

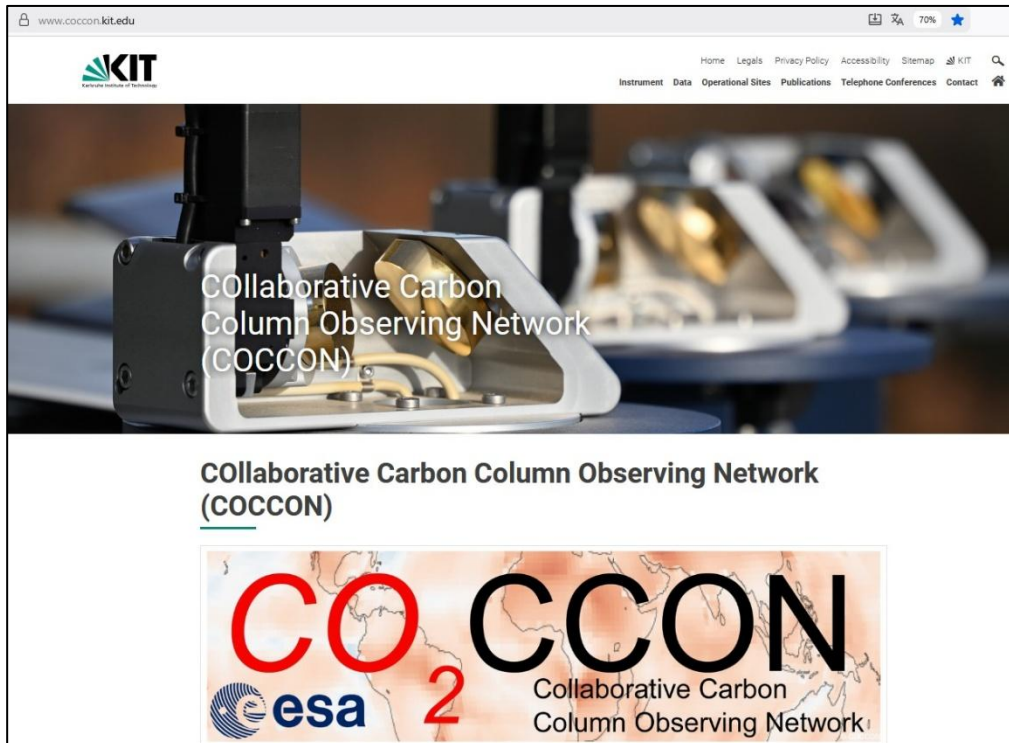
COCCON – EM27/SUN Telecon 2026-02-19

1. COCCON – Homepage
2. COCCON – Central Facility
3. PROFFAST – Data Processing
4. EVDC – Data Publication



COCCON – Homepage

- Homepage moved to a New Location !!!
 - <https://www.imkasf.kit.edu/english/COCCON.php> (OLD)
 - <https://www.coccon.kit.edu> (NEW)

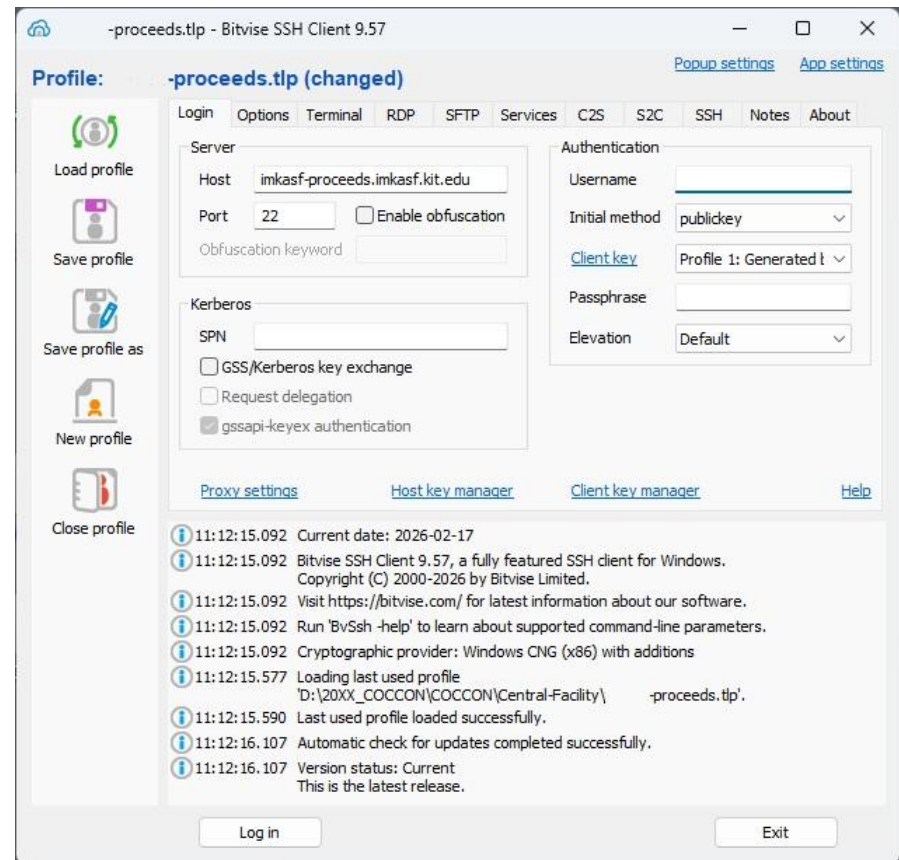


- COCCON
 - Instrument
 - Calibration
 - Q & A
 - Data
 - Data Repository
 - Data Processing
 - Previous versions
 - PROFFASTpylot Documentation
 - Operational Sites
 - Site Status Summary
 - Data Repository
 - Membership
 - Publications
 - Telephone Conferences
 - Contact

COCCON – Central Facility

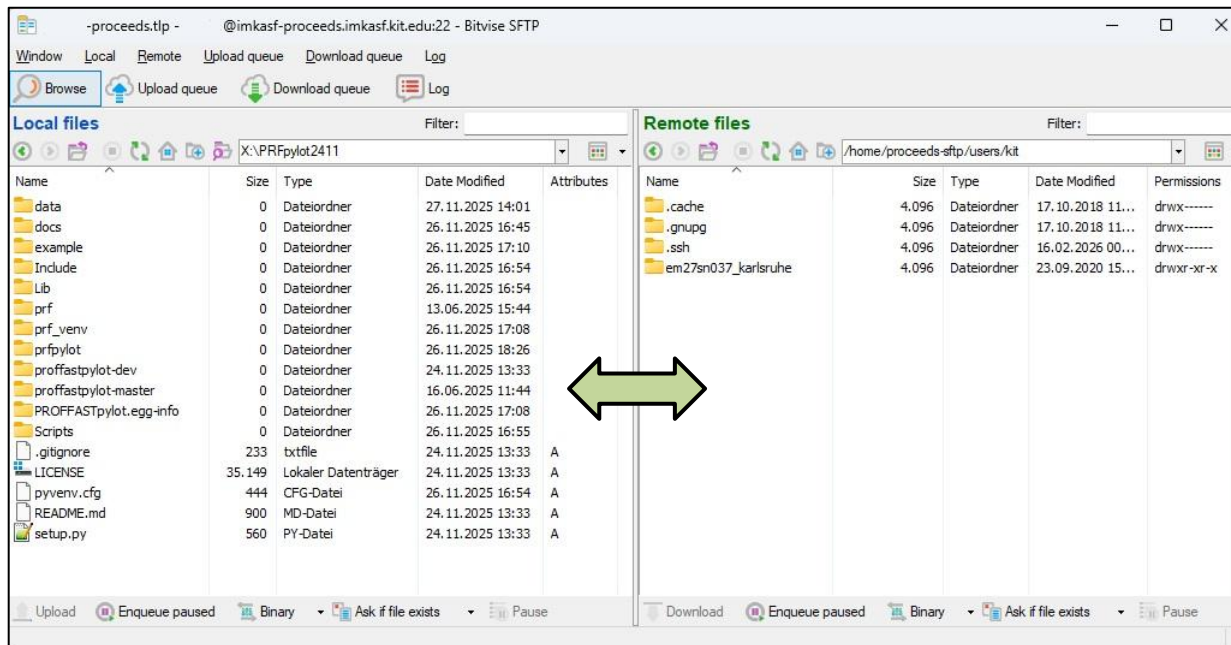
- Account on the COCCON Server (Central Facility)

- SSH Client SW Bitvise recommended
- Useful for Data Exchange
- Host Name changed !!!
- OLD with Hyphens:
imk-asf-proceeds.imk-asf.kit.edu
- NEW without Hyphens:
imkaf-proceeds.imkaf.kit.edu
- All other Settings remain unchanged



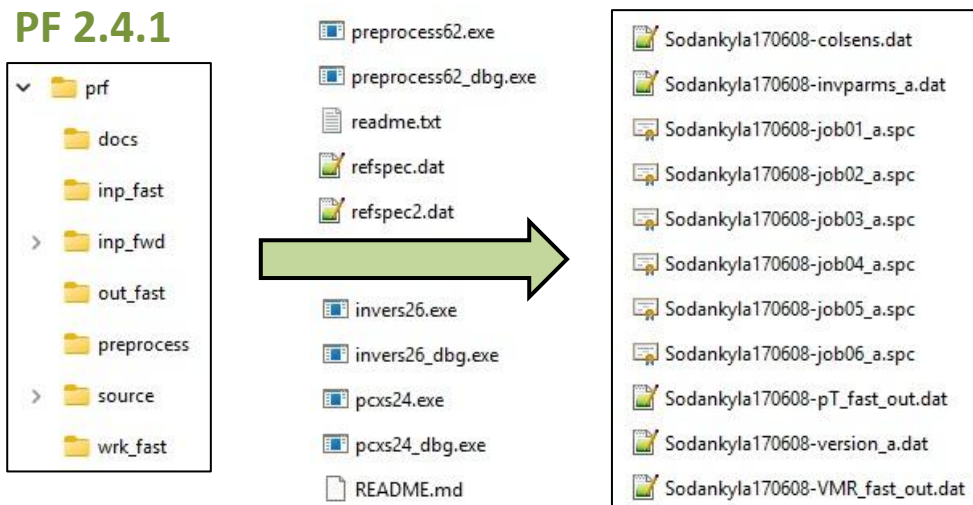
COCCON – Central Facility

- Account on the COCCON Server (Central Facility)
 - More Information on Subpage „Data Processing“
<https://www.coccon.kit.edu/69.php>
 - SSH Client Bitwise (see Tab „Central Facility“)
<https://www.coccon.kit.edu/69.php?tab=%5B194%5D#tabpanel-194>



PROFFAST – Data Processing

- PROFFAST – Software for EM27/SUN Data Evaluation
 - Information on Subpage „Data Processing“ (with Several Tabs)
<https://www.coccon.kit.edu/69.php>
 - SW Download (see Tab „Software & Manuals“)
<https://www.coccon.kit.edu/69.php?tab=%5B192%5D#tabpanel-192>
 - Current **PROFFAST** Version **2.4.1**
<https://www.coccon.kit.edu/downloads/Instrument/PROFFASTv2.4.1.zip>



PROFFAST – Data Processing

- PROFFASTpylot – User-friendly Interface for PROFFAST
 - GitLab (OLD) up to Version 2.4.1-2
<https://gitlab.eudat.eu/coccon-kit/proffastpylot>
 - GitHub (NEW) Version 2.4.1-3 soon Available !
<https://github.com/coccon>

PROFFASTpylot

Download

master proffastpylot

Datei finden Code

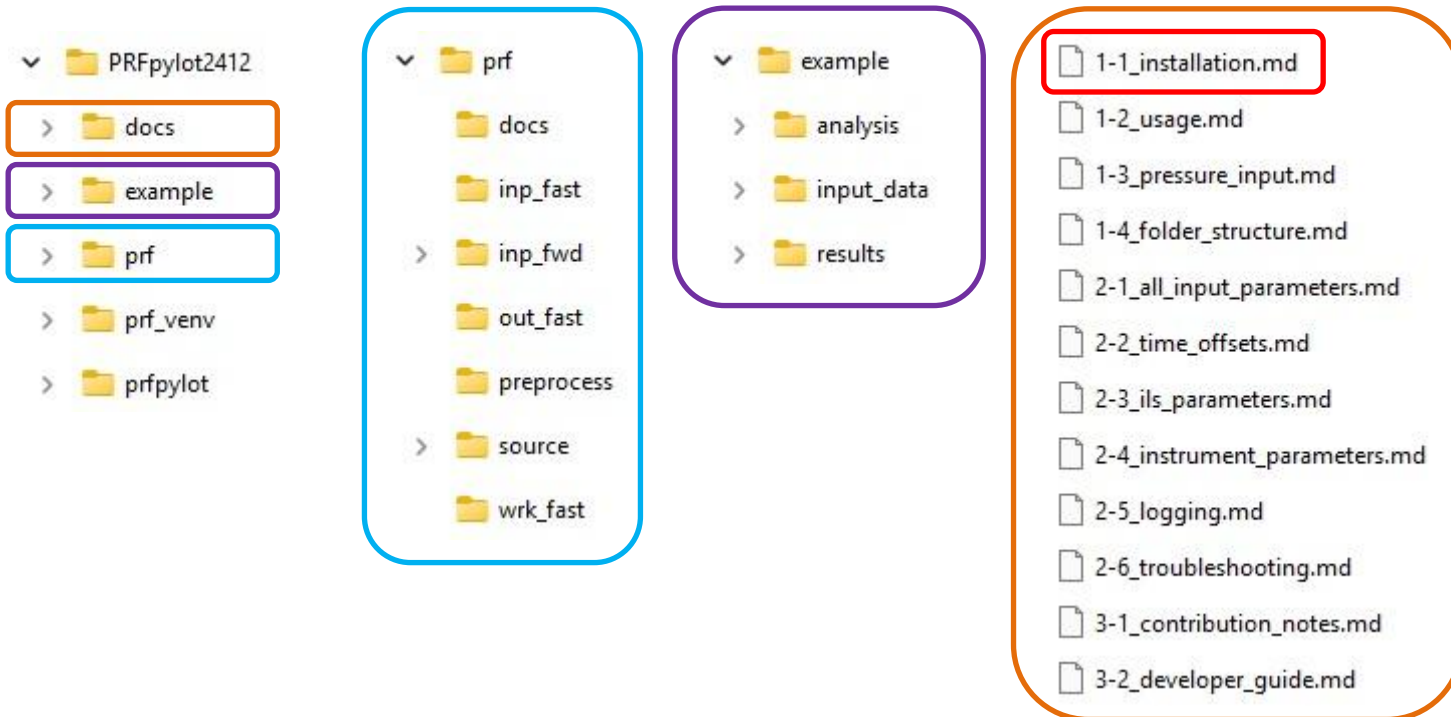
Merge branch 'dev' into 'master'
Von Lena Feld verfasst am vor 2 Monaten

20e958ed Verlauf

Name	Letzter Commit	Letzte Aktualisierung
docs	change contact information and rename i...	vor 2 Monaten
example	extend example coord parameters	vor 2 Monaten
prfpylot	prevent error in hdf writer for rejected days	vor 2 Monaten
.gitignore	line prf* deleted	vor 1 Jahr
LICENSE	replace license in setup and LICENSE file	vor 3 Jahren
README.md	contact information	vor 2 Monaten
setup.py	change contact information and rename i...	vor 2 Monaten

PROFFAST – Data Processing

- PROFFAST + PROFFASTpylot
 - PROFFAST Versions (1.0 / 2.0 / 2.2 / 2.3 / 2.4) → 2.4.1
 - PROFFASTpylot Subversion (2.4.1-0) → 2.4.1-1 / 2.4.1-2 / 2.4.1-3

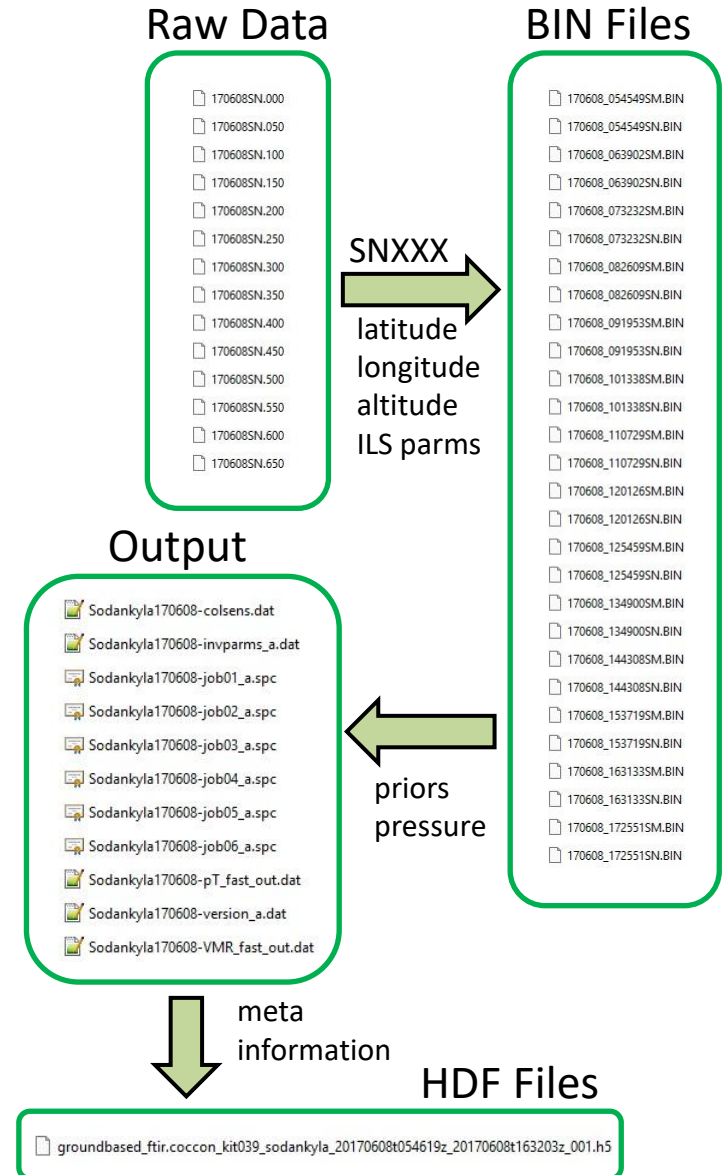


EVDC – Data Publication

- COCCON Membership
 - Participation realized by **Publication** of EM27/SUN XGas Data
 - ESA EVDC Data Portal: <https://evdc.esa.int/search>
 - Processing with **PROFFAST** Mandatory !!!
(maintain Consistency in the Data Sets across the Network)
 - Amount of published Data decided by the Member !
(also subsets of data or campaigns are possible)
 - No strict Requirement on Timeliness !
 - Data **Ownership** remains to the Data Originator, see
EVDC ESA Protocol <https://protocol.evdc.nilu.no>
and CC BY 4.0 <https://creativecommons.org/licenses/by/4.0>
 - For detailed Information see Subpage „COCCON Membership“:
<https://www.coccon.kit.edu/121.php>

EVDC – Data Publication

- COCCON Sevice – Processing Chain
 - EM27/SUN Raw Data
 - Interferograms, i.e. *SN.Nr and *SM.Nr
 - PROFFAST Preprocessed Files
 - Binary Files, i.e. *SN.BIN and *SM.BIN
 - PROFFAST Results
 - *colsens.dat , *invparms.dat,
*pT_fast_out.dat , and *VMR_fast_out.dat
 - GEOMS Compliant HDF Files
 - groundbased_ftir.coccon_*.h5
- Additional Information required
 - SN and Location of the EM27/SUN Instrument
 - Ground-Pressure Data (UTC or Local Time)
 - Priors (i.e. *.map, GGG2020, 8 files per day)
 - Meta Information for HDF Files (e.g. PI, DO, DS)



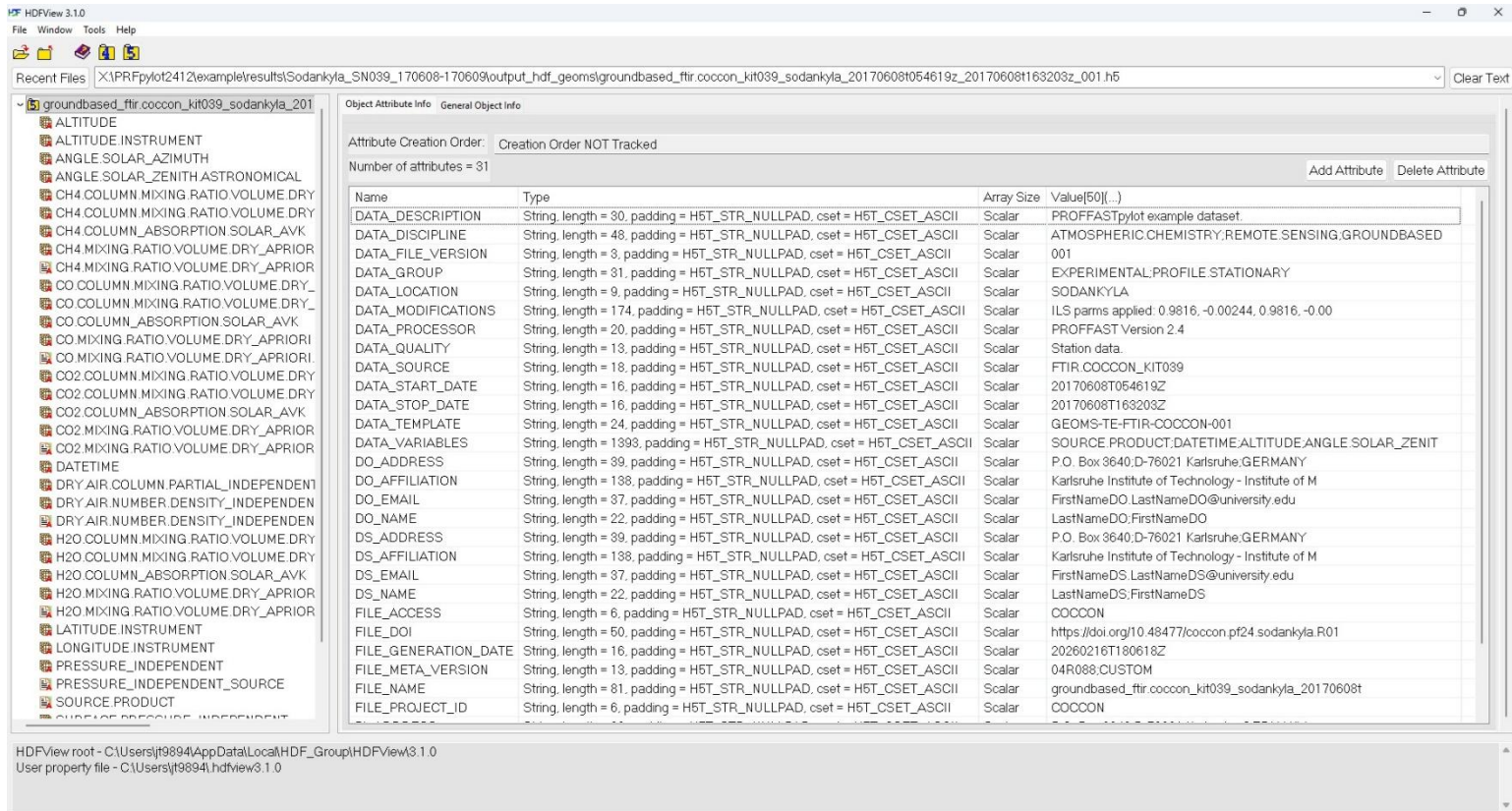
EVDC – Data Publication

geoms-1.0.pdf
 tableattrvalue_04R108.dat
 GEOMS-TE-FTIR-COCCON-001.csv

- GEOMS Compliant HDF Files
 - More Information at EVDC ESA <https://evdc.esa.int/documentation/geoms> and GIT NILU <https://git.nilu.no/geoms/documentation>
 - File Format Checker (NILU) https://geoms-tool.nilu.no/geoms_file_format_checker
 - `groundbased_ftir.coccon_kit039_sodankyla_20170608t054619z_20170608t163203z_001.h5`
- DOI Definition
 - COCCON Prefix 10.48477, Network COCCON, PROFFAST Version, Site, SN, and Revision
 - <https://evdc.esa.int/doi/10.48477/coccon.pf24.karlsruhe.sn037.r04>
- Landing Page
 - Information about the Data Set + Data Policy + Link to the Data Set
<https://evdc.esa.int/publications/coccon-pf24-karlsruhe-sn037-r04>
<https://doi.org/10.48477/coccon.pf24.karlsruhe.sn037.r04>
- EVDC – Upload and Publication
 - EVDC Data Portal, see <https://evdc.esa.int/search>

EVDC – Data Publication

- GEOMS Compliant HDF Files



The screenshot shows the HDFView 3.1.0 interface. The main window displays a list of attributes for the dataset 'groundbased_ftir.coccon_kit039_sodankyla_201'. The attributes are listed in a table with columns for Name, Type, Array Size, and Value. The 'Value' column contains various metadata and dataset information.

Name	Type	Array Size	Value[50](...)
DATA_DESCRIPTION	String, length = 30, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	PROFFASTpylot example dataset.
DATA_DISCIPLINE	String, length = 48, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	ATMOSPHERIC CHEMISTRY.REMOTE SENSING.GROUNDBASED
DATA_FILE_VERSION	String, length = 3, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	001
DATA_GROUP	String, length = 31, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	EXPERIMENTAL.PROFILE STATIONARY
DATA_LOCATION	String, length = 9, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	SODANKYLA
DATA_MODIFICATIONS	String, length = 174, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	ILS parms applied: 0.9816, -0.00244, 0.9816, -0.00
DATA_PROCESSOR	String, length = 20, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	PROFFAST Version 2.4
DATA_QUALITY	String, length = 13, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	Station data.
DATA_SOURCE	String, length = 18, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	FTIR.COCCON_KIT039
DATA_START_DATE	String, length = 16, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	20170608T054619Z
DATA_STOP_DATE	String, length = 16, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	20170608T163203Z
DATA_TEMPLATE	String, length = 24, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	GEOMS-TE-FTIR-COCCON-001
DATA_VARIABLES	String, length = 1393, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	SOURCE PRODUCT.DATETIME:ALTITUDE:ANGLE.SOLAR_ZENIT
DO_ADDRESS	String, length = 39, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	P.O. Box 3640,D-76021 Karlsruhe,GERMANY
DO_AFFILIATION	String, length = 138, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	Karlsruhe Institute of Technology - Institute of M
DO_EMAIL	String, length = 37, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	FirstNameDO.LastNameDO@university.edu
DO_NAME	String, length = 22, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	LastNameDO.FirstNameDO
DS_ADDRESS	String, length = 39, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	P.O. Box 3640,D-76021 Karlsruhe,GERMANY
DS_AFFILIATION	String, length = 138, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	Karlsruhe Institute of Technology - Institute of M
DS_EMAIL	String, length = 37, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	FirstNameDS.LastNameDS@university.edu
DS_NAME	String, length = 22, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	LastNameDS.FirstNameDS
FILE_ACCESS	String, length = 6, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	COCCON
FILE_DOI	String, length = 50, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	https://doi.org/10.48477/coccon.pf24.sodankyla.R01
FILE_GENERATION_DATE	String, length = 16, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	20260216T180618Z
FILE_META_VERSION	String, length = 13, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	04R088.CUSTOM
FILE_NAME	String, length = 81, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	groundbased_ftir.coccon_kit039_sodankyla_20170608T
FILE_PROJECT_ID	String, length = 6, padding = H5T_STR_NULLPAD, cset = H5T_CSET_ASCII	Scalar	COCCON

EVDC – Data Publication

- Landing Page
 - Creators + Contributors
 - Data Policy
 - Citation
 - Link to Data Set



Updated: 28 Aug 2025

COCCON
Collaborative Carbon Column Observing Network

COCCON Version 4 dataset from atmospheric observatory of Karlsruhe (Germany) available at the EVDC Data Handling Facilities covering start date Mar 27th 2014 to end date Aug 22nd 2024

DOI
10.48477/COCCON.PF24.KARLSRUHE.SN037.R04

Publisher
COCCON - Central Facility / EVDC - ESA Atmospheric Validation Data Centre

Data Format

GEOMS HDF

Data Policy

Creative Commons Attribution-4.0 International (CC-BY 4.0)

In addition to the CC BY license, the COCCON Data Use Agreement including publication co-authorship policy must always be respected (see <https://protocol.evdc.nilu.no>).

Descriptions

COCCON uses the EM27/SUN spectrometer commercially available from Bruker Company. The spectrometer performs solar absorption measurements in the NIR for the measurement of column-averaged abundances of atmospheric greenhouse gases (CO₂, CH₄, CO, and H₂O). COCCON requires the use of calibrated spectrometers and of common data analyses tools (see <http://www.imk-asf.kit.edu/english/COCCON>).

Locations

Location: Karlsruhe, Germany

Latitude: 49.094

Longitude: 8.436

Citation

<https://citation.doi.org>

Funding

KIT

ESA



Download Data

<https://evdc.esa.int/doi/10.48477/COCCON.PF24.KARLSRUHE.SN037.R04>

<https://secondary-data-archive.nilu.no/evdc/ftir/coccon/karlsruhe/version4>

EVDC – Data Publication

- EVDC ESA Data Portal
 - Location
 - Principal Investigator (PI)
 - Data Originator (DO)
 - Data Supplier (DS)
 - Data Source Type „FTIR.COCCON“
 - Frameworks „COCCON“
 - AO ID „COCCON“
 - DOI
 - Time and Location

evdc  
Karlsruhe Institute of Technology

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Search Cal/Val Data

Search our database of Cal/Val data. Log in to download the data products. Hover over the form fields to see more information about search criteria. Browse Documentation section of EVDC (see the menu above) to find out more about GEOMS standard and metadata.

Data

Location

Data Source Type

Data Discipline Field

Data Discipline Class

Data Originator

Data Supplier

Other

Frameworks

Principal Investigator

AO ID

DOI

Time and Location

Date Min

Date Max

Spatial Filter Off Point Bounding Box

Point/Min Longitude (Deg)

Point/Min Latitude (Deg)


Point/Min Altitude (m)

Max Longitude (Deg)

Max Latitude (Deg)

Max Altitude (m)

Stations



Variable

Variable Name

Variable Mode

Variable Descriptor

Skytok · NILU · ESA Contact: nadirteam@nilu.no

EVDC – Data Publication

- THANKS for Your Attention !!!

Contact <https://www.coccon.kit.edu/28.php>



Name	Job Description	E-Mail
Hase, Frank	Project Leader	frank.hase@kit.edu
Alberti, Carlos	Characterization of EM27 instruments and Prior Deployment	carlos.alberti@kit.edu
Dubravica, Darko	Data Management and Support PROFFASTpylot	darko.dubravica@kit.edu
Makowski, Moritz	Support PROFFASTpylot	
Frey, Matthias	Telephone Conferences	matthias.frey@kit.edu
Gross, Jochen	Account and Server Administration	jochen.gross@kit.edu
Meier, Arndt	CO2M Validation	arndt.meier@kit.edu
Maxeiner, Cosma	Website Management	cosma.maxeiner@partner.kit.edu