

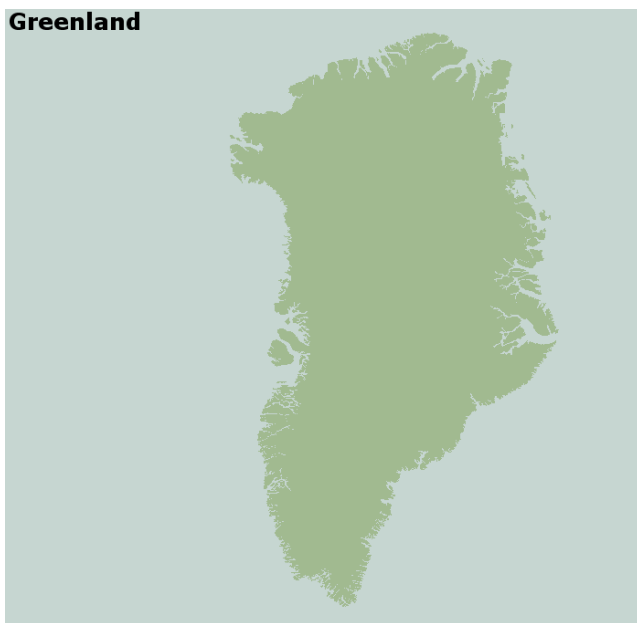


Danish
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DMI Report 17-19

World Weather Records 1991-2016 - Denmark, The Faroe Islands and Greenland

John Cappelen



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Abstract

A number of climatological data series are published in this report. These are monthly-/annual values for 1991-2016 and decadal averages for the periods 1991-2000 and 2001-2010 plus 30 years "clino" averages for the periods 1971-2000 and 1981-2010 for 5 locations in Denmark, 1 at the Faroe Islands and 9 in Greenland and for parameters air temperature, atmospheric air pressure and precipitation The data series is the Danish data contribution to a WMO publication "World Weather Records 2016".

Resumé

Nærværende rapport præsenterer en række danske klimaserier. Det inkluderer måneds-/årsværdier for 1991-2016 og dekadegennemsnit for perioderne 1991-2000 og 2001-2010 samt 30 års "clino" gennemsnit for perioderne 1971-2000 and 1981-2010 for 5 danske, 1 færøsk og 9 grønlandske lokaliteter og for parametrene lufttemperatur, lufttryk og nedbør. Data serierne er det danske bidrag til WMO publikationen "World Weather Records 2016".

1. Introduction

This report presents a number of climatological data series. These are monthly-/annual values for 1991-2016 and decadal averages for the periods 1991-2000 and 2001-2010 plus 30 years “clino” averages for the periods 1971-2000 and 1981-2010 for 5 locations in Denmark, 1 at the Faroe Islands and 9 in Greenland based on DMI Monthly Climate Data Collections [5], [6] and [7]. The data parameters include average air temperature, average of minimum and maximum air temperature, average atmospheric air pressure at mean sea level (msl) and accumulated precipitation.

The data series is the Danish data contribution to a WMO publication “World Weather Records/WWR 2016”.

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

See also the following recently published DMI reports:

[2] DMI Report presenting decadal climate summary 1901-2010 for the same stations in Denmark, the Faroe Islands and Greenland (minus Pituffik and Qaqortoq) as presented in this report, based on DMI Monthly Climate Data Collection. The parameters included here are average air temperature, highest and lowest air temperature and highest 24 hour accumulated precipitation. For the same stations also air temperature rankings 2001-2010 are presented. This decadal climate summary and the air temperature ranking was the Danish contribution to the WMO report “Decadal Global Climate Summary/DGCS 2001-2010.

[3] DMI Report presenting World Weather Records 1991-2010. Specifically monthly-/annual values for 1991-2010 and decadal averages for the periods 1991-2000 and 2001-2010 plus 30 years “clino” averages for the periods 1971-2000 and 1981-2010 for the same stations in Denmark, the Faroe Islands and Greenland as presented in this report, based on DMI Monthly Climate Data Collection. The data parameters include average air temperature, average of minimum and maximum air temperature, average atmospheric air pressure at mean sea level (msl) and accumulated precipitation.

[4] DMI Report presenting World Weather Records 1991-2015. Specifically monthly-/annual values for 1991-2015 and decadal averages for the periods 1991-2000 and 2001-2010 plus 30 years “clino” averages for the periods 1971-2000 and 1981-2010 for the same stations in Denmark, the Faroe Islands and Greenland as presented in this report, based on DMI Monthly Climate Data Collection. The data parameters include average air temperature, average of minimum and maximum air temperature, average atmospheric air pressure at mean sea level (msl) and accumulated precipitation.

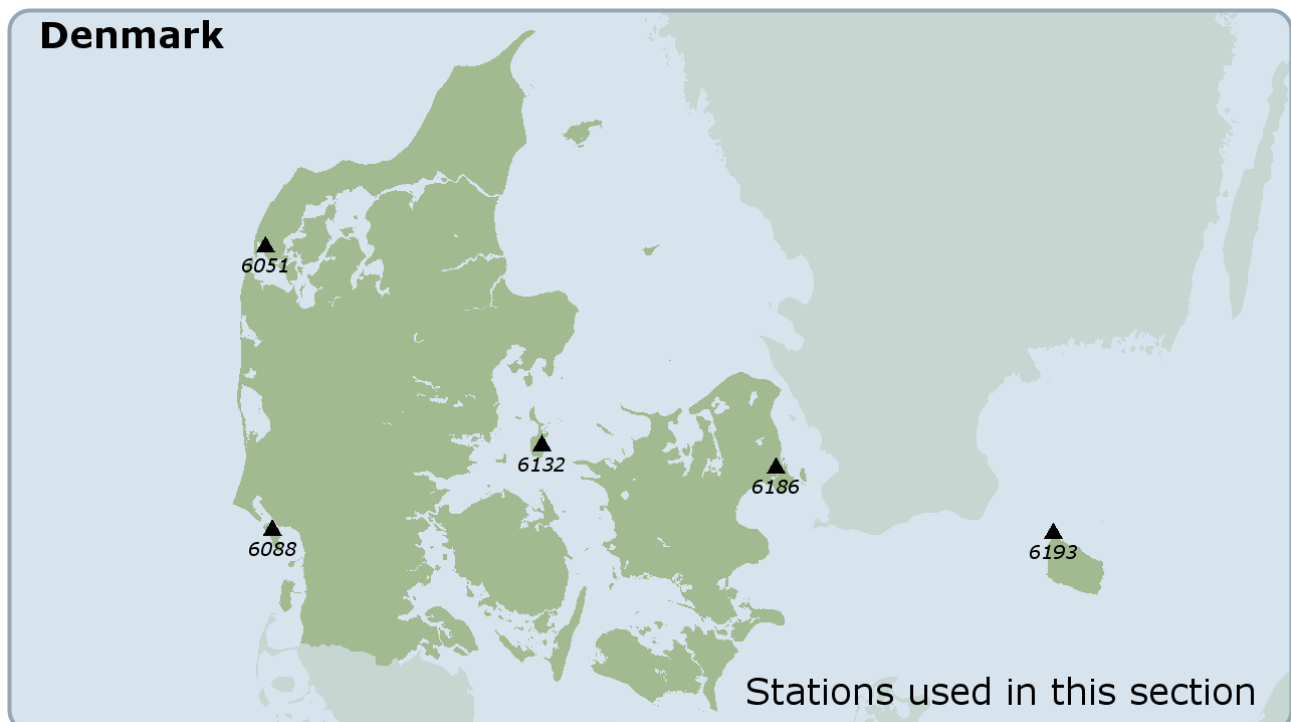
2. Data overview

2.1 Station Overview

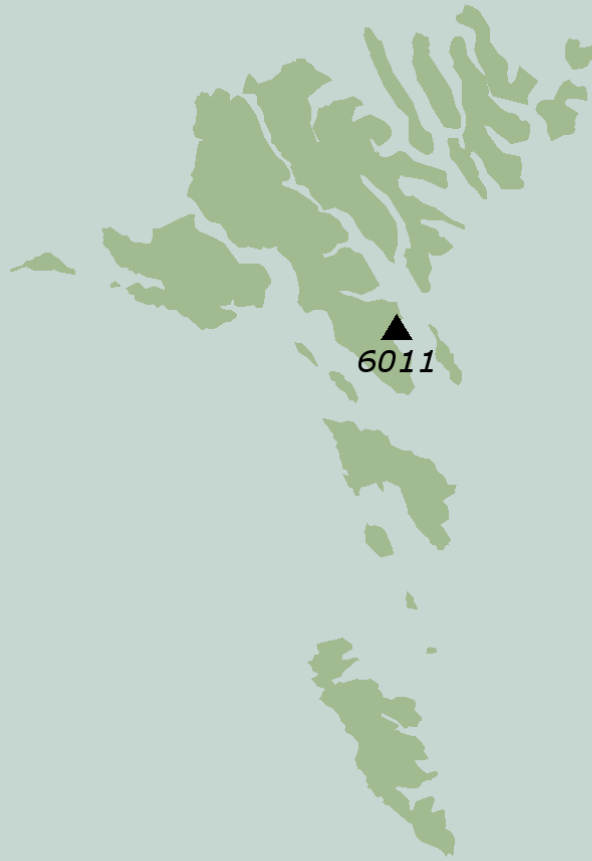
Country	Station number	Station	Latitude	Longitude	Stat height (above msl)	Bar height (above msl)
DK	06051	Vestervig (air pressure from 6052)	5646N	0819E	18	3,6
DK	06088	Nordby (air pressure 6080, 6081 and 6096*)	5527N	0824E	4	8,9*
DK	06132	Tranebjerg (air pressure from 6159)	5550N	1037E	16	15,8
DK	06186	Landbohøjskolen (Kbh) (air pressure 6180)	5541N	1233E	7	5,0
DK	06193	Hammer Odde Fyr	5518N	1446E	8	9,4
FR	06011	Tórshavn	6201N	0646W	54	55,9
GR	04202	Pituffik (only air temperature)	7632N	6842W	77	
GR	04211	Upernavik	7247N	5608W	126	130,0
GR	04221	Ilulissat	6914N	5104W	29	33,6
GR	04250	Nuuk	6411N	5144W	80	83,7
GR	04270	Narsarsuaq	6110N	4526W	34	31,0
GR	04272	Qaqortoq (only air temperature)	6043N	4603W	57	
GR	04320	Danmarkshavn	7646N	1840W	11	12,0
GR	04339	Ittoqqortoormiit	7029N	2157W	70	71,5
GR	04360	Tasiilaq	6537N	3738W	54	55,9

Table 2.1. Primary stations used in this report. See maps below for the locations. The maps are from [5], [6] and [7], where the source of the “World Weather Records” datasets are published as long monthly time series.

Please notice that 34262 Ivittuut is included in the Greenland map, despite it is not a part of this report. The average monthly air temperature series from 34262 Ivittuut is adjusted to Narsarsuaq series in the data set [6] and can be used as a joined long time series. 34339 Scoresbysund, located the same place as 4339 Ittoqqortoormiit and therefore not shown on the map, is also not a part of this report, but part of [6]. It is not adjusted to 4339! More details can be seen in [5,6,7] and in section 3 - Station History.

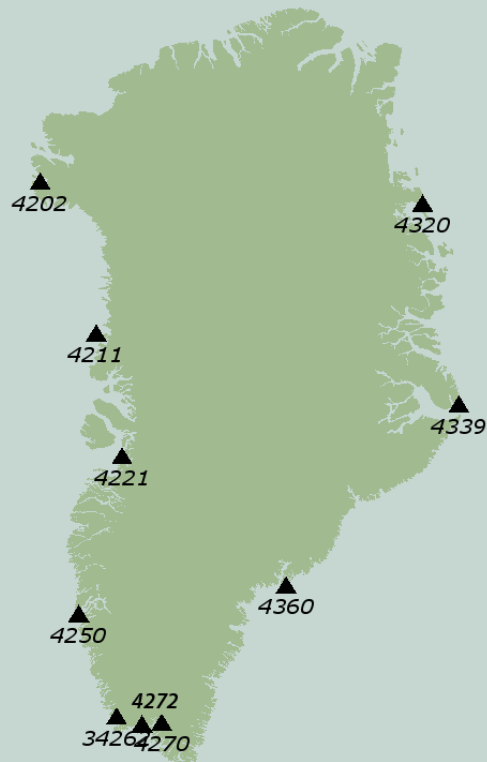


The Faroe Islands



Stations used in this section

Greenland



Stations used in this report

2.2 Data Dictionary

DMI No	WWR No	Element/Parameter	Unit
101	4	Average air temperature	0,1°C
111	6	Average daily maximum air temperature	0,1°C
121	7	Average daily minimum air temperature	0,1°C
401	3	Average atmospheric air pressure at mean sea level (msl)	0,1 hPa
601	5	Accumulated precipitation	0,1 mm

Table 2.2. Elements/parameters presented in this report.

3. Station History

By convention a time series is named after the most recent primary station delivering the data. Below is presented an overview back in time of the positions and relocations and starting and (if any) closing dates of the long station time series, which forms the backbone of the data sets included in this report [5], [6] and [7]. Also presented in the tables are any positions or relocations and starting and closing dates of other stations forming part of the series and therefore referred to in the description of the data series. More metadata on the series/stations may be found in [1,5,6,7].

Table 3. Station history from [5], [6] and [7]. The most recent primary stations are grey shaded. First year of data appearance is included for every station.

6051 Vestervig from 1874

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
21100	Vestervig	01-JUN-1873	30-JUN-1879	clima_man	32V	6291160	459820	82100	564600	47
21100	Vestervig	01-JUL-1879	18-SEP-1883	clima_man	32V	6292610	458640	81900	564600	25
21100	Vestervig	19-SEP-1883	16-AUG-1892	clima_man	32V	6291380	458510	81900	564600	18
21100	Vestervig	17-AUG-1892	30-JUN-1924	clima_man	32V	6291395	458670	81900	564600	22
21100	Vestervig	01-JUL-1924	12-APR-1937	clima_man	32V	6291410	458210	81900	564600	17
21100	Vestervig	13-APR-1937	31-MAR-1946	clima_man	32V	6291225	458420	81900	564600	27
21100	Vestervig	01-APR-1946	01-JAN-2000	clima_man	32V	6291492	458551	81919	564551	18
21100	Vestervig	02-JAN-2000	10-SEP-2003	precip_man	32V	6291492	458551	81919	564551	18
21100	Vestervig	11-SEP-2003	01-APR-2011	precip_man	32V	6291492	458551	81919	564551	18
21100	Vestervig	01-JAN-2000	10-SEP-2003	snow_man	32V	6291492	458551	81919	564551	18
21100	Vestervig	11-SEP-2003		snow_man	32V	6291492	458551	81919	564551	18
21100	Vestervig	17-FEB-2000	10-SEP-2003	clima_aut	32V	6291492	458551	81919	564551	18
21100	Vestervig	11-SEP-2003		clima_aut	32V	6291492	458551	81919	564551	18
21120	Tødsø	05-JUN-1881	30-JUN-1903	clima_man	32V	6298350	488600	84900	565000	33
21120	Erslev	01-NOV-1927	31-DEC-1949	clima_man	32V	6298850	484730	84500	565000	14
21120	Erslev	01-JAN-1950	31-MAY-1961	clima_man	32V	6298820	483850	84400	565000	20
21120	Erslev	01-NOV-1961	31-MAY-1974	clima_man	32V	6299080	483560	84400	565000	25
21120	Erslev	01-JUN-1974	30-JUN-1987	clima_man	32V	6299350	483300	84400	565000	19
21120	Erslev	01-JUL-1987	30-JUN-1993	precip_man	32V	6299280	483340	84400	565000	20
21120	Erslev	01-JUL-1993	01-APR-2011	precip_man	32V	6299080	483585	84400	565000	26
24020	Bovbjerg Fyr	01-MAR-1876	24-MAR-1944	clima_man	32V	6263750	445920	80700	563100	41
24020	Bovbjerg Fyr	03-AUG-1945	30-NOV-1956	clima_man	32V	6263750	445920	80700	563100	41
24020	Bovbjerg Fyr	01-DEC-1956	30-JUN-1987	clima_man	32V	6263750	445950	80700	563100	41
24020	Bovbjerg Fyr	01-MAR-1989	01-AUG-1994	precip_man	32V	6263740	445950	80700	563100	41
6019	Silstrup	22-MAR-2002		synop_dk	32V	6309855	478246	83833	565550	42
6051	Vestervig	11-SEP-2003		synop_dk	32V	6291492	458551	81919	564551	18
6052	Thyborøn	01-JAN-1961	06-FEB-1985	synop_dk	32V	6285030	452360	81300	564200	3
6052	Thyborøn	07-FEB-1985	21-NOV-2000	synop_dk	32V	6284510	452410	81300	564200	2
6052	Thyborøn	22-NOV-2000		synop_dk	32V	6285231	452017	81259	564227	2
6030	Fsn Aalborg	01-JAN-1953		synop_dk	32V	6328631	551614	95107	570549	3
6041	Skagen Fyr	01-JAN-1953	13-DEC-2000	synop_dk	32V	6400730	597240	103800	574400	3
6041	Skagen Fyr	14-DEC-2000		synop_dk	32V	6400740	597229	103759	574413	3
6058	Hvide Sande	01-JAN-1989	06-NOV-2001	synop_dk	32V	6206680	445780	80800	560000	3
6058	Hvide Sande	07-NOV-2001		synop_dk	32V	6207426	446535	80833	560028	2
6060	Fsn Karup	01-JAN-1953		synop_dk	32V	6238954	507127	90655	561739	52

6088 Nordby/Fanø from 1872

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
25140	Nordby	01-SEP-1871	30-APR-1892	clima_man	32U	6144290	462050	82400	552700	4
25140	Nordby	01-MAY-1892	30-NOV-1899	clima_man	32U	6144695	462190	82400	552700	4
25140	Nordby	01-DEC-1899	29-FEB-1904	clima_man	32U	6144290	462050	82400	552700	4
25140	Nordby	01-MAR-1904	29-FEB-1928	clima_man	32U	6144260	462040	82400	552700	4
25140	Nordby	01-MAR-1928	04-APR-1936	clima_man	32U	6144940	462170	82400	552700	4
25140	Nordby	05-APR-1936	15-DEC-1944	clima_man	32U	6144610	462055	82400	552700	5
25140	Nordby	16-DEC-1944	20-NOV-1955	clima_man	32U	6144790	462400	82400	552700	3
25140	Nordby	21-NOV-1955	22-AUG-1960	clima_man	32U	6145210	462330	82400	552700	5
25140	Nordby	23-AUG-1960	10-SEP-1979	clima_man	32U	6144210	461780	82400	552600	6
25140	Nordby	11-SEP-1979	13-JAN-1994	clima_man	32U	6144230	461760	82400	552600	6
25140	Nordby	14-JAN-1994	14-FEB-1996	clima_man	32U	6145165	462375	82400	552700	3
25140	Nordby	15-FEB-1996	01-JAN-2000	clima_man	32U	6145060	462120	82400	552700	4
25140	Nordby	02-JAN-2000	22-JUL-2003	precip_man	32U	6145060	462120	82400	552700	4
25140	Nordby	23-JUL-2003	04-JUL-2007	precip_man	32U	6145047	462147	82406	552656	4
25140	Nordby	05-JUL-2007	01-JAN-2009	precip_man	32U	6145059	462126	82405	552657	4
25140	Nordby	07-FEB-2000	22-JUL-2003	clima_aut	32U	6145060	462120	82400	552700	4

25140	Nordby	23-JUL-2003	04-JUL-2007	clima_aut	32U	6145047	462147	82406	552656	4
25140	Nordby	05-JUL-2007		clima_aut	32U	6145059	462126	82405	552657	4
25140	Nordby	01-JAN-2000	31-MAY-2002	snow_man	32U	6145060	462120	82400	552700	4
25135	Langli	01-AUG-1983	30-JUN-1987	clima_man	32U	6152210	456890	81900	553100	3
25135	Langli	01-JUL-1987	01-SEP-1999	precip_man	32U	6152210	456890	81900	553100	3
25135	Langli	02-JUN-2000	01-DEC-2000	precip_man	32U	6152210	456890	81900	553100	3
25145	Sønderho	01-JUN-1988	23-AUG-1999	precip_man	32U	6134345	466300	82800	552100	4
25145	Sønderho	24-AUG-1999	01-APR-2009	precip_man	32U	6134432	466300	82800	552100	4
25171	Esbjerg R/A V	04-JAN-1979	06-JUN-1985	precip_aut	32U	6149460	464000	82600	552900	3
25171	Esbjerg R/A V	26-AUG-1985	15-JAN-1989	precip_aut	32U	6149500	464120	82600	552900	3
25171	Esbjerg R/A V	16-JAN-1989	06-AUG-1990	precip_aut	32U	6149440	464035	82600	552900	3
25171	Esbjerg R/A V	07-AUG-1990	23-MAY-2012	precip_aut	32U	6149430	464030	82600	552900	3
25171	Esbjerg R/A V	24-MAY-2012		precip_aut	32U	6149500	464020	82550	552921	3
25172	Hjerting	01-DEC-1985	09-JUN-1986	precip_man	32U	6152591	460557	82300	553100	9
25172	Hjerting	10-JUN-1986	01-JAN-2007	precip_man	32U	6152596	460558	82300	553100	9
6088	Nordby	23-JUL-2003	04-JUL-2007	synop_dk	32U	6145047	462147	82406	552656	4
6088	Nordby	05-JUL-2007		synop_dk	32U	6145059	462126	82405	552657	4
6080	Esbjerg Lufthavn	01-JAN-1959	31-MAR-1971	synop_dk	32U	6151640	467420	82900	553000	25
6080	Esbjerg Lufthavn	01-APR-1971	30-SEP-1984	synop_dk	32U	6153140	471550	83300	553100	29
6080	Esbjerg Lufthavn	01-OCT-1984		synop_dk	32U	6153858	472475	83350	553144	25
25348	Vester Vedsted	06-MAY-1986	01-DEC-2003	clima_aut	32U	6127418	478179	83923	551729	3
25348	Vester Vedsted	11-DEC-2003		clima_aut	32U	6127418	478179	83923	551729	3
6081	Blåvandshuk Fyr	01-JAN-1953	31-JAN-1971	synop_dk	32U	6157430	442240	80500	553300	13
6081	Blåvandshuk Fyr	18-SEP-1980		synop_dk	32U	6157424	442226	80503	553329	16
6093	Vester Vedsted	11-DEC-2003		synop_dk	32U	6127418	478179	83923	551729	3
6096	Rømø/juvre	02-MAY-1982	06-APR-2000	synop_dk	32U	6116320	472070	83400	551100	6
6096	Rømø/juvre	07-APR-2000		synop_dk	32U	6116270	472063	83340	551128	6
6058	Hvide Sande	01-JAN-1989	06-NOV-2001	synop_dk	32V	6206680	445780	80800	560000	3
6058	Hvide Sande	07-NOV-2001		synop_dk	32V	6207426	446535	80833	560028	2
25045	Outtrup	01-OCT-2004	14-NOV-2006	snow_man	32U	6175575	458141	82000	554300	17
25045	Outtrup	15-NOV-2006	19-AUG-2009	snow_man	32U	6175311	458776	82100	554300	15
25045	Outtrup	20-AUG-2009	24-OCT-2012	snow_man	32U	6175309	458775	82100	554300	15
25045	Outtrup	25-OCT-2012		snow_man	32U	6175662	458165	82002	554325	18

6132 Tranebjerg (Samsø) from 1872

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
27080	Tranebjerg	01-DEC-1872	28-FEB-1877	clima_man	32U	6188790	600080	103600	555000	15
27080	Tranebjerg	01-MAR-1877	31-MAR-1884	clima_man	32U	6188885	599720	103500	555000	17
27080	Tranebjerg	01-APR-1884	31-MAY-1918	clima_man	32U	6188890	599630	103500	555000	17
27080	Tranebjerg	01-JUN-1918	30-APR-1950	clima_man	32U	6188850	599630	103500	555000	17
27080	Tranebjerg	01-MAY-1950	31-OCT-1972	clima_man	32U	6188910	599730	103600	555000	15
27080	Tranebjerg	01-NOV-1972	01-FEB-2000	clima_man	32U	6190400	600010	103600	555100	11
27080	Tranebjerg	02-FEB-2000	29-FEB-2000	precip_man	32U	6190400	600010	103600	555100	11
27080	Tranebjerg	01-MAR-2000	01-AUG-2001	precip_man	32U	6190468	600052	103600	555100	12
27080	Tranebjerg	15-FEB-2000	29-FEB-2000	clima_aut	32U	6190400	600010	103600	555100	11
27080	Tranebjerg	01-MAR-2000	10-AUG-2003	clima_aut	32U	6190468	600052	103600	555100	12
27080	Tranebjerg Øst	20-AUG-2003		clima_aut	32U	6188727	601656	103723	554956	16
6132	Tranebjerg Øst	20-AUG-2003		synop_dk	32U	6188727	601656	103723	554956	16
27082	Tranebjerg Øst	02-AUG-2001	17-NOV-2009	precip_man	32U	6188800	601435	103700	555000	18
27082	Tranebjerg Øst	18-NOV-2009	01-APR-2011	precip_man	32U	6188798	601458	103700	555000	18
5165	Tranebjerg Øst	18-NOV-2010	25-SEP-2011	synop_dk	32U	6188800	601458	103711	554958	18
5165	Tranebjerg Øst	26-SEP-2011		synop_dk	32U	6188796	601457	103711	554958	18
27082	Tranebjerg Øst	01-OCT-2004	17-NOV-2009	snow_man	32U	6188800	601435	103700	555000	18
27082	Tranebjerg Øst	18-NOV-2009		snow_man	32U	6188798	601458	103700	555000	18
27070	Langør	01-JUN-1871	31-MAY-1880	precip_man	32U	6197690	602720	103900	555500	3
27070	Langør	01-JUN-1880	31-DEC-1928	precip_man	32U	6198330	602320	103800	555500	4
27070	Langør	01-JAN-1929	31-OCT-1946	precip_man	32U	6198480	601270	103700	555500	3
27070	Langør	01-NOV-1946	31-DEC-1959	precip_man	32U	6198480	601820	103800	555500	2
27070	Langør	01-JAN-1960	31-MAY-1977	precip_man	32U	6198480	601270	103700	555500	3
27070	Langør	01-JUN-1977	29-FEB-1996	precip_man	32U	6198480	601820	103800	555500	2
27070	Langør	01-MAR-1996	01-MAY-1997	precip_man	32U	6198435	601255	103700	555500	3
27070	Kanhave	02-MAY-1997	01-JAN-2007	precip_man	32U	6196975	600370	103600	555400	2
27090	Ørnslund	01-JAN-1864	30-SEP-1881	precip_man	32U	6182900	600180	103600	554700	11
27090	Ørnslund	01-OCT-1881	30-APR-1958	precip_man	32U	6183200	599650	103500	554700	6
27090	Brattingsborg	01-MAY-1958	31-DEC-1970	precip_man	32U	6183400	599477	103500	554700	6
27090	Brattingsborg	01-JAN-1971	01-JUN-2004	precip_man	32U	6183332	599485	103500	554700	6
28180	Blangstedgård	01-JUL-1885	31-DEC-1982	clima_man	32U	6138250	591690	102700	552300	15
6159	Røsnaes Fyr	01-JAN-1959	14-NOV-2001	synop_dk	32U	6179330	617414	105200	554500	15
6159	Røsnaes Fyr	15-NOV-2001		synop_dk	32U	6179319	617433	105214	554439	14
6073	Sletterhage Fyr	15-MAY-2001		synop_dk	32V	6217942	594237	103053	560546	4
6120	Odense Lufthavn	01-JAN-1959	30-JUN-1975	synop_dk	32U	6148495	584135	102000	552800	16
6120	Odense Lufthavn	01-JUL-1975	30-SEP-2013	synop_dk	32U	6148648	584180	102000	552900	15
6120	H.C.AndersenAirport	01-OCT-2013		synop_dk	32U	6148648	584180	102000	552900	15

6169	Gniben	01-JAN-1961	31-JUL-1974	synop_dk	32V	6209380	642270	111700	560000	4
6169	Gniben	01-AUG-1974	31-MAR-1979	synop_dk	32V	6209340	642190	111700	560000	10
6169	Gniben	01-APR-1979	14-FEB-1983	synop_dk	32V	6209560	642140	111700	560100	13
6169	Gniben	15-FEB-1983		synop_dk	32V	6209553	642156	111648	560032	14

6186 Københavns Landbohøjskole from 1768

This station has been subject to urban change. Back in time the surroundings were rural whereas today the park of Landbohøjskolen with the synoptic station is surrounded by the city of Copenhagen. Observations in Copenhagen started 1751 in the tower "Rundetårn", but the first 16 years the thermometer was situated inside a room in a little observatory near the top of the tower. In the beginning of 1767 the thermometer was situated outside the observatory facing north and from 1768 the observations were taken 4 times a day. Therefore the series presented in this report starts 1768.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
30380	Landbohøjskolen	01-JAN-1860	01-JUL-1997	clima_man	33U	6173560	345420	123200	554100	9
6186	Landbohøjskolen	29-NOV-1995	12-JUN-1997	synop_dk	33U	6173560	345420	123200	554100	9
6186	Landbohøjskolen	13-JUN-1997	01-JUL-1997	synop_dk	33U	6174083	345667	123242	554112	7
6186	Landbohøjskolen	02-JUL-1997		synop_dk	33U	6174083	345667	123242	554112	7
6180	Københavns Lufthavn	01-JAN-1953	30-JUN-1955	synop_dk	33U	6167070	352740	124000	553800	2
6180	Københavns Lufthavn	01-JUL-1955	30-JUN-1959	synop_dk	33U	6167170	352110	123900	553800	3
6180	Københavns Lufthavn	01-JUL-1959	13-JUL-1971	synop_dk	33U	6166370	352440	123900	553700	3
6180	Københavns Lufthavn	14-JUL-1971	15-JUN-1983	synop_dk	33U	6165550	351570	123900	553700	4
6180	Københavns Lufthavn	16-JUN-1983		synop_dk	33U	6165840	351770	123900	553700	5
6183	Drogden Fyr	01-JAN-1961		synop_dk	33U	6157060	355647	124245	553213	18
6187	Københavns Toldbod	20-FEB-2004		synop_dk	33U	6174236	349105	123559	554121	20
30340	Københavns Toldbod	01-JAN-1886	31-DEC-1949	fuess	33U	6174250	349070	123600	554100	20
30340	Københavns Toldbod	01-JAN-1950	30-JUN-1976	fuess	33U	6174240	349110	123600	554100	20
30340	Københavns Toldbod	01-JAN-1978	30-JUN-1997	fuess	33U	6174240	349110	123600	554100	20
30340	Københavns Toldbod	01-MAY-1968	03-APR-2005	casella	33U	6174240	349110	123600	554100	20
30341	Københavns Toldbod	20-FEB-2004		clima_aut	33U	6174236	349105	123559	554121	20
30210	Meteorologisk Institut	01-JAN-1875	31-DEC-1906	clima_man	33U	6174200	349100	123600	554100	13
30210	Meteorologisk Institut	1-JAN-1907	31-DEC-1922	clima_man	33U	6174200	349100	123600	554100	5
30210	Meteorologisk Institut	01-JAN-1952	28-FEB-1972	clima_man	33U	6182380	347220	123400	554600	15
30210	Meteorologisk Institut	1-MAR-1972	31-MAR-1985	precip_man	33U	6177370	346930	123400	554300	8
30210	Danmarks Met. Inst.	01-JUN-2004		clima_aut	33U	6177359	346923	123348	554300	8
30370	Botanisk Have	01-OCT-1955	31-DEC-1970	clima_man	33U	6174193	347579	123500	554100	6
30370	Botanisk Have	01-NOV-1945	30-SEP-1955	precip_man	33U	6174193	347579	123500	554100	6
30370	Botanisk Have	01-JAN-1971	01-APR-2011	precip_man	33U	6174193	347579	123500	554100	6
5735	Botanisk Have	14-JAN-2010	28-NOV-2011	synop_dk	33U	6174196	347575	123431	554118	6
5735	Botanisk Have	29-NOV-2011	23-JUL-2012	synop_dk	33U	6174199	347574	123431	554118	6
5735	Botanisk Have	24-JUL-2012		synop_dk	33U	6174194	347557	123430	554118	6
30370	Botanisk Have	01-OCT-2004		snow_man	33U	6174193	347579	123500	554100	6
30372	Rundetårn	01-JAN-1751	31-DEC-1817	clima_man	33U	6173480	347655	123437	554055	7 ⁾
30371	Gl. Botanisk Have	01-JAN-1818	31-DEC-1859	clima_man	33U	6173160	348485	123525	554045	3

*) The ground level of the tower is 7 m above MSL. The thermometer was situated app. 43 m above MSL.

6193 Hammer Odde Fyr/Lighthouse (Bornholm) from 1873

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
32030	Sandvig	11-NOV-1872	31-AUG-1953	clima_man	33U	6127090	486180	144700	551700	13
32030	Sandvig	01-SEP-1953	30-JUN-1966	clima_man	33U	6127105	486140	144700	551700	13
32030	Sandvig	01-AUG-1966	30-NOV-1972	clima_man	33U	6127010	485840	144700	551700	12
32025	Hammeren Fyr	01-JAN-1880	31-JUL-1962	clima_man	33U	6126930	484770	144600	551700	77
32020	Hammer Odde Fyr	01-MAR-1953	30-JUN-1974	clima_man	33U	6128190	485630	144600	551800	7
32020	Hammer Odde Fyr	01-JUL-1974	30-JUN-1987	clima_man	33U	6128170	485710	144700	551800	11
6191	Christiansø Fyr	01-JAN-1961	31-MAR-2000	synop_dk	33U	6130820	511970	151100	551900	13
32080	Klemensker	01-OCT-1954	30-NOV-1971	clima_man	33U	6114630	487970	144900	551100	110
32080	Klemensker	01-SEP-1953	30-SEP-1954	precip_man	33U	6114630	487970	144900	551100	110
32080	Klemensker	01-OCT-1994	21-SEP-1998	precip_man	33U	6114674	488059	144900	551100	111
32080	Klemensker	22-SEP-1998	01-DEC-2004	precip_man	33U	6114671	488062	144900	551100	111
32080	Klemensker	02-DEC-2004	01-AUG-2010	precip_man	33U	6114234	488024	144900	551000	108
32080	Klemensker	01-DEC-2002	01-DEC-2004	snow_man	33U	6114671	488062	144900	551100	111
32080	Klemensker	02-DEC-2004	31-MAY-2010	snow_man	33U	6114234	488024	144900	551000	108
32175	Østerlars	15-MAY-1998	20-MAY-2008	precip_man	33U	6113107	498094	145800	551000	94
32175	Østerlars	21-MAY-2008	01-APR-2011	precip_man	33U	6113129	498051	145800	551000	94
32175	Østerlars	20-JAN-2005	20-MAY-2008	snow_man	33U	6113107	498094	145800	551000	94
32175	Østerlars	21-MAY-2008		snow_man	33U	6113129	498051	145800	551000	94
6193	Hammer Odde Fyr	05-OCT-1977	29-AUG-2001	synop_dk	33U	6128170	485710	144700	551800	11
6193	Hammer Odde Fyr	30-AUG-2001		synop_dk	33U	6128170	485579	144622	551755	8

6190	Bornholms Lufthavn	01-JAN-1959	31-MAY-1977	synop_dk	33U	6102830	483820	144500	550400	13
6190	Bornholms Lufthavn	01-JUN-1977		synop_dk	33U	6102556	484066	144500	550400	15
6199	Dueodde N Fyr	01-JAN-1959	30-SEP-1962	synop_dk	33U	6095230	504720	150400	550000	16
6199	Dueodde S Fyr	01-OCT-1962	30-JUN-1977	synop_dk	33U	6094150	504810	150500	550000	6

6011 Tórshavn (The Faroe Islands) from 1873

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
33071	Tórshavn skole	01-JAN-1871	31-DEC-1871	clima_man	29V	6877520	616750	-64600	620100	9
33071	Tórshavn skole	01-OCT-1872	31-JUL-1907	clima_man	29V	6877520	616750	-64600	620100	9
33071	Tórshavn skole	01-AUG-1907	31-MAR-1925	clima_man	29V	6877560	616920	-64600	620100	24
33060	Hoyvik	01-JUN-1921	31-DEC-1981	clima_man	29V	6879770	617460	-64500	620200	20
33060	Hoyvik	01-FEB-1983	31-MAR-1983	clima_man	29V	6879770	617460	-64500	620200	20
33100	Vagur	01-NOV-1903	30-NOV-1922	precip_man	29V	6817750	616350	-64900	612800	15
33100	Vagur	02-JUN-1999	01-OCT-2011	precip_man	29V	6817549	619270	-64500	612800	43
6011	Tórshavn	01-JAN-1953	30-JUN-1962	synop_dk	29V	6878110	616530	-64600	620100	35
6011	Tórshavn	01-JUL-1962	31-DEC-1992	synop_dk	29V	6878170	616530	-64600	620100	43
6011	Tórshavn	01-JAN-1993		synop_dk	29V	6879010	617080	-64600	620100	54

4202 Pituffik (Greenland; Thule Air Base) from 1948

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
4200	Dundas	01-JAN-1961	23-JUN-1981	synop_gr				-684800	763400	21
4200	Dundas	02-NOV-1981	30-DEC-1981	synop_gr				-684800	763400	21
4200	Dundas	01-MAR-1982	29-MAY-1982	synop_gr				-684800	763400	21
4200	Dundas	01-JUL-1982	31-AUG-1983	synop_gr				-684800	763400	21
4202	Pituffik ^{*)}	01-JAN-1974	27-NOV-2006	synop_gr				-684200	763200	77

*) From Nov 2006 the monthly data are obtained from Thule AB (Pituffik), personal communication.

4211 Mittarfik Upernavik (Greenland; Airport) from 1873

The station 4209 Upernavik AWS was an automatic station, which explains the lack of manually observations in the period, where 4210 Upernavik was closed.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34210	Upernavik	01-SEP-1873	31-DEC-1960	clima_man				-560700 ^{*)}	724700 ^{*)}	19 ^{*)}
4210	Upernavik	01-JAN-1958	31-JAN-1987	synop_gr				-561000	724700	63
4209	Upernavik AWS	30-AUG-1984	26-SEP-1995	synop_gr				-561000	724700	63
4210	Upernavik	08-SEP-1995	16-AUG-2004	synop_gr				-561000	724700	120
4211	Mittarfik Upernavik	23-OCT-2000		synop_gr				-560750	724725	126
4202	Pituffik	01-JAN-1974	27-NOV-2006	synop_gr				-684500	763200	77
4216	Ilulissat	01-JAN-1961	30-SEP-1991	synop_gr				-510300	691300	39
4216	Ilulissat	01-OCT-1991	31-AUG-1992	synop_gr				-510300	691300	39
4221	Mittarfik Ilulissat	14-AUG-1991		synop_gr				-510358	691425	29

*) The number and positions of locations/relocations during the period are not certain.

4221 Mittarfik Ilulissat (Greenland; Airport) (Danish name: Jakobshavn Lufthavn) from 1807

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34212	Uummannaq	01-OCT-1829 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
34210	Upernavik	01-AUG-1807 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
34216	Ilulissat	01-NOV-1835 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
34216	Ilulissat	01-JUL-1873	28-FEB-1962	clima_man				-510300	691300	39
34218	Qeqertarsuaq	01-AUG-1807 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
4212	Uummannaq	01-JAN-1961	14-AUG-1989	synop_gr				-520700	704000	39
4212	Uummannaq Heli	15-JAN-2004	30-JUN-2006	synop_gr				-520700	714000	2
4216	Ilulissat	01-JAN-1961	30-SEP-1991	synop_gr				-510300	691300	39
4216	Ilulissat	01-OCT-1991	31-AUG-1992	synop_gr				-510300	691300	39
4218	Qeqertarsuaq	01-JAN-1962	30-JUN-1980	synop_gr				-533100	691400	24
4219	Qeqertarsuaq Heli	21-JAN-2004		synop_gr				-533217	691504	3
4221	Mittarfik Ilulissat	01-JAN-1984	13-AUG-1991	metar				-510358	691425	29
4221	Mittarfik Ilulissat	14-AUG-1991		metar				-510358	691425	29
4221	Mittarfik Ilulissat	14-AUG-1991		synop_gr				-510358	691425	29
4220	Aasiaat	01-JAN-1958		synop_gr				-525106	684229	43

*) The number, start, end and positions of locations/relocations during the period are not known or certain.

4250 Nuuk (Greenland) (Danish name: Godthåb) from 1784

In the late 1990's the manual precipitation gauge at 4250 Nuuk was replaced with an automatic rain gauge. This arrangement did not function satisfactory for climatic purposes at that time and therefore supplementary manual precipitation measurements were started 2 February 1999 at station 34250 Nuuk. Here the precipitation was observed every day at 21 UTC for the previous 24 hours. The manual station 34250 was closed 1 September 2012.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34247	Qoornoq	01-JAN-1874 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
04247	Qoornoq	03-JAN-1966	31-DEC-1969	synop_gr				-510300	643200	
34250	Nuuk	01-SEP-1784 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
34250	Nuuk	01-JAN-1874 ^{*)}	31-DEC-1960	clima_man				-514330 ^{*)}	641030 ^{*)}	20 ^{*)}
4250	Nuuk	01-JAN-1958	31-AUG-1991	synop_gr				-514500	641000	54
4250	Nuuk	01-SEP-1991		synop_gr				-514351	641100	80
34250	Nuuk	02-FEB-1999	01-SEP-2012	precip_man				-514403	641100	54
4221	Mittarfik Ilulissat	14-AUG-1991		synop_gr				-510358	691425	29
4230	Sisimiut	01-JAN-1961	22-JUN-2001	synop_gr				-534000	665500	12
4254	Mittarfik Nuuk	01-AUG-1985		metar				-514041	641127	87
4254	Mittarfik Nuuk	01-NOV-2000		synop_gr				-514041	641127	87
4270	Mittarfik Narsarsuaq	01-JAN-1961		synop_gr				-452532	610939	34

*) The number, start, end and positions of locations/relocations during the period are not known or certain.

34262 Ivittuut (Greenland) (Danish name: Ivigtut) from 1873

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34262	Ivittuut	01-JAN-1875	31-DEC-1966	clima_man				-481100 ^{*)}	611200 ^{*)}	30 ^{*)}

*) The number and positions of locations/relocations during the period are not certain.

4270 Mittarfik Narsarsuaq (Greenland; Airport) from 1961

Manual precipitation measurements were started in January 2009 as station 34270 Mittarfik Narsarsuaq. Here the precipitation is observed every day at 12 UTC for the previous 24 hours.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
4270	Mittarfik Narsarsuaq	01-JAN-1961		synop_gr				-452532	610939	34
34270	Mittarfik Narsarsuaq	22-JAN-2009		precip_man				-452509	610939	26
4271	Narsarsuaq Radiosonde	07-JUL-2011		synop_gr				-452624	610927	4

4272 Qaqortoq (Greenland) (Danish name: Julianehåb) from 1807

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34260	Paamiut	01-AUG-1828 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
34262	Ivittuut	01-JAN-1875	31-DEC-1966	clima_man				-481100 ^{*)}	611200 ^{*)}	30 ^{*)}
34272	Qaqortoq	01-OCT-1807 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
34283	Nanortalik	01-AUG-1883 ^{*)}	? ^{*)}	clima_man				^{*)}	^{*)}	^{*)}
4260	Paamiut	01-JAN-1958	21-SEP-1992	synop_gr				-494300	620000	15
4260	Paamiut Heliport	22-SEP-1992	06-DEC-2007	synop_gr				-494000	620000	13
4260	Mitt. Paamiut	07-DEC-2007		synop_gr				-494015	620053	37
4270	Mitt. Narsarsuaq	01-JAN-1961		synop_gr				-452532	610939	34
4272	Qaqortoq	01-JAN-1961	08-SEP-2003	synop_gr				-460300	604300	32
4272	Qaqortoq	09-SEP-2003		synop_gr				-460256	604256	57
4273	Qaqortoq Heliport	17-MAR-2004		synop_gr				-460146	604247	16

*) The number, start, end and positions of locations/relocations during the period are not known or certain.

4320 Danmarkshavn (Greenland) from 1949

Manual precipitation measurements were started in January 2009 as station 34320 Danmarkshavn. Here the precipitation is observed every day at 12 UTC for the previous 24 hours.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
4320	Danmarkshavn	05-NOV-1948	31-DEC-1957	synop_gr				-184000	764600	14
4320	Danmarkshavn	01-JAN-1958		synop_gr				-184005	764610	11
34320	Danmarkshavn	01-JAN-2009		precip_man				-184005	764610	11

34339 Scoresbysund (Greenland) (Greenland name: Ittoqqortoormiit) from 1924

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34339	Scoresbysund ^{*)}	01-NOV-1923	31-DEC-1946	clima_man				-215800	702900	17
34339	Scoresbysund ^{*)}	01-JAN-1947	30-APR-1948	clima_man				-215800	702900	24
34339	Scoresbysund ^{*)}	01-MAY-1948	31-OCT-1948	clima_man				-215800	702900	41
34339	Scoresbysund ^{*)}	01-NOV-1948	30-SEP-1949	clima_man				-215800	702900	51

*) The relocations during the period are not certain.

4339 Ittoqqortoormiit (Greenland) (Danish name: Scoresbysund. Previous: Illoqqortoormiit) from 1949

Manual precipitation measurements were started in September 2014 as station 34339 Ittoqqortoormiit. Here the precipitation is observed every day at 12 UTC for the previous 24 hours.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34340	Uunarteq (Kap Tobin)	01-OCT-1948	31-DEC-1960	project				-215800	702500	42
4340	Uunarteq (Kap Tobin)	01-OCT-1949	31-OCT-1980	synop_gr				-215800	702500	42
4340	Uunarteq (Kap Tobin)	05-SEP-1985	10-JUN-1990	synop_gr				-215800	702500	41
4339	Ittoqqortoormiit	01-NOV-1980	16-AUG-2005	synop_gr				-215700	702900	65
4339	Ittoqqortoormiit	17-AUG-2005		synop_gr				-215704	702904	70
34339	Ittoqqortoormiit	01-SEP-2014		precip_man				-215700	702900	65
4341	Mittarfik Nerlerit Inaat	01-NOV-2000		synop_gr				-223902	704435	14

4360 Tasiilaq (Greenland) (Danish name: Ammassalik. Previous name: Angmagssalik) from 1895

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34360	Tasiilaq	13-OCT-1894	31-SEP-1959	clima_man				-373800 ^{*)}	653600 ^{*)}	50 ^{*)}
4360	Tasiilaq	01-JAN-1958	31-MAR-1982	synop_gr				-373800	653600	36
4360	Tasiilaq	01-APR-1982	14-AUG-2005	synop_gr				-373800	653600	50
4360	Tasiilaq	15-AUG-2005		synop_gr				-373812	653640	54
4361	Mittarfik Kulusuk	28-NOV-2000		synop_gr				-370725	653425	36

*) The number and positions of locations/relocations during the period are not certain.

4. Data files

Data are included in this report as three (3) Excel files, one for each of the countries Denmark, The Faroe Islands and Greenland and with fifteen (15) sheets, one for every station in table 2.1:

dk_wwr_1991_2016.xlsx, fr_wwr_1991_2016.xlsx, gr_wwr_1991_2016.xlsx

The format is:

Station Metadata section:

Field 1:	Blank	
Field 2:	WMO number	
Field 3:	Record type	1= Station Metadata Record
Field 4:	Latitude	N= Northern
Field 5:	Longitude	E= Eastern, W= Western
Field 6:	Country	
Field 7:	Station name	
Field 8:	Height of station above sea level (meters)	
Field 9:	Height of barometer above sea level (0.1 meters)	

Data records:

Field 1:	Blank	
Field 2:	WMO number	
Field 3:	Element code	3= Average atmospheric air pressure (msl) in 0.1 hPa 4= Average air temperature in 0.1°C 5= Accumulated precipitation in 0.1 mm 6= Average maximum air temperature in 0,1°C 7= Average minimum air temperature in 0,1°C

Field 4:	Year	
Field 5:	Rec type	blank=Monthly and Annual data 1=Decadal (1991- 2000 or 2001-2010) average (NB! Year = 2000 or 2010) 2=Clino (1971-2000 or 1981-2010) average (NB! Year = 2000 or 2010)

Field 6:	Jan	Value for January
Field 7:	Feb	Value for February
Field 8:	Mar	Value for March
Field 9:	Apr	Value for April
Field 10:	May	Value for May
Field 11:	Jun	Value for June
Field 12:	Jul	Value for July
Field 13:	Aug	Value for August
Field 14:	Sep	Value for September
Field 15:	Oct	Value for October
Field 16:	Nov	Value for November
Field 17:	Dec	Value for December
Field 18:	Annual	Annual value

Note: If a monthly value is missing, the yearly value is not calculated. The corresponding fields are left blank. Please also notice that:

- 1) 4202 Pituffik and 4272 Qaqortoq only have average air temperatures in the dataset.
- 2) 4211 Upernavik only have accumulated precipitation up to 1980. The clino 1971-2000 for accumulated precipitation are therefore only calculated on data 1971-1980!
- 3) 4221 Ilulissat only have accumulated precipitation up to 1984. The clino 1971-2000 for accumulated precipitation are therefore only calculated on data 1971-1984! The clino 1981-2010 for accumulated precipitation are therefore only calculated on data 1981-1984!

References

- [1] Laursen, E. V. (2003): Metadata, Selected Climatological and Synoptic Stations, 1750-1996. DMI Technical Report 03-24, Copenhagen.
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Appendix 1. Example of the tables “World Weather Records 1991-2016”.

6051 Vestervig, Denmark.

Station Metadata section:

Field 1:	Blank	
Field 2:	WMO number	
Field 3:	Record type	1= Station Metadata Record
Field 4:	Latitude	N= Northern
Field 5:	Longitude	E= Eastern, W= Western
Field 6:	Country	
Field 7:	Station name	
Field 8:	Height of station above sea level (m)	
Field 9:	Height of barometer above sea level (0.1 m)	

Data records:

Field 1:	Blank	
Field 2:	WMO number	
Field 3:	Element code	3= Average atmospheric air pressure (msl) in 0.1 hPa 4= Average air temperature in 0.1°C 5= Accumulated precipitation in 0.1 mm 6= Average maximum air temperature in 0,1°C 7= Average minimum air temperature in 0,1°C
Field 4:	Year	
Field 5:	Rec type	blank=Monthly and Annual data 1=Decadal (1991- 2000 or 2001-2010) average (NB! Year = 2000 or 2010) 2=Clino (1971-2000 or 1981-2010) average (NB! Year = 2000 or 2010)

Field 6-18: Monthly/annual values

Note: If a monthly value is missing, the yearly value is not calculated. The corresponding fields are left blank.

blank VMO number	Rec type	Latitude	Longitude	Country	Stat name												Station H	Barom H
6051	1	5646N	0819E	Denmark	Vestervig												18	36
blank VMO Number	elem type	year	rec type	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annual		
6051	4	1991		28	-6	45	65	89	115	174	165	138	90	56	49	84		
6051	4	1992		40	45	44	58	134	172	161	155	131	65	59	36	92		
6051	4	1993		27	23	35	75	124	130	135	141	107	76	25	25	77		
6051	4	1994		31	-12	33	71	113	126	189	166	126	86	72	53	88		
6051	4	1995		16	43	34	62	96	138	170	172	133	120	44	-17	84		
6051	4	1996		-18	-25	4	59	81	124	143	176	117	103	51	4	68		
6051	4	1997		-1	32	39	59	97	149	176	203	135	84	42	29	87		
6051	4	1998		28	52	45	65	119	139	143	145	137	88	23	20	84		
6051	4	1999		27	25	40	79	107	133	169	168	163	97	65	33	92		
6051	4	2000		44	41	41	81	125	132	146	153	132	112	71	39	93		
6051	4	2000	1	22	22	36	67	109	136	161	164	132	92	51	27	85		
6051	4	2000	2	14	12	29	60	108	136	155	158	128	93	54	30	81		
6051	4	2001		22	6	12	55	105	122	172	168	127	124	62	13	82		
6051	4	2002		37	42	43	73	127	151	165	196	146	68	36	-3	90		
6051	4	2003		3	-9	31	74	103	152	176	173	142	71	63	46	85		
6051	4	2004		-1	27	36	77	108	131	152	184	140	95	61	54	89		
6051	4	2005		45	9	21	77	102	132	166	152	141	111	70	33	88		
6051	4	2006		-3	8	-1	59	113	139	190	169	164	122	88	78	94		
6051	4	2007		57	22	63	92	104	160	153	164	127	92	58	47	95		
6051	4	2008		45	50	37	77	124	151	177	163	131	102	60	29	96		
6051	4	2009		16	13	43	94	112	137	170	170	140	80	73	11	88		
6051	4	2010		-37	-29	28	67	90	130	176	162	126	91	26	-33	66		
6051	4	2011		11	-2	33	94	112	144	159	158	141	103	74	50	90		
6051	4	2012		29	-6	54	62	114	124	157	163	129	89	64	0	82		
6051	4	2013		-1	-3	-3	51	114	129	164	171	134	107	66	64	83		
6051	4	2014		18	45	59	90	116	148	196	164	149	121	73	43	102		
6051	4	2015		39	31	49	68	93	121	149	173	135	96	81	71	93		
6051	4	2016		7	31	43	66	128	157	160	159	164	88	46	59	92		
6051	4	2010	1	18	14	31	75	109	141	170	170	138	96	60	28	87		
6051	4	2010	2	17	15	31	67	109	137	161	163	132	95	55	28	84		
6051	6	1991		47	13	71	103	124	146	223	200	171	118	76	66	113		
6051	6	1992		58	61	67	85	179	226	207	188	169	96	79	54	122		
6051	6	1993		47	44	62	119	179	171	168	174	136	102	40	40	107		
6051	6	1994		45	9	53	107	163	159	242	207	153	111	90	71	118		
6051	6	1995		37	60	58	92	135	174	216	217	165	142	67	11	115		
6051	6	1996		-2	-2	33	107	113	162	179	226	158	125	69	29	100		
6051	6	1997		24	47	65	88	132	194	224	249	164	111	61	45	117		
6051	6	1998		49	66	71	97	160	175	177	174	165	110	43	37	110		
6051	6	1999		44	46	59	113	143	162	206	209	203	122	89	53	121		
6051	6	2000		62	58	69	117	170	169	182	186	166	136	89	59	122		
6051	6	2000	1	41	40	61	103	150	174	202	203	165	117	70	47	114		
6051	6	2000	2	32	32	55	94	149	175	195	197	160	118	74	48	111		
6051	6	2001		40	29	42	93	144	156	216	207	157	145	86	45	113		
6051	6	2002		51	62	73	113	171	196	205	244	185	98	57	13	122		
6051	6	2003		26	18	66	125	136	194	217	213	182	106	85	65	119		
6051	6	2004		20	52	68	112	146	164	187	235	172	121	85	73	120		
6051	6	2005		61	31	56	121	139	164	204	185	177	148	94	51	119		
6051	6	2006		18	29	28	89	150	173	230	209	201	152	104	91	123		
6051	6	2007		75	39	100	132	136	205	184	197	154	125	82	64	124		
6051	6	2008		58	68	64	120	174	192	217	198	174	128	82	47	127		
6051	6	2009		33	34	68	148	154	180	211	209	173	111	89	31	120		
6051	6	2010		-13	-5	54	101	124	166	218	203	168	126	46	-2	99		
6051	6	2011		31	15	57	137	151	187	192	196	170	132	90	69	119		
6051	6	2012		46	23	75	96	154	154	192	202	155	113	84	19	109		
6051	6	2013		19	19	34	93	159	162	202	211	172	134	89	76	114		
6051	6	2014		31	64	86	129	156	194	238	192	181	147	93	65	132		
6051	6	2015		56	48	79	104	124	155	183	220	173	127	102	86	122		
6051	6	2016		29	54	63	94	171	198	192	195	211	112	71	75	122		
6051	6	2010	1	37	36	62	115	147	179	209	210	174	126	81	48	119		
6051	6	2010	2	36	36	58	103	149	175	201	201	165	122	76	47	114		
6051	7	1991		4	-31	23	31	54	91	137	137	108	59	33	24	56		
6051	7	1992		13	25	21	34	83	117	124	124	103	30	29	14	60		
6051	7	1993		1	-3	4	37	77	95	107	110	80	50	6	-1	47		
6051	7	1994		11	-36	7	38	68	98	139	129	99	60	48	28	57		
6051	7	1995		-15	20	9	32	58	102	128	130	101	94	8	-54	51		
6051	7	1996		-34	-54	-22	21	54	97	110	136	77	82	29	-25	39		
6051	7	1997		-27	14	11	28	61	110	128	157	108	53	21	9	56		
6051	7	1998		2	37	18	39	81	107	118	121	115	63	1	-1	58		
6051	7	1999		4	0	20	48	68	107	130	128	131	72	38	8	63		
6051	7	2000		34	34	16	52	86	106	118	129	101	87	54	18	70		
6051	7	2000	1	-1	1	11	36	69	103	124	130	102	65	27	2	56		
6051	7	2000	2	-10	-12	5	29	69	101	123	124	99	65	28	5	52		

blank VMO Number	elem type	year	rec type	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annual
6051	7	2001		4	-18	-17	24	74	98	134	138	101	101	34	-21	54
6051	7	2002		17	15	15	35	93	116	133	157	109	35	14	-24	60
6051	7	2003		-22	-35	-1	27	74	118	143	133	112	36	41	27	54
6051	7	2004		-25	0	7	47	79	107	121	142	109	65	29	30	59
6051	7	2005		25	-16	-13	41	73	105	137	125	107	77	48	11	60
6051	7	2006		-25	-16	-33	35	80	109	154	138	136	95	62	61	66
6051	7	2007		32	6	33	56	76	121	128	139	104	57	30	31	68
6051	7	2008		27	29	5	39	74	111	141	134	96	78	39	9	65
6051	7	2009		-5	-11	19	52	76	97	139	138	114	48	55	-9	59
6051	7	2010		-64	-63	-3	38	59	103	143	133	91	55	6	-67	36
6051	7	2011		-14	-24	9	59	82	115	134	128	114	73	53	26	63
6051	7	2012		8	-36	37	33	78	100	128	130	106	66	44	-23	56
6051	7	2013		-28	-25	-36	15	73	101	129	135	101	81	39	45	53
6051	7	2014		4	27	35	52	80	106	148	133	115	95	55	18	73
6051	7	2015		19	11	20	36	64	94	118	134	103	71	56	53	65
6051	7	2016		-16	8	23	41	85	114	133	129	124	65	23	35	64
6051	7	2010	1	-4	-11	1	39	76	109	137	138	108	65	36	5	58
6051	7	2010	2	-7	-10	6	34	73	104	128	130	103	67	31	3	55
blank VMO Number	elem type	year	rec type	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annual
6051	3	1991		10173	10195	10144	10156	10184	10081	10162	10165	10124	10148	10072	10203	10151
6051	3	1992		10245	10158	10080	10088	10199	10183	10150	10089	10162	10083	10047	10165	10137
6051	3	1993		10101	10239	10198	10136	10161	10141	10100	10149	10136	10157	10245	9980	10145
6051	3	1994		10026	10199	10057	10109	10151	10137	10194	10124	10095	10129	10161	10086	10122
6051	3	1995		10070	10004	10056	10143	10159	10145	10159	10173	10095	10170	10162	10218	10130
6051	3	1996		10240	10141	10224	10186	10128	10159	10138	10163	10172	10121	10043	10160	10156
6051	3	1997		10230	10066	10188	10158	10147	10108	10170	10177	10172	10125	10109	10108	10147
6051	3	1998		10112	10131	10163	10049	10164	10119	10069	10128	10109	10044	10174	10129	10116
6051	3	1999		10078	10055	10098	10115	10167	10152	10159	10120	10107	10133	10162	9989	10111
6051	3	2000		10141	10085	10137	10095	10152	10153	10097	10151	10148	10076	10009	10056	10108
6051	3	2000	1	10142	10127	10135	10124	10161	10138	10140	10144	10132	10119	10118	10109	10132
6051	3	2000	2	10120	10140	10126	10132	10155	10136	10136	10140	10132	10126	10107	10104	10129
blank VMO Number	elem type	year	rec type	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annual
6051	3	2001		10121	10147	10078	10097	10172	10133	10134	10130	10088	10114	10147	10189	10129
6051	3	2002		10136	10002	10141	10169	10142	10130	10126	10158	10191	10109	10100	10221	10135
6051	3	2003		10097	10229	10225	10180	10141	10139	10143	10154	10176	10115	10136	10121	10155
6051	3	2004		10046	10138	10186	10141	10134	10120	10131	10104	10129	10092	10149	10107	10123
6051	3	2005		10094	10180	10155	10147	10134	10160	10123	10135	10167	10180	10107	10133	10143
6051	3	2006		10254	10135	10104	10098	10129	10196	10194	10081	10133	10081	10076	10125	10134
6051	3	2007		10032	10083	10138	10208	10088	10113	10072	10126	10135	10226	10114	10162	10125
6051	3	2008		10069	10167	9989	10116	10198	10127	10122	10081	10179	10079	10079	10168	10115
6051	3	2009		10117	10114	10099	10169	10178	10157	10091	10139	10170	10153	10004	10078	10122
6051	3	2010		10183	10053	10126	10179	10142	10151	10140	10100	10130	10116	10062	10125	10126
6051	3	2011		10136	10158	10202	10187	10160	10134	10100	10105	10106	10143	10193	9994	10135
6051	3	2012		10128	10237	10232	10054	10156	10101	10112	10146	10099	10083	10073	10075	10125
6051	3	2013		10125	10176	10165	10145	10105	10148	10191	10159	10134	10115	10104	10088	10138
6051	3	2014		10068	9998	10140	10151	10149	10161	10148	10077	10189	10118	10138	10093	10120
6051	3	2015		10044	10127	10166	10173	10108	10163	10110	10165	10148	10209	10070	10148	10136
2016	3	2016		10086	10043	10129	10100	10158	10130	10129	10150	10169	10244	10124	10216	10140
6051	3	2010	1	10115	10125	10124	10150	10146	10143	10128	10121	10150	10127	10097	10143	10131
6051	3	2010	2	10120	10133	10123	10138	10151	10137	10136	10130	10135	10119	10112	10117	10129
blank VMO Number	elem type	year	rec type	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annual
6051	5	1991		726	341	469	430	33	503	424	387	594	622	1319	431	6279
6051	5	1992		312	426	838	731	281	26	324	1591	736	1208	1249	539	8261
6051	5	1993		1004	294	245	322	328	101	830	919	654	814	529	1240	7280
6051	5	1994		1197	430	976	320	198	541	176	836	1606	686	575	910	8451
6051	5	1995		1184	795	589	306	392	422	204	361	903	589	641	320	6706
6051	5	1996		115	358	61	122	534	178	163	558	621	882	1125	780	5497
6051	5	1997		98	1062	392	485	361	509	219	495	737	546	611	767	6282
6051	5	1998		622	578	641	558	306	474	971	632	448	1995	505	845	8575
6051	5	1999		824	567	961	596	518	1383	524	887	1201	918	890	1594	10863
6051	5	2000		800	919	447	428	647	365	402	387	785	1304	1692	874	9050
6051	5	2000	1	688	577	562	430	360	450	424	705	829	956	914	830	7724
6051	5	2000	2	702	485	585	397	437	499	483	723	872	991	931	865	7970

blank VMO Number	elem type	year	rec type	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annual
	6051	5	2001	602	282	516	832	383	423	642	836	1585	1028	598	783	8510
	6051	5	2002	868	1102	347	423	361	1076	717	613	471	1021	655	434	8088
	6051	5	2003	460	275	204	611	971	994	555	265	587	485	847	801	7055
	6051	5	2004	1220	324	634	576	86	451	212	1634	852	1231	590	548	8358
	6051	5	2005	621	374	382	176	606	473	896	507	330	662	1239	481	6747
	6051	5	2006	456	593	468	532	652	214	217	1581	470	1974	1193	1451	9801
	6051	5	2007	917	990	302	165	719	1178	796	626	853	329	500	1119	8494
	6051	5	2008	970	445	810	337	54	503	373	1069	1102	1537	804	277	8281
	6051	5	2009	645	340	568	107	398	306	552	799	424	875	1355	879	7248
	6051	5	2010	416	524	269	239	313	147	776	837	679	1094	860	389	6543
	6051	5	2011	673	709	442	140	461	515	857	1272	1516	668	149	1051	8453
	6051	5	2012	910	320	183	721	655	841	517	793	1187	1437	979	973	9516
	6051	5	2013	544	209	49	267	510	523	30	705	1326	1490	969	959	7581
	6051	5	2014	1089	758	280	431	364	248	666	1491	620	1571	1065	1158	9741
	6051	5	2015	1016	379	773	216	948	725	1307	811	1203	296	1704	1051	10429
	6051	5	2016	558	602	369	524	313	961	793	725	301	405	796	290	6637
	6051	5	2010	1	718	525	450	400	454	577	574	877	735	1024	864	7913
	6051	5	2010	2	726	529	559	384	459	526	514	802	853	1026	842	8028