliant files from a set of ascii metadata and data**

- **Create new metadata templates for their specific measurement principles**

The tool automatically generates the GEOMS headers and files and makes them available for upload and download in EVDC.

Support for Cal/Val Teams

GEOMS Tool and Data Formatting Templates

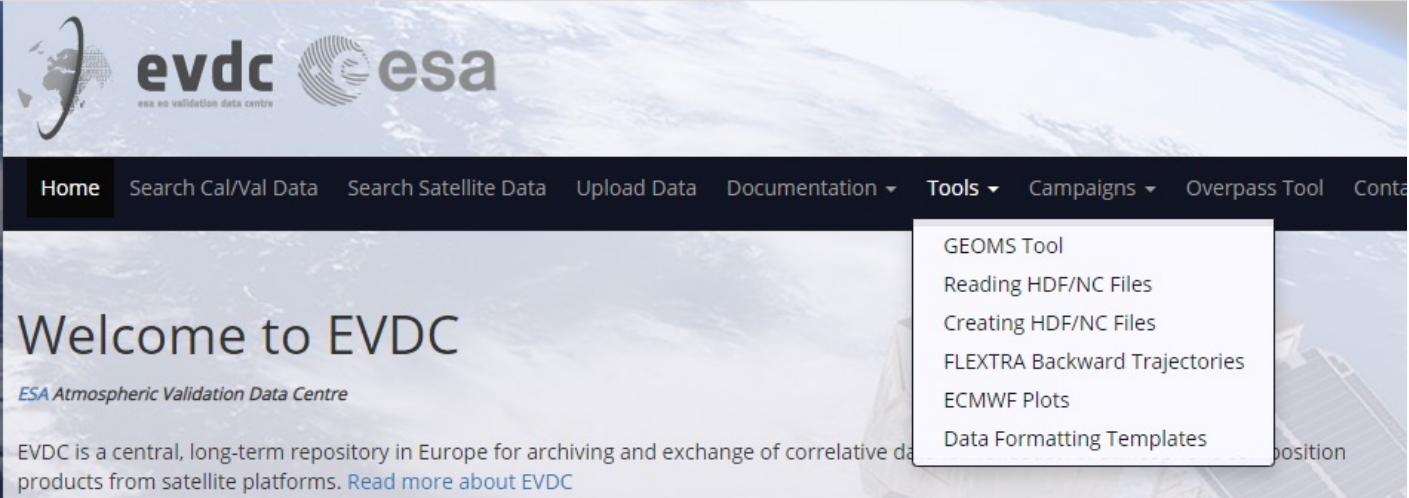| Date	File
2011-10-03	GEOMS-TE-BOUY-001.csv
2020-06-15	GEOMS-TE-CLOUD-RADAR-001.csv
2018-05-28	GEOMS-TE-FTIR-002.csv
2020-09-01	GEOMS-TE-FTIR-COCCON-001.csv
2019-11-21	GEOMS-TE-FTIR-FRM4GHG-001.csv
2015-12-23	GEOMS-TE-FTIR-ISO-001.csv
2019-02-20	GEOMS-TE-FTIR-TCCON-005.csv
2016-07-21	GEOMS-TE-FTUV-003.csv
2019-11-21	GEOMS-TE-LHR-FRM4GHG-001.csv
2020-07-22	GEOMS-TE-LIDAR-AEROSOL-005.csv
2017-10-28	GEOMS-TE-LIDAR-H2O-005.csv
2017-10-28	GEOMS-TE-LIDAR-O3-005.csv
2017-10-28	GEOMS-TE-LIDAR-TEMPERATURE-005.csv
2014-02-18	GEOMS-TE-MWR-003.csv
2018-02-02	GEOMS-TE-MWR-WIND-001.csv
2018-05-20	GEOMS-TE-PANDORA-DIRECTSUN-GAS-002.csv
2016-12-01	GEOMS-TE-RO-001.csv
2020-02-28	GEOMS-TE-SODAR-001.csv
2013-07-19	GEOMS-TE-SONDE-002.csv
2018-04-26	GEOMS-TE-UVVIS-DOAS-DIRECTSUN-GAS-007.csv
2018-04-26	GEOMS-TE-UVVIS-DOAS-OFFAXIS-AEROSOL-007.csv
2018-04-25	GEOMS-TE-UVVIS-DOAS-OFFAXIS-GAS-007.csv
2018-04-25	GEOMS-TE-UVVIS-DOAS-ZENITH-GAS-007.csv
2018-11-01	GEOMS-TE-UVVIS-DOBSON-TOTALCOL-001.csv

Data reporting templates are used as an additional guidance to file formatting for specific instrument types.

This can be useful to make sure all measurements from similar instruments, e.g. a LIDAR, within a monitoring network report the same mandatory data variables.
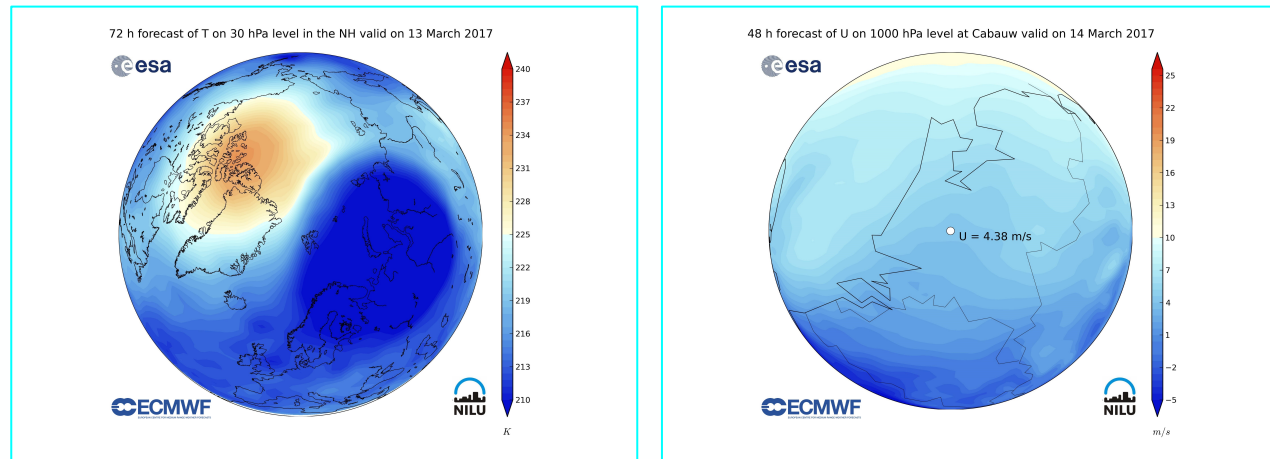
Selected datasets converted to GEOMS:

53% of PIs find a reporting template

→ Create new templates

50% of datasets not stored in a primary archive

EVDC offers provision of DOIs

Web portal – Available services
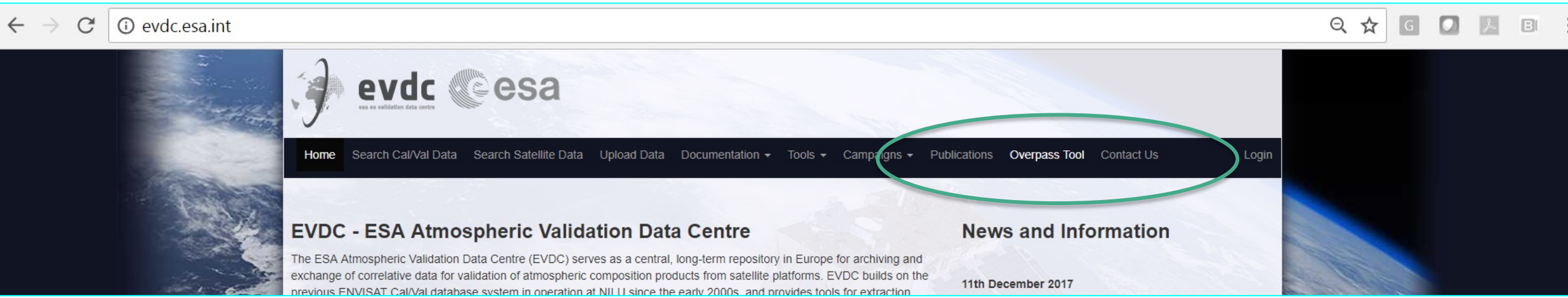
ECMWF service

https://evdc.esa.int/ecmwf/

Through collaboration with the ECMWF, EVDC is providing access to **daily updated analyses and forecast data** files of global gridded meteorological parameters, such as temperature, geopotential height, zonal wind and meridional wind. Analysis and **forecast up to 240 hours** for levels are updated on a daily basis. Data for both the Northern hemisphere and the Southern hemisphere are available.

72 h forecast of T on 30 hPa level in the NH valid on 13 March 2017

48 h forecast of U on 1000 hPa level at Cabauw valid on 14 March 2017

U = 4.38 m/s

Contact: nadirteam@nilu.no or

amf@nilu.no

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Web portal – Available services

Overpass Predictor and Orbit Tool

Search for overpass based on instrument

Display more than one overpass

Search for overpasses between satellittes

EarthCARE is included

DEMO VIDEO!

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Newsletter and contact

EVDC Newsletter

E-mail: *nadirteam@nilu.no*

Twitter: @evdc_team

Subscription to e-mailing list

(contact nadirteam for info)

Thank you!

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