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**DMI monthly climate data, 1873-2002, contribution to
Nordic Arctic Research Programme (NARP)**

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1. Preface

Within NARP - Nordic Arctic Research Programme, supported 1999-2003 by the Nordic Counsel of Ministers¹ – DMI², DNMI³ and IMO⁴ participates in the subproject: Long-term variations in atmospheric circulation and climate in the Arctic. This NARP subproject is simply referred to as 'NARP' throughout this report. One of the aims was to establish a high-quality monthly climate data set for the Nordic Arctic. The data set consists mainly of an updated version of the previously published NACD series (Frich et al. 1996) and REWARD series (Drebs et al. 1998).

Since the publication of the NACD and REWARD data series there has been a data improvement (e.g. removal of errors, replacement of missing values) mainly during 1958-1999 of the Greenlandic and Faroe Islands data due to the work on the 1961-1990 normal reports. The 'NARP version 1' data set available since 2000 from <http://projects.dnmi.no/~narp/> did not contain the improved DMI data sets as it merely consisted of (relevant parts of) the NACD and REWARD data sets plus updates.

Since then the DMI series have been updated to contain the improved data series published in the 1961-1990 normals reports for the Faroe Islands and Greenland (Cappelen and Laursen 1998) (Cappelen et al. 2000) (These reports and their data are available from the Internet homesite of the Danish Meteorological Institute www.dmi.dk). Also it was found relevant to split the Narsarsuaq series up into the parts measured by Station 34262 Iviittut and 04270 Narsarsuaq Airport respectively.

This report contains and describes the updated DMI contribution to the NARP data set.

31 May 2003

Ellen Vaarby Laursen

Weather and Climate Information Division

¹ NARP project homepage: <http://thule.oulu.fi/narp/>

² DMI: Danish Meteorological Institute ('Danmarks Meteorologiske Institut')

³ DNMI: Norwegian Meteorological Institute ('Meteorologisk Institutt')

⁴ IMO: The Icelandic Meteorological Office ('Veðurstofa Íslands')

2. Station catalogue

No.	Name	UTM	Northings	Eastings	Longitude	Latitude	Elev.
06011	Torshavn	29V	6879010	617080	-64600	620100	54
33054	Strond Kraftstation	29V	6906335	625430	-63500	621600	6
04210	Upernavik		.	.	-561000	724700	120
04221	Ilulissat Mittarfia/Airport						
04250	Nuuk (Godthåb)		.	.	-514500	641000	80
34262	Iviittut (Ivigut)				-481100	611200	30
04270	Narsarsuaq Lufthavn/Airport		.	.	-452500	611000	27
04320	Danmarkshavn		.	.	-184000	764600	11
04339	Illoqqortoormiut (Scoresbysund/ Ittoqqortoormiit)		.	.	-215700	702900	65
04360	Tasiilaq (Ammassalik)				-373800	653600	50

Table 2-1. Latest/present position of the DMI NARP stations. Former station names are written in parenthesis.

3. Data dictionary

Number	Abbr.	Element	Method	Power	Units
100	Tair	Air temperature			
101	T	Mean temperature	mean	-1	C
111	Tx	Mean maximum temperature	mean	-1	C
112	Th	Highest maximum temperature	max	-1	C
121	Tn	Mean minimum temperature	mean	-1	C
122	Tl	Lowest minimum temperature	min	-1	C
400	PPP	Air pressure			
401	P	Mean pressure	mean	-1	hPa
600	RRR	Precipitation			
601	R	Precipitation sum	sum	-1	mm
602	Rx	Maximum daily precipitation	max	-1	mm
604	R01	No. of days with R >= 0.1 mm	sum	0	days
605	R1	No. of days with R >= 1 mm	sum	0	days
606	R10	No. of days with R >= 10 mm	sum	0	days
700	WWW	Weather			
701	DSC	No. of days with snow cover (> 50 % covered)	sum	0	days
800	NNN	Cloud cover			
801	N	Mean cloud cover	mean	0	%

Table 3-1. Element numbers in use in the dataset. '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 (May 2003) there are 243 entries.

4. Data series description

Detailed metadata ('data on data', e.g. station relocations, original units) may be found in (Laursen 2003). Details on the published NACD and REWARD series forming part of the NARP dataset version 1 may be found in (Jørgensen and Laursen 2003).

4.1 Abbreviations

'N1'	NARP dataset version 1. Consists of published NACD and REWARD series plus updates.
'TS#'	Time series + number from the DMI time series database: Most of these time series have been published either in (Cappelen et al. 2000) (The Greenland series) or in (Cappelen and Laursen. 1998) (The Faroe Islands series).
'O 04216'	The data was measured by station 04216 Ilulissat (Jacobshavn)
'obsv.'	Observed values from the DMI monthly table 'monthly_clima' in the climate database 'Klimadb'. These monthly values are calculated automatically from observations or (older values) digitised from the year book or similar

4.2 Element no. 101 (Mean temperature)

Station	Period	Contents
04210 Upernavik	1873-2002	N1 1873-1957 + TS#1425 1958-1999 + obsv. 2000-2002
04221 Ilulissat Mittarfia	1873-2002	N1 1873-1960 (O 04216) + TS#1426 1961-1979.03 (O 04216) + N1 1979.04-1991.10 (O 04216) + TS#1428 1991.11-1999 + obsv. 2000-2002
04250 Nuuk	1890-2002	N1 1890-1957 + TS#1433 1958-1999 + obsv. 2000-2002
34262 Ivittuut	1873-1960	N1 1873-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1435 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1439 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1923-2002	N1 1923-1957 + TS#1441 1958-1999 + obsv. 2000-2002
04360 Tasiilaq	1894-2002	N1 1894-1957 + TS#1443 1958-1999 + obsv. 2000-2002
06011 Torshavn	1890-2002	N1 1890-1921 + TS#353 1922-1997 + obsv. 1998-2002
33054 Strond Kraftstation	-	

4.3 Element no. 111 (Mean maximum temperature)

Station	Period	Contents
04210 Upernavik	1890-2002	N1 1890-1957 + TS#1451 1958-1999 + obsv. 2000-2002
04221 Ilulissat Mittarfia	1894-2002	N1 1894-1960 (O 04216) + TS#1452 1961-1991 (O 04216) + TS#1454 1992-1999 + obsv. 2000-2002
04250 Nuuk	1890-2002	N1 1890-1957 + TS#1458 1958-1999 + obsv. 2000-2002
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1460 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1463 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1924-2002	N1 1924-1957 + TS#1465 1958-1999 + obsv. 2000-2002
04360 Tasiilaq	1897-2002	N1 1897-1957 + TS#1467 1958-1999 + obsv. 2000-2002
06011 Torshavn	1873-2002	N1 1873-1960 + TS#361 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	-	

4.4 Element no. 112 (Absolute maximum temperature)

Station	Period	Contents
04210 Upernavik	1890-2002	N1 1890-1957 + TS#1474 1958-1999 + obsv. 2000-2002
04221 Ilulissat Mittarfia	1890-2002	N1 1890-1960 (O 04216) + TS#1475 1961-1991 (O 04216) + TS#1477 1992-1999 + obsv. 2000-2002
04250 Nuuk	1890-2002	N1 1890-1957 + TS#1481 1958-1999 + obsv. 2000-2002
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1483 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1486 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1924-2002	N1 1924-1957 + TS#1488 1958-1999 + obsv. 2000-2002
04360 Tasiilaq	1894-2002	N1 1894-1957 + TS#1490 1958-1999 + obsv. 2000-2002
06011 Torshavn	1873-2002	N1 1873-1960 + TS#368 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	-	

4.5 Element no. 121 (Mean minimum temperature)

Station	Period	Contents
04210 Upernavik	1890-2002	N1 1890-1957 + TS#1495 1958-1999 + obsv. 2000-2002
04221 Ilulissat Mittarfia	1890-2002	N1 1890-1960 (O 04216) + TS#1496 1961-1991 (O 04216) + TS#1498 1992-1999 + obsv. 2000-2002
04250 Nuuk	1890-2002	N1 1890-1957 + TS#1502 1958-1999 + obsv. 2000-2002
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1504 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1507 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1949-2002	N1 1949-1957 + TS#1509 1958-1999 + obsv. 2000-2002
04360 Tasiilaq	1894-2002	N1 1894-1957 + TS#1511 1958-1999 + obsv. 2000-2002
06011 Torshavn	1873-2002	N1 1873-1960 + TS#375 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	-	

4.6 Element no. 122 (Absolute minimum temperature)

Station	Period	Contents
04210 Upernavik	1890-2002	N1 1890-1957 + TS#1516 1958-1999 + obsv. 2000-2002
04221 Ilulissat Mittarfia	1890-2002	N1 1890-1960 (O 04216) + TS#1517 1961-1991 (O 04216) + TS#1519 1992-1999 + obsv. 2000-2002
04250 Nuuk	1890-2002	N1 1890-1957 + TS#1523 1958-1999 + obsv. 2000-2002
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1525 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1528 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1949-2002	N1 1949-1957 + TS#1530 1958-1999 + obsv. 2000-2002
04360 Tasiilaq	1894-2002	N1 1894-1957 + TS#1532 1958-1999 + obsv. 2000-2002
06011 Torshavn	1873-2002	N1 1873-1960 + TS#496 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	-	

4.7 Element no. 401 (Mean air pressure)

Station	Period	Contents
04210 Upernavik	1890-2002	N1 1890-1957 + TS#1606 1958-1999 + obsv. 2000-2002
04221 Ilulissat Mittarfia	1890-2002	N1 1890-1960 (O 04216) + TS#1607 1961-1979.03 (O 04216) + N1 1979.04-1991.10 (O 04216) + TS#1609 1991.11-1999 + obsv. 2000-2002
04250 Nuuk	1890-2002	N1 1890-1957 + TS#1614 1958-1999 + obsv. 2000-2002
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1616 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1621 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1923-2002	N1 1923-1957 + TS#1623 1958-1999 + obsv. 2000-2002
04360 Tasiilaq	1894-2002	N1 1894-1957 + TS#1625 1958-1999 + obsv. 2000-2002
06011 Torshavn	1890-2002	N1 1890-1960 + TS#1220 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	-	

4.8 Element no. 601 (Precipitation sum)

Station	Period	Contents
04210 Upernavik	1890-1981	N1 1890-1957 + TS#1909 1958-1981.05
04221 Ilulissat Mittarfia	1890-1984	N1 1890-1960 (O 04216) + TS#1910 1961-1984 (O 04216)
04250 Nuuk	1890-1998	N1 1890-1957 + TS#1915 1958-1998
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1918 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1921 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1949-2002	N1 1949-1999 + obsv. 2000-2002
04360 Tasiilaq	1897-2002	N1 1897-1957 + TS#1926 1958-1999 + obsv. 2000-2002
06011 Torshavn	1890-2002	N1 1890-1921 + TS#1154 1922-1997 + obsv. 1998-2002
33054 Strond Kraftstation	1931-2002	obsv. 1931-1960 + TS#1161 1961-1990 + obsv. 1991-2002

4.9 Element no. 602 (Maximum daily precipitation)

Station	Period	Contents
04210 Upernavik	1849-1981	N1 1849-1957 + TS#1930 1958-1981
04221 Ilulissat Mittarfia	1890-1984	N1 1890-1960 (O 04216) + TS#1931 1961-1984 (O 04216)
04250 Nuuk	1921-1998	N1 1921-1957 + TS#1936 1958-1998
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#1939 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#1942 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	1949-2002	N1 1949-1999 + obsv. 2000-2002
04360 Tasiilaq	1897-2002	N1 1897-1957 + TS#1946 1958-1999 + obsv. 2000-2002
06011 Torshavn	1890-2002	N1 1890-1960 + TS#1166 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	1931-2002	obsv. 1931-1960 + TS#1172 1961-1990 + obsv. 1991-2002

4.10 Element no. 604 (Number of days with precipitation ≥ 0.1 mm)

Station	Period	Contents
04210 Upernavik	1958-1981	TS#1950 1958-1981.05
04221 Ilulissat Mittarfia	1961-1984	TS#1951 1961-1984 (O 04216)
04250 Nuuk	1958-1998	TS#1956 1958-1998
34262 Ivittuut	-	
04270 Narsarsuaq	1961-2002	TS#1959 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1958-2002	TS#1962 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	-	
04360 Tasiilaq	1958-2002	TS#1966 1958-1999 + obsv. 2000-2002
06011 Torshavn	1953-2002	Obsv. 1953-1960 + TS#1177 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	1931-2002	obsv. 1931-1960 + TS#1183 1961-1990 + obsv. 1991-2002

4.11 Element no. 605 (Number of days with precipitation ≥ 1 mm)

Station	Period	Contents
04210 Upernavik	1958-1981	TS#1970 1958-1981.05
04221 Ilulissat Mittarfia	1961-1984	TS#1971 1961-1984 (O 04216)
04250 Nuuk	1958-1998	TS#1976 1958-1998
34262 Ivittuut	-	
04270 Narsarsuaq	1961-2002	TS#1979 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1958-2002	TS#1982 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	-	
04360 Tasiilaq	1958-2002	TS#1986 1958-1999 + obsv. 2000-2002
06011 Torshavn	1953-2002	Obsv. 1953-1960 + TS#1188 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	1931-2002	Obsv. 1931-1960 + TS#1195 1961-1990 + obsv. 1991-2002

4.12 Element no. 606 (Number of days with precipitation ≥ 10 mm)

Station	Period	Contents
04210 Upernavik	1958-1981	TS#1990 1958-1981.05
04221 Ilulissat Mittarfia	1961-1984	TS#1991 1961-1984 (O 04216)
04250 Nuuk	1958-1998	TS#1996 1958-1998
34262 Ivittuut	-	
04270 Narsarsuaq	1961-2002	TS#1999 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1958-2002	TS#2002 1958-1999 + obsv. 2000-2002
04339 Illoqqortoormiut	-	
04360 Tasiilaq	1958-2002	TS#2006 1958-1999 + obsv. 2000-2002
06011 Torshavn	1890-2002	TS#86 1890-1960 (1890-1925.03: 33071 Torshavn Skole, 1925.04-1957: 33060 Hoyvik, 1958-1960: 06011 Torshavn) + TS#1200 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	1931-2002	Obsv. 1931-1960 + TS#1208 1961-1990 + obsv. 1991-2002

4.13 Element no. 701(Number of days with snow cover (>50% covered))

Station	Period	Contents
04210 Upernavik	1938-1981	TS#2030 1958-1981.05
04221 Ilulissat Mittarfia	1938-1981	N1 1938-1960 + TS#2031 1961-1981 (O 04216)
04250 Nuuk	1942-1981	N1 1942-1957 + TS#2036 1958-1981
34262 Ivittuut	1938-1960	N1 1938-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-1982	TS#2038 1961-1982.01
04320 Danmarkshavn	1957-1981	N1 1957 + TS#2041 1958-1981.06
04339 Illoqqortoormiut	-	
04360 Tasiilaq	1958-1979	TS#2045 1958-1979.09
06011 Torshavn	1939-2002	N1 1939-1960 + TS#1224 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	-	

4.14 Element no. 801(Mean cloud cover)

Station	Period	Contents
04210 Upernavik	1890-1981	N1 1890-1957 + TS#2087 1958-1981.06
04221 Ilulissat Mittarfia	1890-1979	N1 1890-1960 + TS#2088 1961-1979.03 (O 04216)
04250 Nuuk	1890-2002	N1 1890-1957 + TS#2093 1958-1999 + obsv. 2000-2002
34262 Ivittuut	1890-1960	N1 1890-1960 (listed as station number 04270)
04270 Narsarsuaq	1961-2002	TS#2095 1961-1999 + obsv. 2000-2002
04320 Danmarkshavn	1949-2002	N1 1949-1957 + TS#2098 1958-99 + obsv. 2000-2002
04339 Illoqqortoormiut	1923-2002	N1 1923-1957 + TS#2100 1958-1999 + obsv. 2000-2002
04360 Tasiilaq	1894-2002	N1 1894-1957 + TS#2102 1958-1999 + obsv. 2000-2002
06011 Torshavn	1890-2002	N1 1890-1960 + TS#532 1961-1990 + obsv. 1991-2002
33054 Strond Kraftstation	-	

5. Data files format

The monthly climate data may be downloaded as a *.zip file from the DMI Internet homepage www.dmi.dk (look for DMI Technical Report No. 03-25).

The DMI NARP data series are sorted into 13 ASCII data files: One for each type of climate data.

File name: <elementnumber>DMI_NARP.dat

File contents:

Each record contains data from one year in the following fixed format ('NACD-format'):

Position	Format	Description
1-5	I5	Station number (see table 2.1)
6-8	I3	Element number (see table 3.1)
9-12	I4	Year
13-17	I5	January value (units as in table 3.1)
18-22	I5	February value (units as in table 3.1)
23-27	I5	March value (units as in table 3.1)
28-32	I5	April value (units as in table 3.1)
33-37	I5	May value (units as in table 3.1)
38-42	I5	June value (units as in table 3.1)
43-47	I5	July value (units as in table 3.1)
48-52	I5	August value (units as in table 3.1)
53-57	I5	September value (units as in table 3.1)
58-62	I5	October value (units as in table 3.1)
63-67	I5	November value (units as in table 3.1)
68-72	I5	December value (units as in table 3.1)

Missing values: -9999

No blanks included, except leading blanks.

No missing years between start and end of data series.

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