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MINISTRY OF TRANSPORT

———— **TECHNICAL REPORT** ————
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Danish Climatological Normals 1971-2000
- for selected stations

Danske klimanormaler 1971-2000
- for udvalgte stationer

John Cappelen
Sektion for Vejr- og Klimainformation
Weather and Climate Information Division



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Danish Meteorological Institute
Lyngbyvej 100
DK-2100 Copenhagen
Denmark

Phone: +45 39 15 75 00
Fax: +45 39 27 10 80
E-mail: dmi@dmi.dk
Internet: www.dmi.dk

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The report (pdf-format) and the accompanying dataset can be downloaded from the publication part of DMI webpages (www.dmi.dk).

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Introduktion

Nærværende rapport præsenterer en række danske klimanormaler for perioden 1971-2000 for et antal lokaliteter jævnt fordelt ud over landet. Det drejer sig om lufttemperatur, nedbør, solskinstimer, vind, lufttryk, tåge og torden fra 10 lokaliteter i Danmark.

Det grundlæggende arbejde med de klimaserier, der er præsenteret i denne rapport, er udført i forbindelse med to projekter. Det ene projekt er et dansk databidrag til et nyt Europæisk Klima-atlas, der udgives i et samarbejde mellem de forskellige Europæiske Meteorologiske Institutter. Databidraget er rapporteret i DMI Teknisk Rapport 02-13: Danske klimanormaler 1971-2000 til Europæisk Klima-atlas. Det andet projekt er ligeledes et dansk databidrag. Danske klimadata skal her bruges i forbindelse med udvikling af et fremtidigt "Severe Weather Forecasting System" på "European Centre for Medium-Range Weather Forecast" (ECMWF). Denne dataleverance er beskrevet i DMI Teknisk Rapport 02-14: Dansk klimastatistik 1971-2000 til ECMWF – til verifikation og udvikling i forbindelse med opbygning af et "System til varsling af farligt vejr".

Perioden 1971-2000 er den seneste 30 års normalperiode. Perioden må ikke forveksles med en standardnormalperiode, da en sådan er defineret i et teknisk regulativ fra World Meteorological Organisation (WMO) som "gennemsnit af klimadata beregnet for følgende sammenhængende perioder af 30 år:

1. januar 1901 til 31. december 1930, 1. januar 1931 til 31. december 1960, 1. januar 1961 til 31. december 1990 osv."

Introduction

This report presents a number of danish climate normals in the period 1971-2000 for observations sites throughout the country. Air temperature, precipitation, hours of bright sunshine, wind, air pressure, fog and finally thunder are the parameters in question.

The fundamental work with the climate series presented in this report are carried out in connection with two projects. The first project is the danish data contribution to a new European Climate Atlas, to be published in a collaboration between the National Meteorological Services in Europe. The data contribution are described in DMI Technical Report 02-13: Danish Climatological Normals 1971-2000 for European Climate Atlas. The second project is similar. Danish climate data are to be used in connection with the development of a future "Severe Weather Forecasting System" at the "European Centre for Medium-Range Weather Forecast" (ECMWF). This data contribution are described in DMI Technical Report 02-14: Danish Climate Statistics 1971-2000 to ECMWF – for verification and development in connection with the set-up of a "Severe Weather Forecasting System".

The period 1971-2000 is the latest 30 years normal period. This period may not be mistaken for a Climatological standard normal period, which are defined by the World Meteorological Organisation (WMO)'s Technical Regulations as "averages of climatological data computed for the following consecutive periods of 30 years: 1 January 1901 to 31 December 1930, 1 January 1931 to 31 December 1960, 1 January 1961 to 31 December 1990, etc."

De seneste standardnormaler (1961-90) for Danmark foreligger i en række tekniske rapporter fra DMI, frit tilgængelige på Internettet (www.dmi.dk).

Uanset om det er standardperioder eller ej, er normalværdier generelt baseret på komplette og homogene serier af klimaparametre målt et bestemt sted og de benyttes til en beskrivelse af det gennemsnitlige (normale) klima på observationsstedet. En sådan standardmetode muliggør en sammenligning fra sted til sted, selv over landegrænser.

Rapport (pdf-format) og tilhørende data kan hentes på DMI's Internetsider (www.dmi.dk) under "Publikationer".

The latest standard normal values (1961-90) for Denmark have been published in a number of DMI Technical Reports, which can be downloaded from the DMI webpages (www.dmi.dk) without charge.

Standard normal values are based on complete and homogeneous series of climatic variables. They are used to describe the average climate of a particular site. Standard normal values can thus be compared from site to site and across national borders.

The report (pdf-format) and the accompanying data set can be downloaded from the publication part of DMI webpages (www.dmi.dk).

Observationer og metoder

Meteorologisk døgn og måned

Et "meteorologisk døgn" er defineret så det begynder kl. 06 UTC (GMT) om morgenen og slutter kl. 06 UTC den følgende morgen. 06 UTC er det samme som kl. 07 dansk vintertid (eller dansk normaltid) og kl. 08 dansk sommertid.

En "meteorologisk måned" begynder derfor kl. 06 UTC den 1. i måneden og slutter kl. 06 UTC den 1. i den efterfølgende måned. I denne rapport's tabeller og datafiler vil datoen for en hændelse, der registreres i løbet af et meteorologisk døgn, altid være anført den dag, hvor det meteorologiske døgn slutter. Eksempelvis kan datoen for maksimum temperatur for marts derfor være anført som 1. april, selv om maksimum indtraf den 31. marts.

Stationerne

Rapporten præsenterer månedsværdier og normaler for hovedsagelig to stationstyper (se også kort på side 9):

Synoptisk station

Denne type station observerer vejr, skydække, sigtbarhed, snedække, lufttemperatur, relativ fugtighed, vind, lufttryk og nedbør kl. 00, 03, 06, 09, 12, 15, 18 og 21 UTC eller oftere. Selvom nogle af stationer har foretaget observationer hver time er disse ikke medtaget i denne rapport. Verden over følger synoptiske stationer altid det samme måleprogram med målinger mindst hver 3. time og de følger de samme retningslinier for målingerne. De danske synoptiske stationer har i tid og rum opereret med en forskellig grad af automation og det har selvfølgelig haft en indflydelse på, hvordan parametrene nøjagtigt er observeret. Stationsnummeret for synoptiske stationer i Danmark består af 5 cifre, altid begyndende med cifrene 06.

Observations and methods

The meteorological day and month

The 'meteorological day' starts at 06 hours UTC (GMT) in the morning and ends at 06 hours UTC the following day. 06 hours UTC is 07 hours Danish Winter Time (or 07 hours Danish Normal time) and 08 hours Danish Summer time.

The 'meteorological month' thus starts at 06 hours UTC on the first of the month and ends at 06 UTC on the first of the following month. In the tables and data files in this report, an event occurring during a meteorological day is always assigned to the date on which the meteorological day ends. The date of the maximum temperature for March could thus be listed as 1 April although the maximum was reached during 31 March.

The stations

This report presents the monthly values of observations from mainly two types of observation stations (see the map p. 9):

Synoptical station

This type of stations observes weather, cloud cover, visibility, snow cover, air temperature, relative humidity, wind, air pressure and precipitation at 00:00, 03:00, 06:00, 09:00, 12:00, 15:00, 18:00 and 21:00 hours UTC or more often. Although some stations has observed every hour the clock around, they are not a part of this report. Synoptical stations all over the world follow at least the 3-hour interval around the clock, and they always follow the same guidelines. Synoptical stations in Denmark have operated with different automatisations both in time and space, which has of course affected how the parameters is observed. The station number describing synoptical stations in Denmark consist of 5 digits, always starting with the number 06.

Manuel solstation

Denne type station måler døgnets solskinstimer fra midnat til midnat. Observationer af solskin er foretaget fra et særskilt net af solstationer, hvor Skagen er den eneste solstation, der er placeret samme sted som den synoptiske station.

For at kunne præsentere normaler for Abed på Lolland, har der dog været brug for data fra to andre stationstyper:

Manuel nedbørstation

Denne type station måler det foregående døgn nedbørmængde kl. 8 dansk normal tid.

Manuel klimastation

Denne type station observerer vejr, skydække, sigtbarhed, snedække, lufttemperatur, relativ fugtighed, vind og nedbør kl. 8, 14 og 21 dansk normaltid.

Månedsværdierne

På side 24 kan man se en liste over de forskellige klimaelementer, der er behandlet i rapporten og man kan samtidig se, hvordan månedsværdierne er beregnet ud fra de daglige værdier (fx er månedsværdien for "middeltemperaturen" beregnet som et middel af alle månedens dage, der hver især har 8 observationer hver dag).

Fejlagtige og manglende data

Alle observationer, der ligger til grund for denne rapport er omhyggeligt blevet undersøgt og samtlige fejlagtige og manglende data er blevet rettet op eller fjernet, før der er beregnet månedsværdier og statistikker.

DMI har arkiveret information om samtlige nødvendige justeringer af dataserierne.

Manual sunshine station

This type of stations measures hours of bright sunshine around the clock every day. Observations of sunshine duration have taken place from a separate part of the observation system, where Skagen is the only sunshine station placed in same place than the synoptical station.

In order to present normals from Abed on the island Lolland, two additional station types was needed:

Manual precipitation station

This type of station measures 24 hours precipitation totals at 08:00 hours local time every morning.

Manual climatological station

This type of station observes weather, cloud cover, visibility, snow cover, air temperature, relative humidity, wind and precipitation at 08:00, 14:00 and 21:00 hours Danish normal time.

The monthly values

Page 24 contains a table listing the various climate elements referred to in this report, including the methods by which the monthly values are computed from the daily values (e.g. the monthly value for 'mean temperature' is computed as the mean of all days in the month, each contains 8 temperature readings per day).

Erroneous or missing values

All the series of original observations have been examined carefully and all erroneous or missing data have been corrected or removed before calculating the monthly values and statistics.

DMI maintains information on the origin of the monthly values in every series.

Homogenitet

Homogenitet - både i tid og rum - af observationerne er kritisk for enhver type analyse. For at en serie kan regnes for homogen må målingerne af den pågældende klimaparameter ideelt være udført med samme type instrument og på samme måde gennem tiden. Hvad angår den rumlige homogenitet må de enkelte instrumenter på de forskellige målesteder også være kalibreret ens.

Inhomogeniteter opstår, når en eller flere faktorer ændrer sig over observationsperioden. Ændringer i instrumentering, fx introduktionen af automatisk udstyr, vil ikke nødvendigvis lede til en "pludselig" inhomogenitet, men mange ændringer af denne type gør. Stationsflytninger har næsten altid en effekt og det samme gælder nogle gange observatorkift, selvfølgelig specielt når vi har med visuelle observationer at gøre. Faktorerne kan også ændre sig gradvist, fx vegetation der vokser, og i disse tilfælde kan observationerne udvise en ikke naturlig trend.

Siden 1971, har det ikke kunne undgås at ændringer af ovenstående typer i et vist omfang er indtruffet på de danske målesteder, men det har tilsyneladende ikke påvirket homogeniteten af de enkelte serier væsentligt.

For at være sikker på, at alle serier i denne rapport er så homogene som muligt, har de, udover en nøje gennemgang af de enkelte til grund liggende observationer, også undergået et grundigt visuelt check, hvor de samtidig er blevet sammenlignet med andre beslægtede parametre fra samme station.

Homogeneity of the series

Temporal and spatial homogeneity of observations is critical to any kind of analysis. The homogeneity of a series requires the local measurement to have been carried out with the same type of instrument and according to instructions unchanged over time. For spatial homogeneity the individual instruments must also be calibrated in the same way as their neighbours.

Inhomogeneity occurs when one or more factors change during the observation period. Changes in the instrumentation set-up, e.g. the introduction of automatic equipment, do not necessarily lead to abrupt inhomogeneity, but many changes do. The relocation of a station nearly always have an effect. The same applies sometimes to changes in observers, especially with regard to visual (subjective) observations. When one or more factors change gradually i.e. vegetation, the series can show a non-natural trend in the observations.

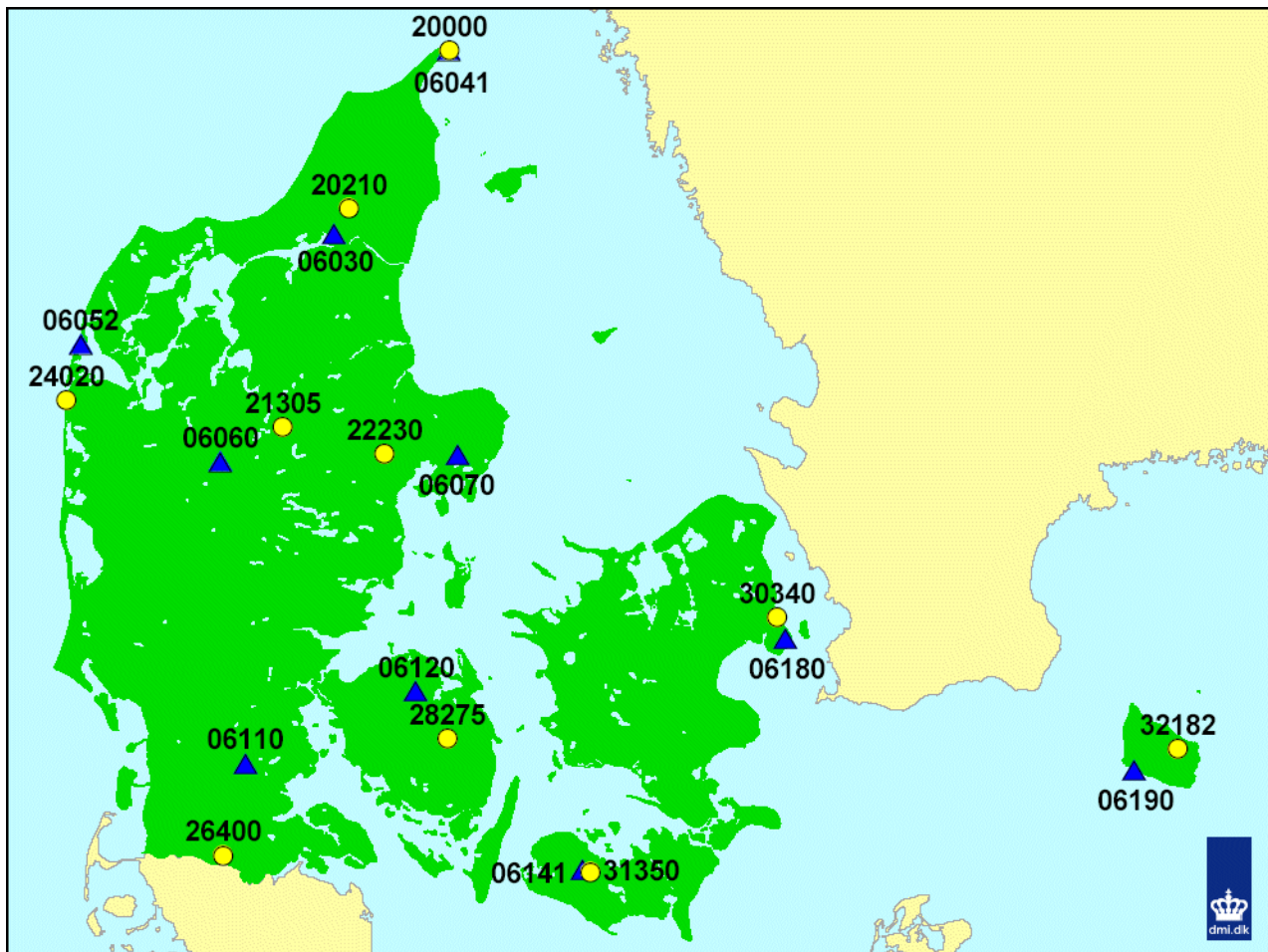
Since 1971, different types of changes to a certain extent have occurred at the observation sites in Denmark, but apparently these changes have not affected the homogeneity of the series significantly.

To ensure an acceptable level of homogeneity, all the series - in addition to a careful examination of the original observations - have been subjected close visual scrutiny, under which they also have been compared with the time series for related climate elements from the same stations.

Kortet på næste side viser placeringen af de DMI vejrstationer, der har leveret data til rapportens talmateriale. Trekkanterne viser de synoptiske stationer, mens cirklerne viser solstationerne. 31350 Tjennemarke har udover soltimer også leveret data til nedbørstatistikken.

The map on the next page shows the positions of the DMI weather stations, having delivered data to the report. The triangles represents the synoptical stations, while the circles represents the sunshine stations. 31350 Tjennemarke has besides hours of bright sunshine also delivered precipitation for the statistics.

Stat_no	Station name	lat (deg.)	lon. (deg.)	elev. (m)
06030	FSN ÅLBORG	5706N	951E	3
06041	SKAGEN FYR	5744N	1038E	3
06052	THYBORØN	5642N	813E	2
06060	FSN KARUP	5618N	907E	52
06070	FSN TIRSTRUP	5618N	1037E	23
06110	FSN SKRYDSTRUP	5514N	916E	41
06120	ODENSE LUFTHAVN	5529N	1020E	15
06141	ABED	5450N	1120E	7
06180	KØBENHAVNS LUFTHAVN	5537N	1239E	5
06190	BORNHOLMS LUFTHAVN	5504N	1445E	15
20000	SKAGEN FYR	5744N	1038E	6
20210	TYLSTRUP	5711N	957E	13
21305	VINKEL	5625N	931E	52
22230	RØVED	5619N	1010E	77
24020	TRANS	5630N	808E	35
26400	STORE JYNDEVAD	5554N	908E	15
28275	ØRE/ÅRSLEV	5518N	1031E	52
30340	KØBENHAVNS TOLDBOD	5541N	1236E	20
31350	TJENNEMARKE	5449N	1123E	9
32182	ØSTERMARIE	5508N	1502E	92



Lufttemperatur

Det vi opfatter som temperatur er faktisk et mål for energiindholdet i luften - nemlig de enkelte molekylers gennemsnitlige bevægelsesenergi. Jo mere energi der er i luften, des højere er temperaturen.

Da temperaturen af de nederste luftlag er meget afhængig af underlagets konsistens, anbefaler World Meteorological Organisation (WMO), at til almindelig meteorologisk brug bør lufttemperaturen måles i beskyttede omgivelser. I Danmark og andre steder sker dette ved at anbringe termometrene i en såkaldt "strålingsskærm" 2 meter over terræn. Skærmen - der kan være en hvidmalet termometerhytte eller en metalskærm, når det drejer sig om nyere sensortyper - beskytter først og fremmest mod stråling fra sol, himmel, jord og genstande i nærheden samt mod nedbør.

Der måles lufttemperatur hver 10. minut, hver time eller hver 3. time døgnet rundt. I denne rapport er kun *lufttemperaturen* hver 3. time benyttet. Desuden måles ekstremer: *absolut maksimum- og minimumtemperatur* pr. døgn.

Udover forskellige temperaturmidler og -ekstremer indeholder denne rapport også *antal isdøgn, kuldedøgn, frostdøgn, sommerdøgn, tropiske nætter og graddage*.

Tables 3.1

Mean Temperature (°C). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	0.2	0.3	2.3	5.9	10.9	14.0	16.0	15.7	12.2	8.5	4.2	1.6	7.6
06041 Skagen Fyr	1.4	1.0	2.5	5.6	10.5	14.0	16.3	16.2	13.1	9.5	5.7	3.1	8.2
06052 Thyborøn	2.1	1.8	3.3	6.2	10.9	13.8	16.0	16.4	13.6	10.2	6.4	3.8	8.7
06060 FSN Karup	0.7	0.8	2.8	6.2	11.2	14.0	16.0	15.8	12.4	8.7	4.5	2.0	7.9
06070 FSN Tirstrup	0.6	0.5	2.4	5.8	10.9	14.1	16.2	15.8	12.2	8.6	4.6	2.0	7.8
06110 FSN Skrydstrup	0.7	0.7	2.9	6.2	10.9	13.8	15.7	15.7	12.4	8.7	4.6	2.1	7.9
06120 Odense Lufthavn	1.0	1.1	3.1	6.6	11.6	14.7	16.6	16.5	13.0	9.2	5.1	2.5	8.4
06141 Abed	0.6	0.6	3.0	6.6	11.6	14.6	16.6	16.7	13.2	9.1	4.9	2.3	8.3
06180 Københavns Lufthavn	0.6	0.5	2.5	6.1	11.1	14.8	16.9	16.7	13.1	9.1	4.9	2.1	8.2
06190 Bornholms Lufthavn	0.9	0.4	2.1	5.5	10.5	14.3	16.8	17.0	13.4	9.5	5.4	2.6	8.2

Air temperature

Our understanding of temperature is actual a measure for the content of energy in the air - that is the average kinetic energy for the single molecules. The more energy in the air, the higher temperature.

Reasonable correct and for that reason comparative air temperature readings assumes the protection of the sensor against unwanted influence from the surroundings (as radiation or precipitation) according to World Meteorological Organisation (WMO) regulations. In Denmark and other places the thermometers are placed inside a so-called "radiation screen" 2 metres above the ground. The screen could be a white painted slat, allowing ventilation or a metal screen, when dealing with new types of sensors.

Air temperature is measured every 10 minutes, every hour or every 3 hours the clock around. In this report only measurements of *air temperature* every 3 hours are included. In addition extremes are measured: *absolute maximum- and absolute minimum air temperature* every day.

In addition to the different temperature averages and - extremes also the *number of ice days, cold days, days with frost, summer days, tropical nights and heating degree days* are included in the report.

Tables 3.2
Average daily maximum temperature (°C). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	2.4	2.6	5.3	10.0	15.5	18.6	20.7	20.4	16.0	11.5	6.7	3.7	11.1
06041 Skagen Fyr	3.0	2.7	4.6	8.4	13.7	17.2	19.5	19.2	15.5	11.4	7.3	4.7	10.6
06052 Thyborøn	3.6	3.2	5.0	8.5	13.6	16.2	18.4	18.8	15.7	11.9	7.9	5.3	10.7
06060 FSN Karup	2.9	3.2	5.9	10.5	15.9	18.6	20.7	20.7	16.4	12.0	7.0	4.2	11.5
06070 FSN Tirstrup	2.8	3.0	5.6	10.4	15.8	18.9	21.1	20.8	16.3	11.8	7.0	4.2	11.5
06110 FSN Skrydstrup	2.8	3.1	5.9	10.4	15.3	18.1	20.2	20.5	16.4	11.9	7.1	4.2	11.3
06120 Odense Lufthavn	3.1	3.3	6.1	10.7	16.0	19.2	21.3	21.4	16.9	12.3	7.4	4.5	11.9
06141 Abed	2.6	2.7	5.7	10.5	15.8	18.7	20.8	21.3	16.8	12.0	7.0	4.1	11.5
06180 Københavns Lufthavn	2.5	2.8	5.5	10.2	15.5	19.1	21.2	21.0	16.7	11.9	6.9	4.1	11.4
06190 Bornholms Lufthavn	2.7	2.4	4.5	8.9	14.5	17.9	20.1	20.5	16.4	11.9	7.3	4.4	10.9

Tables 3.3
Absolute maximum temperature (°C). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	10.5	11.5	18.8	25.5	27.5	30.9	32.1	34.4	25.8	22.3	15.2	11.2	34.4
Day	16/01	24/02	19/03	01/05	26/05	06/06	08/07	11/08	03/09	03/10	03/11	06/12	11/08
Year	1989	1990	1990	2000	1989	1982	1991	1975	1991	1985	1984	1986	1975
06041 Skagen Fyr	10.2	11.5	15.7	19.0	23.6	27.1	28.2	29.0	22.6	19.0	13.2	11.1	29.0
Day	12/01	24/02	29/03	30/04	29/05	28/06	08/07	10/08	06/09	02/10	03/11	22/12	10/08
Year	1998	1990	1989	2000	1992	1988	1991	1975	1999	1985	1971	1971	1975
06052 Thyborøn	9.6	9.6	16.8	20.6	26.8	28.8	30.8	31.8	24.2	20.4	14.4	11.4	31.8
Day	01/02	08/02	19/03	25/04	17/05	05/06	26/07	10/08	02/09	10/10	03/11	13/12	10/08
Year	1990	1990	1990	1995	2000	1982	1994	1975	1997	1995	1984	2000	1975
06060 FSN Karup	11.3	12.2	22.2	26.8	28.4	30.1	32.7	34.6	27.8	23.0	16.0	12.3	34.6
Day	16/01	24/02	19/03	29/04	17/05	27/06	15/07	11/08	02/09	14/10	03/11	04/12	11/08
Year	1990	1990	1990	1993	2000	1995	1994	1975	1983	1978	1984	1986	1975
06070 FSN Tirstrup	12.0	12.4	17.9	25.1	27.0	29.9	30.9	33.9	26.5	23.0	14.4	13.4	33.9
Day	17/01	26/02	29/03	24/04	01/06	21/06	15/07	12/08	04/09	02/10	02/11	12/12	12/08
Year	1993	1998	1989	1993	1978	2000	1994	1975	1991	1985	1982	1994	1975
06110 FSN Skrydstr.	11.2	12.3	18.9	25.7	27.0	30.3	31.6	33.3	27.2	24.0	15.0	11.9	33.3
Day	16/01	22/02	19/03	23/04	31/05	01/07	22/07	11/08	04/09	13/10	03/11	25/12	11/08
Year	1975	1990	1990	1996	1978	1992	1992	1975	1991	1978	1984	1977	1975
06120 Od. Lufthavn	11.2	13.4	18.5	27.4	28.8	31.6	33.4	33.6	27.7	23.0	15.8	12.4	33.6
Day	17/01	22/02	19/03	24/04	17/05	21/06	22/07	12/08	04/09	13/10	03/11	24/12	12/08
Year	1993	1990	1990	1996	2000	2000	1992	1975	1991	1978	1984	1977	1975
06141 Abed	10.7	13.5	17.1	26.9	27.3	30.7	33.3	33.6	28.4	21.5	14.9	11.7	33.6
Day	07/01	22/02	25/03	24/04	17/05	21/06	22/07	11/08	04/09	12/10	02/11	13/12	11/08
Year	1999	1990	1973	1996	2000	2000	1992	1975	1979	1999	2000	2000	1975
06180 Kbh. Lufthavn	10.4	12.8	15.9	25.7	26.4	30.2	31.2	31.1	26.2	20.7	14.7	12.4	31.2
Day	16/01	19/02	01/04	29/04	29/05	21/06	15/07	11/08	02/09	11/10	03/11	25/12	15/07
Year	1990	1998	1998	1993	1985	2000	1994	1975	1983	1995	1996	1977	1994
06190 Brnh. Lufthavn	8.9	9.7	15.1	26.6	27.2	31.7	31.9	32.0	27.9	20.2	15.7	11.0	32.0
Day	18/01	22/02	01/04	01/05	22/05	01/07	14/07	11/08	02/09	09/10	03/11	14/12	11/08
Year	2000	1990	1999	2000	1993	1997	1994	1992	1983	1991	1989	2000	1992

Tables 3.4
Number of summer days ($t_{\max} > 25^{\circ}\text{C}$). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	0	0	0	0	0.4	2.1	4.0	3.5	0	0	0	0	10.0
06041 Skagen Fyr	0	0	0	0	0	0.2	1.0	1.4	0	0	0	0	2.6
06052 Thyborøn	0	0	0	0	0.1	0.3	1.3	1.5	0	0	0	0	3.2
06060 FSN Karup	0	0	0	0.1	0.9	2.9	5.0	4.6	0.2	0	0	0	13.7
06070 FSN Tirstrup	0	0	0	0.1	0.2	2.3	4.5	3.8	0.1	0	0	0	11.0
06110 FSN Skrydstrup	0	0	0	0.1	0.2	2.3	3.8	3.9	0.1	0	0	0	10.3
06120 Odense Lufthavn	0	0	0	0.1	0.6	2.5	4.6	4.9	0.3	0	0	0	12.9
06141 Abed	0	0	0	0.1	0.4	2.0	4.0	4.9	0.3	0	0	0	11.7
06180 Københavns Lufthavn	0	0	0	0	0.2	1.8	3.4	3.3	0.1	0	0	0	8.9
06190 Bornholms Lufthavn	0	0	0	0.1	0.5	1.2	2.7	3.5	0.1	0	0	0	8.2

Tables 3.5
Number of tropical nights ($t_{\min} > 20^{\circ}\text{C}$). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	0	0	0	0	0	0	0	0	0	0	0	0	0
06041 Skagen Fyr	0	0	0	0	0	0	0.03	0.23	0	0	0	0	0.27
06052 Thyborøn	0	0	0	0	0	0	0	0.30	0	0	0	0	0.30
06060 FSN Karup	0	0	0	0	0	0	0	0	0	0	0	0	0
06070 FSN Tirstrup	0	0	0	0	0	0	0	0	0	0	0	0	0
06110 FSN Skrydstrup	0	0	0	0	0	0	0.03	0	0	0	0	0	0.03
06120 Odense Lufthavn	0	0	0	0	0	0	0	0	0	0	0	0	0
06141 Abed	0	0	0	0	0	0	0	0.03	0	0	0	0	0.03
06180 Københavns Lufthavn	0	0	0	0	0	0	0.07	0.17	0	0	0	0	0.23
06190 Bornholms Lufthavn	0	0	0	0	0	0	0.07	0.17	0	0	0	0	0.23

Tables 3.6
Average daily minimum temperature ($^{\circ}\text{C}$). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	-2.4	-2.3	-0.7	1.9	6.3	9.8	11.9	11.4	8.5	5.1	1.5	-1.0	4.2
06041 Skagen Fyr	-0.7	-1.1	0.3	2.9	7.5	10.9	13.1	13.0	10.4	7.1	3.6	1.0	5.7
06052 Thyborøn	0.5	0.1	1.6	4.1	8.5	11.7	14.0	14.4	11.8	8.4	4.8	2.1	6.8
06060 FSN Karup	-2.0	-2.0	-0.5	1.8	6.1	9.3	11.5	11.0	8.4	5.2	1.6	-0.7	4.1
06070 FSN Tirstrup	-2.2	-2.3	-1.1	1.2	5.4	9.1	11.2	10.7	7.9	4.9	1.7	-0.7	3.8
06110 FSN Skrydstrup	-1.8	-2.0	-0.3	1.9	6.2	9.2	11.2	10.7	8.2	5.2	1.7	-0.5	4.1
06120 Odense Lufthavn	-1.5	-1.4	0.1	2.5	6.7	9.9	11.7	11.5	8.9	5.8	2.4	0.2	4.7
06141 Abed	-1.5	-1.6	0.3	2.8	7.3	10.3	12.2	12.0	9.4	6.0	2.6	0.3	5.0
06180 Københavns Lufthavn	-1.7	-1.9	-0.4	2.4	7.0	10.8	12.9	12.6	9.7	6.1	2.4	-0.2	5.0
06190 Bornholms Lufthavn	-1.1	-1.7	-0.4	2.1	6.6	10.7	13.3	13.4	10.5	6.9	3.2	0.5	5.3

Tables 3.7
Absolute minimum temperature ($^{\circ}\text{C}$). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	-25.2	-19.4	-25.6	-8.1	-2.1	2.0	4.2	3.7	-2.3	-5.8	-16.4	-23.0	-25.6
Day	08/01	19/02	06/03	10/04	08/05	15/06	15/07	27/08	01/10	27/10	01/12	21/12	06/03
Year	1982	1985	1987	1977	1996	1982	1977	1995	1995	1997	1985	1981	1987
06041 Skagen Fyr	-16.5	-15.0	-10.8	-4.8	-3.0	3.2	6.0	5.5	1.3	-2.6	-5.8	-12.4	-16.5
Day	10/01	11/02	03/03	14/04	08/05	17/06	02/07	01/09	19/09	22/10	30/11	31/12	10/01
Year	1987	1985	1987	1996	1996	1991	1994	1993	1993	1973	1988	1978	1987
06052 Thyborøn	-15.6	-13.0	-8.4	-2.4	1.0	6.2	9.2	9.5	6.0	0.0	-5.6	-11.2	-15.6
Day	10/01	15/02	03/03	05/04	02/05	02/06	10/07	23/08	30/09	26/10	23/11	01/01	10/01
Year	1982	1979	1987	1996	1979	1975	1993	1977	1983	1985	1998	1978	1982
06060 FSN Karup	-28.4	-21.0	-16.3	-7.8	-4.0	1.1	3.7	1.0	-2.3	-5.3	-18.0	-24.0	-28.4
Day	08/01	19/02	03/03	11/04	11/05	15/06	02/07	29/08	01/10	27/10	01/12	21/12	08/01
Year	1982	1978	1986	1986	1978	1982	1995	1981	1983	1997	1973	1981	1982
06070 FSN Tirstrup	-24.3	-23.0	-21.2	-10.8	-6.0	-0.6	3.4	1.6	-5.0	-7.4	-17.0	-20.0	-24.3
Day	09/01	19/02	03/03	12/04	02/05	02/06	20/07	26/08	01/10	19/10	01/12	18/12	09/01
Year	1982	1985	1986	1986	1979	1989	1996	1986	1972	1994	1985	1981	1982
06110 FSN Skrydstr.	-20.5	-24.0	-16.0	-7.0	-4.0	-0.2	3.0	1.9	-2.3	-7.3	-19.0	-21.0	-24.0
Day	10/01	20/02	22/03	24/04	06/05	04/06	06/07	23/08	01/10	28/10	01/12	21/12	20/02
Year	1986	1978	1978	1981	1979	1975	1978	1973	1995	1997	1973	1981	1978
06120 Od. Lufthavn	-21.6	-20.0	-14.9	-5.3	-2.0	1.7	3.6	4.2	-1.4	-4.1	-16.2	-20.0	-21.6
Day	09/01	20/02	07/03	12/04	05/05	06/06	20/07	01/09	01/10	28/10	01/12	18/12	09/01
Year	1982	1978	1987	1986	1979	1991	1996	2000	1983	1997	1985	1981	1982
06141 Abed	-21.7	-19.8	-15.9	-5.2	-1.5	2.5	4.8	3.8	0.2	-4.9	-12.7	-15.4	-21.7
Day	09/01	19/02	04/03	09/04	17/05	02/06	20/07	13/08	01/10	27/10	01/12	27/12	09/01
Year	1985	1978	1986	1990	1978	1974	1996	1987	1983	1997	1985	1995	1985
06180 Kbh. Lufthavn	-17.8	-16.2	-13.9	-5.2	-2.0	3.4	6.0	5.2	0.9	-4.1	-9.5	-15.9	-17.8
Day	11/01	10/02	06/03	02/04	03/05	02/06	04/07	25/08	18/09	28/10	01/12	27/12	11/01
Year	1987	1985	1987	1996	1981	1991	1979	1986	1977	1997	1983	1995	1987
06190 Brnh. Lufthavn	-15.7	-17.7	-16.1	-7.0	-3.0	-0.2	4.0	5.4	-0.2	-5.7	-10.1	-14.1	-17.7
Day	30/01	26/02	04/03	12/04	22/05	18/06	18/07	30/08	30/09	31/10	22/11	27/12	26/02
Year	1987	1986	1986	1986	1980	1978	1978	1989	1979	1992	1988	1995	1986

Tables 3.8
Number of days with frost ($t_{\min} < 0^{\circ}\text{C}$). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	19.2	18.0	16.3	7.3	0.4	0	0	0	0.2	3.2	10.1	16.3	91.0
06041 Skagen Fyr	15.6	16.5	11.4	3.7	0.1	0	0	0	0	0.8	4.4	10.7	63.1
06052 Thyborøn	12.1	12.1	7.0	0.8	0	0	0	0	0	0	1.9	7.7	41.4
06060 FSN Karup	16.7	16.9	15.0	8.8	1.1	0	0	0	0.1	3.7	9.8	15.4	87.3
06070 FSN Tirstrup	18.0	17.5	16.2	10.9	2.4	0	0	0	0.9	4.8	9.4	14.8	94.7
06110 FSN Skrydstrup	16.9	16.9	14.2	8.2	1.4	0	0	0	0.4	3.5	9.0	15.4	85.8
06120 Odense Lufthavn	16.4	15.6	13.3	5.7	0.6	0	0	0	0.1	2.5	7.4	12.6	74.2
06141 Abed	16.5	15.8	12.2	4.3	0.2	0	0	0	0	1.6	6.6	12.2	69.8
06180 Københavns Lufthavn	18.2	17.0	14.8	5.5	0.2	0	0	0	0	1.7	7.4	14.0	78.7
06190 Bornholms Lufthavn	16.3	16.7	14.1	6.4	0.7	0	0	0	0.1	1.6	5.8	11.6	73.3

Tables 3.9
Number of ice days ($t_{\max} < 0^{\circ}\text{C}$). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	7.3	6.6	1.5	0	0	0	0	0	0	0	0.8	4.3	20.5
06041 Skagen Fyr	5.8	6.3	1.7	0	0	0	0	0	0	0	0.2	2.5	16.5
06052 Thyborøn	4.8	4.6	1.2	0	0	0	0	0	0	0	0.1	1.9	12.6
06060 FSN Karup	6.8	5.5	1.1	0	0	0	0	0	0	0	0.8	4.0	18.2
06070 FSN Tirstrup	6.5	6.1	1.4	0	0	0	0	0	0	0	0.4	3.0	17.4
06110 FSN Skrydstrup	6.7	5.8	1.3	0	0	0	0	0	0	0	0.6	3.5	17.9
06120 Odense Lufthavn	6.5	5.4	1.3	0	0	0	0	0	0	0	0.3	2.9	16.3
06141 Abed	6.6	6.1	1.4	0	0	0	0	0	0	0	0.4	3.6	18.5
06180 Københavns Lufthavn	6.9	5.7	1.4	0	0	0	0	0	0	0	0.4	2.7	17.1
06190 Bornholms Lufthavn	5.7	5.5	1.7	0	0	0	0	0	0	0	0.2	2.0	14.9

Tables 3.10
Number of cold days ($t_{\min} < -10^{\circ}\text{C}$). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	2.6	1.9	0.7	0	0	0	0	0	0	0	0.2	1.2	6.6
06041 Skagen Fyr	0.7	0.6	0.1	0	0	0	0	0	0	0	0	0.1	1.5
06052 Thyborøn	0.5	0.4	0	0	0	0	0	0	0	0	0	0.1	0.9
06060 FSN Karup	3.0	2.0	0.8	0	0	0	0	0	0	0	0.4	1.6	7.9
06070 FSN Tirstrup	3.1	2.4	1.1	0	0	0	0	0	0	0	0.3	1.5	8.4
06110 FSN Skrydstrup	2.5	2.0	0.5	0	0	0	0	0	0	0	0.3	1.2	6.4
06120 Odense Lufthavn	1.9	1.5	0.4	0	0	0	0	0	0	0	0.1	0.9	4.8
06141 Abed	1.8	1.7	0.2	0	0	0	0	0	0	0	0.1	0.5	4.4
06180 Københavns Lufthavn	1.6	1.3	0.3	0	0	0	0	0	0	0	0	0.7	3.9
06190 Bornholms Lufthavn	0.6	1.2	0.5	0	0	0	0	0	0	0	0	0.2	2.5

Tables 3.11
Heating degree days* (sum of ($17^{\circ}\text{C} - t_{\text{day}}$)). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	520	472	455	334	192	99	50	57	145	265	383	478	3451
06041 Skagen Fyr	482	453	448	341	201	95	41	42	119	232	339	430	3223
06052 Thyborøn	461	429	424	323	192	103	50	37	102	211	317	407	3057
06060 FSN Karup	506	458	440	325	183	102	55	59	140	257	375	465	3366
06070 FSN Tirstrup	509	465	453	336	192	96	48	56	145	261	373	465	3399
06110 FSN Skrydstrup	505	461	438	325	191	107	60	61	139	257	372	463	3380
06120 Odense Lufthavn	495	450	429	312	171	84	41	42	124	243	358	425	3173
06141 Abed	507	462	433	311	171	84	40	39	118	244	362	455	3238
06180 Københavns Lufthavn	509	466	451	328	183	77	32	36	120	244	364	461	3272
06190 Bornholms Lufthavn	498	468	461	347	203	91	35	30	109	233	349	436	3259

*uncorrected, i.e. no correction for wind and sunshine. The yearly values are the sum of 12 months from January to December.

Nedbør

Nedbør er defineret som det faste eller flydende resultat af de nedbørprocesser som sker i en sky og som derefter falder ud af dem.

Det kan være som sammenhængende nedbør, eller byger bestående af: regn, slud, sne eller hagl. Hertil kommer et oftest mindre bidrag fra andre kondensationsprocesser i form af dug, rim og afsætning af tågedråber.

Den totale nedbørmængde, som når overfladen i en given periode (i denne rapport døgn, måned og år) udtrykkes ved den dybde, hvormed den - i flydende form (fast nedbør smeltes således før måling) - ville dække et horisontalt plan af jordens overflade, hvis den kunne blive liggende uden at fordampe eller løbe af.

Rent praktisk anbringes nedbørmålere i Danmark 1,5 meter over terræn og de forsynes nogle gange med en læskærm for at minimere problemer med vindtransport af nedbøren. I nyere tid er også automatiske nedbørmålere indført.

Ligestyldig hvilken metode man bruger til at måle nedbørmængde må man tilstræbe at målingen er så tæt på den "sande" mængde som mulig, men det kan af mange årsager være vanskeligt at opnå, specielt under ekstreme forhold.

Tabellerne viser den *akkumulerede nedbørmængde*, *største 24-timers nedbør* samt *antal døgn med nedbør større end eller lig med henh. 0.1, 1, 5 og 10 mm*. Endelig er *antal døgn med hagl og snefald* vist.

Precipitation

Precipitation is defined as the solid or liquid result of the precipitation processes, which take place in a cloud and subsequently fall from it. The result can be coherent precipitation or showers or what can be deposited from the air to the ground or the surface of the sea. In broad outline this can be about rain, sleet, snow, hail plus dew, white frost and deposit of fog.

The total amount of precipitation, falling on the ground in a given period (in this report days, months and years) is defined by the depth of a volume of precipitation (in liquid form; solid precipitation is melted before the reading) covering a horizontal plane on the surface of the ground, if there was no run-off or evaporation.

Practically the rain gauges in Denmark are placed 1,5 metres above the ground and some places in addition provided with a shelter arrangement in order to minimise the wind related problems. In recent times automatic rain gauges has been introduced.

No matter which method used to measure the amount of precipitation it is important that the registration should be as close as possible to the "true" precipitation. Obviously this can be very difficult, especially during extreme conditions.

The tables shows the *accumulated precipitation*, *highest 24 hour precipitation* and *number of days with precipitation exceeding 0.1, 1, 5 and 10 mm*. Finally *number of days with hail and snowfall* are shown.

Tables 4.1
Mean accumulated precipitation (mm). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	45.8	29.6	37.8	30.8	42.3	55.5	51.4	58.1	71.3	66.4	56.3	52.8	600.1
06041 Skagen Fyr	52.4	32.1	40.4	33.7	43.6	54.6	48.8	61.9	75.5	75.6	66.1	58.5	643.2
06052 Thyborøn	63.4	42.8	47.4	34.3	37.6	46.5	45.4	65.4	81.6	88.8	86.1	76.1	719.2
06060 FSN Karup	67.7	45.9	55.5	40.8	48.1	63.3	59.3	68.7	84.5	86.7	81.1	77.0	778.5
06070 FSN Tirstrup	56.0	37.5	49.3	38.0	45.5	62.8	59.6	61.4	73.3	68.4	63.3	58.9	674.1
06110 FSN Skrydstrup	69.6	46.8	56.3	42.5	52.7	68.7	71.2	75.3	87.1	93.9	87.8	77.5	829.3
06120 Odense Lufthavn	48.5	30.1	39.6	32.4	41.1	50.6	50.0	52.7	56.7	58.1	53.3	47.7	560.9
31350 Tjennemarke	49.4	33.1	43.0	37.8	41.2	54.3	59.1	55.1	58.3	52.1	56.0	55.4	594.8
06180 Københavns Lufthavn	37.3	22.7	35.0	32.5	40.5	50.0	51.4	50.1	58.9	50.2	48.0	46.0	522.6
06190 Bornholms Lufthavn	40.2	22.8	30.6	30.2	31.9	44.2	47.1	41.4	55.5	50.2	52.1	42.4	488.7

Tables 4.2
Highest 24 hour precipitation (mm). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	16.8	24.0	19.5	21.0	37.0	50.0	39.3	31.1	61.0	27.0	25.6	26.0	61.0
Day	06/01	08/02	06/03	04/04	28/05	30/06	26/07	31/08	16/09	14/10	17/11	25/12	16/09
Year	1999	1990	1975	1998	1981	1981	1973	1973	1994	1976	1974	1977	1994
06041 Skagen Fyr	30.0	16.0	26.0	20.0	56.0	44.0	54.6	44.0	81.0	35.5	28.0	26.4	81.0
Day	19/01	16/02	07/03	14/04	28/05	30/06	31/07	16/08	16/09	16/10	14/11	24/12	16/09
Year	1995	1992	1999	2000	1981	1981	1989	1999	1994	1976	1994	1984	1994
06052 Thyborøn	31.0	25.0	30.0	22.3	31.0	44.0	46.9	49.0	43.0	40.3	41.0	28.0	49.0
Day	05/01	08/02	19/03	30/04	19/05	01/07	01/08	04/08	22/09	02/10	17/11	06/12	04/08
Year	1982	1990	1997	1972	1983	1998	1972	1986	1990	1974	1999	1985	1986
06060 FSN Karup	20.0	30.0	23.0	35.0	40.0	64.0	62.1	44.6	41.0	43.6	31.3	26.0	64.0
Day	11/01	08/02	23/03	29/04	28/05	30/06	30/07	08/08	05/09	14/10	02/11	25/12	30/06
Year	1993	1990	1986	1991	1981	1981	1972	1971	1990	1976	1991	1999	1981
06070 FSN Tirstrup	28.0	30.0	21.1	25.0	37.0	38.0	80.7	66.0	71.0	31.0	27.0	36.0	80.7
Day	19/01	08/02	27/03	04/04	28/05	12/06	11/07	21/08	16/09	03/10	28/11	02/12	11/07
Year	1995	1990	2000	1998	1981	1999	1975	1981	1994	1994	1983	1985	1975
06110 FSN Skrydstr.	29.0	34.0	24.0	36.0	34.0	44.0	50.0	46.0	37.0	33.0	31.1	27.0	50.0
Day	05/01	08/02	20/03	04/04	28/05	29/06	09/07	03/08	25/09	08/10	01/12	12/12	09/07
Year	1982	1990	1991	1998	1981	1981	1980	1991	1990	1982	1976	1994	1980
06120 Od. Lufthavn	32.0	34.0	21.0	35.0	46.0	42.0	63.4	51.0	37.3	34.0	25.9	22.0	63.4
Day	13/01	08/02	17/03	17/04	28/05	09/06	30/07	21/08	22/09	08/10	01/12	10/12	30/07
Year	1978	1990	1979	1986	1981	1990	1972	1981	1973	1980	1976	1983	1972
31350 Tjennemarke	31.5	22.1	30.7	28.4	50.4	74.6	71.7	57.8	41.1	29.1	31.5	28.5	74.6
Day	20/01	17/02	07/03	04/04	25/05	01/07	30/07	29/08	16/09	21/10	27/11	01/01	01/07
Year	1986	2000	1999	1998	1983	1980	1972	1989	1994	1981	1990	1978	1980
06180 Kbh. Lufthavn	20.0	13.0	16.0	33.0	27.0	32.0	58.0	33.0	37.9	30.0	26.0	26.0	58.0
Day	23/01	12/02	29/03	14/04	28/05	07/06	25/07	29/08	16/09	16/10	12/11	11/12	25/07
Year	1995	1998	1983	1994	1981	1984	1986	1989	1994	1976	1992	1979	1986
06190 Brnh. Lufthavn	26.0	16.0	18.0	29.0	28.0	56.0	66.0	39.0	39.0	37.0	29.0	19.0	66.0
Day	12/01	11/02	07/03	30/04	05/05	16/06	10/07	28/08	06/09	11/10	28/11	11/12	10/07
Year	1987	1981	1999	1991	1996	1987	1996	1989	1997	1982	1983	1979	1996

Tables 4.3
Number of days with precipitation $\geq 0,1$ mm. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	16.5	12.8	14.9	11.5	11.1	12.0	11.5	12.6	15.3	16.2	17.7	17.3	169.3
06041 Skagen Fyr	16.5	12.3	13.7	11.2	11.1	11.8	10.1	11.8	14.4	16.0	16.6	16.7	162.3
06052 Thyborøn	17.6	14.1	15.7	11.7	10.1	10.6	11.0	12.2	15.2	17.2	18.1	18.7	172.7
06060 FSN Karup	19.1	14.9	16.7	12.3	11.9	13.0	12.9	14.0	16.0	17.6	19.3	19.9	187.7
06070 FSN Tirstrup	17.2	15.1	16.5	12.8	11.6	12.8	12.5	13.2	15.8	16.2	18.3	18.4	180.5
06110 FSN Skrydstrup	19.1	14.4	17.1	14.0	12.7	13.7	15.1	14.7	16.9	18.0	19.8	19.9	195.3
06120 Odense Lufthavn	16.4	12.7	14.7	11.8	11.0	12.4	12.4	12.7	14.8	15.8	16.7	16.5	168.0
31350 Tjennemarke	16.3	13.0	14.3	11.7	10.7	12.4	12.3	11.5	13.6	15.0	17.1	17.5	165.3
06180 Københavns Lufthavn	14.9	11.4	13.5	11.5	10.8	12.0	12.4	12.0	13.6	14.5	15.4	15.4	157.4
06190 Bornholms Lufthavn	16.5	12.9	13.7	11.2	10.0	11.0	10.6	10.8	13.2	14.5	16.7	16.1	157.3

Tables 4.4
Number of days with precipitation ≥ 1 mm. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	10.9	7.5	9.6	7.2	7.5	8.4	7.6	9.0	11.1	11.3	12.2	11.6	114.4
06041 Skagen Fyr	10.7	7.2	8.9	7.3	7.4	8.2	6.9	8.7	10.7	11.6	11.9	11.1	110.5
06052 Thyborøn	12.5	9.1	10.7	7.5	7.0	7.5	7.6	9.2	11.3	13.2	14.6	13.2	123.7
06060 FSN Karup	12.6	9.6	11.2	8.2	8.0	9.6	9.4	10.3	12.2	12.8	13.9	13.9	131.6
06070 FSN Tirstrup	11.5	9.1	11.2	8.3	7.9	9.3	8.6	8.8	10.7	11.3	12.1	11.8	120.6
06110 FSN Skrydstrup	13.0	9.6	11.5	8.4	8.6	10.1	10.5	10.5	11.7	12.8	14.7	13.3	134.6
06120 Odense Lufthavn	10.4	7.4	9.0	7.5	7.3	8.9	8.1	8.6	9.7	10.8	10.9	9.8	108.4
31350 Tjennemarke	11.1	8.1	10.0	8.3	7.7	9.3	9.0	7.9	9.6	10.7	11.5	11.7	114.9
06180 Københavns Lufthavn	9.0	6.4	8.2	7.0	7.0	8.8	8.5	8.0	9.6	9.4	9.8	9.9	101.6
06190 Bornholms Lufthavn	9.2	6.8	7.8	6.4	6.1	7.2	7.5	7.0	8.6	9.5	11.2	10.2	97.6

Tables 4.5
Number of days with precipitation ≥ 5 mm. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	3.3	1.9	2.5	2.1	3.0	4.0	3.4	4.4	5.3	4.9	3.9	4.1	43.1
06041 Skagen Fyr	3.8	2.3	2.8	2.6	3.4	3.9	3.0	4.1	5.2	5.4	5.0	4.6	46.2
06052 Thyborøn	4.9	3.1	3.7	2.4	2.9	3.3	3.1	4.2	5.4	6.4	7.0	5.8	52.6
06060 FSN Karup	5.3	3.5	4.3	3.1	3.5	3.9	3.8	4.9	5.5	6.2	6.1	5.9	56.0
06070 FSN Tirstrup	4.1	2.7	3.8	2.6	3.5	4.3	3.9	4.3	4.6	4.8	5.2	4.2	48.1
06110 FSN Skrydstrup	5.2	3.4	4.3	3.0	3.9	4.9	5.1	5.2	5.9	6.8	6.7	6.1	60.5
06120 Odense Lufthavn	3.7	1.8	2.6	2.0	3.1	3.7	3.5	3.4	4.2	4.1	4.0	3.5	39.7
31350 Tjennemarke	3.5	1.9	2.8	2.4	2.4	4.0	3.7	3.3	4.2	3.1	3.8	3.9	39.0
06180 Københavns Lufthavn	2.5	1.4	2.7	2.1	3.0	3.5	3.6	3.5	3.9	3.7	3.3	3.4	36.5
06190 Bornholms Lufthavn	2.6	1.2	1.9	2.0	2.2	2.9	3.5	2.6	3.8	3.7	3.7	2.6	32.5

Tables 4.6
Number of days with precipitation ≥ 10 mm. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	0.6	0.3	0.5	0.5	1.1	1.6	1.8	2.0	2.0	2.1	1.1	1.0	14.8
06041 Skagen Fyr	1.0	0.5	0.7	0.7	0.9	1.6	1.5	1.9	2.2	2.7	1.9	1.5	17.1
06052 Thyborøn	1.4	0.8	0.7	0.7	0.7	1.2	1.0	2.0	2.7	3.2	2.3	1.9	18.7
06060 FSN Karup	1.8	0.8	1.2	0.8	1.3	1.8	1.7	2.4	2.8	2.8	2.3	2.0	21.6
06070 FSN Tirstrup	1.2	0.5	1.1	0.7	1.3	2.2	1.9	1.7	2.1	2.1	1.5	1.3	17.6
06110 FSN Skrydstrup	1.9	1.0	1.1	0.7	1.7	2.1	2.1	2.7	2.9	2.9	2.8	2.4	24.1
06120 Odense Lufthavn	1.0	0.4	0.8	0.5	1.0	1.3	1.2	1.5	1.6	1.4	1.1	1.2	12.9
31350 Tjennemarke	0.9	0.4	0.6	0.7	1.0	1.1	1.6	1.6	1.3	1.2	1.2	0.9	12.5
06180 Københavns Lufthavn	0.5	0.2	0.5	0.8	1.4	1.6	1.3	1.4	1.6	1.2	1.0	0.7	12.0
06190 Bornholms Lufthavn	0.7	0.2	0.3	0.7	0.7	1.1	1.4	1.1	1.7	1.1	0.9	0.8	10.7

Tables 4.7
Number of days with hail. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	0.8	0.6	0.8	0.5	0.2	0.1	0	0	0.1	0.4	0.6	0.6	4.6
06041 Skagen Fyr	0.5	0.3	0.2	0.3	0.1	0.1	0	0	0.1	0.6	0.7	0.6	3.6
06052 Thyborøn	1.5	0.7	1.0	0.3	0.1	0	0.1	0.1	0.1	0.3	1.2	1.4	6.8
06060 FSN Karup	1.4	0.8	0.9	1.1	0.4	0	0	0	0.1	0.5	0.7	1.0	6.9
06070 FSN Tirstrup	0.3	0.4	0.6	0.6	0.2	0.1	0	0	0.1	0.1	0.4	0.2	3.0
06110 FSN Skrydstrup	0.9	0.7	0.9	0.9	0.2	0	0	0	0.1	0.4	0.8	0.8	5.7
06120 Odense Lufthavn	0.4	0.2	0.6	0.5	0.1	0	0.1	0	0	0.1	0.3	0.3	2.7
06141 Abed*	-	-	-	-	-	-	-	-	-	-	-	-	-
06180 Københavns Lufthavn	0.1	0	0.3	0.6	0.1	0	0	0	0.1	0.1	0.2	0	1.6
06190 Bornholms Lufthavn	0.2	0.1	0.2	0.3	0	0	0	0	0	0.1	0.7	0.4	2.1

*no data from 06141 Abed

Tables 4.8
Number of days with snowfall. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	7.0	5.2	4.3	1.3	0	0	0	0	0	0.1	2.0	4.8	24.6
06041 Skagen Fyr	5.8	4.6	3.7	1.2	0	0	0	0	0	0.1	1.2	3.7	20.3
06052 Thyborøn	4.5	4.2	3.4	0.8	0	0	0	0	0	0	0.7	3.3	17.0
06060 FSN Karup	7.3	6.3	4.9	1.6	0.1	0	0	0	0	0.2	2.6	5.8	28.8
06070 FSN Tirstrup	7.2	7.2	5.6	1.7	0.1	0	0	0	0	0.2	2.7	5.1	29.8
06110 FSN Skrydstrup	6.5	5.8	5.1	1.7	0.1	0	0	0	0	0.1	2.2	5.2	26.7
06120 Odense Lufthavn	6.0	4.4	3.9	1.1	0	0	0	0	0	0	1.6	3.3	20.9
06141 Abed*	-	-	-	-	-	-	-	-	-	-	-	-	-
06180 Københavns Lufthavn	5.9	4.4	4.1	1.3	0	0	0	0	0	0.2	1.7	3.9	21.4
06190 Bornholms Lufthavn	5.6	5.3	4.0	0.9	0.1	0	0	0	0	0	1.8	3.4	21.2

*no data from 06141 Abed

Solskinstimer

Ved solskinstimer over en vis periode forstås den sammenlagte tid, det direkte sollys når jordoverfladen i det pågældende tidsrum og med en vis minimumsintensitet.

Perioden i denne rapport er 1 døgn, 1 måned eller 1 år.

Hours of bright sunshine

The term “hours of bright sunshine” over a fixed period generally means the accumulated time period, where the insolation from the sun reach the surface of the Earth and exceeds a certain minimum intensity. The periods in this report are 1 day (i.e. 24 hours), 1 month or 1 year.

Tables 5.1

Mean accumulated hours of bright sunshine. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
20000 Skagen Fyr*	59	77	135	194	291	274	306	257	164	101	56	48	1.969
20210 Tylstrup	43	72	119	183	255	253	265	228	149	100	59	38	1.771
24020 Trans	49	77	117	176	244	233	242	219	137	93	53	34	1.691
21305 Vinkel	37	64	105	169	238	225	236	211	135	95	54	33	1.579
22230 Røved	44	67	114	177	250	242	249	223	146	98	59	39	1.708
26400 Store Jydevad	45	67	110	166	239	220	226	218	137	99	54	38	1.618
28275 Ore/Årslev	40	62	110	172	251	235	245	223	143	101	57	34	1.674
31350 Tjennemarke	44	64	114	181	256	239	256	232	155	107	59	37	1.743
30340 Københavns Toldbod	46	65	117	188	262	247	260	241	154	103	58	38	1.780
32182 Østermarie	35	53	112	190	284	266	276	252	155	102	46	31	1.809

*20000 Skagen Fyr from June 1988

Vind

Ved "vind" forstås generelt luftens bevægelse. I meteorologisk sammenhæng forstås "vinden" som den faktiske vandrette bevægelse indenfor en bestemt midlingsperiode, der normalt er 10 minutter. Vindretningen angives som den middeltretning, hvorfra vinden blæser indenfor midlingsperioden. *Vindhastigheden* er den hastighed, hvormed vinden bevæger sig i forhold til jordoverfladen. *Vindstød* er såvel positive som negative afvigelser fra middelvindhastigheden indenfor et kort tidsrum, normalt få sekunder (vindstødet varighed må ikke overstige 1 minut). Det er dog kun de højeste positive afvigelser, der rapporteres.

Da vindretningen og navnlig vindhastigheden normalt ændrer sig relativ meget i lav højde over jorden, fordi luften bremses og afbøjes af terrænet (såsom bakker og vegetation samt bygninger osv.), er det internationalt vedtaget, at vindmålinger skal foretages 10 meter over åbent fladt terræn.

Se *vindroser* for alle stationer i afsnittet "Vindroser" side 26.

Wind

The term "wind" generally means movement of air. In meteorological terms the "wind" is the actual horizontal movement over a certain period, normally 10 minutes. The wind direction is given as the mean direction, from where the wind blows over the time period in question (i.e. 10 minutes). *The wind speed* is the speed, with which the wind moves compared to the ground. *Gust* is both negative and positive deviations from the mean wind speed over a short time period, normally few seconds (the duration of the gust must not exceed 1 minute). Only the positive deviations are reported.

Since the wind direction and especially the wind speed normally change relatively much in low levels just above the ground - because of the brake and deflect of the air when moving over terrain (hills, vegetation, buildings etc.) - a international agreement state that wind measurements must be carried out 10 metres over open and flat terrain.

See *wind roses* for all stations in the section "Wind roses" on page 26.

Tables 6.1

Mean wind speed (m/sec). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	5.6	5.4	5.5	5.0	4.7	4.6	4.7	4.4	4.9	5.0	5.1	5.4	5.0
06041 Skagen Fyr	8.7	8.2	7.9	6.8	6.2	6.4	6.3	6.3	7.7	8.2	8.7	8.8	7.5
06052 Thyborøn	7.7	7.2	7.1	6.3	5.8	6.0	6.2	6.0	7.2	7.5	7.7	7.7	6.9
06060 FSN Karup	5.3	5.1	5.4	4.8	4.5	4.4	4.5	4.2	4.6	4.6	4.8	5.1	4.8
06070 FSN Tirstrup	4.6	4.6	4.6	4.2	3.9	3.8	4.0	3.7	4.0	4.0	4.2	4.5	4.2
06110 FSN Skrydstrup	5.5	5.2	5.3	4.6	4.2	4.0	4.1	3.8	4.3	4.5	4.8	5.3	4.6
06120 Odense Lufthavn	5.7	5.5	5.5	4.9	4.5	4.3	4.3	4.1	4.6	4.8	5.3	5.6	4.9
06141 Åbed*	5.6	5.8	5.4	4.8	4.4	3.9	3.9	4.0	4.3	4.9	4.7	5.2	4.7
06180 Københavns Lufthavn	6.3	5.9	5.8	5.1	4.7	4.7	4.8	4.6	5.3	5.6	6.1	6.3	5.4
06190 Bornholms Lufthavn	6.9	6.2	6.0	5.4	5.2	4.8	5.1	5.1	5.9	6.4	7.1	7.1	5.9

*06141 Åbed 1987-2000

Tables 6.2
Maximum wind gust (m/sec). Climatological normals 1971-2000*.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	35.0	34.5	30.9	27.3	29.3	24.7	21.6	23.1	26.8	26.8	30.9	29.8	35.0
Day	30/01	26/02	28/03	19/04	23/05	18/06	29/07	15/08	10/09	29/10	30/11	14/12	30/01
Year	2000	1997	1997	1992	1991	1998	1992	1999	1994	1988	1999	2000	2000
06041 Skagen Fyr	-	-	-	-	-	-	-	-	-	-	-	-	-
Day	-	-	-	-	-	-	-	-	-	-	-	-	-
Year	-	-	-	-	-	-	-	-	-	-	-	-	-
06052 Thyborøn	-	-	-	-	-	-	-	-	-	-	-	-	-
Day	-	-	-	-	-	-	-	-	-	-	-	-	-
Year	-	-	-	-	-	-	-	-	-	-	-	-	-
06060 FSN Karup	36.5	35.5	29.8	32.4	24.2	29.8	24.2	26.2	28.8	34.5	32.4	34.5	36.5
Day	30/01	27/02	25/03	08/04	23/05	23/06	01/08	14/08	10/09	17/10	07/11	04/12	30/01
Year	2000	1990	1994	1995	1991	1994	1989	1994	1997	1987	1996	1999	2000
06070 FSN Tirstrup	31.4	34.5	27.8	30.4	26.2	25.2	22.1	22.1	24.2	24.2	27.3	29.3	34.5
Day	30/01	27/02	28/03	08/04	23/05	24/06	06/07	02/08	10/09	29/10	29/11	20/12	27/02
Year	2000	1990	1997	1995	1991	1994	1995	1989	1997	1988	1988	1993	1990
06110 FSN Skrydstr.	36.0	36.0	29.3	29.8	24.7	22.1	22.1	23.7	29.3	28.3	32.9	47.3	47.3
Day	26/01	27/02	04/03	08/04	25/05	23/06	15/08	01/08	25/09	31/10	07/11	04/12	04/12
Year	1990	1990	2000	1995	1991	1994	1989	1994	1988	2000	1996	1999	1999
06120 Od. Lufthavn	35.0	35.0	28.3	30.4	24.7	21.6	21.6	21.6	28.3	26.2	34.0	45.8	45.8
Day	22/01	27/02	03/03	08/04	23/05	23/06	15/07	15/08	10/09	26/10	07/11	04/12	04/12
Year	1993	1990	1998	1995	1991	1994	1998	1994	1997	1998	1996	1999	1999
06141 Abed	38.8	30.5	25.6	28.1	24.2	24.2	22.0	24.9	34.6	27.9	29.8	38.1	38.8
Day	14/01	22/01	29/03	06/04	23/05	09/06	27/07	28/08	25/09	13/10	01/12	04/12	14/01
Year	1993	1995	1987	1989	1991	1987	1993	1989	1988	1993	1999	1999	1993
06180 Kbh. Lufthavn	37.0	31.8	30.8	31.4	27.8	25.7	24.7	24.7	29.8	27.2	32.4	42.7	42.7
Day	14/01	27/02	30/03	12/04	23/05	18/06	18/07	29/08	29/09	12/10	30/11	04/12	04/12
Year	1993	1990	1985	1997	1991	1998	1987	1989	1995	1985	1988	1999	1999
06190 Brnh. Lufthavn	39.6	31.9	30.9	29.3	27.8	25.2	22.1	24.7	31.4	33.4	34.0	41.2	41.2
Day	23/01	05/02	04/03	12/04	03/05	17/06	15/07	30/08	29/09	29/10	18/11	04/12	04/12
Year	1995	1999	2000	1997	1998	1998	1998	1994	1995	1998	1995	1999	1999

*06030 FSN Ålborg 1988-2000

*no data from 06041 Skagen Fyr

*no data from 06052 Thyborøn

*06060 FSN Karup 1986-2000

*06070 FSN Tirstrup 1986-2000

*06110 FSN Skrydstrup 1986-2000

*06120 Odense Lufthavn 1989-2000

*06141 Abed 1987-2000

*06180 Københavns Lufthavn 1983-2000

*06190 Bornholms Lufthavn 1989-2000

Lufttryk

Lufttryk er defineret som vægten af den luftsøjle, som hviler på 1 cm² af en vandret flade. Lufttrykket aftager altid op igennem atmosfæren.

Lufttryk blev i gamle dage målt i millimeter som indikerer højden af en kviksølvssøjle i et barometer.

760 mmHg repræsenterer normaltrykket ved jordoverfladen. Lufttrykket kan også måles i hectopascal (hPa) (eller med en gammel betegnelse millibar (mb)), som er den internationale enhed til måling af lufttryk. 1 hPa (100 Pa = 100 N/m²) er det samme som 1 mb (=1/1000 bar). 1013,25 hPa er normaltrykket ved jordoverfladen.

I denne rapport opgives *lufttrykket* i hPa og lufttrykket er reduceret til samme reference, nemlig havets overflade (mean sea level (MSL)), som om der herskede en standardatmosfære imellem stationernes officielle niveau og MSL.

Atmospheric pressure

Atmospheric pressure is defined as the weight of a column of air, standing on 1 cm² of a horizontal plane. The atmospheric pressure is always decreasing with decreasing height above ground.

In the old days atmospheric pressure was registered in millimetres - the height of a column of mercury in a barometer. 760 mmHg represents the normal atmospheric pressure at the surface of the earth. The atmospheric pressure can also be registered in hectopascal (hPa or with a older name millibar (mb)) - the international unity for the registration of atmospheric pressure. 1 hPa (100 Pa = 100 N/m²) is the same as 1mb (=1/1000 bar). 1013,25 hPa represents the normal atmospheric pressure at the surface. In this report hPa are used and the *atmospheric pressure* is reduced to the same reference - the mean sea level (MSL) assuming a standard atmosphere between the official level of the station and MSL.

Tables 7.1

Mean atmospheric pressure (hPa). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	1012.1	1014.1	1012.7	1013.0	1015.4	1013.0	1012.9	1013.6	1013.0	1012.6	1010.9	1010.4	1012.8
06041 Skagen Fyr	1011.9	1014.0	1012.8	1013.2	1015.6	1012.9	1012.7	1013.5	1012.9	1012.6	1010.7	1010.1	1012.8
06052 Thyborøn	1011.9	1013.9	1012.5	1013.1	1015.4	1013.5	1013.5	1013.9	1013.0	1012.4	1010.7	1010.3	1012.8
06060 FSN Karup	1012.4	1014.2	1012.7	1012.9	1015.2	1013.4	1013.4	1013.9	1013.2	1012.8	1011.1	1010.8	1013.0
06070 FSN Tirstrup	1012.6	1014.3	1012.9	1012.9	1015.3	1013.2	1013.2	1013.9	1013.3	1013.1	1011.3	1010.9	1013.1
06110 FSN Skrydstrup	1013.4	1014.8	1013.3	1013.1	1015.3	1014.0	1014.1	1014.5	1013.9	1013.5	1011.9	1011.8	1013.6
06120 Od. Lufthavn	1013.4	1014.8	1013.4	1013.2	1015.5	1013.8	1013.9	1014.4	1013.9	1013.6	1012.0	1011.8	1013.6
06141 Åbed*	-	-	-	-	-	-	-	-	-	-	-	-	-
06180 Kbh. Lufthavn	1013.7	1015.1	1013.8	1013.2	1015.7	1013.7	1013.6	1014.4	1014.1	1014.0	1012.3	1011.9	1013.8
06190 Brnh. Lufthavn	1014.6	1015.8	1014.7	1013.8	1016.3	1014.3	1014.3	1015.2	1014.9	1015.1	1013.3	1012.8	1014.6

*no data from 06141 Åbed

Tåge og torden

Tåge er i virkeligheden skyer, der ligger umiddelbart over jordoverfladen. I modsætning til skyer ligger tåge dog i direkte kontakt med underlaget. Ligesom de fleste lavereliggende skyer består tåge og tågedis af meget små vanddråber, som svæver i luften (eller ved iståge iskrystaller). Tåge er oftest tættest når det er koldest dvs. normalt omkring solopgang.

Også ved temperaturer nogle grader under 0 °C består tåge/tågedis normalt af vanddråber. De er nu blot "underafkølede". Hvis de rammer (rammes af) noget fryser de momentant til is og man taler om rimtåge. Først ved lave temperaturer (under ca. - 10 °C, men oftest langt lavere) kommer man ud for iståge, som består af iskrystaller.

Pr. definition er sigtbarheden i tåge mindre end 1000 meter og tykkelsen af laget mere end 2 meter over land, 10 meter over hav.

Torden er navnet på den lyd som høres, når elektriske udladninger (lyn) sker enten i en sky, mellem skyer eller mellem sky og jord/hav. Lynet får luften til at udvide sig eksplosionagtigt og lige så hurtigt trække sig sammen igen pga. af den kraftige omvarmning omkring lynkanalen og det er det, der giver lyd. Torden forekommer kun i forbindelse med skyer af slægten cumulonimbus (også kaldet CB'er blandt fagfolk).

Observation af torden foretages kun på stationer, der er manuelt betjente.

Fog and thunder

In reality fog is clouds, lying immediately above the ground. In contrast to clouds the fog has direct contact with the ground. Like most of the low clouds fog and mist consists of very tiny water droplets, drifting in the air (frosty fog consists of ice crystals). Fog is often most impenetrable, when it is coldest e.g. normally around sun rise.

At temperatures a few degrees below 0 °C the fog/mist normally also consist of water droplets. They are just "super cooled". If they hit (or are hit by) something, the freeze momentary into ice and then we are dealing with frosty mist. Not until the temperatures are very low (below app. -10 °C, but often far lower) we are dealing with frosty mist consisting of ice crystals.

By definition the weather is foggy, when the visibility is below 1000 metres and the thickness of the fog layer is more than 2 metres above land, 10 metres above sea.

Thunder is the name for the sound heard, when electrical charges (lightning) are taking place in a cloud, between clouds or between clouds and the surface of the Earth. The lightning makes the air expand like a explosion and quickly contract again caused by the heavily warming from the lightning channel. That is the reason for the sound. Thunder occur only in connection with certain clouds called cumulonimbus (professionals call them CB's).

Observations of thunder take place on stations manually operated.

Tables 8.1

Number of days with fog (visibility < 1km). Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	9.7	8.5	7.7	7.3	6.1	6.1	6.6	8.0	7.6	8.7	6.7	8.4	91.3
06041 Skagen Fyr	5.5	6.0	7.2	6.7	6.6	5.1	5.5	4.7	2.7	4.4	2.5	3.8	60.9
06052 Thyborøn	6.2	6.5	6.9	6.1	3.2	2.1	1.7	1.8	1.8	3.7	3.0	4.2	47.8
06060 FSN Karup	11.7	10.4	10.2	8.9	8.9	8.8	8.8	10.0	8.4	10.4	9.1	10.2	115.8
06070 FSN Tirstrup	9.3	7.5	8.3	7.5	9.0	8.7	9.0	10.7	10.0	10.1	7.4	8.1	105.7
06110 FSN Skrydstrup	12.3	11.4	10.4	8.5	8.1	8.4	8.7	11.1	10.8	11.5	9.9	11.2	122.7
06120 Odense Lufthavn	9.0	7.3	7.0	5.5	4.7	4.6	5.1	6.2	7.0	8.5	6.6	6.7	79.8
06141 Abed*	-	-	-	-	-	-	-	-	-	-	-	-	-
06180 Københavns Lufthavn	8.7	7.5	7.3	5.7	5.4	5.1	4.9	6.6	6.6	7.8	5.1	6.8	77.4
06190 Bornholms Lufthavn	4.7	5.9	7.5	5.7	3.9	2.7	1.6	1.7	3.4	4.6	2.2	2.9	46.9

*no data from 06141 Abed

Tables 8.2

Number of days with thunder. Climatological normals 1971-2000.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
06030 FSN Ålborg	0.3	0.3	0.1	0.3	1.8	2.6	3.4	3.0	1.6	0.5	0.3	0.3	14.4
06041 Skagen Fyr	0.2	0	0	0.2	0.7	1.5	1.5	2.2	1.2	0.3	0.1	0.2	8.2
06052 Thyborøn	0.3	0.1	0.1	0	0.6	0.9	1.2	1.5	0.9	0.5	0.5	0.2	6.8
06060 FSN Karup	0.6	0.2	0.2	0.3	1.9	3.0	3.1	3.4	1.6	1.0	0.7	0.2	16.1
06070 FSN Tirstrup	0.3	0.1	0.2	0.3	1.7	2.5	3.3	3.3	1.4	0.5	0.3	0.1	14.1
06110 FSN Skrydstrup	0.7	0.5	0.4	0.5	2.2	3.2	3.8	4.1	2.4	1.4	1.2	0.7	21.1
06120 Odense Lufthavn	0.3	0.1	0	0.2	1.6	2.3	2.5	2.5	1.1	0.3	0.2	0.1	11.3
06141 Abed*	-	-	-	-	-	-	-	-	-	-	-	-	-
06180 Københavns Lufthavn	0.4	0.1	0.3	0.5	1.8	2.2	3.1	3.1	1.6	0.6	0.4	0.1	14.1
06190 Bornholms Lufthavn	0.1	0.1	0	0.1	1.1	1.1	1.7	1.7	1.3	0.4	0.1	0	7.6

*no data from 06141 Abed

Beskrivelse af klimaparametre/Climate element description

Tabellen nedenfor beskriver de klimaparametre, der indgår i denne rapport.

Elementnummeret indgår i de forskellige datafiler på de datafiler, der følger med rapporten. Enheden der er knyttet til de forskellige parametre er den enhed, der er brugt i alle datafiler indeholdende månedsværdier.

Bemærk at enheden i de datafiler der indeholder normaltall *alle* er 0,1. Metoden angiver, hvordan de forskellige klimaværdier er beregnet ud fra de enkelte observationer, *før* der midles til klima- eller provisoriske normaler.

The table below lists the climate elements described in this report. The element no. is the number by which the climate element is identified in the normal and monthly data files. The units in the table are the units used in the monthly data files.

The units of the normals in the normal.dat data file are *all* 0.1. The method is the method applied to the daily values to obtain the monthly values, *before* calculating the average climatological or provisional normals.

Elem. no.	Description/Unit	Method
101	Mean temperature 0.1 °C	Mean
111	Average daily maximum temperature + date 0.1 °C	Mean
112	Absolute maximum temperature + date 0.1 °C	Max
114	Number of ice days (Tmax < 0 °C) days	Sum
115	Number of summer days (Tmax > 25 °C) days	Sum
121	Average daily minimum temperature 0.1 °C	Mean
122	Absolute minimum temperature 0.1 °C	Min
124	Number of cold days (Tmin < -10 °C) days	Sum
125	Number of days with frost (Tmin < 0 °C) days	Sum
126	Number of tropical nights (Tmin > 20 °C) days	Sum
147	Heating degree days (Sum of 17 °C - Tday) 0.1K	Sum
301	Mean wind speed (10 minutes average) 0.1 m/s	Mean
304	Maximum gust + date 0.1 m/s	Max
401	Mean atmospheric pressure 0.1 hPa	Mean
501	Mean accumulated hours of bright sunshine hours	Sum
601	Mean accumulated precipitation 0.1 mm	Sum
602	Highest 24 hour precipitation + date 0.1 mm	Max
604	Number of days with precipitation ≥ 0.1 mm days	Sum
605	Number of days with precipitation ≥ 1 mm days	Sum
608	Number of days with precipitation ≥ 5 mm days	Sum
606	Number of days with precipitation ≥ 10 mm days	Sum
607	Number of days with snow falling days	Sum
702	Number of days with fog (visibility < 1 km) days	Sum
703	Number of days with thunder days	Sum
704	Number of days with hail days	Sum

Indhold af medfølgende datafiler/Contents of accompanying dataset

Det medfølgende datasæt består af:

- 10 grafikfiler <**stationsnummer_periode**>.wmf (WMF - Windows Meta File), der indeholder vindroser med tilhørende statistik
- 25 ASCII datafiler med fast format <**elementnummer**>.dat indeholdende tidsserier af månedsværdier (1971-2000)
- 1 ASCII datafil med fast format **normal.dat** med normalværdier
- 1 ASCII datafil med fast format **station.dat** med oplysninger om stationerne samt
- 1 ASCII tekstfil **readme.txt**.

Data må kun benyttes, hvis der samtidig anføres reference til rapporten (Cappelen, J., 2002. Danske klimanormaler 1971-2000 - for udvalgte stationer. DMI Teknisk Rapport 02-12).

The accompanying dataset contains:

- 10 graphic files named <**station number_period**>.wmf (WMF - Windows Meta File) containing the wind rose statistics
- 25 fixed ASCII format data files named <**element number**>.dat containing the monthly data (1971-2000)
- 1 fixed ASCII format file **normal.dat** containing the climatological normals
- 1 fixed ASCII format file named **station.dat** containing a station catalogue and, finally, an ASCII text format file named **readme.txt**.

Data may only be used with proper reference to the accompanying report (Cappelen, J., 2002. Danish Climatological Normals 1971-2000 for selected stations. DMI Technical Report No. 02-12).

Vindroser/Wind roses

Vindroser for 10 stationer i perioden 1971-2000 (perioden er stationsafhængig), er indeholdt i grafikfilerne **<stationsnummer_periode>.wmf** (WMF - Windows Meta File). De er samtidig vist på de efterfølgende sider.

Wind roses for 10 stations in the period 1971-2000 (the period is dependent on the actual station) are contained in the graphic files **<station number_period>.wmf** (WMF - Windows Meta File). They are also shown on the following pages.

Forklaring til vindroser

Vindroserne præsenteret i det medfølgende datasæt viser fordelingen af vindens retning og hastighed. Vindens retning er inddelt i 12 sektorer på hver 30 grader og der er ligeledes inddelt i hastigheds-klasser. Den procentvise fordeling er tillige anført i en frekvenstabel under selve vindrosen. Vær opmærksom på, at i denne frekvenstabel er vindstille defineret som vindhastigheder mindre end eller lig med 0,2 m/s og disse tilfælde indgår ikke i statistikken! Det betyder bl.a. at beregningen af den totale middelvindhastighed godt kan være højere end den middelhastighed man traditionelt beregner, idet denne indeholder samtlige tilfælde af vindstille.

Alle vindroserne i rapporten er på engelsk. Af den grund er vindrosen for 06052 Thyborøn også vist i en dansksproget version.

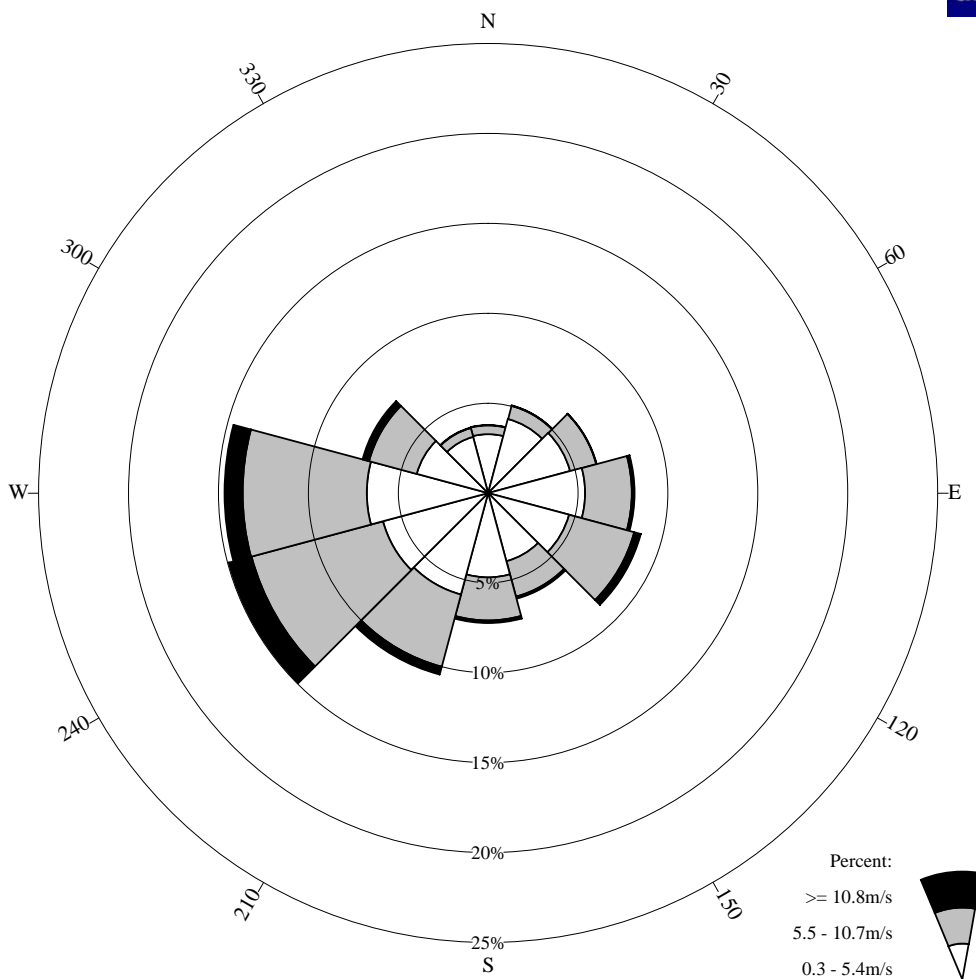
Wind roses, explanation

The wind roses presented in the accompanying dataset show the distribution of wind direction and speed. The wind direction is divided into 12 sectors, each 30 degrees. Furthermore, the speed is divided into sub groups. The distribution in percent can also be seen in the frequency table just below the wind roses. Please note that calm situations are defined as wind speed below or equal to 0,2 m/s, and that these situations are not included in the calculations. This means that the calculation of the total mean wind speed in the frequency table could be higher than a mean wind speed calculated in the conventional manner, as this takes all wind speeds (also calm) into account.

All the diagrams in this report are in English. For this reason, the wind rose for 06052 Thyborøn additionally is shown in a Danish version.

Station 06030 FSN ÅLBORG

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	3.8	5.0	6.3	8.1	8.8	6.1	7.2	10.5	14.9	14.7	7.2	3.8	96.4
% 0.3-5.4m/s	3.3	4.3	4.7	5.4	4.7	3.9	4.7	5.9	6.1	6.8	4.1	3.2	57.0
% 5.5-10.7m/s	0.5	0.8	1.5	2.6	3.7	2.0	2.4	4.2	7.6	6.9	2.8	0.5	35.5
% >= 10.8m/s	0.0	0.0	0.0	0.1	0.4	0.1	0.1	0.4	1.3	1.0	0.4	0.0	4.0
Mean wind speed	3.3	3.5	4.0	4.6	5.5	4.8	4.7	5.3	6.4	6.0	5.3	3.5	5.1
Max wind speed	17.5	12.3	13.9	14.9	18.0	14.4	20.0	22.1	21.6	24.6	19.5	18.5	24.6

Number of observations = 110848

Source: DMI

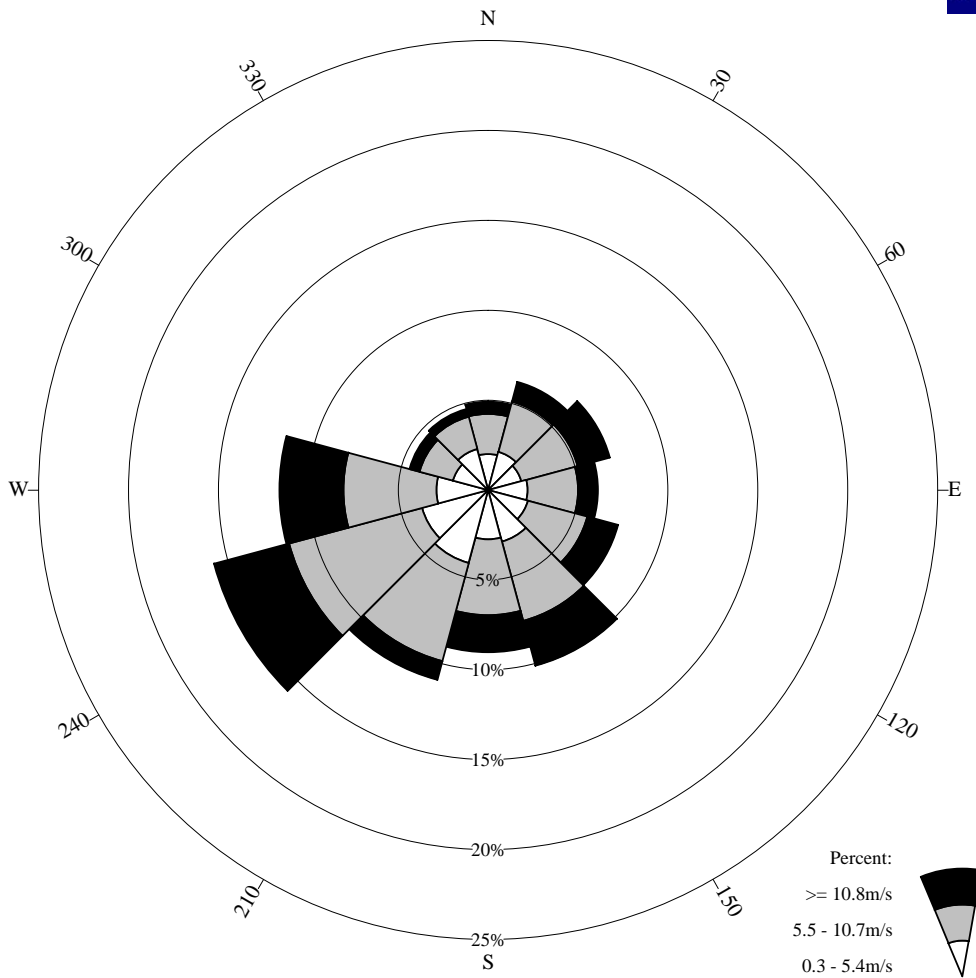
Calm defined as wind speed <= 0.2m/s

Number of observations with calm/varying wind direction: 3973 = 3.6%

Observations with calm/varying wind direction are not used in the statistics

Station 06041 SKAGEN FYR

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	4.9	6.2	7.0	6.1	7.5	10.1	9.0	10.9	15.8	11.6	4.5	4.7	98.4
% 0.3-5.4m/s	2.0	2.2	1.9	2.2	2.3	3.0	2.7	4.2	3.8	2.9	2.0	2.4	31.6
% 5.5-10.7m/s	2.2	2.9	3.2	2.8	3.4	4.6	4.2	5.6	7.7	5.2	1.9	1.9	45.6
% >= 10.8m/s	0.7	1.1	1.8	1.1	1.8	2.6	2.1	1.1	4.3	3.6	0.6	0.4	21.2
Mean wind speed	6.7	7.3	8.2	7.1	7.8	8.1	7.8	6.6	8.4	8.6	6.5	6.0	7.6
Max wind speed	22.1	23.2	21.6	21.9	24.7	25.0	25.0	21.6	26.8	26.0	21.6	24.2	26.8

Number of observations = 87649

Source: DMI

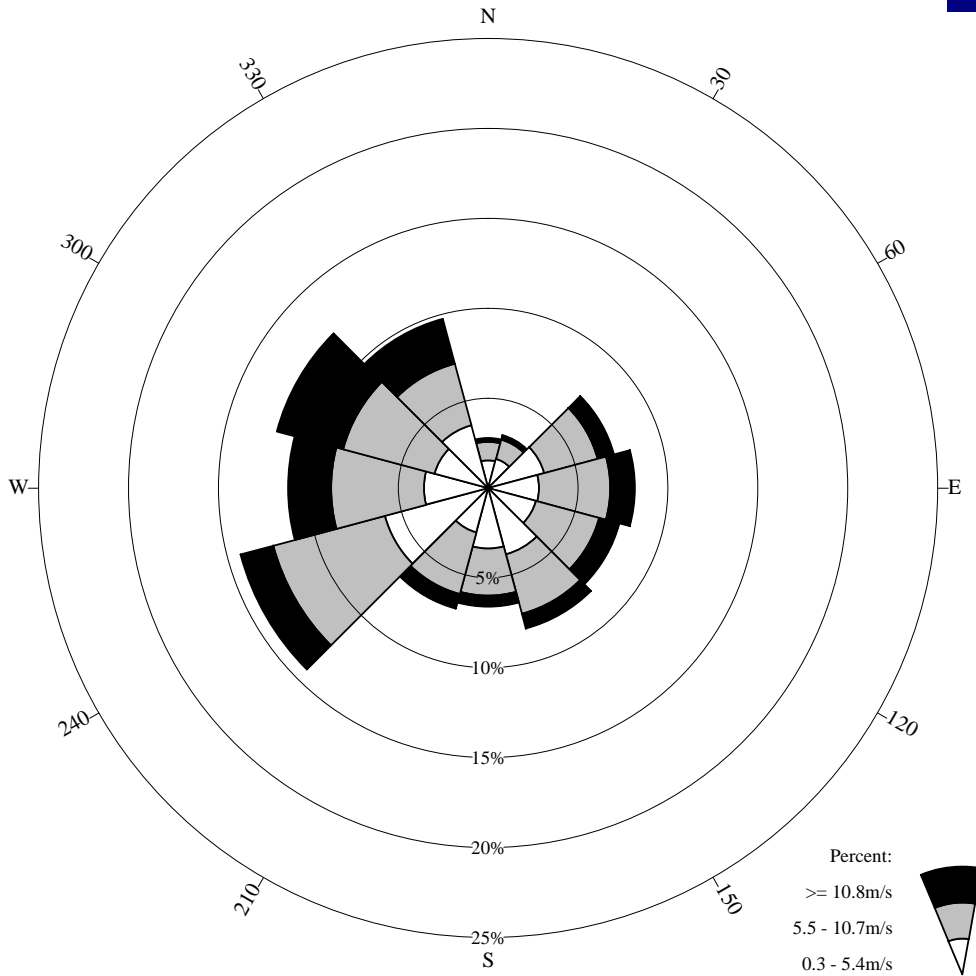
Calm defined as wind speed <= 0.2m/s

Number of observations with calm/varying wind direction: 1399 = 1.6%

Observations with calm/varying wind direction are not used in the statistics

Station 06052 THYBORØN

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	2.8	3.1	7.2	8.2	7.6	8.1	6.6	7.0	14.3	11.1	12.2	9.7	97.8
% 0.3-5.4m/s	1.5	1.7	3.2	2.8	2.8	3.8	3.4	2.6	6.0	3.6	3.1	3.6	38.0
% 5.5-10.7m/s	1.0	1.1	3.1	4.0	3.6	3.4	2.6	3.6	6.4	5.2	5.3	3.5	42.8
% ≥ 10.8m/s	0.2	0.3	0.9	1.4	1.2	0.8	0.6	0.8	1.9	2.4	3.8	2.6	16.9
Mean wind speed	5.5	5.6	6.3	7.1	7.0	6.1	5.9	6.9	6.6	7.6	8.7	7.8	7.0
Max wind speed	19.0	22.1	19.0	22.0	23.0	22.0	26.0	24.6	30.9	32.9	32.9	30.8	32.9

Number of observations = 87986

Source: DMI

Calm defined as wind speed ≤ 0.2m/s

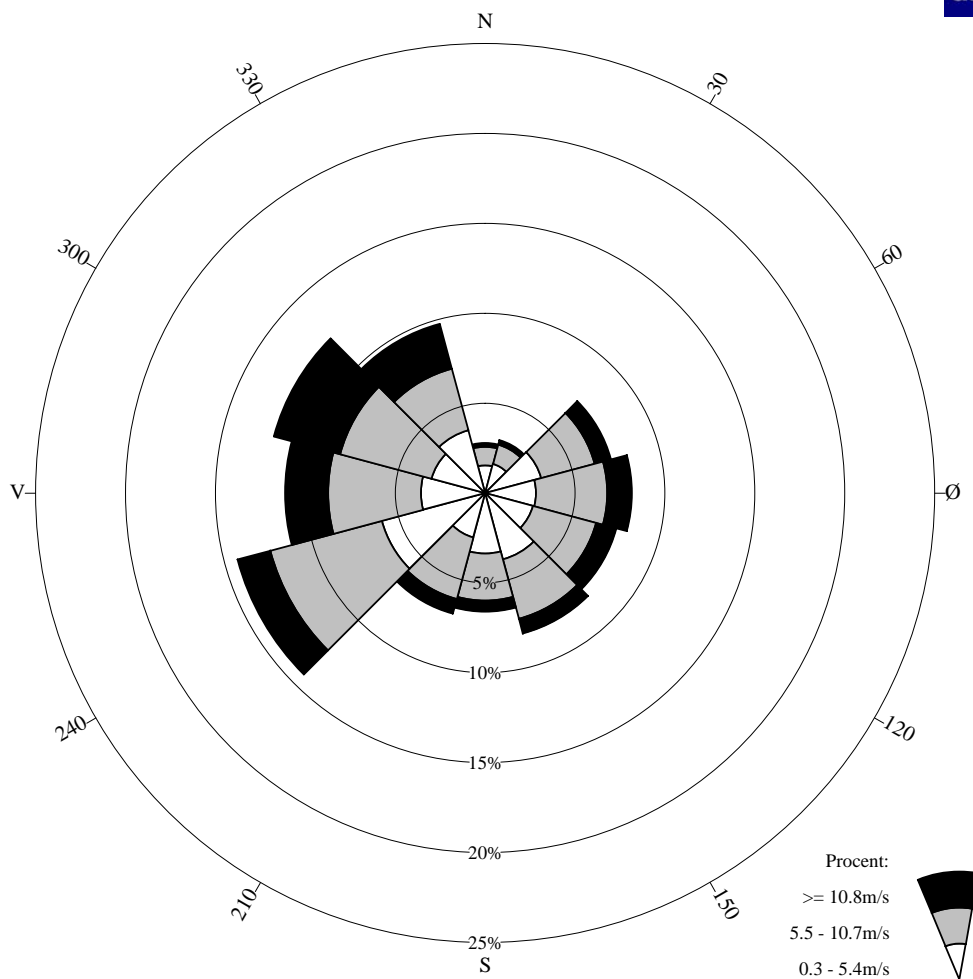
Number of observations with calm/varying wind direction: 1967 = 2.2%

Observations with calm/varying wind direction are not used in the statistics

Station 06052

THYBORØN

01-01-1971 - 31-12-2000



	N	30	60	Ø	120	150	S	210	240	V	300	330	Ialt
%	2.8	3.1	7.2	8.2	7.6	8.1	6.6	7.0	14.3	11.1	12.2	9.7	97.8
% 0.3-5.4m/s	1.5	1.7	3.2	2.8	2.8	3.8	3.4	2.6	6.0	3.6	3.1	3.6	38.0
% 5.5-10.7m/s	1.0	1.1	3.1	4.0	3.6	3.4	2.6	3.6	6.4	5.2	5.3	3.5	42.8
% >= 10.8m/s	0.2	0.3	0.9	1.4	1.2	0.8	0.6	0.8	1.9	2.4	3.8	2.6	16.9
Middel hastighed	5.5	5.6	6.3	7.1	7.0	6.1	5.9	6.9	6.6	7.6	8.7	7.8	7.0
Største hastighed	19.0	22.1	19.0	22.0	23.0	22.0	26.0	24.6	30.9	32.9	32.9	30.8	32.9

Totalt antal observationer = 87986

Vindstille defineret som hastighed <= 0.2m/s

Antal observationer med vindstille/varierende vind: 1967 = 2.2%

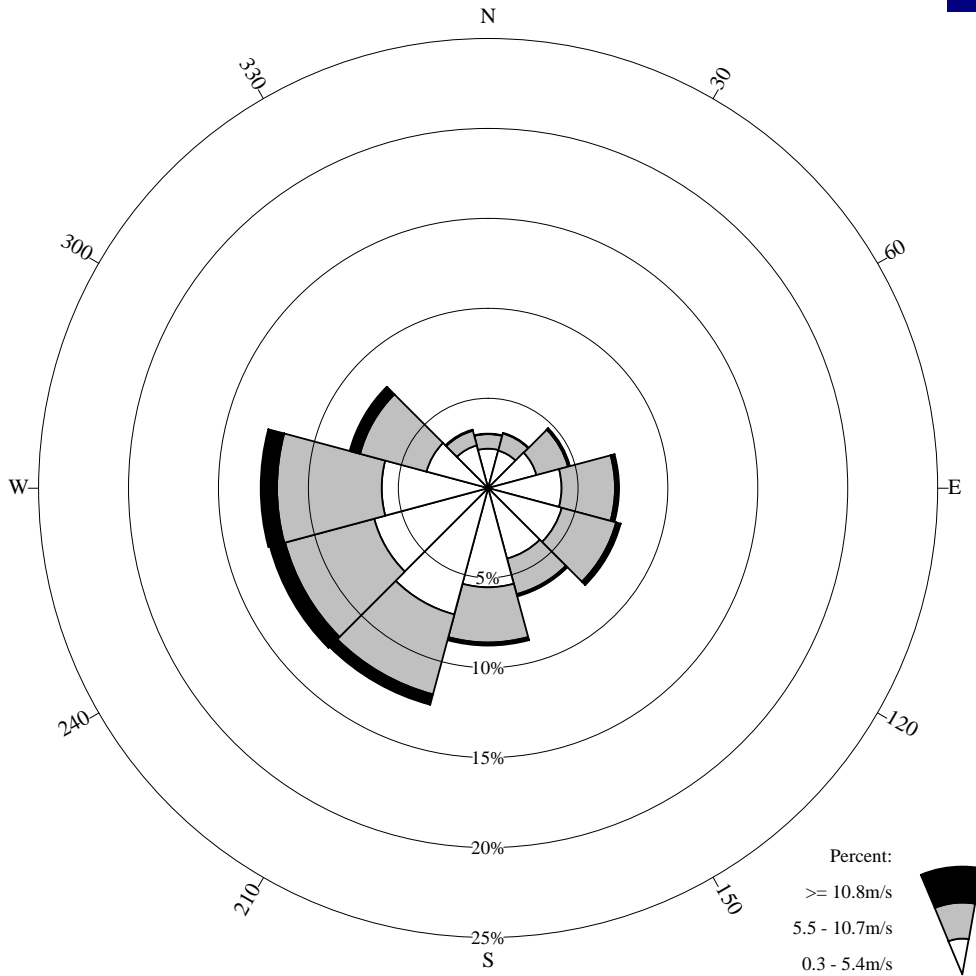
Observationer med vindstille/varierende vind indgår ikke i beregningerne

Kilde: DMI

Station 06060

FSN KARUP

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	3.0	3.2	4.7	7.3	7.6	6.2	8.8	12.5	12.6	12.6	8.0	3.4	89.9
% 0.3-5.4m/s	2.2	2.2	2.8	4.1	4.2	4.1	5.5	7.3	6.6	5.9	3.5	2.4	50.9
% 5.5-10.7m/s	0.8	1.0	1.8	3.0	3.1	2.0	3.1	4.6	5.1	5.8	3.8	0.9	35.0
% ≥ 10.8m/s	0.0	0.0	0.1	0.2	0.3	0.1	0.2	0.6	0.9	0.9	0.6	0.1	4.0
Mean wind speed	4.2	4.5	5.0	5.2	5.3	4.8	5.0	5.3	5.7	6.0	6.0	4.2	5.3
Max wind speed	17.0	13.9	16.5	15.4	18.0	16.9	18.0	19.0	23.1	25.7	21.0	17.0	25.7

Number of observations = 110643

Source: DMI

Calm defined as wind speed ≤ 0.2m/s

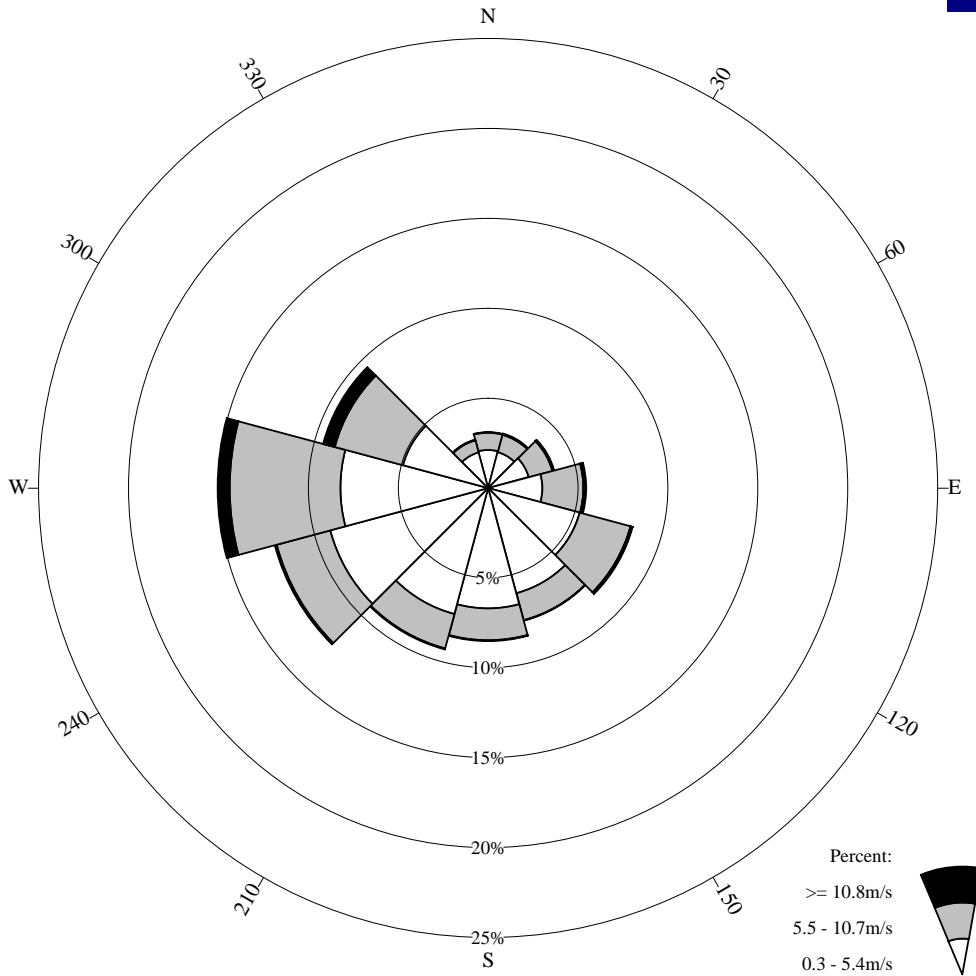
Number of observations with calm/varying wind direction: 11198 = 10.1%

Observations with calm/varying wind direction are not used in the statistics

Station 06070

TIRSTRUP

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	3.1	3.1	3.8	5.5	8.3	7.6	8.5	9.3	12.3	15.0	9.5	2.8	88.9
% 0.3-5.4m/s	2.1	2.1	2.3	3.0	5.3	6.1	6.7	7.3	9.1	8.2	4.9	2.0	59.1
% 5.5-10.7m/s	1.0	1.0	1.4	2.3	2.9	1.6	1.8	2.0	3.1	6.2	3.9	0.7	27.7
% ≥ 10.8m/s	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.7	0.7	0.0	2.1
Mean wind speed	4.5	4.6	4.9	5.3	4.7	3.8	3.9	4.0	4.3	5.4	5.6	4.1	4.7
Max wind speed	13.8	13.9	15.0	16.0	16.0	14.4	15.0	17.4	20.1	24.0	23.0	17.0	24.0

Number of observations = 110270

Source: DMI

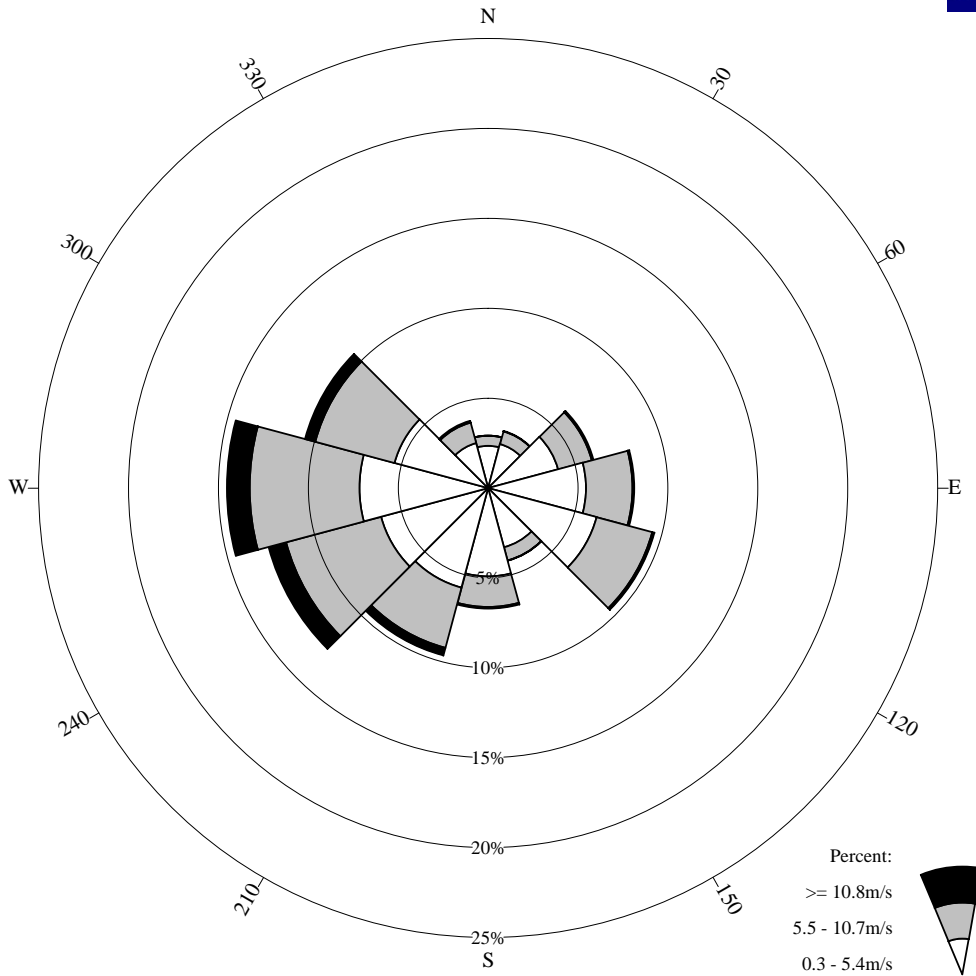
Calm defined as wind speed ≤ 0.2m/s

Number of observations with calm/varying wind direction: 12191 = 11.1%

Observations with calm/varying wind direction are not used in the statistics

Station 06110 FSN SKRYDSTRUP

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	2.9	3.3	6.1	8.1	9.6	4.2	6.7	9.6	12.6	14.5	10.5	3.9	92.1
% 0.3-5.4m/s	2.4	2.5	4.0	5.4	6.3	3.4	4.9	5.7	6.2	7.2	5.4	2.6	56.0
% 5.5-10.7m/s	0.6	0.7	1.9	2.6	3.2	0.8	1.7	3.5	5.5	6.1	4.6	1.2	32.3
% ≥ 10.8m/s	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.4	1.0	1.3	0.6	0.1	3.8
Mean wind speed	3.7	3.8	4.6	4.6	4.8	3.8	4.3	5.2	5.9	5.9	5.7	4.6	5.1
Max wind speed	17.0	13.3	16.0	17.0	14.0	13.4	18.0	20.6	21.1	31.4	21.1	19.5	31.4

Number of observations = 110850

Source: DMI

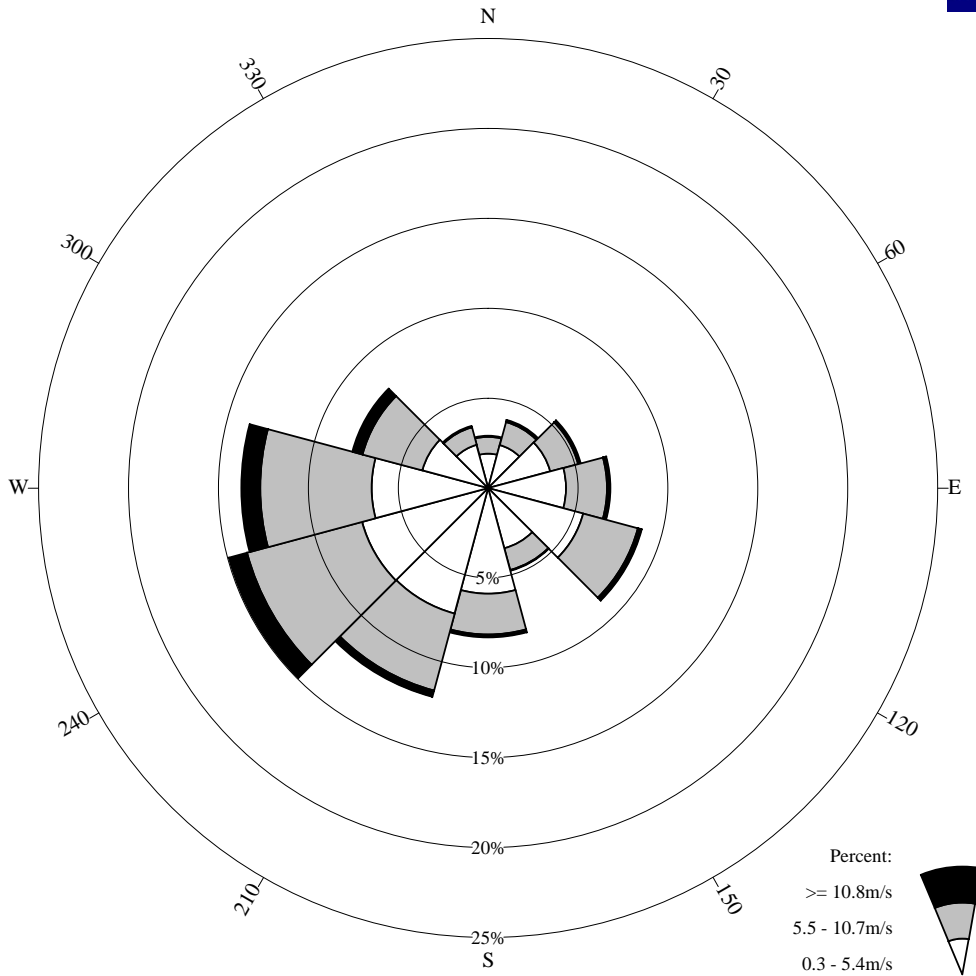
Calm defined as wind speed ≤ 0.2m/s

Number of observations with calm/varying wind direction: 8741 = 7.9%

Observations with calm/varying wind direction are not used in the statistics

Station 06120 ODENSE LUFTHAVN

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	2.9	3.9	5.3	6.8	8.9	4.8	8.3	12.0	14.9	13.7	7.8	3.6	93.0
% 0.3-5.4m/s	1.9	2.5	3.6	4.3	5.5	3.5	5.9	7.2	7.3	6.5	3.8	2.5	54.4
% 5.5-10.7m/s	0.9	1.3	1.6	2.3	3.2	1.3	2.3	4.4	6.6	6.2	3.4	1.0	34.5
% ≥ 10.8m/s	0.1	0.1	0.2	0.2	0.2	0.0	0.2	0.4	1.0	1.0	0.6	0.1	4.1
Mean wind speed	4.6	4.8	4.7	4.9	4.9	4.2	4.4	5.0	5.9	6.0	5.9	4.4	5.2
Max wind speed	14.4	15.4	18.0	16.0	17.0	13.4	15.4	18.0	26.0	23.1	21.0	16.4	26.0

Number of observations = 108902

Source: DMI

Calm defined as wind speed ≤ 0.2m/s

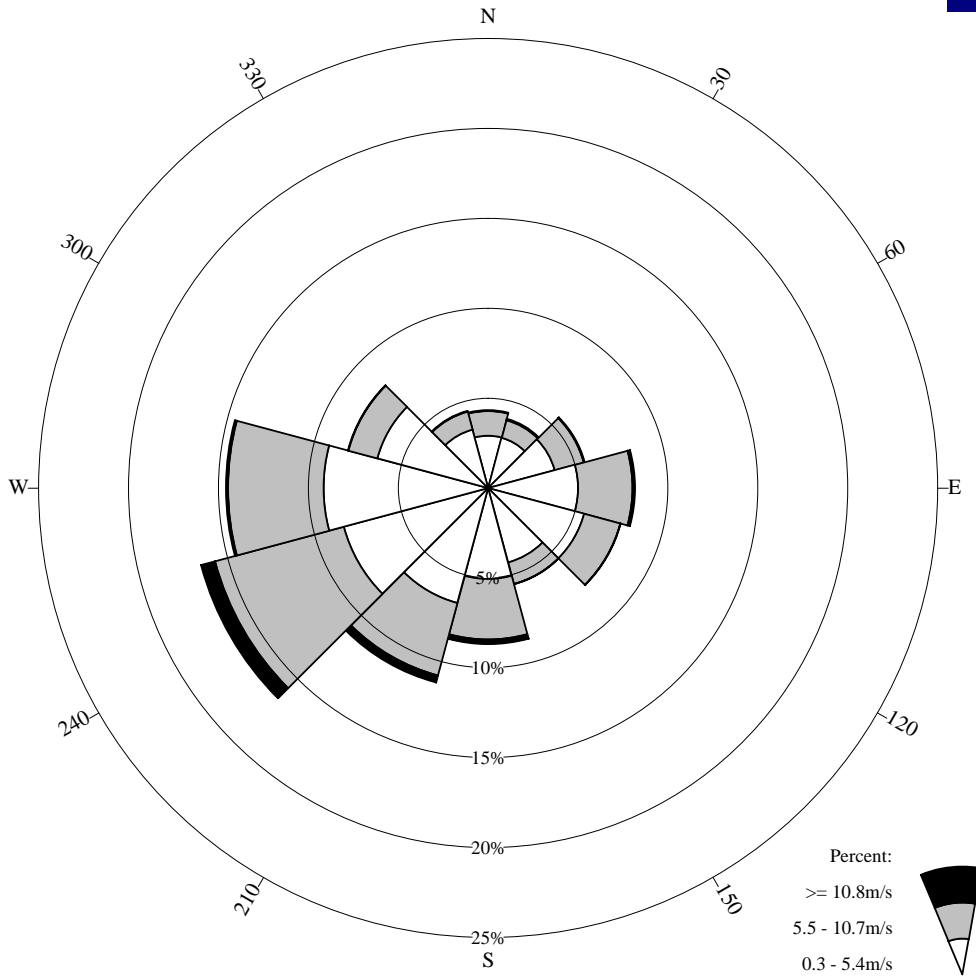
Number of observations with calm/varying wind direction: 7621 = 7.0%

Observations with calm/varying wind direction are not used in the statistics

Station 06141

ABED

01-01-1987 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	4.3	4.0	5.6	8.2	7.6	5.5	8.7	11.2	16.5	14.6	8.1	4.4	98.8
% 0.3-5.4m/s	2.9	2.9	3.8	5.0	5.5	4.3	5.1	6.6	8.3	9.2	6.4	3.4	63.4
% 5.5-10.7m/s	1.4	1.0	1.7	3.0	2.1	1.2	3.4	4.2	7.4	5.3	1.7	1.0	33.4
% ≥ 10.8m/s	0.1	0.1	0.1	0.1	0.0	0.0	0.3	0.4	0.8	0.1	0.0	0.0	2.0
Mean wind speed	4.5	4.3	4.4	4.9	4.3	4.2	5.1	5.1	5.7	4.8	4.1	4.1	4.8
Max wind speed	15.8	16.0	15.2	19.3	13.1	11.6	15.9	18.5	24.8	20.6	13.3	14.1	24.8

Number of observations = 121845

Source: DMI

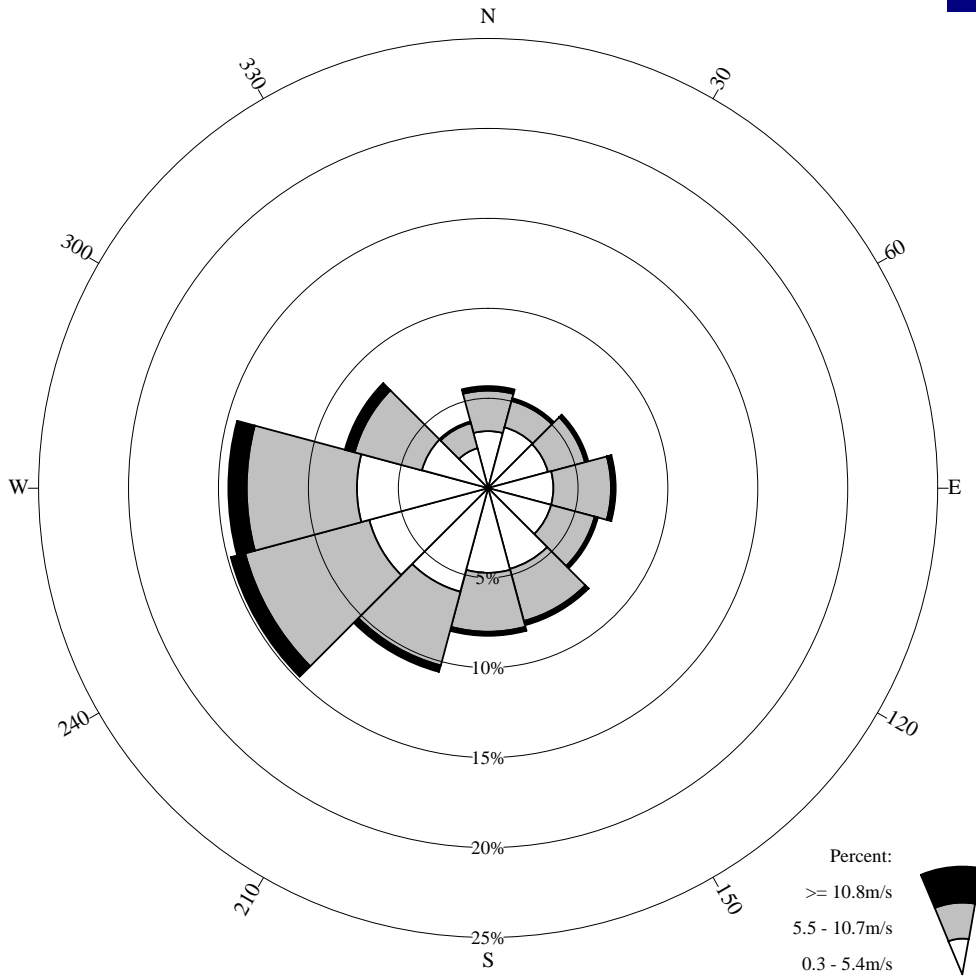
Calm defined as wind speed ≤ 0.2m/s

Number of observations with calm/varying wind direction: 1504 = 1.2%

Observations with calm/varying wind direction are not used in the statistics

Station 06180 KØBENHAVNS LUFTHAVN

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	5.7	5.2	5.8	7.1	6.3	7.9	8.2	10.6	14.8	14.4	8.2	3.8	98.1
% 0.3-5.4m/s	3.2	3.5	3.5	3.6	3.6	4.7	4.7	6.0	6.8	7.3	3.8	2.3	53.0
% 5.5-10.7m/s	2.3	1.5	2.1	3.2	2.5	3.0	3.3	4.2	7.2	6.1	3.9	1.4	40.7
% >= 10.8m/s	0.3	0.1	0.2	0.3	0.2	0.2	0.2	0.4	0.8	1.0	0.6	0.1	4.4
Mean wind speed	5.4	4.8	5.1	5.6	5.3	5.2	5.2	5.3	5.9	5.8	6.0	5.2	5.5
Max wind speed	20.0	17.0	17.0	17.0	18.5	19.5	16.5	20.6	21.6	23.7	19.0	17.0	23.7

Number of observations = 87579

Source: DMI

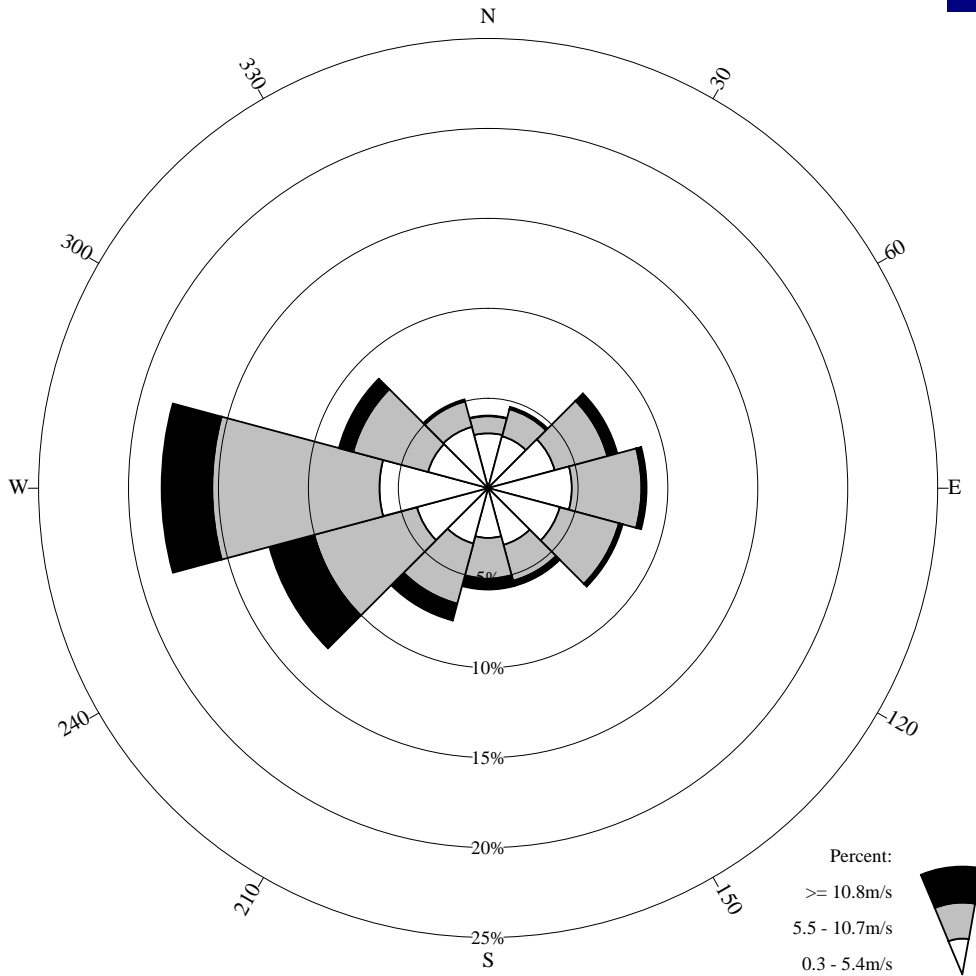
Calm defined as wind speed <= 0.2m/s

Number of observations with calm/varying wind direction: 1642 = 1.9%

Observations with calm/varying wind direction are not used in the statistics

Station 06190 BORNHOLMS LUFTHAVN

01-01-1971 - 31-12-2000



	N	30	60	E	120	150	S	210	240	W	300	330	Total
%	4.0	4.7	7.4	8.8	7.7	5.6	5.7	7.6	12.6	18.2	8.6	5.1	96.1
% 0.3-5.4m/s	3.1	3.0	3.8	4.7	4.1	3.3	2.8	3.2	4.1	6.0	3.5	3.5	45.0
% 5.5-10.7m/s	0.9	1.6	3.0	3.9	3.4	2.1	2.3	3.5	5.9	9.3	4.3	1.5	41.6
% ≥ 10.8m/s	0.0	0.1	0.6	0.3	0.2	0.3	0.6	1.0	2.6	2.8	0.8	0.1	9.4
Mean wind speed	4.1	4.8	5.7	5.5	5.5	5.4	6.0	6.5	7.5	7.2	6.4	4.6	6.1
Max wind speed	13.4	15.4	18.5	16.0	16.9	19.0	21.0	19.5	27.0	26.8	22.2	16.5	27.0

Number of observations = 83584

Source: DMI

Calm defined as wind speed ≤ 0.2m/s

Number of observations with calm/varying wind direction: 3266 = 3.9%

Observations with calm/varying wind direction are not used in the statistics

Stationsfil/Station file

Stationskataloget i filen **station.dat** beskriver stationsnummer, elementnummer, position, højde over havet samt det første og det sidste år i den periode, der er medtaget for hver klimaparameter i denne rapport. Hver linie i filen repræsenterer en station/et element. Filen er sorteret efter stationsnummer/elementnummer.

The station catalogue contained in the file **station.dat** describes the station no., element no., name, position, elevation and first and last year of the climate element series in this report. Each record in the file contains information about one station/element. The file is sorted by station no./element no.

Position	Format	Description
1-6	F6.0	Station no.
7-12	F6.0	Element no.
13-42	A30	Station name
43-44	F2.0	Latitude (degrees)
45-46	F2.0	Latitude (minutes)
47-47	A1	Northern (N) or Southern (S) hemisphere
48-49	F2.0	Longitude (degrees)
50-51	F2.0	Longitude (minutes)
52-52	A1	East (E) or West (W) of Greenwich
53-56	F4.0	Elevation (metres above mean sea level)
57-62	F6.0	First year in the data series
63-68	F6.0	Last year in the data series

Normalfil/Normal file

Normalværdier for standardperioden 1971-2000 og andre perioder findes i filen **normal.dat**. Filen indeholder normalværdier for alle stationer beskrevet i stationskataloget. Filen er sorteret efter stationsnummer/elementnummer. Hver linie i filen indeholder månedsværdier og årsværdi - alle med enhed 0,1 - fra en station/et element.

Normal values for the standard normal period 1961-1990 and other periods are contained in the file **normal.dat**. The file contains normal values for all stations described in the station catalogue. The file is sorted by station no./element no. Each record in the file contains the mean monthly and annual values - all in units of 0.1 - from one station/element no.

Position	Format	Description
1-6	F6.0	Station no.
7-12	F6.0	Element no.
13-18	F6.0	First year in normal period
19-24	F6.0	Last year in normal period
25-30	F6.0	January normal value
31-36	F6.0	February normal value
37-42	F6.0	March normal value
43-48	F6.0	April normal value
49-54	F6.0	May normal value
55-60	F6.0	June normal value
61-66	F6.0	July normal value
67-72	F6.0	August normal value
73-78	F6.0	September normal value
79-84	F6.0	October normal value
85-90	F6.0	November normal value
91-96	F6.0	December normal value
97-102	F6.0	Annual normal value

Månedssfiler/Monthly files

Tidsserier af månedsværdier (1971-2000) for alle stationer, der er beregnet normaler på i afsnit 3 til 8, findes i filerne **<elementnummer>.dat**. Filerne er sorteret efter stationsnummer/elementnummer, år og måned (måned 13 er årsværdien). Hver linie i filerne indeholder 1 måneds- eller årsværdi.

Enheden på de enkelte klimaparametre kan ses på side 24. Bemærk at "Date" - datoen for en hændelse - kun findes i filerne med ekstremværdier (formatet er [måned][dag] fx 825 for 25. august).

I tilfælde af manglende data er månedsværdien blank og årsværdien er ikke beregnet (bortset fra ekstremfilerne).

Time series (1971-2000) for all the stations presented in section 3 to 8 are contained in the files **<element number>.dat**. The files are sorted by station no./element no., year and month (month 13 gives the annual total). Each record in the files contains one monthly or annual value for one station/element no.

The units of the values can be seen in the table on page 24. Please also note that the 'Date' variable only exists in the files concerned with extreme values (format is [month][day], e.g., 825 for 25 August).

In case of missing data, the monthly value is blank and the annual value not calculated (except in the extreme files).

Position	Format	Description
1-6	F6.0	Station no.
7-12	F6.0	Element no.
13-18	F6.0	Year
19-24	F6.0	Month (1-12 and 13 for annual)
25-30	F6.0	Value
31-36	F6.0	Date