

DATA SET DESCRIPTION

Multi-annual station means for the climate normal reference period 1961-90, for current station location and for reference station location

Version V0.x

Cite data set as: DWD Climate Data Center (CDC): Multi-annual station means for the climate normal reference period 1961-90, for current station location and for reference station location, Version V0.x, current year.

INTENT OF THE DATASET

This document describes the freely available data of the DWD Climate Data Center (CDC). These long-term station means correspond to the standard climate normal, or reference period 1961-90.

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DATA DESCRIPTION

Spatial coverage selected stations in Germany

Temporal coverage 01.01.1961 - 31.12.1990

Temporal resolution 30 years

Format(s) There are at least two options to derive a 30year mean when station locations change over time (see section DATA ORIGIN). One option is to use the current location at the day the calculation is performed, this is given in files *aktStandort.txt. Another option is to use the station location at the end of the period, this is given in files *festerStandort.txt ("reference station location"). The data are given in files according to parameters. One file contains all stations where the respective value was determined. The station metadata are collected in the files *Stationsliste*.

Parameters	Niederschlag	mean monthly sum of precipitation height	mm
	Sonnenscheindauer	mean monthly sum of sunshine duration	hours
	Temperatur	mean of temperature 2 m above ground	degree Celsius
	Eistage	days with daily maximum temperature < 0 °C	average number per year
	Frosttage	days with daily minimum temperature < 0 °C	average number per year
	Sommertage	days with daily maximum temperature >= 25 °C	average number per year
	Heiße Tage	days with daily maximum temperature >= 30 °C	average number per year

DATA ORIGIN

The station network of DWD is developing over time, as the surrounding of stations may change and require a re-location of the station for representative measurements. This kind of changes had been considered in the long-term means given here, employing comparisons with stations of similar height and similar climate. In the files *aktStandort* the long-term means are given for the station location at the data of calculation. In case of re-located stations, the long-term means were calculated for the new location. The files *festerStandort* are for the reference location (also named "Bezugsstandort") which is the location at the end of the averaging period (reference station location 1961-90 is the station location of end of 1990). The mean the whole period had been calculated, if no values were missing. For the reference period 1961-90, missing values were carefully estimated from surrounding stations.

VALIDATION AND UNCERTAINTY ESTIMATE

CONSIDERATIONS FOR APPLICATIONS

The question which annual mean to use, will be determined by the time span of interest. When comparing with recent data, *aktStandort* is the right choice. If the time span of interest is before the station re-location, the reference location "Bezugsstandort" *festerStandort* should be used.

REFERENCES

Behrendt, J., E. Penda, A. Finkler, U. Heil, C. Polte-Rudolf: Beschreibung der Datenbasis des NKDZ. Version 3.5, Offenbach, 15.02.2011.

Kaspar, F., G. Müller-Westermeier, E. Penda, H. Mächel, K. Zimmermann, A. Kaiser-Weiss, T. Deutschländer: Monitoring of climate change in Germany – data, products and services of Germany's National Climate Data Centre. Adv. Sci. Res., 10, doi:10.5194/asr-10-99-2013, 99–106, 2013.

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REVISION HISTORY

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