

cesar_surface_meteo_lb1_t10

Version	Date	Description
1.0	09-dec-2009	Creation

Documentation on the CESAR in-situ observational program in general and the parameters in this dataset in particular can be downloaded as a pdf-file from:

http://projects.knmi.nl/cabauw/insitu/observations/documentation/Cabauw_TR/Cabauw_TR.pdf

For easy access it is advised to open the document with the navigation panel visible.

For gapfilled datasets (lcl) also consult the pdf file at:

http://projects.knmi.nl/cabauw/insitu/observations/documentation/gapfilling/cabcon_gapfilling.pdf

Further information including near real time display can be found via:

<http://projects.knmi.nl/cabauw/insitu/index2.htm>

Below follows a header dump of one of the NetCdf dataset files.
Refer to the attribute long_name of the variables for explanation.

>>>> Header dump of NetCdf file <<<<<<

```
netcdf test {
dimensions:
    time = UNLIMITED ; // (144 currently)
    nv = 2 ;
    day_in_time_interval = 1 ;
variables:
    char iso_dataset ;
        iso_dataset:hierarchyLevel = "dataset" ;
        iso_dataset:url = "http://www.cesar-database.nl" ;
        iso_dataset:protocol = "website" ;
        iso_dataset:topic = "climatologyMeteorologyAtmosphere" ;
        iso_dataset:westbound_longitude = "4.926" ;
        iso_dataset:eastbound_longitude = "4.926" ;
        iso_dataset:southbound_latitude = "51.97" ;
        iso_dataset:northbound_latitude = "51.97" ;
        iso_dataset:datasetDateType = "publication" ;
        iso_dataset:code = "28992" ;
        iso_dataset:codeSpace = "EPSG" ;
        iso_dataset:accessConstraints = "CESAR data policy" ;
        iso_dataset:useLimitation = "None" ;
        iso_dataset:organisationName_dataset = "Royal Netherlands Meteorological Institut
e (KNMI)" ;
        iso_dataset:email_dataset = "fred.bosveld@knmi.nl" ;
        iso_dataset:role_dataset = "Principle Investigator" ;
        iso_dataset:organisationName_metadata = "Royal Netherlands Meteorological Institu
te (KNMI)" ;
        iso_dataset:role_metadata = "Principle Investigator" ;
        iso_dataset:email_metadata = "fred.bosveld@knmi.nl" ;
        iso_dataset:url_metadata = "http://www.knmi.nl/~bosveld" ;
        iso_dataset:metadataDateType = "creation" ;
        iso_dataset:language = "eng" ;
        iso_dataset:metadataStandardName = "ISO-19115" ;
        iso_dataset:metadataStandardNameVersion = "Nederlands profiel op ISO 19115 voor g
eografie, v1.2" ;
        iso_dataset:title = "CESAR meteorological surface data validated" ;
        iso_dataset:abstract = "Meteorological surface observations of precipitation, vis
ibility, radiation, air pressure, wind speed, wind direction, temperature and dew point at Cabauw
at 10 minute time base. Visibility and precipitation type available from January 2008. validated
." ;
        iso_dataset:status = "onGoing" ;
        iso_dataset:uid_dataset = "4fd555a0-0dbf-11df-ac2a-0002a5d5c51b" ;
        iso_dataset:keyword = "Surface temperature humidity wind precipitation visibility
pressure radiation" ;
        iso_dataset:temporal_extent = "2000-05-01,onGoing" ;
        iso_dataset:date = "2010-01-28" ;
        iso_dataset:statement = "Continuous observations are performed and archived. The
data product is published in monthly intervals." ;
        iso_dataset:metadata_id = "63039ce0-0dbf-11df-bb89-0002a5d5c51b" ;
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        iso_dataset:datestamp = "2010-01-28" ;
char product ;
    product:format_version = "netCDF,3.6" ;
    product:originator = "Bosveld, F.C., KNMI" ;
    product:software_version = "see http://www.knmi.nl/~bosveld -> software -> Mobiba
se" ;
    product:command_line = " mb_ncselect.x caboper b10 [M]cesar,[O]cesar_surface_mete
o_lbl_t10_v1.0 20170320 -f/usr/people/bosveld/CDS/test.nc" ;
    product:date_start_of_data = "2017-03-20T00:00Z" ;
    product:date_end_of_data = "2017-03-20T23:59Z" ;
    product:revision_date = "2017-03-21" ;
    product:ref_doc = "cesar_surface_meteo_lbl_t10_v1.0.pdf" ;
    product:ref_doc_version = "v1.0" ;
char station_details ;
    station_details:name = "CESAR observatory" ;
    station_details:latitude = "51.97" ;
    station_details:longitude = "4.926" ;
    station_details:elevation = "-0.7" ;
    station_details:WMO_id = "06348" ;
    station_details:address = "Zijdweg 1" ;
    station_details:postal_code = "3411 MH" ;
    station_details:city = "Lopik" ;
    station_details:administration_area = "Utrecht" ;
    station_details:country = "the Netherlands" ;
float time(time) ;
    time:units = "hours since 2017-03-20 00:00:00 0:00" ;
    time:long_name = "hours since 2017-03-20 00:00:00 (UTC)" ;
    time:standard_name = "time" ;
    time:axis = "T" ;
    time:bounds = "time_bnds" ;
int date(time) ;
    date:long_name = "yyyymmdd" ;
byte valid_dates(day_in_time_interval) ;
    valid_dates:comment = "indicates whether any data are included for a particular d
ay: 0=none, 1=data, index runs from date indicated by \"units\" attribute of the time variable" ;
float time_bnds(time, nv) ;
float P0(time) ;
    P0:units = "hPa" ;
    P0:long_name = "Air pressure at sensor level AWS (+0.86m NAP)" ;
    P0:standard_name = "air_pressure" ;
    P0:accuracy = "0.1" ;
    P0:_FillValue = -9999.f ;
    P0:cell_methods = "time: mean" ;
float RAIN(time) ;
    RAIN:units = "mm" ;
    RAIN:long_name = "Rain amount AWS" ;
    RAIN:standard_name = "thickness_of_rainfall_amount" ;
    RAIN:accuracy = "0.2" ;
    RAIN:_FillValue = -9999.f ;
    RAIN:cell_methods = "time: sum" ;
float RDUR(time) ;
    RDUR:units = "s" ;
    RDUR:long_name = "Rain duration AWS" ;
    RDUR:_FillValue = -9999.f ;
    RDUR:cell_methods = "time: sum" ;
float SWD(time) ;
    SWD:units = "W m-2" ;
    SWD:long_name = "Short wave downward radiation at surface" ;
    SWD:standard_name = "surface_downwelling_shortwave_flux_in_air" ;
    SWD:accuracy = "3%2" ;
    SWD:_FillValue = -9999.f ;
    SWD:cell_methods = "time: mean" ;
float TA002(time) ;
    TA002:units = "K" ;
    TA002:long_name = "Temperature at 2 m" ;
    TA002:standard_name = "air_temperature" ;
    TA002:accuracy = "0.1" ;
    TA002:_FillValue = -9999.f ;
    TA002:cell_methods = "time: mean" ;
float TD002(time) ;
    TD002:units = "K" ;
    TD002:long_name = "Dew point at 2 m" ;
    TD002:standard_name = "dew_point_temperature" ;
    TD002:accuracy = "0.5" ;

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        TD002:_FillValue = -9999.f ;
        TD002:cell_methods = "time: mean" ;
float RH002(time) ;
        RH002:units = "%" ;
        RH002:long_name = "Relative humidity at 1.5 m" ;
        RH002:standard_name = "air_temperature" ;
        RH002:accuracy = "3.5%" ;
        RH002:_FillValue = -9999.f ;
        RH002:cell_methods = "time: mean" ;
float TA000(time) ;
        TA000:units = "degC" ;
        TA000:long_name = "Air temperature at 0.1 m (Grass)" ;
        TA000:standard_name = "air_temperature" ;
        TA000:accuracy = "0.1" ;
        TA000:_FillValue = -9999.f ;
        TA000:cell_methods = "time: mean" ;
float F010(time) ;
        F010:units = "m s-1" ;
        F010:long_name = "Wind speed at 10 m selected and corrected" ;
        F010:standard_name = "wind_speed" ;
        F010:accuracy = "0.5" ;
        F010:_FillValue = -9999.f ;
        F010:cell_methods = "time: mean" ;
float D010(time) ;
        D010:units = "degree" ;
        D010:long_name = "Wind direction at 10 m selected and corrected" ;
        D010:standard_name = "wind_from_direction" ;
        D010:accuracy = "3." ;
        D010:_FillValue = -9999.f ;
        D010:cell_methods = "time: mean" ;
float ZMA(time) ;
        ZMA:units = "m" ;
        ZMA:long_name = "Visibility PWS" ;
        ZMA:standard_name = "visibility_in_air" ;
        ZMA:accuracy = "10%" ;
        ZMA:_FillValue = -9999.f ;
        ZMA:cell_methods = "time: mean" ;
float PWA(time) ;
        PWA:units = "-" ;
        PWA:long_name = "Precipitation type PWS" ;
        PWA:_FillValue = -9999.f ;
        PWA:cell_methods = "time: maximum" ;

// global attributes:
        :institution = "Royal Netherlands Meteorological Institute (KNMI)" ;
        :comment = "none" ;
        :Conventions = "CF-1.4" ;
        :location = "CESAR observatory, the Netherlands" ;
        :file_creation_date_time = "20170321 12:02:43 (UTC)" ;
        :references = "cesar_surface_meteo_lbl_t10_v1.0.pdf @ http://www.cesar-database.n
1" ;
        :history = "Continuous observations are performed and archived. The data product
is published in monthly intervals." ;
}

```