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cesar_soil_water_lb1_t10

Version History

Version        Date    Description
    1.0 20-jan-2010 Creation
    1.1 06-sep-2010 GWLWS not correct since 200904, incorrect data removed from dataset
    1.0 09-okt-2013 Added groundwater level relative to surface level
    1.1 04-jul-2014 Fixed of error. Since 201207 soil water content was by accident in sensor uni
ts (kHz) and should be in m3/m3.


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 (lc1) 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 soil water, validated" ;
                iso_dataset:abstract = "Soil moisture content profile and ground water levels at
Cabauw at 10 minute time base, validated." ;
                iso_dataset:status = "onGoing" ;
                iso_dataset:uid_dataset = "76b12cf5-850c-4dbc-828d-d3c7ea5bdf6e" ;
                iso_dataset:keyword = "soil water groundwater" ;
                iso_dataset:temporal_extent = "2001-10-01,onGoing" ;
                iso_dataset:date = "2010-09-06" ;
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                iso_dataset:statement = "Continuous observations are performed and archived. The
        data product is published in monthly intervals." ;
                iso_dataset:metadata_id = "03d49ffc-525e-4c9b-95bc-2b5c4aa5e493" ;
                iso_dataset:datestamp = "2010-09-06" ;
        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 cabsurf b10 [M]cesar,[O]cesar_soil_water_l
        b1_t10_v1.1 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_soil_water_lb1_t10_v1.1.pdf" ;
                product:ref_doc_version = "v1.1" ;
        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 = "Zijdeweg 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 TH03(time) ;
                TH03:units = "m3 m-3" ;
                TH03:long_name = "Soil water content at 0.03 m depth Campbell calibration" ;
                TH03:_FillValue = -9999.f ;
                TH03:cell_methods = "time: mean" ;
        float TH08(time) ;
                TH08:units = "m3 m-3" ;
                TH08:long_name = "Soil water content at 0.08 m depth Campbell calibration" ;
                TH08:_FillValue = -9999.f ;
                TH08:cell_methods = "time: mean" ;
        float TH20(time) ;
                TH20:units = "m3 m-3" ;
                TH20:long_name = "Soil water content at 0.20 m depth Campbell calibration" ;
                TH20:_FillValue = -9999.f ;
                TH20:cell_methods = "time: mean" ;
        float GWLWN(time) ;
                GWLWN:units = "m" ;
                GWLWN:long_name = "Ground water level, r.t. NAP, M-field (cabsurf)" ;
                GWLWN:_FillValue = -9999.f ;
                GWLWN:cell_methods = "time: mean" ;
        float GWLWS(time) ;
                GWLWS:units = "m" ;
                GWLWS:long_name = "Ground water level, r.t. NAP, M-field (tebex)" ;
                GWLWS:_FillValue = -9999.f ;
                GWLWS:cell_methods = "time: mean" ;
        float GWLSL(time) ;
                GWLSL:units = "m" ;
                GWLSL:long_name = "Ground water level, r.t. NAP, ditch" ;
                GWLSL:_FillValue = -9999.f ;
                GWLSL:cell_methods = "time: mean" ;
        float GWLW1(time) ;
                GWLW1:units = "m" ;
                GWLW1:long_name = "Ground water level, r.t. NAP, grass strip ditch" ;
                GWLW1:_FillValue = -9999.f ;
                GWLW1:cell_methods = "time: mean" ;
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        float GWLW2(time) ;
                GWLW2:units = "m" ;
                GWLW2:long_name = "Ground water level, r.t. NAP, grass strip central" ;
                GWLW2:_FillValue = -9999.f ;
                GWLW2:cell_methods = "time: mean" ;
        float GWLEB(time) ;
                GWLEB:units = "m" ;
                GWLEB:long_name = "Ground water level, NAP, EB-terrain" ;
                GWLEB:_FillValue = -9999.f ;
                GWLEB:cell_methods = "time: mean" ;
        float GWLWNS(time) ;
                GWLWNS:units = "m" ;
                GWLWNS:long_name = "Ground water level, r.t surface, M-field (cabsurf)" ;
                GWLWNS:_FillValue = -9999.f ;
                GWLWNS:cell_methods = "time: mean" ;
        float GWLW1S(time) ;
                GWLW1S:units = "m" ;
                GWLW1S:long_name = "Ground water level, r.t surface, grass strip ditch" ;
                GWLW1S:_FillValue = -9999.f ;
                GWLW1S:cell_methods = "time: mean" ;
        float GWLW2S(time) ;
                GWLW2S:units = "m" ;
                GWLW2S:long_name = "Ground water level, r.t surface, grass strip central" ;
                GWLW2S:_FillValue = -9999.f ;
                GWLW2S:cell_methods = "time: mean" ;
        float GWLEBS(time) ;
                GWLEBS:units = "m" ;
                GWLEBS:long_name = "Ground water level, r.t surface, EB-field" ;
                GWLEBS:_FillValue = -9999.f ;
                GWLEBS:cell_methods = "time: mean" ;

// global attributes:
                :institution = "Royal Netherlands Meteorological Institute (KNMI)" ;
                :comment = "none" ;
                :Conventions = "CF-1.4" ;
                :location = "CESAR observatory, the Netherlands" ;
                :file_creation_date_time = "20170321 12:02:50 (UTC)" ;
                :history = "Continuous observations are performed and archived. The data product
is published in monthly intervals." ;
                :references = "cesar_soil_water_lb1_t10_v1.1.pdf @ http://www.cesar-database.nl"
;
}
```