cesar_surface_meteo_lc1_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 (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 meteorological surface data gap filled" ;
                iso_dataset:abstract = "Meteorological surface observations of precipitation, rad
iation, air pressure, wind speed, wind direction, temperature and dew point at Cabauw at 10 minut
e time base. gap filled." ;
                iso_dataset:status = "onGoing" ;
                iso_dataset:uid_dataset = "04529224-c2e7-4ab5-b989-dadfce3ba8eb" ;
                iso_dataset:keyword = "Surface temperature humidity wind precipitation pressure r
adiation" ;
                iso_dataset:temporal_extent = "2000-05-01,onGoing" ;
                iso_dataset:datasetDate = "2012-06-05" ;
                iso_dataset:statement = "Continuous observations are performed, gap filles and ar
chived. The data product is published in monthly intervals." ;
                iso_dataset:metadata_id = "fcdfc615-da7a-40ed-ac0e-75989e47aa39" ;
                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,[O]cesar_surface_meteo
_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_meteo_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 = "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 P0(time) ;
                P0:units = "hPa" ;
                P0:long_name = "MERGED Atmospheric air pressure" ;
                P0:standard_name = "air_pressure_at_sensor_level" ;
                P0:accuracy = "0.1" ;
                P0:ancillary_variables = "IP0" ;
                P0:_FillValue = -9999.f ;
                P0:cell_methods = "time: mean" ;
        float IP0(time) ;
                IP0:units = "-" ;
                IP0:long_name = "MERGED Atmospheric air pressure Source index" ;
                IP0:_FillValue = -9999.f ;
        float RAIN(time) ;
                RAIN:units = "mm" ;
                RAIN:long_name = "MERGED Rain amount" ;
                RAIN:standard_name = "thickness_of_rainfall_amount" ;
                RAIN:accuracy = "0.2" ;
                RAIN:ancillary_variables = "IRAIN" ;
                RAIN:_FillValue = -9999.f ;
                RAIN:cell_methods = "time: sum" ;
        float IRAIN(time) ;
                IRAIN:units = "-" ;
                IRAIN:long_name = "MERGED Rain amount Source index" ;
                IRAIN:_FillValue = -9999.f ;
        float SWD(time) ;
                SWD:units = "W m-2" ;
                SWD:long_name = "MERGED Short wave downward radiation" ;
                SWD:standard_name = "surface_downwelling_shortwave_flux_in_air" ;
                SWD:accuracy = "3%2" ;
                SWD:ancillary_variables = "ISWD" ;
                SWD:_FillValue = -9999.f ;
                SWD:cell_methods = "time: mean" ;
        float ISWD(time) ;
                ISWD:units = "-" ;
                ISWD:long_name = "MERGED Short wave downward radiation Source index" ;
                ISWD:_FillValue = -9999.f ;
        float TA002(time) ;
                TA002:units = "degC" ;
                TA002:long_name = "MERGED Air temperature at   2 m" ;
```

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                TA002:standard_name = "air_temperature" ;
                TA002:accuracy = "0.1" ;
                TA002:ancillary_variables = "ITA002" ;
                TA002:_FillValue = -9999.f ;
                TA002:cell_methods = "time: mean" ;
        float ITA002(time) ;
                ITA002:units = "-" ;
                ITA002:long_name = "MERGED Air temperature at   2 m Source index" ;
                ITA002:_FillValue = -9999.f ;
        float Q002(time) ;
                Q002:units = "1e-3" ;
                Q002:long_name = "MERGED Specific humidity     at   2 m" ;
                Q002:ancillary_variables = "IQ002" ;
                Q002:_FillValue = -9999.f ;
                Q002:cell_methods = "time: mean" ;
        float IQ002(time) ;
                IQ002:units = "-" ;
                IQ002:long_name = "MERGED Specific humidity     at   2 m Source index" ;
                IQ002:_FillValue = -9999.f ;
        float F010(time) ;
                F010:units = "m s-1" ;
                F010:long_name = "MERGED Wind speed at  10 m" ;
                F010:standard_name = "wind_speed" ;
                F010:accuracy = "0.5" ;
                F010:ancillary_variables = "IF010" ;
                F010:_FillValue = -9999.f ;
                F010:cell_methods = "time: mean" ;
        float IF010(time) ;
                IF010:units = "-" ;
                IF010:long_name = "MERGED Wind speed at  10 m Source index" ;
                IF010:_FillValue = -9999.f ;
        float D010(time) ;
                D010:units = "degree" ;
                D010:long_name = "MERGED Wind direction at  10 m" ;
                D010:standard_name = "wind_from_direction" ;
                D010:accuracy = "3." ;
                D010:ancillary_variables = "ID010" ;
                D010:_FillValue = -9999.f ;
                D010:cell_methods = "time: mean" ;
        float ID010(time) ;
                ID010:units = "-" ;
                ID010:long_name = "MERGED Wind direction at  10 m Source index" ;
                ID010:_FillValue = -9999.f ;
        float TD002(time) ;
                TD002:units = "degC" ;
                TD002:long_name = "Dew point temperature from MERGED Spec. hum. at   2 m" ;
                TD002:standard_name = "dew_point_temperature" ;
                TD002:accuracy = "0.5" ;
                TD002:_FillValue = -9999.f ;
                TD002:cell_methods = "time: mean" ;
        float RH002(time) ;
                RH002:units = "1e-2" ;
                RH002:long_name = "Rel. hum. from MERGED air and dew-point temp. at 2 m" ;
                RH002:standard_name = "relative_humidity" ;
                RH002:accuracy = "3.5" ;
                RH002:_FillValue = -9999.f ;
                RH002: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 12:02:43 (UTC)" ;
                :references = "cesar_surface_meteo_lc1_t10_v1.0.pdf @ http://www.cesar-database.n
l" ;
                :history = "Continuous observations are performed, gap filles and archived. The d
ata product is published in monthly intervals." ;
}
```