

Training session on data formatting and data submission to the EVDC – use of metadata template tool

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With contribution from EVDC-team



Norsk institutt
for luftforskning

Outline

- About EVDC
- Where to start
- Use of tool

EVDC: ESA atmospheric Validation Data Centre

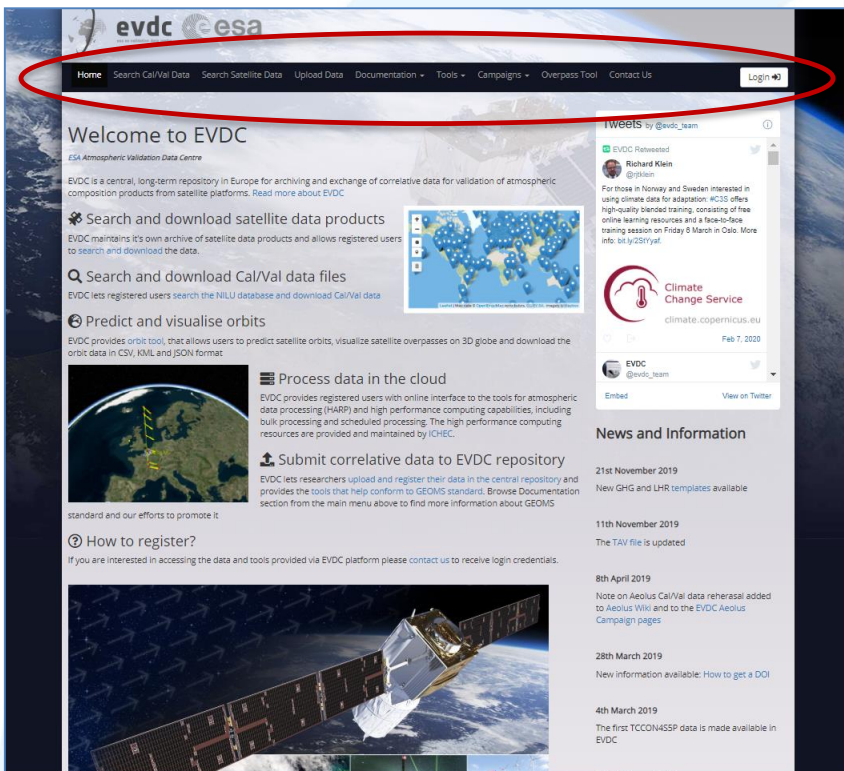
EVDC is a central, long-term repository in Europe for archiving and exchange of correlative data for validation of atmospheric composition products from satellite platforms

We focus on use of metadata template creation during this course

EVDC: ESA atmospheric Validation Data Centre

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The screenshot shows the EVDC website homepage. At the top, there is a navigation menu with the following items: Home, Search Cal/Val Data, Search Satellite Data, Upload Data, Documentation, Tools, Campaigns, Overpass Tool, and Contact Us. A red circle highlights this menu. Below the menu, the page features a 'Welcome to EVDC' section with a brief description of the center's purpose. To the right, there is a 'Tweets by @evdc_team' section showing a tweet from Richard Klein (@rklein) about climate data for adaptation. Below the tweets, there is a 'News and Information' section with several news items, including '21st November 2019: New GHG and LHR templates available', '11th November 2019: The TAV file is updated', '8th April 2019: Note on Aeolus Cal/Val data rehearsal added to Aeolus Wiki and to the EVDC Aeolus Campaign pages', '28th March 2019: New information available: How to get a DOI', and '4th March 2019: The first TCCON455P data is made available in EVDC'. The page also includes sections for 'Search and download satellite data products', 'Search and download Cal/Val data files', 'Predict and visualise orbits', and 'Process data in the cloud'.

Goto <http://evdc.esa.int>

The menu is found at the top of the page

EVDC: ESA atmospheric Validation Data Centre

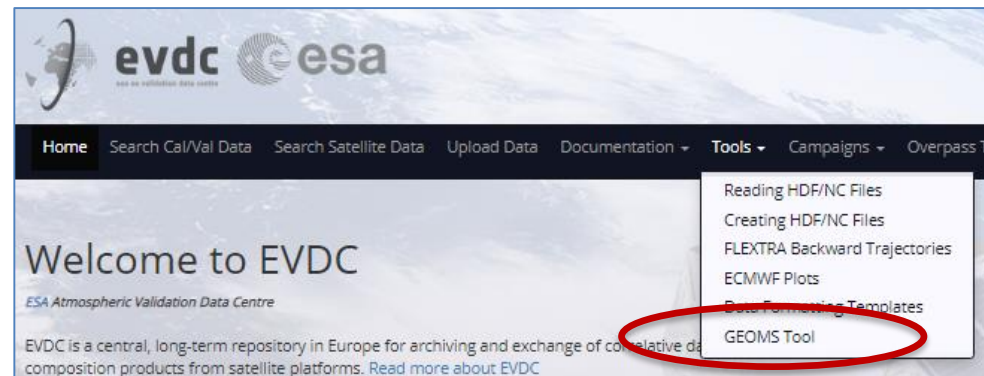
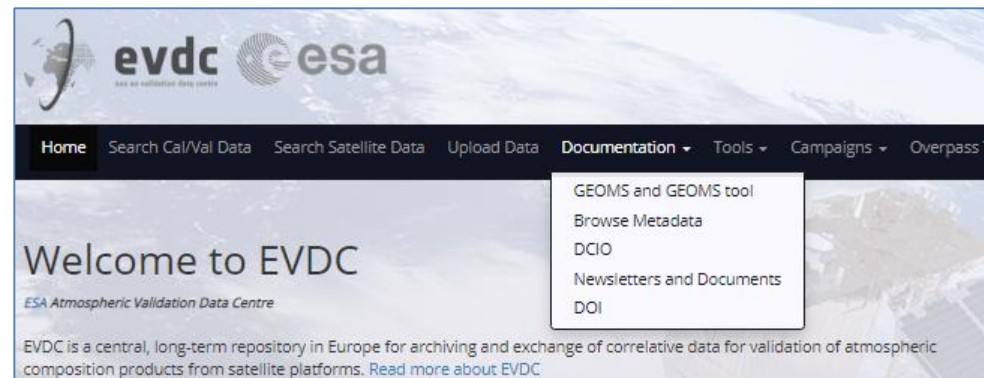
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The “Documentation” and “Tools” sections contain useful resources for e.g. the GEOMS formatting and submission.

Details of these are shown in other courses.

Here, we will focus on “GEOMS tool”



<http://evdc.esa.int/geoms>

evdc ESA GEOSCIENCE DATA CENTRE esa

Home Search Cal/Val Data Search Satellite Data Upload Data Documentation Tools Campaigns Overpass Tool Contact Us Login

GEOMS tool

Description of the tool

This is an on-line tool to generate GEOMS compliant files. It allows the data provider to upload their data and metadata in a simple single column ASCII format. The tool automatically generates the GEOM file(s) and makes them available for download.

GEOMS File Creation

Create HDF4 Create HDF5 Create netCDF

New Metadata

Register a new Metadata template

The «Register a new Metadata template» takes input from existing metadata templates <http://evdc.esa.int/tools/data-formatting-templates/> and allows the data submitters to personalise their metadata headers.

It is recommended to also follow the «Create HDF» course! (separate training).

<http://evdc.esa.int/geoms>

New Metadata

[Register a new Metadata template](#)

Click on «Register a new Metadata template»

This will take you to the «Global Attributes» page

Metadata Registration - Global Attributes

Global Attributes

Data Template: * ▼

PI Name: *

PI Affiliation: ▼

PI Address: ▼

PI E-mail:

DO Name:

DO Affiliation: ▼

DO Address: ▼

DO E-mail:

DS Name:

DS Affiliation: ▼

DS Address: ▼

DS E-mail:

<http://evdc.esa.int/geoms>

Metadata Registration - Global Attributes

Global Attributes

Data Template: *

PI Name: *

PI Affiliation:

PI Address:

PI E-mail:

DO Name:

DO Affiliation:

DO Address:

DO E-mail:

DS Name:

DS Affiliation:

DS Address:

DS E-mail:

Select the relevant Data Template from the drop down menu.

Fill in as much information as possible.

<http://evdc.esa.int/geoms>

Select the relevant Data Template from the drop down menu.

Fill in as much information as possible.

You have now added information about the instrument, PIs etc.

Click on «Continue to register Variables».

This will take you to the page where the instrument specific variable metadata is added.

Data Modifications:

Data Caveats:

Rule of Use:

Acknowledgement:

Processor:

File Access:

File Project ID:

File DOI:

File Association:

File Meta Version:

Continue to register Variables

<http://evdc.esa.int/geoms>

Variable Attributes

1. VAR_NAME =

DATETIME

Reporting: Mandatory Optional-Include Optional-Exclude

VAR_DESCRIPTION =

Effective meas. time

VAR_NOTES =

Additional pertinent information

VAR_DEPEND =

DATETIME

VAR_DATA_TYPE =

DOUBLE

VAR_UNITS =

MJD2K

VAR_VALID_MIN =

Enter value

VAR_VALID_MAX =

VAR_FILL_VALUE =

2. VAR_NAME =

LATITUDE.INSTRUMENT

Reporting: Mandatory Optional-Include Optional-Exclude

VAR_DESCRIPTION =

Inst. geolocation

VAR_NOTES =

Additional pertinent information

VAR_DEPEND =

CONSTANT
DATETIME

VAR_DATA_TYPE =

REAL

VAR_UNITS =

deg

VAR_VALID_MIN =

Enter value

VAR_VALID_MAX =

VAR_FILL_VALUE =

3. VAR_NAME =

LONGITUDE.INSTRUMENT

Fill in the correct attribute values for your measurements.

<http://evdc.esa.int/geoms>

Variable Attributes

1. VAR_NAME =

DATETIME

Reporting: Mandatory Optional-Include Optional-Exclude

VAR_DESCRIPTION =

Datetime (UT), defined relative to reference datetime of Jan. 1, 2000 at 0:00:00 UT which is equal to 0.00

VAR_NOTES =

initial time of each measurement

VAR_DEPEND =

DATETIME

VAR_DATA_TYPE =

DOUBLE

VAR_UNITS =

MJD2K

VAR_VALID_MIN =

0

VAR_VALID_MAX =

1000

VAR_FILL_VALUE =

-99999

2. VAR_NAME =

LATITUDE.INSTRUMENT

Reporting: Mandatory Optional-Include Optional-Exclude

VAR_DESCRIPTION =

latitude north (decimal degrees) of the location of the instrument

VAR_NOTES =

sign convention: + for north and - for south

VAR_DEPEND =

CONSTANT
DATETIME

VAR_DATA_TYPE =

REAL

VAR_UNITS =

deg

VAR_VALID_MIN =

-90

VAR_VALID_MAX =

90

VAR_FILL_VALUE =

999

Fill in the correct attribute values for your measurements.

3. VAR_NAME =

LONGITUDE.INSTRUMENT

<http://evdc.esa.int/geoms>

Variables may be mandatory, optional, or with dependencies.

10. VAR_NAME =	TEMP
Reporting: <input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Optional-Include <input type="checkbox"/> Optional-Exclude	
VAR_DESCRIPTION =	Effective
VAR_NOTES =	Additional
VAR_DEPEND =	DATETIME;ALTITUDE
VAR_DATA_TYPE =	REAL

12. VAR_NAME =	[GAS].MIXING.RATIO.VOLUME_ABSORPTION.[SOLAR LUNAR]
Reporting: <input type="checkbox"/> Mandatory <input type="checkbox"/> Optional-Include <input type="checkbox"/> Optional-Exclude	
VAR_REPORTING =	<i>o</i>
VAR_DESCRIPTION =	Retrieved target vertical profile in VMR units
VAR_NOTES =	Additional pertinent information
VAR_DEPEND =	DATETIME;ALTITUDE
VAR_DATA_TYPE =	REAL

13. VAR_NAME =	[GAS].MIXING.RATIO.VOLUME_ABSORPTION.[SOLAR LUNAR]_APRIORI
Reporting: <input type="checkbox"/> Mandatory <input type="checkbox"/> Optional-Include <input type="checkbox"/> Optional-Exclude	
VAR_REPORTING =	<i>x if [GAS].MIXING.RATIO.VOLUME_ABSORPTION.[SOLAR LUNAR] is provided</i>
VAR_DESCRIPTION =	A-priori target vertical profile in VMR units
VAR_NOTES =	Additional pertinent information
VAR_DEPEND =	DATETIME;ALTITUDE
VAR_DATA_TYPE =	REAL

<http://evdc.esa.int/geoms>

12. VAR_NAME = [GAS].MIXING.RATIO.VOLUME_ABSORPTION.[SOLAR|LUNAR]_APRIORI

Reporting: Mandatory Optional-Include Optional-Exclude

VAR_REPORTING = 0

VAR_DESCRIPTION = Retrieved target vertical profile

VAR_NOTES = Additional pertinent information

VAR_DEPEND = DATETIME;ALTITUDE

VAR_DATA_TYPE = REAL

VAR_UNITS = ppmv

VAR_VALID_MIN = ppbv

VAR_VALID_MAX = pptv

VAR_FILL_VALUE = Enter value

13. VAR_NAME = [GAS].MIXING.RATIO.VOLUME_ABSORPTION.[SOLAR|LUNAR]_APRIORI

Reporting: Mandatory Optional-Include Optional-Exclude

VAR_REPORTING = x if [GAS].MIXING.RATIO.VOLUME_ABSORPTION.[SOLAR|LUNAR] is provided

VAR_DESCRIPTION = A-priori target vertical profile in VMR units

VAR_NOTES = Additional pertinent information

VAR_DEPEND = DATETIME;ALTITUDE

VAR_DATA_TYPE = REAL

VAR_UNITS = ppmv

VAR_VALID_MIN = ppbv

VAR_VALID_MAX = pptv

VAR_FILL_VALUE = Enter value

An «Optional-Exclude» selection will gray out the metadata attributes and remove the variables from the header file.

http://evdc.esa.int/geoms

Fill in as much information as possible.

Click on «Create Metadata file» to continue.

The metadata file is made available for download and further use together with the data file.

28. VAR_NAME = SOURCE.PROD

Reporting: Mandatory Optional-Include Optional-Exclude

VAR_REPORTING = 0

VAR_DESCRIPTION = Information relevant

VAR_NOTES = Additional pertinent

VAR_DEPEND = INDEPENDENT

VAR_DATA_TYPE = STRING

VAR_UNITS =

VAR_VALID_MIN =

VAR_VALID_MAX =

VAR_FILL_VALUE =

Create Metadata File

Download

- [Fjæraa_ABERYSTWYTH_FTIR.H2O_001_001_RD.meta](#)

[Back to Global Attributes](#)

DONE!

Continue with «hands-on session....»