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DMI monthly Climate Data Collection 1768-2005, Denmark, The Faroe Islands and Greenland

John Cappelen, Ellen Vaarby Laursen, Peter Viskum
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Abstract

This report contains the available long monthly DMI data series 1768-2005 for Denmark, The Faroe Islands and Greenland.

Resumé

Denne rapport indeholder tilgængelige lange månedlige serier af data 1768-2005 for Danmark, Færøerne og Grønland.



1. Introduction

The purpose of this report is to publish available long *monthly* DMI data series 1768-2005 for Denmark, The Faroe Islands and Greenland. The data parameters include mean temperature, minimum temperature, maximum temperature, atmospheric pressure, precipitation, maximum daily precipitation, hours of bright sunshine, number of days with snow and cloud cover. Only one station has data before the 1870s – Copenhagen.

According to the intentions to update regularly, preferably every year, this particular report contains an update of the DMI monthly climate data previously published in DMI Technical Report No. 05-05: DMI monthly Climate Data Collection 1768-2004, Denmark, The Faroe Islands and Greenland (Cappelen et al., 2005). A similar collection of long DMI *daily* and *annual* climate data series can be found in other 2006 DMI reports (Cappelen et al., 2006 and Cappelen, 2006).

Some of the monthly data have over the years been published in connection with different Nordic climate projects like NACD (North Atlantic Climatological Dataset, see (Frich et al. 1996)), REWARD (Relating Extreme Weather to Atmospheric circulation using a Regionalised Dataset, see (Drebs et al. 1998)), NORDKLIM (Nordic Co-operation within Climate activities, see NORDKLIM project homepage: http://www.smhi.se/hfa_coord/nordklim/) and NARP (Nordic Arctic Research Programme, see NARP project homepage: <http://projects.dnmi.no/~narp/>).

One of the previous DMI Monthly Climate Data Collection (Jørgensen & Laursen, 2003) was for that reason, besides a publication of a collection of recommended DMI long monthly data series 1860-2002, also an revision/update of the NACD, REWARD, NORDKLIM and NARP datasets with a clarification on what has been done with the data previously. The method used in this clarification was based on 3 different datasets:

- 1) **Recommended** - a collection of DMI recommended well-documented data series.
- 2) **Observed** - based strictly on raw observations, which have to fulfil certain criteria in terms of frequency etc., in order for arithmetic means, maximums, minimums etc. to be calculated depending on the parameter. These dataset acts as a baseline, since many of the time-series previously published represent adjusted data, which are not very well documented.
- 3) **Previous** - represents the time-series generated earlier primarily in connection with NACD and REWARD. These time-series are quite complete for the period 1890 – 1995, and many holes has been filled compared to the observed dataset.

The revision/update of the different datasets are considered done with that former report.

Therefore only already published recommended DMI monthly data series with relevant updates/corrections will be included in this and the coming reports comprising DMI Monthly Data Collections.

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

October 2006
John Cappelen



Special remarks:

In the following the reference “NARP1” refers to the “NARP dataset version 1” available from <http://projects.dnmi.no/~narp/>.

The time series that are referred to in this report have been constructed by a number of persons. Their names and initials/abbreviations are: Poul Frich (PF), John Cappelen (JC), Ellen Vaarby Laursen (EVL), Rikke Sjølin Thomsen (RST), Bent Vraae Jørgensen (BVJ) and Lotte Sligting Stannius (LSS).

Time series are referred to by their creator (abbreviations seen above) and the number they have in the internal DMI time series database.

Therefore, time series “JC-TS1220” means a time series created by John Cappelen with number 1220 in the time series database.

“Monthly_db” refers to an internal DMI monthly database with monthly values of various weather parameters.

The reference “TR” refers to DMI Technical Reports. Therefore, “TR99-5” means DMI Technical Report 99-5 available from:

<http://www.dmi.dk/dmi/index/viden/dmi-publikationer/tekniskerapporter.htm>

In this report months are referred to by year/month number (ex. 2000/03 = March 2000) and the criteria used here for calculating a valid monthly value is that measurements from more than 21 days are present in that month, so the number of daily values are ranging 22-31.

During some of the former data projects (i.e. NACD) the data have been homogenised based on tests against neighbouring stations.

The updated series presented in this report have been tested and corrected carefully, mainly based on visual tests. Otherwise it is indicated if care should be taken when using the series.

Special care should be taken concerning most of the series with mean cloud cover. There are still problems to be solved in the data sets mainly due to the difficult character of the observation (visual) and the shift to automatic detection with a ceilometer starting approximately in the beginning of the new millennium. Care should also be taken in the case of series with number of days with snow cover, another visual parameter.

2. Data overview

2.1 Station Overview

	Country	Station	Station number
1	DK	Hammer Odde Fyr	06193
2	DK	Vestervig	06051 ¹⁾
3	DK	Nordby	06088 ²⁾
4	DK	Tranebjerg	06132 ³⁾
5	DK	København	06186 ⁴⁾
6	FR	Tórshavn	06011
7	FR	Strond Kraftstation	33054
8	GR	Upernavik	04211 ⁵⁾
9	GR	Ilulissat	04221 ⁶⁾
10	GR	Nuuk	04250
11	GR	Ivittuut/Narsarsuaq	04270 ⁷⁾
12	GR	Danmarkshavn	04320
13	GR	Illoqqortoormiut	04339 ⁸⁾
14	GR	Tasiilaq	04360

Table 1. Primary stations used in this report.

¹⁾ In data set versions before 2005 the series was listed as no. 21100

²⁾ In data set versions before 2005 the series was listed as no. 25140

³⁾ In data set versions before 2005 the series was listed as no. 27080

⁴⁾ In data set versions before app. 2000 the series was listed as no. 30380

⁵⁾ In data set versions before 2005 the series was listed as no. 04210

⁶⁾ In data set versions before app. 2000 the series was listed as no. 04216

⁷⁾ In data set versions before app. 2000 the whole series was listed as 04270, whereas now the series is split into the parts originating (until and including 1960) from 34262 Ivittuut and (since 1961) 04270 Narsarsuaq Airport.

⁸⁾ In data set versions before 2005 the whole series was listed as 04339, whereas now the series is split into the parts originating (until and including 1949/9) from 34339 Scoresbysund and (since 1949/120) 04339 Illoqqortoormiut.

2.2 Data Dictionary

Number	Abbr.	Element	Method	Power	Unit
101	T	Mean temperature	mean	-1	C
111	Tx	Mean of daily maximum temperature	mean	-1	C
112	Th	Highest temperature	max	-1	C
121	Tn	Mean of daily minimum temperature	mean	-1	C
122	Tl	Lowest temperature	min	-1	C
401	P	Mean atmospheric pressure	mean	-1	hPa
504	S	Hours of bright sunshine (Star level)	sum	-1	Hours
601	R	Accumulated precipitation	sum	-1	mm
602	Rx	Highest 24-hour precipitation	max	-1	mm
701	DSC	No. of days with snow cover (> 50 % covered)	sum	0	days
801	N	Mean cloud cover	Mean	0	%

Table 2. Elements used in this report. 'Method' specifies whether the element is a sum, a mean, an extreme or other. The units of the monthly values specified by the element number is the unit specified in 'unit' times 10 raised to the power specified in 'Power'. The DMI system of element numbers contains more than the shown elements: At the moment (2005) there are about 250 entries.

3. Station Catalogue

3.1 History

By convention a time series is named after the most recent primary station delivering the data. Here is presented an overview back in time of the positions and relocations and starting and (if any) closing dates of the stations. Also presented 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 in the next section. More metadata on the series/station may be found in (Laursen, 2003a).

Table 3. HAMM: 06193 Hammer Odde Fyr/Lighthouse

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
06191	Christiansø Fyr	01-JAN-1961	31-MAR-2000	synop_dk	33U	6130820	511970	151100	551900	13
32080	Klemensker	22-SEP-1998	01-DEC-2004	snow_man	33U	6114671	488062	144900	551100	111
32080	Klemensker	02-DEC-2004		snow_man	33U	6114234	488024	144900	551000	108
06193	Hammer Odde Fyr	05-OCT-1977	29-AUG-2001	synop_dk	33U	6128170	485710	144700	551800	11
06193	Hammer Odde Fyr	30-AUG-2001		synop_dk	33U	6128175	485583	144600	551800	8
06190	Bornholms Lufthavn	01-JAN-1959	31-MAY-1977	synop_dk	33U	6102830	483820	144500	550400	13
06190	Bornholms Lufthavn	01-JUN-1977		synop_dk	33U	6102560	484070	144500	550400	15
06199	Dueodde N Fyr	01-JAN-1959	30-SEP-1962	synop_dk	33U	6095230	504720	150400	550000	16
06199	Dueodde Fyr Syd	01-OCT-1962	30-JUN-1977	synop_dk	33U	6094150	504810	150500	550000	6

Table 4. VEST: 06051 Vestervig

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	6291500	458550	81900	564600	18
21100	Vestervig	02-JAN-2000		precip_man	32V	6291500	458550	81900	564600	18
21100	Vestervig	02-JAN-2000		snow_man	32V	6291500	458550	81900	564600	18
21100	Vestervig	17-FEB-2000		clima_aut	32V	6291500	458550	81900	564600	18
21120	Erslev	01-JUN-1987	30-JUN-1993	precip_man	32V	6299280	483340	84400	565000	20
21120	Erslev	01-JUL-1993		precip_man	32V	6299090	483590	84400	565000	26
24020	Bovbjerg Fyr	01-MAR-1989	01-AUG-1999	precip_man	32V	6263740	445950	80700	563100	41
06051	Vestervig	11-SEP-2003		synop_dk	32V	6291500	458550	81900	564600	18
06052	Thyborøn	01-JAN-1961	06-FEB-1985	synop_dk	32V	6285030	452360	81300	564200	3
06052	Thyborøn	07-FEB-1985	21-NOV-2000	synop_dk	32V	6284510	452410	81300	564200	2
06052	Thyborøn	22-NOV-2000		synop_dk	32V	6285229	452016	81300	564200	2
06030	FSN Aalborg	01-JAN-1953		synop_dk	32V	6328631	551614	95100	570600	3
06041	Skagen Fyr	01-JAN-1953	13-DEC-2000	synop_dk	32V	6400730	597240	103800	574400	3
06041	Skagen Fyr	14-DEC-2000		synop_dk	32V	6400740	597229	103800	574400	3
06060	FSN Karup	01-JAN-1953		synop_dk	32V	6238950	507130	90700	561800	52

Table 5. NORD: 06088 Nordby

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		precip_man	32U	6145060	462120	82400	552700	4
25140	Nordby	07-FEB-2000		clima_aut	32U	6145060	462120	82400	552700	4
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	Sonderho	01-JUN-1988	23-AUG-1999	precip_man	32U	6134345	466300	82800	552100	4
25145	Sonderho	24-AUG-1999		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		precip_aut	32U	6149430	464030	82600	552900	3
25172	Hjerting	01-DEC-1985	09-JUN-1986	precip_man	32U	6152591	460557	82300	553100	9
25172	Hjerting	10-JUN-1986		precip_man	32U	6152596	460558	82300	553100	9
06088	Nordby	23-JUL-2003		synop_dk	32U	6145042	462144	82400	552700	4
06080	Esbjerg Lufthavn	01-JAN-1959	31-MAR-1971	synop_dk	32U	6151640	467420	82900	553000	25
06080	Esbjerg Lufthavn	01-APR-1971	30-SEP-1984	synop_dk	32U	6153140	471550	83300	553100	29
06080	Esbjerg Lufthavn	01-OCT-1984		synop_dk	32U	6153850	472500	83400	553200	24
25348	Vester Vedsted	06-MAY-1986		clima_aut	32U	6127450	478170	84000	551800	3
06081	Blåvandshuk Fyr	01-JAN-1959	31-DEC-1971	synop_dk	32U	6157430	442240	80500	553300	13
06193	Vester Vedsted	11-DEC-2003		synop_dk	32U	6127450	478170	84000	551800	3
06081	Blåvandshuk Fyr	18-SEP-1980		synop_dk	32U	6157450	442210	80500	553300	13
06096	Rømø/Juvre	02-MAY-1982	06-APR-2000	synop_dk	32U	6116310	472070	83400	551100	4
06096	Rømø/Juvre	07-APR-2000		synop_dk	32U	6116290	472065	83400	551100	6

Table 6. TRAN: 06132 Tranbjerg

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
27080	Tranbjerg	01-DEC-1872	28-FEB-1877	clima_man	32U	6188790	600080	103600	555000	15
27080	Tranbjerg	01-MAR-1877	31-MAR-1884	clima_man	32U	6188885	599720	103500	555000	17
27080	Tranbjerg	01-APR-1884	31-MAY-1918	clima_man	32U	6188890	599630	103500	555000	17
27080	Tranbjerg	01-JUN-1918	30-APR-1950	clima_man	32U	6188850	599630	103500	555000	17
27080	Tranbjerg	01-MAY-1950	31-OCT-1972	clima_man	32U	6188910	599730	103600	555000	15
27080	Tranbjerg	01-NOV-1972	01-FEB-2000	clima_man	32U	6190400	600010	103600	555100	11
27080	Tranbjerg	02-FEB-2000	29-FEB-2000	precip_man	32U	6190400	600010	103600	555100	11
27080	Tranbjerg	15-FEB-2000	29-FEB-2000	clima_aut	32U	6190400	600010	103600	555100	11
27080	Tranbjerg	01-MAR-2000	10-AUG-2003	clima_aut	32U	6190468	600052	103600	555100	12
06132	Tranbjerg Øst	11-AUG-2003		synop_dk	32U	6188815	601610	103700	555000	16
27080	Tranbjerg	01-MAR-2000	01-AUG-2001	precip_man	32U	6190468	600052	103600	555100	12
27082	Tranbjerg Øst	02-AUG-2001		precip_man	32U	6188800	601435	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-MAY-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
27090	Ørnslund	01-JAN-1864	30-SEP-1881	precip_man	32U	6182900	600180	103600	554700	11
27090	Ørnslund	01-OCT-1881	31-DEC-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	Blangstedgaard	01-JUL-1885	31-DEC-1982	clima_man	32U	6138250	591690	102700	552300	15
06159	Røsnæs Fyr	01-JAN-1959	14-NOV-2001	synop_dk	32U	6179330	617414	105200	554500	15
06159	Røsnæs Fyr	15-NOV-2001		synop_dk	32U	6179323	617440	105200	554500	14



Table 7. KOEB: 06186 Københavns Landbohøjskole

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
06186	Landbohøjskolen	29-NOV-1995	12-JUN-1997	synop_dk	33U	6173560	345420	123200	554100	9
06186	Landbohøjskolen	13-JUN-1997		synop_dk	33U	6174090	345670	123300	554100	7
06180	Københavns Lufthavn	01-JAN-1953	30-JUN-1955	synop_dk	33U	6167070	352740	124000	553800	2
06180	Københavns Lufthavn	01-JUL-1955	30-JUN-1959	synop_dk	33U	6167170	352110	123900	553800	3
06180	Københavns Lufthavn	01-JUL-1959	13-JUL-1971	synop_dk	33U	6166370	352440	123900	553700	3
06180	Københavns Lufthavn	14-JUL-1971	15-JUN-1983	synop_dk	33U	6165550	351570	123900	553700	4
06180	Københavns Lufthavn	16-JUN-1983		synop_dk	33U	6165840	351770	123900	553700	5
06183	Drogden Fyr	01-JAN-1961		synop_dk	33U	6157060	355647	124300	553200	6
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
30370	Botanisk Have	01-JAN-1971		precip_man	33U	6174200	347570	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 mean sea level. The thermometer was situated app. 43 m above mean sea level.

Table 8. TORS: 06011 Tórshavn

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
33071	Torshavn skole	01-JAN-1871	31-DEC-1871	clima_man	29V	6877520	616750	-64600	620100	9
33071	Torshavn skole	01-OCT-1872	31-JUL-1907	clima_man	29V	6877520	616750	-64600	620100	9
33071	Torshavn 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
06011	Torshavn	01-JAN-1953	30-JUN-1962	synop_dk	29V	6878110	616530	-64600	620100	35
06011	Torshavn	01-JUL-1962	31-DEC-1992	synop_dk	29V	6878170	616530	-64600	620100	43
06011	Torshavn	01-JAN-1993		synop_dk	29V	6879010	617080	-64600	620100	54

Table 9. STRO: 33054 Strond Kraftstation

This station was selected as a supplement to the precipitation series of Tórshavn. The Tórshavn precipitation series is not characteristic for the more extreme amounts of precipitation received at the Faroe Islands whereas Strond Kraftstation held the 24 hours record for the period 1961-1990.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
33054	Strond Kraftstation	01-MAR-1931	30-JUN-1981	precip_man	29V	6906290	625480	-63500	621600	10
33054	Strond Kraftstation	01-JUL-1981	30-JUN-1983	precip_man	29V	6906250	625440	-63500	621600	4
33054	Strond Kraftstation	01-JUL-1983	27-MAY-1987	precip_man	29V	6906315	625435	-63500	621600	8
33054	Strond Kraftstation	28-MAY-1987		precip_man	29V	6906335	625430	-63500	621600	6
33020	Fossaverkid	01-FEB-1960		precip_man	29V	6892955	596540	-70900	620900	2
33037	Hvalvik	01-JUN-1921	28-FEB-1930	clima_man	29V	6896770	602305	-70200	621100	14
33037	Hvalvik	01-JAN-1987		precip_man	29V	6896770	602305	-70200	621100	14
33045	Hellur	01-JUN-1987		precip_man	29V	6905115	611100	-65200	621600	11
33051	Kirkja	01-MAY-1873	31-AUG-1874	clima_man	29V	6912765	639150	-61900	621900	44
33051	Kirkja	01-MAR-1879	30-JUN-1880	clima_man	29V	6912815	639110	-61900	621900	49
33051	Kirkja	01-JUL-1987	01-MAY-1999	clima_man	29V	6912895	638960	-61900	621900	53
33051	Kirkja	02-MAY-1999		precip_man	29V					
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
33070	Torshavn	21-SEP-1906	09-JUL-1907	clima_man	29V	6877720	616570	-64600	620100	20
33070	Torshavn	23-APR-1908	30-JUN-1916	clima_man	29V	6877720	616570	-64600	620100	20
33070	Torshavn	01-JUL-1916	30-JUN-1922	clima_man	29V	6878110	616530	-64600	620100	35
33070	Torshavn	01-JUL-1930	31-JAN-1942	clima_man	29V	6878110	616530	-64600	620100	35
33070	Torshavn	01-FEB-1943	31-DEC-1948	precip_man	29V	6878110	616530	-64600	620100	35
33080	Nolsoy Fyr	01-APR-1955	30-NOV-1995	precip_man	29V	6872000	625100	-63600	615700	80
33090	Sandur	01-APR-1873	31-JAN-1877	clima_man	29V	6858140	614800	-64900	615000	34
33090	Sandur	01-SEP-1877	31-MAY-1879	clima_man	29V	6858140	614800	-64900	615000	34
33090	Sandur	01-JAN-1881	31-MAY-1885	clima_man	29V	6858650	614730	-64900	615000	9
33090	Sandur	01-MAR-1904	29-FEB-1908	clima_man	29V	6860810	614390	-65000	615200	16
33090	Sandur	01-NOV-1912	31-DEC-1916	clima_man	29V	6858140	614800	-64900	615000	34
33090	Sandur	01-JUN-1921	31-AUG-1940	clima_man	29V	6860810	614390	-65000	615200	16
33090	Sandur	01-JUN-1956	31-DEC-1970	clima_man	29V	6858897	615363	-64900	615100	10
33090	Sandur	01-JAN-1973	01-JAN-1997	clima_man	29V	6858897	615363	-64900	615100	10
33090	Sandur	01-JAN-1971	31-OCT-1971	precip_man	29V	6858897	615363	-64900	615100	10
33090	Sandur	01-FEB-1972	31-DEC-1972	precip_man	29V	6858897	615363	-64900	615100	10
33090	Sandur	02-JAN-1997	07-SEP-2002	precip_man	29V	6858895	615362	-64900	615100	10
33090	Sandur	08-SEP-2002		precip_man	29V	6858893	615361	-64900	615100	9

Table 10. UPER: 04211 Mittarfik Upernavik (Airport)

The station 04209 Upernavik AWS was an automatic station, which explains the lack of manually observations in the period, where 04210 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 ^{*)}
04210	Upernavik	01-JAN-1958	31-JAN-1987	synop_gr				-561000	724700	63
04209	Upernavik AWS	30-AUG-1984	26-SEP-1995	synop_gr				-561000	724700	63
04210	Upernavik	08-SEP-1995	16-AUG-2004	synop_gr				-561000	724700	120
04211	Mittarfik Upernavik	23-OCT-2000		synop_gr				-560800	724700	126
04202	Pituffik	01-JAN-1974		synop_gr				-684500	763200	77
04216	Ilulissat	01-JAN-1961	30-SEP-1991	synop_gr				-510300	691300	39
04216	Ilulissat	01-OCT-1991	31-AUG-1992	synop_gr				-510300	691300	39
04221	Mittarfik Ilulissat	14-AUG-1991		synop_gr				-510400	691400	29

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

**Table 11. ILUL: 04221 Mittarfik Ilulissat (Airport)
(Danish name: Jakobshavn Lufthavn/Airport)**

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34216	Jakobshavn	01-JUL-1873	28-FEB-1962	clima_man				-510300	691300	39
04216	Ilulissat	01-JAN-1961	30-SEP-1991	synop_gr				-510300	691300	39
04216	Ilulissat	01-OCT-1991	31-AUG-1992	synop_gr				-510300	691300	39
04221	Mittarfik Ilulissat	01-JAN-1984	13-AUG-1991	metar				-510400	691400	29
04221	Mittarfik Ilulissat	14-AUG-1991		metar				-510400	691400	29
04221	Mittarfik Ilulissat	14-AUG-1991		synop_gr				-510400	691400	29
04220	Aasiaat	01-JAN-1958		synop_gr				-524500	684200	43

Table 12. NUUK: 04250 Nuuk (Danish name: Godthåb)

In the late 1990's the manual precipitation measurement at 04250 Nuuk was replaced with an automatic rain gauge. This was not able to function satisfactory for climatic purposes and therefore a supplementary manual measurement was started in February 1999 as station 34250 Nuuk. At this manual precipitation station 34250 Nuuk the precipitation is observed every day at 21 UTC for the previous 24 hours.

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34250	Nuuk	01-JAN-1874	31-DEC-1960	clima_man				-514330 ^{*)}	641030 ^{*)}	20 ^{*)}
04250	Nuuk	01-JAN-1958	31-AUG-1991	synop_gr				-514500	641000	50
04250	Nuuk	01-SEP-1991		synop_gr				-514500	641000	80
34250	Nuuk	02-FEB-1999		precip_man				-514500	641000	80
04221	Mittarfik Ilulissat	14-AUG-1991		synop_gr				-510400	691400	29
04254	Mittarfik Nuuk	01-AUG-1985		metar				-514100	641200	86
04270	Narsarsuaq Lufthavn/Airport	01-JAN-1961		synop_gr				-452500	611000	27

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

Table 13. IVITT: 34262 Ivittut (Danish name: Ivigtut)

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

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

Table 14. NARS: 04270 Narsarsuaq Lufthavn/Airport

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
04270	Narsarsuaq Lufthavn/Airport	01-JAN-1961		synop_gr				-452500	611000	27



Table 15. DANM: 04320 Danmarkshavn

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
04320	Danmarkshavn	05-NOV-1948		radio sonde				-184600	764600	14
04320	Danmarkshavn	01-JAN-1958		synop_gr				-184000	764600	11

Table 16. SCRO: 34339 Scoresbysund

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.

**Table 17. ILLO: 04339 Illoqqortoormiut
(Danish name: Scoresbysund. Previous name: Ittoqqortoormiit)**

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
04340	Uunarteq (Kap Tobin)	01-OCT-1949	31-OCT-1980	synop_gr				-215800	702500	42
04340	Uunarteq (Kap Tobin)	05-SEP-1985	10-JUN-1990	synop_gr				-215800	702500	41
04339	Illoqqortoormiut (Scoresbysund)	01-NOV-1980		synop_gr				-215700	702900	65

Table 18. TASI: 04360 Tasiilaq (Danish name: Ammassalik. Previous name: Angmagssalik)

No.	Name	Start	End	Type	UTM	Northings	Eastings	Longitude	Latitude	Elev.
34360	Tasiilaq (Ammassalik)	13-OCT-1894	31-SEP-1959	clima man				-373800 ^{*)}	653600 ^{*)}	29 ^{*)}
04360	Tasiilaq (Ammassalik)	01-JAN-1958	31-MAR-1982	synop_gr				-373800	653600	36
04360	Tasiilaq (Ammassalik)	01-APR-1982	14-AUG-2005	synop_gr				-373800	653600	50
04360	Tasiilaq (Ammassalik)	15-AUG-2005		synop_gr				-373800	653600	53

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

3.2 Maps

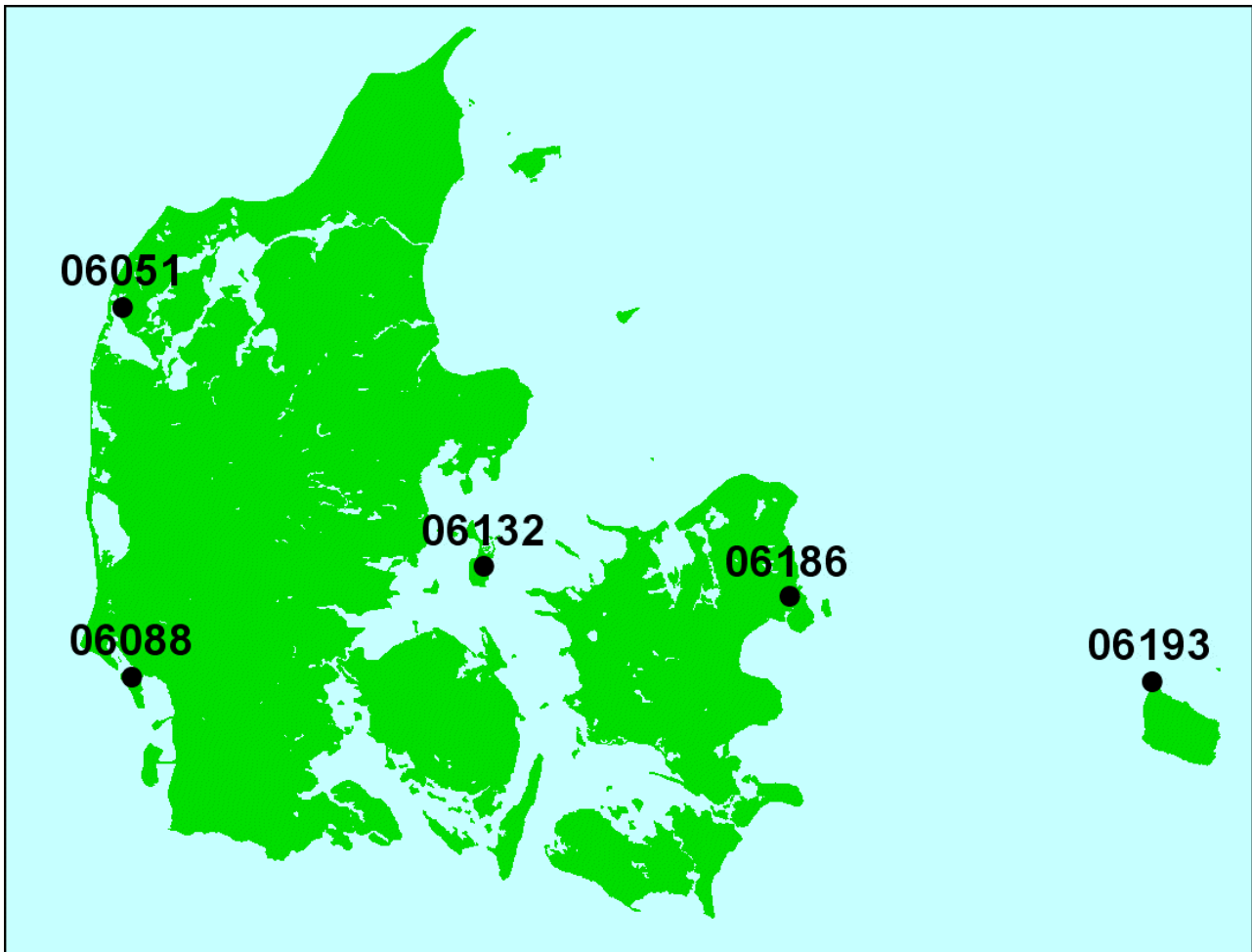


Figure 1. Latest station numbers and positions for the primary Danish stations.

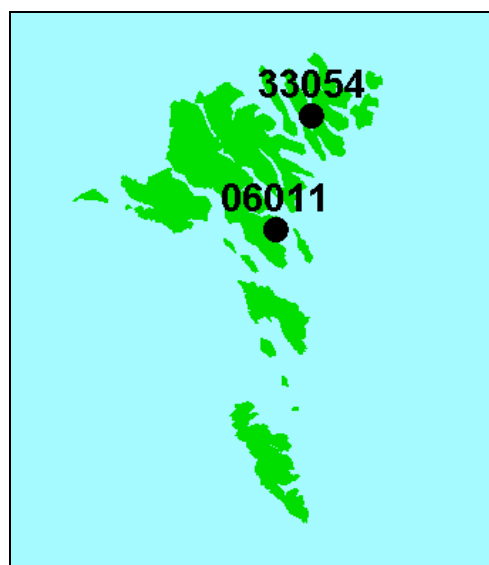


Figure 2. Latest station numbers and positions for the primary stations at the Faroe Islands.

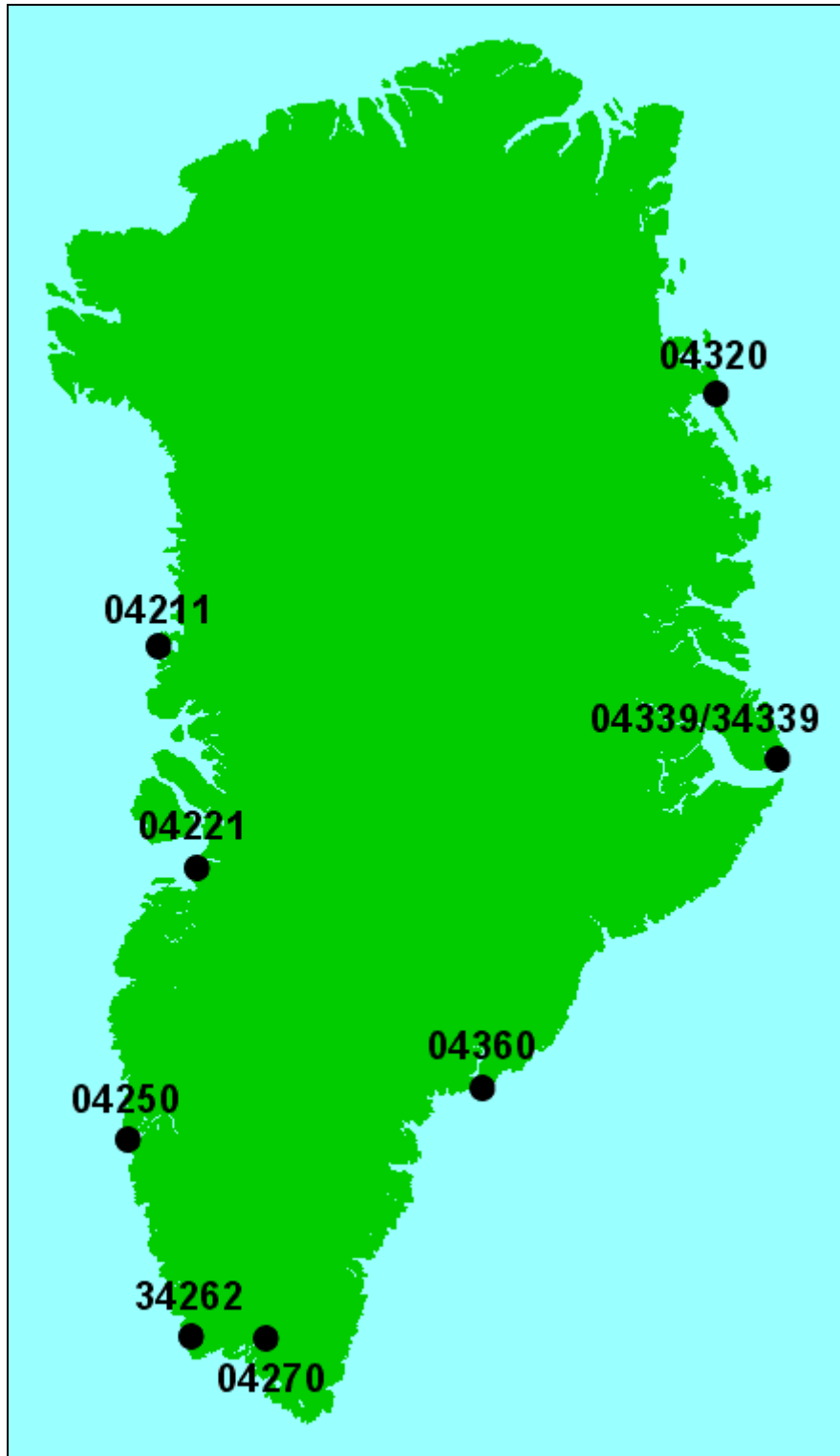


Figure 3. Latest station numbers and positions for the primary stations in Greenland.

4. Description of data series

4.1 Hammer Odde Fyr (HAMM) – 06193

Element No.101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db HAMM 06193/32020 + 32030 + TR99-5	1596	0
Details: Created using monthly-db 1873-1953: 32030 Sandvig, 1953-1960: mean of 32030 and 32020 Hammer Odde Fyr /06193 Hammer Odde Fyr, 1961-1990: TR99-5 06193 Hammer Odde Fyr, 1991-2005: 06193 Hammer Odde Fyr.				

Element No.111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db HAMM 06193/32020 + 32030 + TR99-5	1572	0
Details: Created using monthly-db 1875-1953: 32030 Sandvig, 1953-1960: mean of 32030 and 32020/06193, 1961-1990: TR99-5 06193, 1991-2005: 06193 Hammer Odde Fyr. Missing values for 1951/9+10 were filled using 32025 Hammeren Fyr.				

Element No.112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2005	Monthly-db HAMM 06193/32020 + 32030 + TR99-5	1584	2
Details : Created using monthly-db 1874-1953: 32030-Sandvig, 1953-1960: mean of 32030 and 32020/06193, 1961-1990: TR99-5 06193, 1991-2005: 06193 Hammer Odde Fyr. Missing 1874/3 and 1874/5. Missing values for 1951/9+10 were filled using 32025 Hammeren Fyr.				

Element No.121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db HAMM 06193/32020 + 32030 + TR99-5	1596	0
Details: Created using monthly-db 1873-1953: 32030-Sandvig, 1953-1960: mean of 32030 and 32020/06193, 1961-1990: TR99-5 06193, 1991-2005: 06193 Hammer Odde Fyr.				

Element No.122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db HAMM 06193/32020 + 32030 + TR99-5	1596	0
Details: Created using monthly-db 1873-1953: 32030-Sandvig, 1953-1960: mean of 32030 and 32020/06193, 1961-1990: TR99-5 06193, 1991-2005: 06193 Hammer Odde Fyr.				



Hammer Odde Fyr (HAMM) – 06193 (continued)

Element No.401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db HAMM 06193/32020 + 32030	1596	0
Details : Created using monthly-db 1873-1970: 32030-Sandvig reduced to mean sea level (see appendix), 1971-1987/06: 32020 Hammer Odde Fyr/Lighthouse reduced to mean sea level (see appendix) and 1987/07-2005: 06193 Hammer Odde Fyr/Lighthouse. Missing value 1966/07 filled with 32020 reduced to mean sea level.				

Element No.601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db HAMM 06193/32020 + 32030	1596	0
Details : Created using monthly-db 1873-1953: 32030-Sandvig, 1953-1971: mean of 32030 and 32020/06193, 1971-2005: 06193/32020-Hammer Odde Fyr.				

Element No.602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db HAMM 06193/32020 + 32030	1596	0
Details Created using monthly-db 1873-1953: 32030-Sandvig, 1953-1971: mean of 32030 and 32020/06193, 1971-2005: 06193/32020-Hammer Odde Fyr. Missing values (1948/3, 1951/7 and 1952/12) were filled using values from 32025 Hammeren Fyr.				

Element No.701 (Number of days with Snow Cover) – Not necessarily homogenous				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1939 – 2005	Monthly-db HAMM 06193/32020 + 32030 + 06190 + 32080	804	10
Details : Created using monthly-db mean of 32030-Sandvig 1939-1971, 06193/32020 Hammer Odde Fyr 1953-2002, 06190 Bornholms Lufthavn and 32080 Klemensker 2002-2005. Period 2001/9 – 2002/12 taken from 06190 because 06193 has stopped these observations. 2004/1-2005/12 taken from 32080 Klemensker because 06190 has stopped these observations. Out of the 46 missing values, the ones for the months 06, 07, 08, 09 in the period 1971-77 and 2003 were set to zero. After this, 11 missing months are left. One (1955/1) was filled using 32025 Hammeren Fyr. The remaining ten (1952/1, 1953/5, 2003/1-5 and 2003/9-12) cannot be filled, since there are no observations of Element 701 on Bornholm for these months. Not necessarily homogenous, many different locations involved.				

Element No.801 (Mean Cloud Cover) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	PF-TS97 + Monthly-db HAMM 06193/32020 + 32030	1596	1
Details : Created using monthly-db 32030: 1873-1889, PF-TS97 1890-1995 and monthly-db 06193: 1996-2005. 14 months missing from PF-TS97: 1911/1, 1953/5, 1966/7, 1973/3+7, 1974/3+7+12, 1987/7-12. The 1953/5 and 1966/7 were filled with 32020. The 1973/3+7 and 1974/3+7 were filled using values from 06190. 1974/12 by an average of 06191 Christianø Fyr and 06199 Dueodde Fyr. 1987/7-12 were filled with 06193. 1911/1 can not be filled. No cloud cover observations on Bornholm for this month. 30 August 2001 a ceilometer for automatic detection of cloud cover was installed at 06193 Hammer Odde Fyr. Inhomogenous based on a visual test, possible several breaks.				

4.2 Vestervig (VEST) – 06051

Element No.101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2005	Monthly-db VEST 21100/06051 + TR99-5	1584	0
Details: Created using monthly-db VEST 21100: 1874-1960, TR99-5: 1961-1990, monthly-db VEST 21100: 1991-2003/8, monthly-db VEST 06051: 2003/10-2005. Three months (2000/1+2 and 2003/9) were filled using monthly-based regression with 06052 Thyborøn: January 2000: $st21100 = 1.0718*st06052 - 9.417$ ($r^2=0.988$), February 2000: $st21100 = 1.0474*st06052 - 6.970$ ($r^2=0.995$), September 2003: $st21100 = 1.003*st06052 - 9.573$ ($r^2=0.954$).				

Element No.111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db VEST 21100/06051 + TR99-5	1572	1
Details: Created using monthly-db VEST 21100: 1875-1960, TR99-5: 1961-1990, monthly-db VEST 21100: 1991-2003/8, monthly-db VEST 06051: 2003/10-2005. 3 months (1970/12, 2000/1+2) were filled using data from 06052 Thyborøn directly. One month (2003/9) was filled using monthly-based regression with 06052: September 2003: $st21100 = 1.014*st06052 + 0.64$ ($r^2=0.932$). 1924/5 could not be filled since no data from nearby climate stations are available.				

Element No.112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db VEST 21100/06051 + TR99-5	1572	0
Details: Created using monthly-db VEST 21100: 1875-1960, TR99-5: 1961-1990, monthly-db VEST 21100: 1991-2003/9, monthly-db VEST 06051: 2003/10-2005. 4 months (1962/6, 1970/12, 2000/1+2) were filled using data from 06052 Thyborøn. 2003/9 for station VEST 21100 is not complete, but the highest temperature in September 2003 occurred in the existing part of the series.				

Element No.121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db VEST 21100/06051 + TR99-5	1572	0
Details: Created using monthly-db VEST 21100: 1875-1960, TR99-5: 1961-1990, monthly-db VEST 21100: 1991-2003/8, monthly-db VEST 06051: 2003/10-2005. 4 months (1962/6, 1970/12, 2000/1+2) were filled using data from 06052 Thyborøn. One month (2003/9) was filled using monthly-based regression with 06052: September 2003: $st21100 = 1.03*st06052 - 21.94$ ($r^2=0.829$).				

Element No.122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db VEST 21100/06051 + TR99-5	1572	0
Details: Created using monthly-db VEST 21100: 1875-1960, TR99-5: 1961-1990, monthly-db VEST 21100 1991-2003/9, monthly-db VEST 06051 2003/10-2005. 4 months (1962/6, 1970/12, 2000/1+2) were filled using data from 06052 Thyborøn. 2003/9 for station VEST 21100 is not complete, but the lowest temperature in September 2003 occurred in the existing part of the series.				



Vestervig (VEST) – 21100/06051 (continued)

Element No.401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2005	Monthly-db VEST 21100 + 06052	1584	0
Details: Created using monthly-db VEST 21100: 1874-1987/7 reduced to mean sea level (see appendix), monthly-db 06052 Thyborøn: 1987/8 -2005.				

Element No.601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2005	Monthly-db VEST 21100	1584	0
Details: Created using monthly-db VEST 21100: 1874-2005.				

Element No.602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2005	Monthly-db VEST 21100	1584	0
Details: Created using monthly-db VEST 21100: 1874-2005. Missing (1950/1+4, 1954/1) filled using the average of 24020 Bovbjerg Fyr and 21120 Erslev.				

Element No.701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1939 – 2005	Monthly-db VEST 21100 + TR99-5	804	0
Details: Created using monthly-db VEST 21100: 1939-1960, TR99-5 VEST 21100: 1961-1990, monthly-db VEST 21100: 1991-2005. VEST 21100 stopped 701 observations in August 2001 and started again January 2004. September 2001- December 2003 were filled using the average of 06030 FSN Aalborg and 06060 FSN Karup. 2004/6-2004/9 had problems, but were filled with zero. The many missing month are missing zero's for June-September months from 1970-1990. These zero's were inserted. After this, two months were missing (1955/3 and 1970/12) 1970/12 was filled using 06052 while 1955/3 was filled using the average of 06030 FSN Aalborg, 06041 Skagen Fyr and 06060 FSN Karup.				

Element No.801 (Mean Cloud Cover) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2005	PF-TS110 + Monthly-db VEST 21100 + 06052	1584	0
Details: Created using monthly-db 21100: 1874-1889, PF-TS110 1890-1995 and monthly_db 06052 Thyborøn: 1996-2005. VEST 21100 stops cloud cover observations in December 1999. 06052 values were used for the period 2000-2005 + for filling values in 1962/5+6. 22 November 2000 a ceilometer for automatic detection of cloud cover was installed at 06052 Thyborøn. Inhomogenous based on a visual test, possible several breaks.				

4.3 Nordby (NORD) – 06088

Element No.101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1872 – 2005	Monthly-db NORD 25140/06088 + TR99-5	1596	0
Details: Created using monthly-db NORD 25140: 1872-1960, TR99-5 25140: 1961-1990, monthly-db NORD 25140: 1991-2003/6, monthly-db NORD 06088: 2003/8-2005. 4 months (1993/12, 1994/1, 2000/1, 2002/6) were filled using average values from stations 06080 Esbjerg Lufthavn, 06081 Blåvandshuk Fyr and 25348 Vester Vedsted. 2003/7 was filled using a average value from stations 06080 Esbjerg Lufthavn, 06081 Blåvandshuk Fyr, 06096 Rømø/Juvre and 25348 Vester Vedsted. 2005/4 was filled using an average value from stations 06080 Esbjerg Lufthavn, 06096 Rømø/Juvre and 06093 Vester Vedsted.				

Element No.111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db NORD 25140/06088 + TR99-5	1572	0
Details: Created using monthly-db NORD 25140: 1875-1960, TR99-5 25140: 1961-1990, monthly-db NORD 25140: 1991-2003/6, monthly-db NORD 06088: 2003/8-2005. 4 months (1993/12, 1994/1, 2000/1, 2002/6) were filled using average values from stations 06080, 06081 and 25348. 2003/7 was filled using a average value from stations 06080, 06081, 06096 and 25348. 2005/4 was filled using an average value from stations 06080 Esbjerg Lufthavn, 06096 Rømø/Juvre and 06093 Vester Vedsted.				

Element No.112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2005	Monthly-db NORD 25140/06088 + TR99-5	1584	0
Details: Created using monthly-db NORD 25140: 1874-1960, TR99-5 25140: 1961-1990, monthly-db NORD 06088: 1991-2005. 4 months (1993/12, 1994/1, 2000/1, 2002/6) were filled using average values from stations 06080, 06081 and 25348. 2005/4 was filled using an average value from stations 06080 Esbjerg Lufthavn, 06096 Rømø/Juvre and 06093 Vester Vedsted.				

Element No.121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db NORD 25140/06088 + TR99-5	1572	0
Details: Created using monthly-db NORD 25140: 1875-1960, TR99-5 25140: 1961-1990, monthly-db NORD 25140: 1991-2003/6, monthly-db NORD 06088: 2003/8-2005. 4 months (1993/12, 1994/1, 2000/1, 2002/6) were filled using average values from stations 06080, 06081 and 25348. 2003/7 was filled using an average value from stations 06080, 06081, 06096 and 25348. 2005/4 was filled using an average value from stations 06080 Esbjerg Lufthavn, 06081 Blåvandshuk Fyr, 06096 Rømø/Juvre and 06093 Vester Vedsted.				

Element No.122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1875 – 2005	Monthly-db NORD 25140/06088 + TR99-5	1572	0
Details: Created using monthly-db NORD 25140: 1875-1960, TR99-5 25140: 1961-1990, monthly-db 1991-2005. 4 months (1993/12, 1994/1, 2000/1, 2002/6) were filled using average values from stations 06080, 06081 and 25348. 2005/4 was filled using an average value from stations 06080 Esbjerg Lufthavn, 06081 Blåvandshuk Fyr, 06096 Rømø/Juvre and 06093 Vester Vedsted.				

Nordby (NORD) – 25140 (continued)

Element No.401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1872 – 2005	Monthly-db NORD 25140 + 6080/6081/6096	1608	5
Details: Created using monthly-db NORD 25140: 1872-1987/7 reduced to mean sea level (see appendix). Extended using the average of 06080, 06081 and 06096 for the period 1987/7 – 2005/12. Five months 1942/6 – 1942/9 and 1952/11 are missing.				

Element No.601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1872 – 2005	Monthly-db NORD 25140	1608	0
Details: Created using monthly-db NORD 25140: 1872-2005. 1 month (1993/12) was filled using the average from 4 nearby manual stations (25135 Langli, 25145 Sønderho, 25171 Esbjerg Renseanlæg Vest and 25172 Hjerting).				

Element No.602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1872 – 2005	Monthly-db NORD 25140	1608	0
Details: Created using monthly-db NORD 25140: 1872-2005. 1 month (1993/12) was filled using the average from 3 nearby manual stations (25135 Langli, 25171 Esbjerg Renseanlæg Vest and 25172 Hjerting).				

Element No.701 (Number of Days with Snow Cover) – Not necessarily homogenous				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1957 – 2005	Monthly-db NORD 25140 + 06080 + TR99-5	588	0
Details: Created using monthly-db NORD 25140: 1957-1960, TR99-5 25140: 1961-1990, monthly-db 1991-2001/8, 06080: 2001/9 – 2005/12. Jun – Sept. months 1970-1990 had missing zero's which were inserted. 2 missing months (1993/12 and 1994/1) were filled using values from 06080. Not necessarily homogenous, different locations involved.				

Element No.801 (Mean Cloud Cover) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1872 – 2005	Monthly-db NORD 25140 + PF-TS126 + 06080 + 06096	1596	2
Details: Created using monthly-db NORD 25140: 1872-1889, PF-TS126 1890-1995 and monthly-db 25140: 1996-1999. 06080 are used for 2000/1- 2000/3 and 06096 for the remaining period 2000/4 – 2005/12. 06096 was used because 06080 has an unstable number of observations per month. 1959/10 was filled using a value from 06081, and 1993/12 + 1994/1 were filled using values from 06080. 2006/8 and 2006/9 are missing. 7 April 2000 a ceilometer for automatic detection of cloud cover was installed at 06096 Rømø/Juvre. Inhomogenous based on a visual test, possible several breaks.				



4.4 Tranebjerg (TRAN) – 06132

Element No.101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db TRAN 27080/06132 + TR99-5	1596	0
Details: Created using monthly-db TRAN 27080: 1873-1960, TR99-5 27080: 1961-1990, monthly-db TRAN 27080: 1991-2003/7, monthly-db TRAN 06132: 2003/9-2005. 1995/2, 2000/2, 2003/4-5, 2003/8 and 2005/1 were filled using values from 06159 Røsnæs Fyr, the closest station outside Samsø.				

Element No.111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 - 2005	Monthly-db TRAN 27080/06132 + TR99-5	1596	4
Details: Created using monthly-db TRAN 27080: 1875-1960, TR99-5 27080: 1961-1990, monthly-db TRAN 27080: 1991-2003/7, monthly-db TRAN 06132: 2003/9-2005. 1873/12, 1925/10, 1947/11 and 1949/3 could not be filled, while 1995/2, 2000/2 and 2005/1 were filled using values from 06159.				

Element No.112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 - 2005	Monthly-db TRAN 27080/06132 + TR99-5	1596	3
Details: Created using monthly-db TRAN 27080: 1873-1960, TR99-5 27080: 1961-1990, monthly-db TRAN 27080: 1991-2003/7, monthly-db TRAN 06132: 2003/9-2005. 1925/10, 1947/11 and 1949/3 could not be filled, while 1995/2 and 2000/2 and 2003/4 were filled using values from 06159.				

Element No.121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 - 2005	Monthly-db TRAN 27080/06132 + TR99-5	1596	2
Details: Created using monthly-db TRAN 27080: 1873-1960, TR99-5 27080: 1961-1990, monthly-db TRAN 27080: 1991-2003/7, monthly-db TRAN 06132: 2003/9-2005. 1947/11 and 1949/3 could not be filled, while 1995/2, 2000/2, 2003/4-5, 2003/8 and 2005/1 were filled using values from 06159.				

Element No.122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 - 2005	Monthly-db TRAN 27080 + TR99-5	1596	2
Details: Created using monthly-db TRAN 27080: 1873-1960, TR99-5 27080: 1961-1990, monthly-db TRAN 27080: 1991-2003/7, monthly-db TRAN 06132: 2003/8-2005. 1947/11 and 1949/3 could not be filled, while 1995/2, 2000/2 and 2003/4 were filled using values from 06159.				



Tranebjerg (TRAN) – 27080 (continued)

Element No.401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1872 – 2005	Monthly-db TRAN 27080 + 06159	1597	12
Details: Created using monthly-db NORD 27080: 1872/12-1987/7 reduced to mean sea level (see appendix). Extended using 06159 for the period 1987/8 – 2005/12. Twelve months are missing: 1911/5-8, 1924/8, 1925/1, 1945/11, 1946/9, 1947/11, 1949/3, 1972/10-11.				

Element No.601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db TRAN 27080 + 27082	1596	0
Details: Created using monthly-db TRAN 27080: 1873-2001/7, 27082: 2001/8 – 2005. Months 1972/10+11 and 1995/2 were filled using average values from stations 27070 Langør and 27090 Brattingsborg.				

Element No.602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	Monthly-db TRAN 27080 + 27082	1596	0
Details: Created using monthly-db TRAN 27080: 1873-2001/7, 27082: 2001/8-2005. Months 1972/10+11 and 1995/2 were filled using average values from stations 27070 and 27090.				

Element No.701 (Number of days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2000	Monthly-db TRAN 27080 + TR99-5	624	0
Details: Created using monthly-db TRAN 27080: 1949-1960, TR99-5: 1961-1990, monthly-db TRAN 27080: 1991- 2000. Months 1949/3, 1955/1+2 were filled using values from 28180 Blangstedgaard. This series could not without severe problems be extended using data from a station on the islands Fyn or Sjælland i.e. 29020 KolléKollé, so this is not done.				

Element No.801 (Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1874 – 2001	Monthly-db TRAN 27080 + 06159 + TR99-5	1534	0
Details: Created using monthly-db TRAN 27080: 1874-1960, TR99-5: 1961-1990, monthly-db TRAN 27080: 1991- 2000/1, monthly-db 06159 2000/2 – 2001/10. Months 1947/4+11, 1948/1+11 were filled using values from 28180. Months 1949/3, 1972/10+11, 1995/2 were filled using values from 06159. This series could not without severe problems be extended using data from a station on the islands Fyn or Sjælland i.e. 06159 Røsnæs Fyr, so this is not done.				

4.5 København (KOEB)- 06186

Element No.101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1768 – 2005	Monthly-db KOEB 06186/30380+ Rundetårn+ old Botanical Garden	2856	168
Details: Created using monthly-db KOEB 06186/30380: 1860-2005, and keyed in data from Rundetårn: 1768-1819 and the old Botanical Garden: 1820-1859 (Willaume-Jantzen, V. (1896)). 168 missing months: 1777/1-1781/12 and 1789/1-1797/12.				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1861 – 2005	Monthly-db KOEB 06186/30380	1740	0
Details: Created using monthly-db KOEB 06186/30380: 1861- 2005. 1970/12 was filled using a value from station 06180 Københavns Lufthavn.				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1861 – 2005	Monthly-db KOEB 06186/30380	1740	0
Details: Created using monthly-db KOEB 06186/30380: 1861- 2005. 1970/12 was filled using a value from station 06180.				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1861 – 2005	Monthly-db KOEB 06186/30380	1740	0
Details: Created using monthly-db KOEB 06186/30380: 1861- 2005. 1970/12 was filled using a value from station 06180.				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1861 – 2005	Monthly-db KOEB 06186/30380	1740	0
Details: Created using monthly-db KOEB 06186/30380: 1861- 2005. 1970/12 was filled using station 06180.				



København (KOEB) – 06186 (continued)

Element No.401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1923 – 2005	Monthly-db KOEB 30380 + 06180	996	1
Details: Created using monthly-db KOEB 30380: 1923/1-1987/7 reduced to mean sea level (see appendix). Extended using 06180 for the period 1987/8 – 2005/12. One month is missing: 1957/10. In monthly-db there are also data from 30380 in the period 1860/1- 1875/12 reduced to mean sea level, but these data are not part of this publication.				

Element No. 504 (Hours of bright sunshine)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1876 – 2005	EVL-TS276 + Monthly-db KOEB 30380/30340/30341	1560	0
Details: Created using EVL-TS276 1876-1997, monthly-db 30340 Københavns Toldbod: 1998-2004 and monthly_db 30341 Københavns Toldbod: 2005. The EVL-TS276 + 30340 from 1998-2004 series was converted from casella to star level by JC using following monthly conversion factors: (1,05;0,98;0,94;0,91;0,87;0,84;0,83;0,83;0,84;0,88;0,96;1,10).				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1821 – 2005	Monthly-db KOEB 06186/30380 + 30370 + old botanical garden	2220	19
Details: Created using monthly-db KOEB 06186/30380: 1860-1995, 30370: 1996-2005 plus keyed in data from the old Botanical Garden 1821-1859 (Willaume-Jantzen, V. (1896)). The 19 missing months are all month in 1825, 1926/1- 1926/4 and 1926/9-1926/11. The former published series (latest 1821-2004 and earlier) has been changed, because the use of the station 30381 in that series for the period 1996/1 – 2004/12 wasn't appropriate.				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1843 – 2005	Monthly-db KOEB 06186/30380 + 30370 + old botanical garden	1956	0
Details: Created using monthly-db KOEB 06186/30380: 1860-1995, 30370: 1996-2005 plus keyed in data from the old Botanical Garden 1843-1859 (Willaume-Jantzen, V. (1896)). For 1974/4 a value from 06180 was used. The former published series (latest 1843-2004 and earlier) has been changed, because the use of the station 30381 in that series for the period 1996/1 – 2004/12 wasn't appropriate.				

Element No. 701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1938 – 2005	Monthly-db KOEB 06186/30380 + 06180	816	0
Details: Created using monthly-db KOEB 06186/30380: 1875-1996 and 06180: 1997-2005. Jun, Jul, Aug & Sep months 1970-1990 had missing data, zero's were inserted. 1970/12 was filled using a values from 06180.				

Element No. 801 (Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1876 – 2005	PF-TS153 + Monthly-db KOEB 06186/30380 + 06180	1560	0
Details: Created using monthly-db 06186/30380: 1876-1889, PF-TS153 1890-1995 and monthly-db 06180: 1996-2005. 1937/1 was filled using 06183, which was the only possibility.				



4.6 Torshavn (TORS) - 06011

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + EVL-TS353 + Monthly-db TORS 06011	1392	0
Details: Created using NARP1: 1890-1921, EVL-TS353: 1922-1997, monthly-db TORS 06011: 1998-2005. The original NACD series had many holes and corrections were done by comparison with 33060 Hoyvik. These holes were filled in TR98-14 (EVL-TS353).				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	NARP1 + EVL-TS361 + Monthly-db TORS 06011	1596	0
Details: Created using NARP1: 1873-1960, EVL-TS361: 1961-1990, monthly-db TORS 06011: 1991-2005. The months 1957/9+10+11+12 and 1973/11 months were filled using values from 33060.				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	NARP1 + EVL-TS368 + Monthly-db TORS 06011	1596	0
Details: Created using NARP1: 1873-1960, EVL-TS368: 1961-1990, monthly-db TORS 06011: 1991-2005. The months 1957/9+10+11+12 and 1973/11 months were filled using values from 33060.				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	NARP1 + EVL-TS375 + Monthly-db TORS 06011	1596	0
Details: Created using NARP1: 1873-1960, EVL-TS375: 1961-1990, monthly-db TORS 06011: 1991-2005. The months 1957/9+10+11+12 and 1973/11 months were filled using values from 33060.				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	NARP1 + EVL-TS496 + Monthly-db TORS 06011	1596	0
Details: Created using NARP1: 1873-1960, EVL-TS496: 1961-1990, monthly-db TORS 06011: 1991-2005. The months 1957/9+10+11+12 and 1973/11 months were filled using values from 33060.				



TORSHAVN (TORS) – 06011 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1220 + Monthly-db TORS 06011	1392	7
Details: Created using NARP1: 1890-1960 (33060) reduced to mean sea level (see appendix), JC-TS1220: 1961-1990, monthly-db TORS 06011: 1991-2005. Missing: 1925/4-10.				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1154 + Monthly-db TORS 06011	1392	0
Details: Created using NARP1: 1890-1921, JC-TS1154: 1922-1997, monthly-db TORS 06011: 1998-2005. Missing months 1957/9+10+11+12, 1971/8+9+10, 1972/11 & 1973/11 were filled using values from 33060.				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1166 + Monthly-db TORS 06011	1392	0
Details: Created using NARP1: 1890-1960, JC-TS1166: 1961-1990, monthly-db TORS 06011: 1991-2005. Missing months 1957/9+10+11+12, 1971/8+9+10, 1972/11 & 1973/11 were filled using values from 33060.				

Element No. 701 (Number of days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1939 – 2005	NARP1 + JC-TS1224 + Monthly-db TORS 06011	804	0
Details: Created using NARP1: 1939-1960, JC-TS1224: 1961-1990, monthly-db TORS 06011: 1991-2005. Missing months 22 months (not listed here) were filled using values from 33060.				

Element No. 801 (Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS532 + Monthly-db TORS 06011	1392	0
Details: Created using NARP1: 1890-1960, JC-TS532: 1961-1990, monthly-db TORS 06011: 1991-2005. Missing months 1957/9+10+11+12, 1973/11 were filled using values from 33060.				



4.7 Strond Kraftstation (STRO) - 33054

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1932 – 2005	JC-TS1161 + Monthly-db STRO 33054	888	0
Details: Created using monthly-db STRO 1932-1960, JC-TS1161: 1961-1999, monthly-db STRO 33054: 1991-2005. 1933/7 was filled using the average of 33060, 33070 & 33090. 1977/3, 1982/8+9+10 are filled in JC-TS1161 (see Cappelen, J. & Ellen Vaarby Laursen (1998) for further details). Month 1991/5+6+11 were filled using a 5-year period regression against the average of stations 33020 and 33045 (to $r^2=0.810$): $St.33054 = 0.9451 * (St.33020 + St.33045)/2$. This was an improvement compared to single station correlations (with 33020, 33037, 33045, 33051, 33080 and 33090).				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1932 – 2005	JC-TS1172 + Monthly-db STRO 33054	888	4
Details: Created using monthly-db STRO 1932-1960, JC-TS1172: 1961-1999, monthly-db STRO 33054: 1991-2005. Missing: 1933/7, 2000/12, 2001/9-10. Months 1977/3 & 1982/8+9+10 were filled in JC-TS1172 (see Cappelen, J. & Ellen Vaarby Laursen (1998)) and months 1991/5+6+11, 2001/11+12 were filled using the same regression as for element 601.				

4.8 Upernavik (UPER) - 04211

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	NARP1 + LSS-TS1425 + Monthly-db UPER 04210/04209/04211	1596	0
Details: Created using NARP1: 1873-1957, LSS-TS1425: 1958-1999, monthly-db UPER 04210/04209: 2000-2001 and monthly-db UPER 4211: 2002-2005. Missing months were filled using multiple regressions with Ilulissat (ILUL) and Pituffik (PITU), one regression for each month January-December, see Table 1 in the Appendix 1. Months with inserted values: 1977/08, 1982/01-12, 1983/01-07, 1983/09-11, 1984/01+02+04+05+06+07, 1986/02-10, 1988/09+10+11+12, 1989/01, 1990/10+11, 1991/08. For one month 1982/03, Pituffik (PITU) was not available so the regression was done with Ilulissat (ILUL) alone ($UPER = 0.843 * ILUL - 70.3 = -204, r^2=0.876$).				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1+ LSS-TS1451 + Monthly-db UPER 04210/04209/04211	1392	244
Details: Created using NARP1: 1890-1957, LSS-TS1451: 1958-1999, monthly-db UPER 04210/04209: 2000-2001 and monthly-db UPER 04211: 2002-2005. LSS-TS1451 has missing values from 1981/07 - 1995/09, because the number of days per month for 04209 were low in this period (15-25 pr. month). Missing months: 244 (not listed here).				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1474 + Monthly-db UPER 04210/04209/04211	1392	248
Details: Created using NARP1: 1890-1957, JC-TS1474: 1958-1999, monthly-db UPER 04210/04209: 2000-2001 and monthly-db UPER 04211: 2002-2005. LSS-TS1474 has missing values from 1981/07 - 1995/09, because the number of days per month for 04209 were low in this period (15-25 pr. month). Missing months: 248 (not listed here).				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1495 + Monthly-db UPER 04210/04209/04211	1392	226
Details: Created using NARP1: 1890-1957, JC-TS1495: 1958-1999, monthly-db UPER 04210/04209: 2000-2001 and monthly-db UPER 04211: 2002-2005. LSS-TS1495 has missing values from 1981/07 - 1995/09, because the number of days per month for 04209 were low in this period (15-25 pr. month). Missing months: 226 (not listed here).				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1516 + Monthly-db UPER 04210/04209/04211	1392	229
Details: Created using NARP1: 1890-1957, LSS-TS1516: 1958-1999, monthly-db UPER 04210/04209: 2000-2001 and monthly-db UPER 04211: 2002-2005. LSS-TS1516 has missing values from 1981/07 - 1995/09, because the number of days per month for 04209 were low in this period (15-25 pr. month). Missing months: 229 (not listed here).				



Upernavik (UPER) – 04211 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1606 + Monthly-db UPER 04210/04209/04211	1392	145
Details: Created using NARP1: 1890-1957 (34210) reduced to mean sea level (see appendix), JC-TS1606: 1958-1999, monthly-db UPER 04210/04209: 2000-2001 and monthly-db UPER 04211: 2002-2005. The missing values are concentrated in the periods 1940-1945 and 1981-1988. Missing months: 145 (not listed here).				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1980	NARP1 + BVJ-TS1909	1092	119
Details: Created using NARP1: 1890-1957, BVJ-TS1909: 1958-1980. The missing values are concentrated in the period 1938-1950. Missing months: 119 (not listed here).				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1950 – 1980	NARP1 + BVJ-TS1930	372	1
Details: Created using NARP1: 1950-1957, BVJ-TS1930: 1958-1980. Missing data: 1977/8.				

Element No. 701 (Number of days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1938 – 1980	NARP1 + LSS-TS2030	516	0
Details: Created using NARP1: 1950-1957, LSS-TS2030: 1958-1980. Missing: None.				

Element No. 801 (Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1980	NARP1 + LSS-TS2087	1092	46
Details: Created using NARP1: 1890-1957, LSS-TS2087: 1958-1980. Missing: 46 (not listed here).				

4.9 Ilulissat (ILUL) - 04221

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 2005	PF-TS14 +LSS-TS1428 + Monthly-db ILUL 04221	1596	0
Details: Created using PF-TS14: 1873/1-1991/10, LSS-TS1428: 1991/11-1999, monthly-db ILUL 04221: 2000-2005. Missing months 1976/7, 1993/5+6 and 2000/4 were filled using monthly correlations with Aasiaat (04220): 1976/07: $ILUL = 0.948 * AASI + 23.7$ ($r^2=0.829$), 1993/05: $ILUL = 1.081 * AASI + 21.0$ ($r^2=0.987$), 1993/06: $ILUL = 1.080 * AASI + 20.0$ ($r^2=0.968$) and 2000/04: $ILUL = 1.063 * AASI + 19.2$ ($r^2=0.989$). Missing months 2005/08 and 2005/9 were filled using monthly correlations with Aasiaat (04220): 2005/08: $ILUL = 1.021 * AASI + 6.341$ ($r^2=0.8$) and 2005/09: $ILUL = 1.3 * AASI - 8.995$ ($r^2=0.849$). The former published series (latest 1873-2002 and earlier) has been changed, because the use of JC-TS1426 in that series for the period 1961/1 – 1979/3 wasn't appropriate.				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1895 – 2005	NARP1 + LSS-TS1452 +LSS-TS1454 + Monthly-db ILUL 04221/04216	1332	104
Details: Created using NARP1: 1895-1960, LSS-TS1452: 1961-1991, LSS-TS1454: 1992-1999, monthly-db ILUL 04221: 2000-2005. Missing: 104 months, not listed here, especially during years 1916-1918 and 1982-1988. Missing months 2005/08 and 2005/9 were filled using monthly correlations with Aasiaat (04220): 2005/08: $ILUL = 1.309 * AASI - 8,832$ ($r^2=0.931$) and 2005/09: $ILUL = 1.477 * AASI - 13.849$ ($r^2=0.849$).				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1475 +LSS-TS1477 + Monthly-db ILUL 04221/04216	1392	120
Details: Created using NARP1: 1890-1960, LSS-TS1475: 1961-1991, LSS-TS1477: 1992-1999, monthly-db ILUL 04221: 2000-2005. Missing: 120 months, not listed here, especially during years 1893, 1916-1918 and 1982-1988.				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1496 +LSS-TS1498 + Monthly-db ILUL 04221/04216	1392	111
Details: Created using NARP1: 1890-1960, LSS-TS1496: 1961-1991, LSS-TS1498: 1992-1999, monthly-db ILUL 04221: 2000-2005. Missing: 111 months, not listed here, especially during years 1916-1917, 1935-1936 and 1982-1988. Missing months 2005/08 was filled with Aasiaat (04220). 2005/9 was filled using a monthly correlation with Aasiaat (04220): $ILUL = 1.026 * AASI - 33.316$ ($r^2=0.634$).				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1517 +LSS-TS1519 + Monthly-db ILUL 04221/04216	1392	125
Details: Created using NARP1: 1890-1960, LSS-TS1517: 1961-1991, LSS-TS1519: 1992 – 1999, monthly-db ILUL 04221: 2000-2005. Missing: 125 months, not listed here, especially during years 1916-1917, 1935-1937 and 1982-1988.				



Ilulissat (ILUL) – 04221 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1607 + JC-TS1609 + Monthly-db ILUL 04221/04216	1392	70
Details: Created using NARP1: 1890-1960 (34216) reduced to mean sea level (see appendix), JC-TS1607: 1961-1991, JC-TS1609: 1992 – 1999, monthly-db ILUL 04221: 2000-2005. Missing: 70 months, not listed here, especially during years 1987-1991.				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1984	NARP1 + BVJ-TS1910	1140	14
Details: Created using NARP1: 1890-1960, BVJ-TS1910: 1961-1984. Missing: 14 months, not listed here.				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1984	NARP1 + BVJ-TS1931	1140	10
Details: Created using NARP1: 1890-1960, BVJ-TS1931: 1961-1984. Missing: 10 months, not listed here.				

Element No. 701 (Number of days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1938 – 1981	NARP1 + LSS-TS2031	528	1
Details: Created using NARP1: 1890-1960, LSS-TS2031: 1961-1981. Missing: 1976/7.				

Element No. 801 (Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1978	NARP1 + LSS-TS2088	1068	4
Details: Created using NARP1: 1890-1960, LSS-TS2088: 1961-1978. Missing: 1921/3, 1929/7, 1936/10 and 1976/7.				



4.10 Nuuk (NUUK) - 04250

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1433 + Monthly-db NUUK 04250	1392	9
Details: Created using NARP1: 1890-1957, LSS-TS1433: 1958-1999, monthly-db NUUK 04250: 2000-2005. Missing: 1896/6, 1899/4+5, 1900/10, 1901/1+2, 1920/9+10 & 2000/3. 2000/12 was filled using a monthly regression with ILUL(04221) and NARS(04270): $2000/12: NUUK = 0.424 * ILUL + 0.320 * NARS + 5.4$ ($r^2=0.929$). 2003/2 was filled using a monthly regression with NUUK AIRPORT (04254). $2003/2: NUUK(04250) = 1.050 * NUUK AIRPORT(04254) + 6.603$ ($r^2=0.999$). 2005/5 was filled with the value from Nuuk Airport 04254.				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1458 + Monthly-db NUUK 04250	1392	31
Details: Created using NARP1: 1890-1957, LSS-TS1458: 1958-1999, monthly-db NUUK 04250: 2000-2005. Missing: 31 months (not listed here), particularly during year 1894, 1898 & 1912. 2003/2 was filled using a monthly regression with NUUK(04254). $2003/2: NUUK(04250) = 1.014 * NUUK(04254) - 3.782$ ($r^2=0.999$). 2005/5 was filled with the value from Nuuk Airport 04254.				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1481 + Monthly-db NUUK 04250	1392	35
Details: Created using NARP1: 1890-1957, LSS-TS1481: 1958-1999, monthly-db NUUK 04250: 2000-2005. Missing: 35 months (not listed here), particularly during year 1894, 1898, 1912 and 1999. 2003/1 was filled using the value from 04254. 2005/5 was filled with the value from Nuuk Airport 04254.				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1502 + Monthly-db NUUK 04250	1392	50
Details: Created using NARP1: 1890-1957, LSS-TS1502: 1958-1999, monthly-db NUUK 04250: 2000-2005. Missing: 50 months (not listed here), particularly during years 1941 and 1943-1945. 2003/2 was filled using a monthly regression with NUUK(04254). $2003/2: NUUK(04250) = 1.080 * NUUK(04254) + 18.282$ ($r^2=0.997$). 2005/5 was filled with the value from Nuuk Airport 04254.				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS1523 + Monthly-db NUUK 04250	1392	63
Details: Created using NARP1: 1890-1957, LSS-TS1523: 1958-1999, monthly-db NUUK 04250: 2000-2005. Missing: 63 months (not listed here), particularly during years 1941, 1943-1945 and 1999. 2003/1 was filled using the value from 04254.				



Nuuk (NUUK) – 04250 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + JC-TS1614 + Monthly-db NUUK 04250	1392	262
Details: Created using NARP1: 1890-1957 (34250) reduced to mean sea level (see appendix), JC-TS1614: 1958-1999, monthly-db NUUK 04250: 2000-2005. Missing: 262 months (not listed here), particularly during years 1926-1946. 2003/1+2 and 2005/5 were filled using the values from 04254.				

Element No. 601 (Accumulated Precipitation) – Not necessarily homogenous				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + BVJ-TS1915 + Monthly-db NUUK 34250	1392	78
Details: Created using NARP1: 1890-1957, BVJ-TS1915: 1958-1998, monthly-db 34250 Nuuk: 1999/2-2005. Missing: 78 months (not listed here), particularly during years 1893, 1899, 1918-1921. Not necessarily homogenous, possible break in the early 1950s based on a visual check.				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1922 – 2005	NARP1 + BVJ-TS1936 + Monthly-db NUUK 34250	1008	2
Details: Created using NARP1: 1890-1957, BVJ-TS1936: 1958-1998, monthly-db 34250 Nuuk: 1999/2-2005. Missing: 1992/7, 1999/1.				

Element No. 701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1942 – 1981	NARP1 + LSS-TS2036	480	0
Details: Created using NARP1: 1942-1957, LSS-TS2036: 1958-1981.				

Element No. 801 (Mean Cloud Cover) – Not necessarily homogenous				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 2005	NARP1 + LSS-TS2093 + Monthly-db NUUK 04250	1392	37
Details: Created using NARP1: 1890-1957, LSS-TS2093: 1958-1999, monthly-db 04250 Nuuk: 2000-2005. Missing: 37 months (not listed here), particularly during years 1893-1894 and 1999-2005. From 1 February 1999 a ceilometer for automatic detection of cloud cover was used at 04250 Nuuk as the only way of observation the clock around. Not necessarily homogenous, because of the different ways of detection.				



4.11 Ivittuut – (IVIT) - 34262 (Previous part of Narsarsuaq series)

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1873 – 1960	NARP1	1056	0
Details: Created using NARP1: 1873-1960. Missing: None.				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	50
Details: Created using NARP1: 1890-1960. Missing: 50 months (not listed here), particularly during years 1916-1919 & 1927-1928.				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	50
Details: Created using NARP1: 1890-1960. Missing: 50 months (not listed here), particularly during years 1916-1919 & 1927-1928.				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	25
Details: Created using NARP1: 1890-1960. Missing: 25 months (not listed here), particularly during years 1918-1919 & 1927-1928.				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	25
Details: Created using NARP1: 1890-1960. Missing: 25 months (not listed here), particularly during years 1918-1919 & 1927-1928.				



Ivittuut – (IVIT) - 34262 (continued) (Previous part of Narsarsuaq series)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	26
Details: Created using NARP1: 1890-1960 (34262) reduced to mean sea level (see appendix). Missing: 26 months (not listed here), particularly during years 1918-1919 & 1927-1928.				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	27
Details: Created using NARP1: 1890-1960. Missing: 27 months (not listed here), particularly during years 1918-1919 & 1927-1928.				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	15
Details: Created using NARP1: 1890-1960. Missing: 15 months (not listed here), particularly during years 1927-1928.				

Element No. 701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1938 – 1960	NARP1	276	12
Details: Created using NARP1: 1938-1960. Missing: 12 months 1942/1-1942/12.				

Element No. 801 (Mean Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1890 – 1960	NARP1	852	26
Details: Created using NARP1: 1890-1960. Missing: 26 months (not listed here), particularly during years 1918-1919 & 1927-1928.				



4.12 Narsarsuaq (NARS) - 04270

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	LSS-TS1435 + Monthly-db NARS 04270	540	2
Details: Created using: LSS-TS1435: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: 1985/5+6.				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	LSS-TS1460 + Monthly-db NARS 04270	540	0
Details: Created using: LSS-TS1460: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: None.				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	LSS-TS1483 + Monthly-db NARS 04270	540	2
Details: Created using: LSS-TS1483: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: 2 months (1967/12, 1985/6).				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	LSS-TS1504 + Monthly-db NARS 04270	540	0
Details: Created using: LSS-TS1504: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: None.				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	LSS-TS1525 + Monthly-db NARS 04270	540	3
Details: Created using: LSS-TS1525: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: 3 months (1962/3, 1963/1, 1967/12).				



Narsarsuaq (NARS) – 04270 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	JC-TS1616 + Monthly-db NARS 04270	540	0
Details: Created using: JC-TS1616: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: None.				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	BVJ-TS1918 + Monthly-db NARS 04270	540	0
Details: Created using: BVJ-TS1918: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: None.				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	BVJ-TS1939 + Monthly-db NARS 04270	540	0
Details: Created using: BVJ-TS1939: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: None.				

Element No. 701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 1999	LSS-TS2038 + Monthly-db NARS 04270	468	41
Details: Created using: LSS-TS2038: 1961-1981, monthly-db NARS 04270: 1982-1999. Missing: 41 months (not listed here), particularly during years 1985 & 1996-1998. After 1999, data becomes very sparse.				

Element No. 801 (Mean Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1961 – 2005	LSS-TS2095 + Monthly-db NARS 04270	540	2
Details: Created using: LSS-TS2095: 1961-1999, monthly-db NARS 04270: 2000-2005. Missing: 2 months (1985/5+6).				



4.13 Danmarkshavn (DANM) - 04320

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1439 + Monthly-db DANM 04320	684	6
Details: Created using NARP1: 1949-1957, LSS-TS1439: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 6 months (1954/11, 1977/8, 1981/7-10 (due to labour strike)).				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1463 + Monthly-db DANM 04320	684	6
Details: Created using NARP1: 1949-1957, LSS-TS1463: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 6 months (1954/11, 1977/8, 1981/7-10 (due to labour strike)).				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1483 + Monthly-db DANM 04320	684	6
Details: Created using NARP1: 1949-1957, LSS-TS1483: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 6 months (1977/8, 1981/6-10 (due to labour strike)).				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1507 + Monthly-db DANM 04320	684	5
Details: Created using NARP1: 1949-1957, LSS-TS1507: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 5 months (1977/8, 1981/7-10 (due to labour strike)).				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1528 + Monthly-db DANM 04320	684	6
Details: Created using NARP1: 1949-1957, LSS-TS1528: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 6 months (1977/8, 1981/6-10 (due to labour strike)).				



Danmarkshavn (DANM) – 04320 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + JC-TS1621 + Monthly-db DANM 04320	684	6
Details: Created using PF-TS49: 1949-1957, JC-TS1621: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 6 months (1954/11, 1977/8, 1981/7-10 (due to labour strike)).				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + BVJ-TS1921 + Monthly-db DANM 04320	684	7
Details: Created using NARP1: 1949-1957, BVJ-TS1921: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 7 months (1949/9, 1954/11, 1977/8, 1981/7-10 (due to labour strike)).				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + BVJ-TS1942 + Monthly-db DANM 04320	684	5
Details: Created using NARP1: 1949-1957, BVJ-TS1942: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 5 months (1977/8, 1981/7-10 (due to labour strike)).				

Element No. 701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1958 – 1981	LSS-TS2041	288	5
Details: Created using LSS-TS2041: 1958-1981. Missing: 5 months (1977/8, 1981/7-10 (due to labour strike)). Since 1981 most winter months are missing a few days, which means that the number of days with snow cover at Danmarkshavn is not accurate. The data after 1981 are therefore not recommended for use.				

Element No. 801 (Mean Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS2098 + Monthly-db DANM 04320	684	6
Details: Created using NARP1: 1949-1957, LSS-TS2098: 1958-1999, monthly-db DANM 04320: 2000-2005. Missing: 6 months (1954/11, 1977/8, 1981/7-10 (due to labour strike)).				



4.14 Scoresbysund (SCOR) – 34339 (Previous part of Illoqqortoormiut series)

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1924 – 1949	NARP1	309	37
Details: Created using parts of NARP1: 1924/1-1949/9. Missing: 37 months: 1924/7-10, 1927/8, 1929/8, 1931/9, 1932/8, 1933/8, 1934/8, 1936/8, 1938/7-1939/1, 1939/-8, 1940/9, 1941/8-10, 1942/8-9, 1943/8-10, 1944/8, 1945/7-8, 1946/8.				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1925 – 1949	NARP1	297	47
Details: Created using parts of NARP1: 1925/1-1949/9. Missing: 47 months: 1938/7-1939/1, 1939/7-8, 1946/8-1949/9.				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1925 – 1949	NARP1	297	45
Details: Created using parts of NARP1: 1925/1-1949/9. Missing: 45 months 1938/7-1939/1, 1946/8-1949/9.				

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1924 – 1949	NARP1	309	69
Details: Created using parts of NARP1: 1924/1-1949/9 (34339) reduced to mean sea level (see appendix). Missing: 69 months (not listed here), primarily during 1938-1943.				

Element No. 801 (Mean Cloud Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1924 – 1949	NARP1	309	39
Details: Created using parts of NARP1: 1924/1-1949/9. Missing: 39 months (not listed here).				

4.15 Illoqqortoormiut (ILLO) - 04339

Element No. 101 (Mean Temperature) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1441 + Monthly-db ILLO 04339/04340	685	5
Details: Created using parts of NARP1: 1949/10-1957/12 (34340 Kap Tobin), LSS-TS1441: 1958-1999 (04340: 1958/1-1980/10 and 04339:1980/11-1999/12), monthly-db ILLO 04339: 2000-2005. Missing: 5 months 1977/8, 1981/7-10 (due to labour strike). Inhomogenous based on a visual test, possible break 1980/10.				

Element No. 111 (Mean of Daily Maximum Temperature) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1465 + Monthly-db ILLO 04339	685	146
Details: Created using parts of NARP1: 1949/10-1957/12 (34340 Kap Tobin), LSS-TS1465: 1958-1999 (04340/04339), monthly-db ILLO 04339: 2000-2005. Missing: 146 months 1977/8, 1981/6-10 (due to labour strike) and 1982/1-1993/8. Inhomogenous based on a visual test, possible break 1980/10.				

Element No. 112 (Highest Temperature) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS1488 + Monthly-db ILLO 04339	685	145
Details: Created using parts of NARP1: 1949/10-1957/12 (34340 Kap Tobin), LSS-TS1488: 1958-1999 (04340/04339), monthly-db ILLO 04339: 2000-2005. Missing: 145 months 1977/8, 1981/6-10 (due to labour strike) and 1982/2-1993/8. Inhomogenous based on a visual test, possible break 1980/10.				

Element No. 121 (Mean of Daily Minimum Temperature) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1950 – 2005	NARP1 + LSS-TS1509 + Monthly-db ILLO 04339/04340	672	146
Details: Created using NARP1: 1950-1957 (34340 Kap Tobin), LSS-TS1509: 1958-1999 (04340/04339), monthly-db ILLO 04339: 2000-2005. Missing: 146 months (not listed here), particularly during 1981-1993. Inhomogenous based on a visual test, possible break 1980/10.				

Element No. 122 (Lowest Temperature) - Inhomogenous based on a visual test				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1950 – 2005	NARP1 + LSS-TS1530 + Monthly-db ILLO 04339/04340	672	147
Details: Created using NARP1: 1950-1957 (34340 Kap Tobin), LSS-TS1530: 1958-1999 (04340/04339), monthly-db ILLO 04339: 2000-2005. Missing: 147 months (not listed here), particularly during 1981-1993. Inhomogenous based on a visual test, possible break 1980/10.				



Illoqqortoormiut (ILLO) – 04339 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + JC-TS1623 + Monthly-db ILLO 04339	675	5
Details: <i>Recommended:</i> Created using parts of NARP1: 1949/10-1957/12 (34340 Kap Tobin), JC-TS1623: 1958-1999 (04340/04339), monthly-db ILLO 04339: 2000-2005. Missing: 5 months 1977/8 and 1981/7-10 (due to labour strike).				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1950 – 2005	NARP1 + Monthly-db ILLO 04339/04340	672	2
Details: Created using NARP1: 1950-1999 (04340/04339), monthly-db ILLO 04339: 2000-2005. Missing: 2 months (1957/6, 1981/7).				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1950 – 2005	NARP1 + Monthly-db ILLO 04339/04340	672	0
Details: Created using NARP1: 1950-1957 (34340 Kap Tobin), monthly-db ILLO 04339/04340: 1958-2005. Missing: None.				

Element No. 701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1958 – 1980	LSS-TS2043	274	1
Details: Created using LSS-TS2043: 1958/1-1981/10 (04340 Kap Tobin). Missing: 1 month (1977/8). After 1981 observations are available from 04339 Illoqqortoormiut. Observations of snow cover exist from August 1993. However, most winter months are missing a few days, which means that the number of days with snow cover at Illoqqortoormiut not can be considered as accurate. The data after 1980 are therefore not recommended for use.				

Element No. 801 (Mean Cloud Cover) – Not necessarily homogenous				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1949 – 2005	NARP1 + LSS-TS2100 + Monthly-db ILLO 04339	685	5
Details: Created using parts of NARP1: 1949/10-1957/12 (34340 Kap Tobin), LSS-TS2100: 1958-1999 (04340/04339), monthly-db ILLO 04339: 2000-2005. From 1949/10 observations came from 04340 Kap Tobin in octas. The former published series of cloud cover from Scoresbysund (Jørgensen, P. V. and Ellen Vaarby Laursen (2003)) have been multiplied by a factor 1,25 from 1953/1, indicating that observations in octas were started from that year. This was indeed wrong. There are observations in octas from 1949/10. Therefore the former monthly values of cloud cover have been multiplied by the factor 1,25 in the period 1949/10-1952/12. Missing: 5 months 1977/8 and 1981/7-10 (due to labour strike). From 17 August 2005 a ceilometer for automatic detection of cloud cover are used at 04339 Illoqqortoormiut as the only way of observation the clock around. Not necessarily homogenous, mostly because of the new way of detection but also because of different locations involved.				



4.16 Tasiilaq (TASI) - 04360

Element No. 101 (Mean Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1895 – 2005	NARP1 + LSS-TS1443 + Monthly-db TASI 04360	1332	14
Details: Created using NARP1: 1895-1957, LSS-TS1443: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 14 months (1910/9 – 1911/8, 1924/8, 1937/7).				

Element No. 111 (Mean of Daily Maximum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1898 – 2005	NARP1 + LSS-TS1457 + Monthly-db TASI 04360	1296	12
Details: Created using NARP1: 1898-1957, LSS-TS1457: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 12 months (1910/9 – 1911/8).				

Element No. 112 (Highest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1895 – 2005	NARP1 + LSS-TS1457 + Monthly-db TASI 04360	1332	17
Details: Created using NARP1: 1895-1957, LSS-TS1457: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 17 months (1910/9 – 1911/8, 1977/11, 1982/11-1983/2).				

Element No. 121 (Mean of Daily Minimum Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1895 – 2005	NARP1 + LSS-TS1511 + Monthly-db TASI 04360	1332	24
Details: Created using NARP1: 1895-1957, LSS-TS1511: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 24 months (not listed here), mainly during years 1910-1911 & 1937-1938.				

Element No. 122 (Lowest Temperature)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1895 – 2005	NARP1 + LSS-TS1532 + Monthly-db TASI 04360	1332	25
Details: Created using NARP1: 1895-1957, LSS-TS1532: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 25 months (not listed here), mainly during years 1910-1911 & 1937-1938.				



Tasiilaq (TASI) – 04360 (continued)

Element No. 401 (Mean Atmospheric Pressure)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1895 – 2005	NARP1 + JC-TS1625 + Monthly-db TASI 04360	1332	57
Details: Created using NARP1: 1895-1957 (34360) reduced to mean sea level (see appendix), JC-TS1625: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 57 months (not listed here), mainly during years 1910-1911 & 1940-1943.				

Element No. 601 (Accumulated Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1898 – 2005	NARP1 + BVJ-TS1926 + Monthly-db TASI 04360	1296	21
Details: Created using NARP1: 1898-1957, BVJ-TS1946: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 21 months (not listed here), mainly during years 1910-1911 & 1980.				

Element No. 602 (Highest 24-hour Precipitation)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1898 – 2005	NARP1 + BVJ-TS1926 + Monthly-db TASI 04360	1296	17
Details: Created using NARP1: 1898-1957, BVJ-TS1946: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 17 months (not listed here), mainly during years 1910-1911 & 1980.				

Element No. 701 (Number of Days with Snow Cover)				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1958 – 1978	LSS-TS2045	252	0
Details: Created using LSS-TS2045: 1958-1978. Since 1978 most winter months are missing a number of days, which means that the number of days with snow cover at Tasiilaq not can be considered as accurate. The data after 1978 are therefore not recommended for use.				

Element No. 801 (Mean Cloud Cover) – Not necessarily homogenous				
<i>Dataset</i>	<i>Period</i>	<i>Content</i>	<i>Total months</i>	<i>Missing months</i>
Recommended	1895 – 2005	NARP1 + LSS-TS1926 + Monthly-db TASI 04360	1332	14
Details: Created using NARP1: 1898-1957, LSS-TS1946: 1958-1999, monthly-db TASI 04360: 2000-2005. Missing: 14 months (1910/9-1911/8, 1924/8, 1937/7). From 18 August 2005 a ceilometer for automatic detection of cloud cover was used at 04360 Tasiilaq as the only way of observation the clock around. Not necessarily homogenous, mostly because of new ways of detection.				



5. Data files description

All the data are located in one directory: *recommended2005*.

The different stations are located in sub-directories, one for each station: ex. *koeb6186*.

Separate fixed-format ASCII-files are provided for each station, for each element, named by the 4-letter station abbreviation plus station number, element no. and period (_rec means recommended): ex. *koeb_6186_101_1768_2005_rec.dat*

The data files are tab-delimited ASCII-format and consists of 3 columns: YEAR, MONTH, "VALUE".

The units of "VALUE" can be seen in the data dictionary, table 2, in section 2.2.

Special Remarks:

1) Months are referred to by year/month number (ex. 1981/03 = March 1981).

2) The criteria used here for calculating a valid monthly value is that **measurements from more than 21 days** are present in that month, so the number of daily values are ranging 22-31.

In addition the recommended dataset is also saved in one fixed format ASCII data file named: recommended_all_data.dat, containing all data series.

In recommended_all_data.dat each record contains:

Variable	Start	End	Format	Description
STAT_NO	1	5	F5.0	Station number (see section 2.1)
ELEM_NO	6	8	F3.0	Element number (see section 2.2)
YEAR	9	12	F4.0	Year
JAN	13	17	F5.0	January value (units described in section 2.2)
FEB	18	22	F5.0	Feb. value (units described in section 2.2)
MAR	23	27	F5.0	March value (units described in section 2.2)
APR	28	32	F5.0	April value (units described in section 2.2)
MAY	33	37	F5.0	May value (units described in section 2.2)
JUN	38	42	F5.0	June value (units described in section 2.2)
JUL	43	47	F5.0	July value (units described in section 2.2)
AUG	48	52	F5.0	Aug. value (units described in section 2.2)
SEP	53	57	F5.0	Sep. value (units described in section 2.2)
OCT	58	62	F5.0	Oct. value (units described in section 2.2)
NOV	63	67	F5.0	Nov. value (units described in section 2.2)
DEC	68	72	F5.0	Dec. value (units described in section 2.2)
CO_CODE	73	75	A3	Country code (DK= Denmark, FR= Faroe Island, GR=Greenland).

In the data file **recommended_all_data.dat** data are sorted according to element and station number. Furthermore all missing values have been replaced with the dummy value -9999 and a country code has been introduced.



APPENDIX 1

Table 1. Multiple Regressions used to fill 46 months in UPERNAVIK(4209/4210) - ELEMENT101

Month	Regression Formula	Corr. Coeff.
January	$UPER = 0.607 * ILUL + 0.542 * PITU + 32.3$	$r^2 = 0.867$
February	$UPER = 0.480 * ILUL + 0.575 * PITU + 12.6$	$r^2 = 0.902$
March	$UPER = 0.386 * ILUL + 0.600 * PITU - 0.2$	$r^2 = 0.954$
April	$UPER = 0.432 * ILUL + 0.524 * PITU - 11.2$	$r^2 = 0.979$
May	$UPER = 0.520 * ILUL + 0.437 * PITU - 16.6$	$r^2 = 0.982$
June	$UPER = 0.647 * ILUL + 0.384 * PITU - 19.9$	$r^2 = 0.966$
July	$UPER = 0.748 * ILUL + 0.407 * PITU - 24.2$	$r^2 = 0.842$
August	$UPER = 0.574 * ILUL + 0.249 * PITU - 2.2$	$r^2 = 0.897$
September	$UPER = 0.513 * ILUL + 0.283 * PITU - 2.5$	$r^2 = 0.968$
October	$UPER = 0.431 * ILUL + 0.351 * PITU + 5.6$	$r^2 = 0.963$
November	$UPER = 0.599 * ILUL + 0.412 * PITU + 20.9$	$r^2 = 0.917$
December	$UPER = 0.513 * ILUL + 0.283 * PITU + 2.5$	$r^2 = 0.889$

UPER = Upernavik, ILUL = Ilulissat and PITU = Pituffik. For more information see also section 4.8, element number 101.



APPENDIX 2

Regarding air pressure:

The reading of a mercury barometer is proportional to the length of a mercury column in the barometer, which is balanced against the weight of the entire atmospheric column of air above the open surface of the mercury. The mercury barometer was therefore calibrated to “standard conditions” (0°C and a certain standard gravity). At other conditions corrections must be used.

The formula used to correct old barometer readings for the stations presented in this publication is given below. The formula simply correct for gravity (part 1) and reduce the pressure to mean sea level (part 2):

$$P * (1 - 0,00259 * \cos(2 * \varphi * \pi/180)) * (1 + 9.82/287.04 * h/(T/10+273.15))$$

P is air pressure (0.1 hPa) at station level, φ is the latitude in degrees, h is the height of the barometer in meters above sea level and T is the air temperature at station level (0.1 °C)

For the calculation are used monthly means of P and T. This introduces an error compared to a reduction performed on the actual observations. The error is proportional to the difference between ‘the average P to T ratio’ and ‘the ratio of average P to average T’ (T in Kelvin). This means the error is zero if T is constant within the period. Within a month the maximum T-range would normally be within 30 degrees. And a numerical variation of 30 is small when compared to the temperature in Kelvin and the air pressure in 0.1 hPa. Therefore the error introduced by using monthly values may be considered small.

The different station specific corrections, which have been used in the construction of the pressure series in this report can be seen in the following DMI publication:

Laursen, Ellen Vaarby (2003): Metadata, selected climatological and synoptic stations, 1750-1996. DMI Technical Report No. 03-24, Copenhagen.

This publication can be downloaded from the publication part of DMI’s web site:

<http://www.dmi.dk/dmi/dmi-publikationer.htm>

Station 25140 Nordby: Reduction of air pressure to mean sea level. Until and including 1892 also correction for gravity.		
Start	End	Formula, P: station level pressure (0.1 hPa), T: Air temperature at station level (0.1°C)
-	18920400	$P * (1 - 0.00259 * \cos(2 * 55.5 * 3.14/180)) * (1 + 9.82/287.04 * 5.5/(T/10+273.15))$
18920500	18921200	$P * (1 - 0.00259 * \cos(2 * 55.5 * 3.14/180)) * (1 + 9.82/287.04 * 8.0/(T/10+273.15))$
18930100	18991100	$P * (1 + 9.82/287.04 * 8.0/(T/10+273.15))$
18991200	19280700	$P * (1 + 9.82/287.04 * 5.5/(T/10+273.15))$
19280800	19360300	$P * (1 + 9.82/287.04 * 10.5/(T/10+273.15))$
19360400	19441100	$P * (1 + 9.82/287.04 * 6.9/(T/10+273.15))$
19441200	19450500	$P * (1 + 9.82/287.04 * 7.0/(T/10+273.15))$
19450600	19551100	$P * (1 + 9.82/287.04 * 3.0/(T/10+273.15))$
19551200	19600800	$P * (1 + 9.82/287.04 * 9.7/(T/10+273.15))$
19600900	-	$P * (1 + 9.82/287.04 * 6.7/(T/10+273.15))$

Example: The formulas take care that the published air pressure is reduced to mean sea level, 0°C and gravity at 45° latitude. The temperature used is the monthly mean temperature in the NORD-25140 ‘recommended’ series.



APPENDIX 3

Additional Notes

For a few of the stations, namely Torshavn, Strond Kraftstation, Upernavik and Ilulissat, the exact differences between the NACD series, the present series in the time-series database (constructed by Poul Frich), the JC/EVL/LSS series and observed values in monthly has been studied in further details. These details are found in the tables below:

TORSHAVN - TORS
<p>Element No.101 Further details: The NACD Element 101 data had extensive holes: 1925/4-10 and 1964/01 – 1965/12 and 1969/09 - 1975/12. These were filled in TR98-14 and introduced in NORDKLIM and NARP datasets. In NACD, several corrections were made by comparisons with Hoyvik 33060. Data in NARP (series 353) and monthly are the same from 1958 - 1999, except in two cases (1973/11 & 1980/2).</p>
<p>Element No. 111 Further details: Data in REWARD and “monthly” are the same from 1958 - 1995, except in very few cases (1969/10, 1979/06, 1981/01 & 1995/07). “Monthly” was used to update REWARD to include the period 1995-2000 in NORDKLIM/NARP. Data in EVL-TS361 are the same as in “monthly” except for 1973/11 where a value from Hoyvik was inserted.</p>
<p>Element No. 112 Further details: Data values in REWARD and “monthly” are the same from 1964 except in two cases (1969/10 & 1979/06). The values in EVL-TS368 are the same as in monthly.</p>
<p>Element No. 121 Further details: Data values in REWARD and monthly are the same from 1964 except in the following cases (1967/07, 1969/08, 1972/07 & 1995/10). The values in EVL-TS375 are the same as in monthly, except 1973/11.</p>
<p>Element No. 122 Further details: Data values in REWARD and monthly are the same from 1964 except in the following cases (1968/07, 1969/08 & 1972/07). The values in EVL-TS496 are the same as in monthly, except 1973/11.</p>
<p>Element No. 401 Further details: Data values in NACD and monthly are the same from 1958 except in the following cases (1980/01 & 1981/01). The values in EVL-TS1220 are the same as in monthly, except 1973/11 and 1980/01. There are no observations on the Faroe Islands during the missing period in 1925.</p>
<p>Element No. 601 Further details: Data values in NACD and monthly are the same from 1958 except in the following cases (1971/07, 1980/03, 1981/01 & 1985/03). The values in JC-TS1154 are completely different from both NACD and monthly until 1993/01. From then onwards, they are the same.</p>
<p>Element No. 602 Further details: Data values in NACD and NARP are the same. NACD and monthly are the same from 1958/01 except in the following cases (1971/09 & 1985/03). The values in JC-TS1166 are the same except the cases (1971/8+9+10, 1972/11, & 1973/11).</p>
<p>Element No. 701 Further details: Data values in NACD had holes for entire years 1964, 1965 and 1970. Values from TR98-14 are different from NACD and monthly in most months in the period 1961-1990. The values in EVL-TS1224 are the same as monthly except the cases (1962/02, 1966/12, 1967/01, 1967/03, 1967/12, 1973/11 & 1982/01).</p>
<p>Element No. 801 Further details: Comparison between the NACD and monthly was not made.</p>

STROND KRAFTSTATION – (STRO)
<p>Element No. 601 Further details: The series JC-TS1161 from (Cappelen & Laursen 1998), originally had holes that were filled through correlation with 06009, 06011, 33020, 33080, 33090 (Cappelen & Laursen 1998).</p>
<p>Element No. 602 Details: The Element 602 (JC-TS172) from (Cappelen & Laursen 1998), originally had holes that were filled through correlation with 06009, 06011, 33020, 33080, 33090 (Cappelen & Laursen 1998). In the NARP/monthly-clima dataset some 3 holes in 1991 as in element 601 was found. The same correlation was used to calculate the missing daily values and there from the missing monthly values. (Inserted values: 05/1991=172 06/1991=302 11/1991 = 591).</p>

UPERNAVIK – (UPER)**Element No. 101**

Details: note that this Poul Frich series is rather new and not identical to the NACD series (only 1890-1981). NACD had many holes (1891/10, 1934/4, 1932/8+9, 1939/8+9+10+11, 1940/2, 1943/9, 1944/4 – 1945/10, 1981/7-12). The JC series 1425, 1958 – 1999 (here from 1961 - 1990 published in (Cappelen et al. 2001)) is basically an extension of the NACD series to 1999. They are equal from 1958 - 1981 except in a few cases (1968/10, 1970/5, 1971/12, 1977/8, 1979/1 and 1981/3), where JC corrects small NACD mistakes by comparisons with "monthly". After the restart of 4210 instead of 4209 in 1995/09 the data in PF, JC, NACD and *monthly* are exactly the same. The JC series has "introduced" holes in for example in 1977/08 due to a very low number of elements used for the monthly calculations. Other holes: 1981/07-1984/08, 1986/02-10, 1988/09 - 1989/01, 1990/10+11 & 1991/08.

Element No. 111

Details: no info about PF series number. JC series (Series 1451: 1958/01 - 1999/12) and REWARD/NARP are equal for long periods 1961/01 - 1981/06 (except in a few cases: 1966/12, 1967/05, 1968/10, 1970/05, 1971/02, 1971/12, 1977/08 and 1981/03). The JC-series 1451 has missing values from 1981/07 - 1995/09. Oct.1995/10 the values are again the same except in some few cases (1995/11, 1997/09 and 1997/12). Before 1961/01 (e.g. 1958/01 - 1960/12) values are different. REWARD holes: 1914/01 - 12, 1925/03 - 1927/07, 1943/04 - 1945/10. The data in *monthly* are the same as in JC from 1958 - 1961. From 1961 - 1981 *monthly*/JC/NARP are equal except in a few cases (typing errors?). Also the data in *monthly* are the same as NARP and JC from 1995 - 2000. In the period with 4209 the number of elements were often low (15-25 pr. month), which caused JC to insert "missing values". In the 4209 period the REWARD series is often equal to *monthly* for 4209, but many months are different. Corrected?

Element No. 112

Details: the PF (Series 4) consist of st34210 from 1890 - 1954, st4210 from 1955 - 1986, st4209 from 1987 - 1995/09 and st4210 from 1995/10 - 12. The PF data and the JC (Series 1474: 1958/01 – 1999/12) are the same during most of the period (1958-1996). The main difference is introduced holes in the JC series due to low number of elements in some periods. These holes are 1958/05 - 07, 1977/07 and 1981/07 - 1995/09. A part from these values are different in 1968/10, 1970/05, 1971/12 and 1981/03. As with elem.111, the REWARD/NARP series has holes 1914/01 - 12, 1925/03 - 1927/07, 1943/04 - 1945/10. The data in *monthly* (starting 1958/01) are the same as NARP, except in a few cases (1968/10, 1970/05, 1971/12, 1981/03, 1983/06, 1987/01 and 1995/09). Station 4210 used for most of period, except 4209 is used from 1987/03 - 1995/09.

Element No. 121

Details: the PF data consists of st34210 from 1890/01 - 1960/12, st4210 from 1961/01 – 1985/12, st4209 from 1986/01 - 1995/10 and st4210 1995/10 - 1995/12. The PF and JC data (Series 1495: 1958/01 – 1999/12) are the same during most of the period (1958-1996). The main difference is introduced holes in the JC series due to low number of elements in some periods. These are primarily 1977/08 and the period 1981/07 - 1995/09. Different values are found in 1958/01 - 1961/01, 1976/02 and 1981/06. The NARP/REWARD series is the same as PF, except for the three months (1932/08+09 and 1950/07). Two large holes are found 1925/01 - 1927/07 and 1944/04 - 1946/02. The data in *monthly* are the same as NARP from 1961/02 - 1981/09 and again from 1995/10 except in a few cases (1976/02, 1978/08 and 1998/01+02). Before 1961/02 they are equal to JC series. There is one hole from 1982/01-08. From 1987-1995 the data in NARP are from *monthly* for 4209.

Element No. 122

Details: The JC (Series 1516: 1958/01 – 1999/12) and PF data are the same from 1960/12 - 1981/06 and 1995/10-12, except for a few months (1973/03, 1973/05 & 1977/08). Before 1960/12 (1958/01 – 1960/11) they are different, with JC values the same as in *monthly*. The JC data has holes: one major hole: 1981/07 - 1995/09, a minor holes: 1973/05, 1977/08, 1998/01 & 1999/05. The NARP/REWARD series is the same as the PF series except for 1932/09, 1989/11 & 1993/11. The REWARD series has holes from 1925/01 - 1927/07 and 1944/04 - 1946/02.

Element 401

Details: The JC (Series 1606: 1958/01 – 1999/12) and PF data are the same for most of the overlapping period, except 1981/03+08+12, 1991/02+04+05, 1992/09, 1994/07+12, 1995/02+05-09. But the JC data actually has more values than the PF series, including 1984/09 – 1985/12, 1986/11 – 1988/08, 1989/02 - 1990/12. The PF and NACD are identical in the overlapping period (until 1981/12). The NACD has extensive holes: 1891/10, 1899/08, 1900/08, 1927/01 -07, 1931/04, 1932/08+09, 1939/08-11, 1940/02 - 1945/12, 1949/01-06, 1981/07, 1982/01 – 1984/08, 1986/01-10, 1988/09 – 1989/01.

Element 601

Details: Data in PF and JC (Series 1909: 1958/06 - 1981/05) series are the same in the overlap period except only 1963/11 and 1977/08 (JC no data). The same data are found in NARP and NACD. NACD has big holes with missing data before 1950: 1891/09, 1908/02, 1923/08, 1927/02+03, 1931/04, 1932/08+09, 1933/01+03, 1934/07, 1936/01, 1937/08, 1937/12 – 1938/05, 1938/10-12, 1939/02-04+08-12, 1940/02+03+05+11, 1941/02+03, 1941/11 – 1942/05, 1942/10 – 1943/05, 1943/10, 1943/12 – 1946/06, 1946/11 – 1947/05, 1947/08, 1947/10 – 1948/05, 1948/10 – 1949/06, 1949/10-1950/05, 1950/10+12. Station 4209 did not measure precipitation.



UPERNAVIK – (UPER)

Element No. 602

Details: the JC (Series 1930: 1958/01 - 1981/12), PF, NARP, REWARD data are exactly the same except JC has introduced holes due to low number of elements for certain months/periods. Data in "monthly" are also the same (starting in January 1958). No information about stations or adjustments. Remark: Station 4209 did not measure precipitation

Element No. 701

Details: the JC (Series 2030: 1958/01 - 1981/05), PF, NARP and NACD data are exactly the same in the overlap period, except JC does not include the second half of 1981 due to low number of elements. Data in "monthly" are also the same (starting in January 1958).

Element No. 801

Details: the PF, NARP and NACD data are exactly the same. The JC (Series 2087: 1958/01 - 1981/06) data is also the same for the overlap period, except in the following months (1959/07, 1959/08, 1961/07+12, 1962/06, 1963/01, 1964/03+05+08+09+12, 1965/05, 1969/11, 1972/02, 1975/06, 1977/08+12, 1979/01+04). The data in monthly are the same as in the JC series except for 1977/08.

ILULISAAT – (ILUL)

Element 101

Details: The PF (series 14) and JC (series 1426: 1961/01 – 1979/03) data are not identical. A correction of the months June, July and August by -0.1 °C from 1873/01 – 1982/12 in the PF series (because of significant “break”) are the main difference. The PF-TS14 series is not the same as the NACD, but rather a corrected version of it, with corrections on a monthly basis for different periods. PF-TS14 has no holes, while NACD had several missing months including (1916/10-12, 1917/02, 1921/03, 1929/07, 1936/10 & 1937/07). From 1982 - 1990 PF-TS14 and NACD are the same. Monthly for 4216 is almost the same as NACD but 54 of 396 months have slightly different values.



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