

# DAYCLI message

Expert Team on Data Development and Stewardship (ET-DDS)

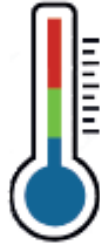


**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale

# DAYCLI message?

A WMO message with a worldwide mission to share daily values of temperature, precipitation and snow, currently at a month frequency.



*Daily Minimum Mean  
and Maximum  
temperatures*



*Daily total  
accumulated  
precipitation*



*Daily total snow  
depth & Daily depth  
of fresh snow*

Its special feature is the exchange of daily data and its metadata on the quality of the measurements, including the **time period of each variable**, the **computation method**, the **siting classification**, the **measurement quality classification** and the **data quality information**, all of which contributing to better quality of climate services.

It enables the **climatology departments** of each National Meteorological Hydrological Service (**NMHS**) to **assess** and then share their **reference daily climate datasets** nationally, regionally and globally.

# Content of the DAYCLI message

- ✓ Metadata on designation & location
- ✓ Metadata on quality (siting, measurement, computation method)
- ✓ Metadata on climatological days (rr, ds, tsd, tn, tx, tm): beginning date and time for each of the 6 parameters\*
- ✓ Values of each parameter with its quality flag:

Attribution date	rr	qrr	fs	qfs	tsd	qtsd	tn	qtn	tx	qtx	tm	qtm
202105010000	0.0	0		6		6	295.25	0	299.55	0	297.05	0
202105020000	0.2	0		6		6	295.25	0	298.65	0	296.55	0
202105030000	14.4	0		6		6	294.25	0	298.15	0	295.85	0
202105040000	61.7	0		6		6	292.15	0	296.65	0	294.45	0
202105050000	0.0	0		6		6	292.85	0	300.15	0	296.65	0
202105060000	0.0	0		6		6	293.05	0	302.25	0	297.25	0
202105070000	0.0	0		6		6	294.35	0	303.05	0	298.45	0
202105080000	0.8	0		6		6	297.05	0	301.25	0	298.15	0
202105090000	0.0	0		6		6	297.15	0	302.45	0	298.75	0
202105100000	0.0	0		6		6	296.15	0	302.75	0	298.75	0
202105110000	0.0	0		6		6	297.05	0	303.35	0	298.95	0
202105120000	0.0	0		6		6	296.35	0	301.45	0	298.15	0
202105130000	0.2	0		6		6	296.55	0	302.95	0	298.45	0
202105140000	4.3	0		6		6	296.05	0	302.75	0	298.55	0
202105150000	1.4	0		6		6	296.35	0	301.05	0	297.75	0
202105160000	15.2	0		6		6	295.35	0	297.95	0	296.35	0
202105170000	0.0	0		6		6	294.65	0	300.15	0	296.95	0
202105180000	1.0	0		6		6	292.35	0	297.15	0	294.95	0
202105190000	29.9	0		6		6	292.45	0	296.75	0	294.75	0
202105200000	38.0	0		6		6	293.05	0	297.05	0	294.45	0
202105210000	0.6	0		6		6	293.15	0	298.45	0	295.45	0
202105220000	10.2	0		6		6	293.25	0	298.85	0	294.85	0
202105230000	2.2	0		6		6	290.95	0	298.45	0	294.25	0
202105240000	1.8	0		6		6	290.05	0	298.15	0	293.35	0
202105250000	6.6	0		6		6	292.25	0	297.25	0	294.35	0
202105260000	1.4	0		6		6	291.05	0	297.95	0	293.95	0
202105270000	0.0	0		6		6	290.85	0	298.45	0	293.95	0
202105280000	7.8	0		6		6	291.35	0	298.55	0	293.75	0
202105290000	0.2	0		6		6	292.05	0	298.05	0	294.45	0
202105300000	0.6	0		6		6	291.35	0	296.55	0	293.35	0
202105310000	0.6	0		6		6	290.25	0	297.45	0	292.85	0

1. rr: Total accumulated precipitation
2. fs: Fresh snow
3. tsd: Total snow depth
4. tn: Minimum temperature
5. tx: Maximum temperature
6. Tm: Mean temperature

*qxx: quality flags (qrr, qfs, qstd, qtn, qtx, qtm)*

## Requirements for DAYCLI

- ✓ Maintain the integrity of the NMHS's historical daily climate data series --> Maintain the NMHS's « Attribution day ».
- ✓ Make the production of the DAYCLI message as simple as possible for NMHSs

# Vocabulary ?

## **Attribution day**

Is the day to which the values of parameters are assigned. Should reflect the day used by NMHSs to compile their long-term data series.

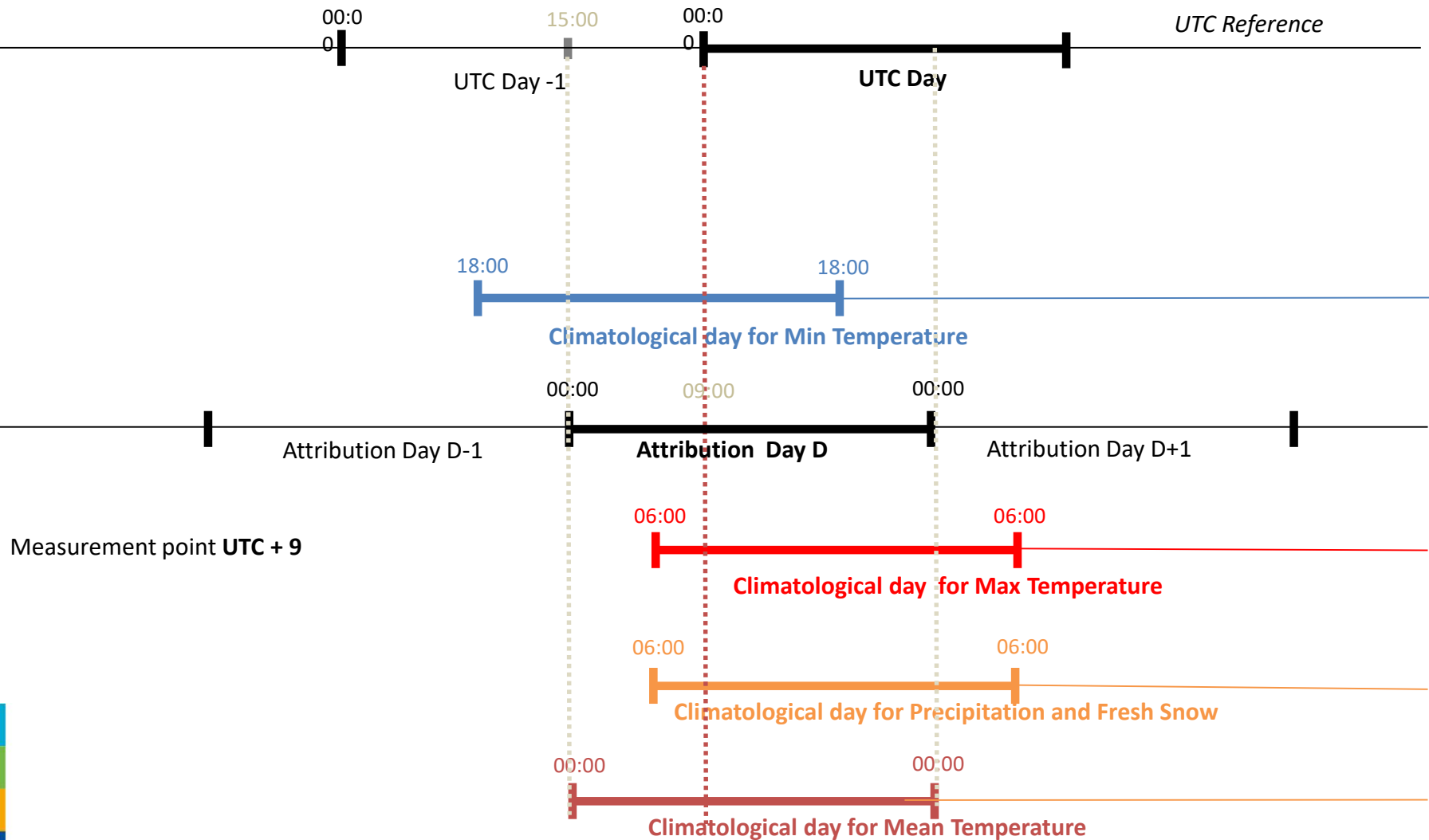
## **Climatological day**

This represents the 24-hour period over which the various daily parameters are measured or calculated, whether for extremes, averages or accumulations.

The Expert Team on Data Standards from INFCOM) is proposing the DAYCLI message design (BUFR sequence)

See the discussions at <https://github.com/wmo-im/BUFR4/issues/238> )

# Figure representing climatological days



**Thank you !**



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# Example of convention for 3 daily datasets providers

- ✓ **NOAA/NCEI** and in particular its GHCND (**Global Historical Climatology Network Daily**), exchanges its daily data according to the time of observation that *"is the 24 hour clock time of the observation given as the local time at the station of record"*.  
<https://www.ncdc.noaa.gov/cdo-web/datasets> and see  
[https://www.ncei.noaa.gov/pub/data/cdo/documentation/GHCND\\_documentation.pdf](https://www.ncei.noaa.gov/pub/data/cdo/documentation/GHCND_documentation.pdf)
- ✓ **BoM** (Australia) exchanges its daily data according its Reference Date and Time (RDT). E.g. for rainfall at the station of Melbourne Airport , measurements are nominally made at 9 am local clock time and record the total for the previous 24 hours  
[http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p\\_nccObsCode=136&p\\_display\\_type=dailyDataFile&p\\_startYear=&p\\_c=&p\\_stn\\_num=086282](http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=136&p_display_type=dailyDataFile&p_startYear=&p_c=&p_stn_num=086282)
- ✓ **Météo-France** exchanges its daily data according the Reference Date and Time zones. That means in UTC for its territory in continental Europe (0 meridian), and in RDT for stations in Polynesia, in the Caribbean, etc.  
<https://www.data.gouv.fr/fr/datasets/donnees-climatologiques-de-base-quotidiennes/>