

Report: Working group data management (data archive) 5th COPS workshop

The data format is netCDF/CF for all instrument data, that is stored at WDC data base. Only a very limited number of exceptions to the data format of the instruments is accepted on special request and when agreed on by COPS coordinator and M&D. The data in special formats has to be accompanied with the corresponding software for reading (probably radar data).

The structure of the WDC data base is organized in three hierarchical categories. In the nomenclature of the data base these categories are called '**projects**', '**experiments**' and '**data sets**'. For each of the three partner activities COPS, GOP and D-PHASE a data base project has been defined. The names for 'projects', 'experiments' and 'data sets' have to be unique throughout the whole WDC data base.

The following definition of data base "experiments" and data base "data sets" has been agreed on by COPS-coordinator and M&D at 5th COPS workshop. The data providers will have to deliver the upload files in the exact naming structure.

1.1. Experiment names for data base <EXP(4)>

Data base experiments are defined according to the "location" of the instruments, the type of network or the airplane, the instrument is mounted on:

1.2. Experiments are:

Super sites:

SUPV (Super site Voges Mountain)

SUPR (Super site Rhine valley)

SUPH (Super site Hornisgrinde)

SUPM (Super site Murg Valley)

SUPS (Super site Stuttgart)

POLD (polidrad)

RADK (Karlsruhe Radar)

DOWS (Doppler Radar on wheels)

RSDU (radiosonde and drop up sondes)

Networks:

NEB (energy balance networks)

NRG (rain gauges)

NGPS (gps data)

NSM (soilmoisture)

NMET (meteorol. Stations, MESONET)

NMRR (micro rain radar)

NSOD (sodar)

(air planes, each air plane corresponds to an experiment)

ADLR, DLR-Falcon

ASAF, SAFIRE Falcon

ADO, DO-128

APAR, Parternavia

AZEP, Zeppelin NT

ADIM, Dimona
AULI, Ultralight
ABAE, BAe146
ALEA, Learjet 35A
AATR, ATR

1.3. **Dataset naming convention** (used for upload files, acronyms of data sets in data base listing and corresponding download files)

<STARTTIME (10)>_ <COPS_><EXP(4)>_<INSTRU (6)>_<PARA(6)>_ <FLAG(1)>.
<EXT(3)>

with

STARTTIME(10):	YYYYMMDDHH (in UTC); has to have 10 digits
COPS_	is obligatory part of name
FLAG(1):	d for data p for pics s supplement file (attachment)
EXT(2-3):	nc netCDF file tar tarfiles with pictures
<EXP(4)>	flag for experiment, according to 1.2
<INSTRU(6)>	flag describing the measurement instrument, accord. to 1.4
<PARA(6)>	either <SINGLE_PARA(6)> or <MULTI_PARA(6)>

1.4. INSTRUMENTS<6> Instrument flag (for example):

- 1.4.1. ELIDAR = elastic backscatter lidar
- 1.4.2. RLIDAR = Raman lidar
- 1.4.3. WVDIAL = Water vapour differential-absorption lidar
- 1.4.4. DLIDAR = Doppler lidar
- 1.4.5. WRADAR = weather radar
- 1.4.6. MRADAR = Micro rain radar
- 1.4.7. SODAR= Sodar
- 1.4.8. DSONDE= drop sonde
- 1.4.9. RSONDE= radio sonde
- 1.4.10. to be extended

1.5. **data sets are** defined according to either:

- 1.5.1. <PARA(6)> = <SINGLE_PARA>: the meteorological parameter for instruments, where single parameters might be of interest or where file sizes would be very large.
- 1.5.2. <PARA(6)> = <MULTI_PARA(6)>: contain several parameters, in case of smaller file sizes for example radio soundings (data set contains all parameters t,u,v,w,p,rh in one file)
- 1.5.3. <PARA> = PIC: pictures, which contain graphs of several/all parameters.

Examples:

WVM02M (water vapour mixing ratio, 2m)
WVM10M (water vapour mixing ratio, 10m)
WVMPRO (water vapour mixing ratio, profile)
WVN02M (water vapour number density, 2m)
WVN10M (water vapour number density, 10 m)
WVNPRO (water vapour number density, profile)
WVR02M (relative humidity, 2m)
WVR10M (relative humidity, 10m)
WVRPRO (relative humidity, profile)
T02M (temperature 2m)
T10M (temperature 10m)
TPRO (temperature profile)
TEMP (T,RH,U,V,W of radio soundings, drop sondes)
WIND (u,v,w; if all components are measured)
LOSVEL (line-of-sight velocity)
U (for single wind components)
V (for single wind components)
W (for single wind components)
HUMID (all humidity parameters)
BACKSC (backscatter signal)
DEPOL (depolarization signal)
PRECIP (precipitation)
To be extended

Example:

Experiment: DLR Falcon or Super Site, or network

Dataset-Group: DLR-WV-DIAL (this hierarchical level might be defined additionally)

Dataset: -WV number density

- backscatter signal
- pics for both together

Radiosondes: T,q,u,v,w together in one dataset (several parameters to be filled in Metadata tool)

1.6. Time granularity:

The time granularity for the upload files has been discussed and will be announced in more detail in the COPS-operations plan.