

cesar_surface_flux_lc1_t10

History

Version	Date	Description
1.0	28-jan-2010	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 (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 surface fluxes validated and gap filled" ;
        iso_dataset:abstract = "Surface fluxes of net radiation, momentum, sensible heat,
latent heat, soil heat and carbon dioxide at Cabauw at 10 minute time base, gap filled" ;
        iso_dataset:status = "onGoing" ;
        iso_dataset:uid_dataset = "09814d72-1b1f-41f5-aaf0-2635d18d6673" ;
        iso_dataset:keyword = "flux temperature humidity momentum carbon dioxide soil hea
t radiation" ;
        iso_dataset:temporal_extent = "2001-08-01,onGoing" ;
        iso_dataset:datasetDate = "2012-06-05" ;
        iso_dataset:statement = "Continuous observations are performed, gap filled and ar
chived. The data product is published in monthly intervals." ;
        iso_dataset:metadata_id = "d2b79a08-5c07-4111-aa41-295127349223" ;
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        iso_dataset:metadataDate = "2012-06-05" ;
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 cabcon a10 [M]cesar,[0]cesar_surface_flux_
lc1_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_flux_lc1_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 UST(time) ;
    UST:units = "m s-1" ;
    UST:long_name = "MERGED Friction velocity" ;
    UST:ancillary_variables = "IUST" ;
    UST:_FillValue = -9999.f ;
    UST:cell_methods = "time: mean" ;
float IUST(time) ;
    IUST:units = "-" ;
    IUST:long_name = "MERGED Friction velocity source index" ;
    IUST:_FillValue = -9999.f ;
float FC(time) ;
    FC:units = "mg m-2 s-1" ;
    FC:long_name = "MERGED CO2 flux" ;
    FC:ancillary_variables = "IFC" ;
    FC:_FillValue = -9999.f ;
    FC:cell_methods = "time: mean" ;
float IFC(time) ;
    IFC:units = "-" ;
    IFC:long_name = "MERGED CO2 flux source index" ;
    IFC:_FillValue = -9999.f ;
float H(time) ;
    H:units = "W m-2" ;
    H:long_name = "MERGED Surface sensible heat flux" ;
    H:standard_name = "surface_upward_sensible_heat_flux" ;
    H:accuracy = "10%" ;
    H:ancillary_variables = "IH" ;
    H:_FillValue = -9999.f ;
    H:cell_methods = "time: mean" ;
float IH(time) ;
    IH:units = "-" ;
    IH:long_name = "MERGED Surface sensible heat flux Source index" ;
    IH:_FillValue = -9999.f ;
float LE(time) ;
    LE:units = "W m-2" ;
    LE:long_name = "MERGED Surface latent heat flux" ;
    LE:standard_name = "surface_upward_latent_heat_flux" ;
    LE:accuracy = "10%" ;
    LE:ancillary_variables = "ILE" ;

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        LE:_FillValue = -9999.f ;
        LE:cell_methods = "time: mean" ;
float ILE(time) ;
        ILE:units = "-" ;
        ILE:long_name = "MERGED Surface latent heat flux Source index" ;
        ILE:_FillValue = -9999.f ;
float G0(time) ;
        G0:units = "W m-2" ;
        G0:long_name = "MERGED Surface soil heat flux" ;
        G0:standard_name = "downward_heat_flux_at_ground_level_in_soil" ;
        G0:accuracy = "10%10" ;
        G0:ancillary_variables = "IG0" ;
        G0:_FillValue = -9999.f ;
        G0:cell_methods = "time: mean" ;
float IG0(time) ;
        IG0:units = "-" ;
        IG0:long_name = "MERGED Surface soil heat flux Source index" ;
        IG0:_FillValue = -9999.f ;
float QN(time) ;
        QN:units = "W m-2" ;
        QN:long_name = "MERGED Net radiation" ;
        QN:ancillary_variables = "IQN" ;
        QN:_FillValue = -9999.f ;
        QN:cell_methods = "time: mean" ;
float IQN(time) ;
        IQN:units = "-" ;
        IQN:long_name = "MERGED Net radiation Source index" ;
        IQN:_FillValue = -9999.f ;
float LE2(time) ;
        LE2:units = "W m-2" ;
        LE2:long_name = "Merged latent heat EC Bowen ratio" ;
        LE2:_FillValue = -9999.f ;
        LE2:cell_methods = "time: mean" ;
float ILE2(time) ;
        ILE2:units = "W m-2" ;
        ILE2:long_name = "Source of merged latent heat flux EC Bowen ratio" ;
        ILE2:_FillValue = -9999.f ;
        ILE2: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 12:02:47 (UTC)" ;
        :history = "Continuous observations are performed, gap filled and archived. The d
ata product is published in monthly intervals." ;
        :references = "cesar_surface_flux_lc1_t10_v1.0.pdf @ http://www.cesar-database.nl
" ;
}

```