



DATASET DESCRIPTION

wind roses of the annual hours in % from station measurements for Germany at a height of approx. 10 m

Version: v24.3

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Dataset-ID: urn:x-wmo:md:de.dwd.cdc::derivgermany-techn-multi_annual-windroses

Dataset-URL: https://opendata.dwd.de/climate_environment/CDC/derived_germany/techn/multi_annual/windroses/

ABSTRACT

Based on hourly averages of the wind, multi-year strength wind roses (at least strength wind roses with an annual reference) are created. In order to be able to make representative statements about the wind conditions at a station with the help of a starch wind rose, conditions regarding data availability, continuity of the measuring site, homogeneity of the measuring method and a uniform sensor height per site were taken into account.

These data originate from stations of the DWD and legally and qualitatively equivalent partner network stations.

POINT OF CONTACT

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DATASET DESCRIPTION

Parameter	wind direction, wind velocity
Unit(s)	%, degree, m/s
Statistical processing	multi-annual averages
Temporal coverage	1963-01-01 -- 2023-12-31
Spatial coverage	stations in Germany
Projection	WGS 84 (EPSG:4326)
Format description	derivgermany-techn-multi_annual-windroses : format(s): - png (starch wind rose), - csv (basic data of wind direction and wind speed), - zip (csv and png)
Quality Information	

DATA ORIGIN

These data are obtained from the station measuring networks of the German Weather Service. For more detailed information on the current observation and measurement procedures, see VuB 3 Observer Manual (DWD, 2014a), VuB 3 Technician Manual (DWD, 2014b) and VuB 2 Weather Key Manual (DWD, 2013). The stations are set up and operated according to WMO regulations.

RESOURCE MAINTENANCE

The data is updated annually and extended to include the last year that has elapsed.

VALIDATION AND UNCERTAINTY ESTIMATE

All offered measuring stations meet parameter-related homogeneity and inventory criteria, i.e. no station relocation is permitted during the evaluation period, for example. In addition, a data stock of at least 90% is guaranteed for the reference years.

UNCERTAINTIES

Uncertainties result from incorrect or missing observations.

CONSIDERATIONS FOR APPLICATIONS

The quality of the starch wind roses depends on the quality of the station readings. These are subjected to a continuous quality check. The stations were selected according to WMO criteria.

ADDITIONAL INFORMATION

parameters: hourly average of wind speed (scalar averaging) and wind direction (vectorial averaging)

LITERATURE

[Behrendt, J., et al.: Beschreibung der Datenbasis des NKDZ. Version 3.5. Offenbach, 15.02.2011.](#)

[DWD Vorschriften und Betriebsunterlagen Nr. 2 \(VuB 2\), Wetterschlüsselhandbuch Band D, Nov 2013.](#)

[DWD Vorschriften und Betriebsunterlagen Nr. 3 \(VuB 3\), Beobachterhandbuch \(BHB\) für Wettermeldestellen des synoptisch-klimatologischen Mess- und Beobachtungsnetzes, März 2014a.](#)

[DWD Vorschriften und Betriebsunterlagen Nr. 3 \(VuB 3\), Technikerhandbuch \(THB\) für Wettermeldestellen des synoptisch-klimatologischen Mess- und Beobachtungsnetzes, März 2014b.](#)

[Kaspar, F., et al.: 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.](#)

[Spengler, R.: The new Quality Control- and Monitoring System of the Deutscher Wetterdienst. Proceedings of the WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation, Bratislava, 2002.](#)

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REVISION HISTORY

This document is maintained by Deutscher Wetterdienst, Zentrales Klimabüro, last edited at 2024-06-06. The data are updated annually and supplemented by the most recent past year. This document is maintained by the Climate and Environmental Consultancy Department (KU11), DWD, last edited 2021-11-01.