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**Trausti Jónsson
Gísli Kristjánsson**

Instrumental meteorological observations in Iceland in the Early Instrumental Period. A Data Companion

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INTRODUCTION

Trausti Jónsson and Gísli Kristjánsson

*Instrumental observations in Iceland in the EIP
A Data Companion*

The EU ENV-4 program ADVICE enabled the Icelandic Meteorological Office to resume work on the digitization of early instrumental observations in Iceland. This work had started on a small scale around 1990 with a grant from the Icelandic Science Fund. Now it was possible to search for more data and digitize much more. It also became possible to do more background work and finally to make the data available for the general community.

The present report is a companion to the data files and gives an introduction to the data format. Some checking is also included. For more information on the background, stations and observers one must refer to Hávarðsson (1997), Jónsson and Garðarsson (1998) and Thorbjarnardóttir et.al. (1998). Here a very short overview is sufficient (from the abstract of Jónsson and Garðarsson above).

When the Danish Meteorological Institute (DMI) was established in 1872 it took over the responsibility of meteorological observations in Iceland. Prior to that time, the observations were in the hands of interested individuals, in some cases in close contact with the international scientific community. The original data material has accumulated at the Manuscript section of the Icelandic National Library and at the Icelandic Meteorological Office. Much of it was delivered to Iceland along with other documents from official Danish archives after the formal independence of Iceland. The oldest such observations that have been found were made in 1749-1751 and 1763. The temporal density increases after 1775 and from 1822 there is at least one instrumental observation to be found on each and every day, somewhere in the country. During the 1776 to 1822 period there are many gaps, both short and long, the longest from late 1814 to mid-1820. During this last gap almost no instrumental records have been found. The quality of the observations is very variable, but generally they seem to be at least internally consistent and will certainly become an important addition to the knowledge of the climate and climatic variability of the Northeast Atlantic.

References:

Garðarsson, H. (1998) Stuttarleg æviatriði manna sem gerðu veðurathuganir á Íslandi fyrir 1872 eða tengdust þessum athugunum. (Short biographical notes relating to meteorological observations in Iceland before 1872). VÍ-G98029-ÚR24.

Hávarðsson, S. (1997) Veðurhandrit. Könnun og skráning veðurfræðilegra gagna á Handritadeild Landsbókasafns og Þjóðskjalasafni Íslands. With an English Summary and explanations. (Includes details and commentaries on the observation manuscript source references). Veðurstofa Íslands, VÍ-G97039-ÚR30, 1997 6+28pp.

Jónsson, T., H. Garðarsson (1998) Early instrumental meteorological observations in Iceland. Submitted to "Climatic Change".

Thorbjarnardóttir, G., T. Jónsson and G. Kristjánsson, (1998). Afrit af nokkrum skjölum á Þjóðskjalasafni varðandi íslenskar veðurathuganir á 18. öld (Transcriptions of 18. century documents in the Icelandic National Archives related to weather observations). Veðurstofa Íslands, VÍ-G98027-ÚR22, 88pp.

- File locations and syntax descriptions -

1. Excel (5.0 / 7.0), Word (6.0 / 95), and PRN file locations:

- Raw data is stored on regular diskettes both in Excel and PRN files. The Excel files are stored on 5 diskettes named: *Advice Data #1 to #5*. Data PRN files (with a comma decimal point) are stored on 3 diskettes named: *Advice CPRN #1 to #3*. The 3 diskettes containing PRN files (with a dot decimal point) are named: *Advice DPRN #1 to #3*.
- Processed data is stored in Excel files on 3 regular diskettes. The names of these diskettes are *Advice Proc #1 to #3*.
- Notes and file descriptions are stored in Word files on a diskette named *Advice notes*. It contains 17 files of which 13 hold weather code descriptions, the name of the observer and weather station location in latitude and longitude for each of the 13 data series. For information on the remaining 4 files, see end of 2nd chapter.

NOTE: See **Table I**, at the end of this document, for an index of file locations.

2. File names – Syntax descriptions:

- Excel raw-data series files:

- The name format for 14 of these 17 files is: *dxxyyyf.xls*. The first letter *d* indicates that the files contain raw data.

xx: The name initials of the observer in the order: first name initial, surname initial. An exception from the rule are the two files: *d1x1763.xls* and *d2x1776f.xls*. The reason is that the observers and exact locations of these 2 stations are not known.

yyyy: The year in which the observations started. If the observations continue into one or more new calendar years, then the 8th letter is *f*, otherwise no letter follows the year.

The excel-file 3 letter ending (*xls*) is of course preceded by a dot.

NOTE: If the files are too large to store on a single diskette, they are compressed into a ZIP archive. Every diskette that contains such an archive has a text file named: *read me.txt* containing help on extracting the files contained. If ZIP-extracting software is not available, we have included such a device on a separate diskette. It is called WinZip and is solely for the W95 platform.

- The 3 remaining raw data files are:

1. *dmkdiary.xls*: Magnús Ketilsson's weather diary.
2. *dr1table.xls*: Weather tables compiled by Rasmus Lievog.
3. *dsptable.xls*: Weather tables compiled by Sveinn Pálsson.

- Excel processed-data files:

The name format for these 12 files is: *pxx+nnn.xls*. The first letter *p* indicates that the files hold processed data.

xx: the name initials of the observer in the order: first name initial, surname initial. They indicate from which series data is being processed.

The 4th index position in the name holds either the + (plus) or the _ (underscore) symbol. The latter symbol (_) indicates that the file only holds processed data from one series. The + symbol, on the other hand, indicates that the file holds processed data from more than one data series.

nnn: An index starting with 001.

Example: The name of the files: *psp+001.xls* and *psp+002* indicate that both the files hold processed data from more than one weather data series, of which one is the Sveinn Pálsson series.

- PRN files containing raw data:

The name format for these files is: *dxx_comd.prn* or *dxx_dotd.prn*. The first letter *d* indicates that the files hold processed data. The first name format is used for prn-files with a *comma (,) decimal point* format and the latter for a *dot (.) decimal point* format. A decision was made to include a double set of the PRN files with both these formats because not all software packages permit a comma decimal in numbers.

xx: The name initials of the observer in the order: first name initial, surname initial. An exception from the rule are the two files: *d1x_comd.prn* (or *d1x_dotd.prn*) and *d2x_comd.prn* (or *d2x_dotd.prn*). The reason is, as mentioned above, that the observers and exact locations of these 2 stations are not known.

- Word files containing descriptions and notes:

The name format for 13 of the 17 files on the diskette is: *xxnotes.doc*. The 1st and 2nd letters are the name initials of the observer in the order: first name initial, surname initial. They indicate that the descriptions are of data in the observers series.

A file named *excl_not.doc* holds descriptions on all Excel files. It includes: File names, size (in kb.), file dates, location on diskette, file descriptions and source of data.

The files: *dprn_not.doc* and *cprn_not.doc* hold descriptions on PRN files with a dot decimal point and a comma decimal point format, respectively. The descriptions include: File names, size (in kb.), file dates, location on diskette, file descriptions and source of data.

The diskette also contains this word file, named: *file_not.doc*.

Table I – Locations of all data files (Excel and Prn) and Word files.

Diskette:	File names	
Advice Data #1	d1x1763.xls	
	d2x1776f.xls	
	dhs1779f.xls	
	dnh1749f.xls	
	<i>drl1779f.ZIP</i> ⇒	drl1779f.xls
	drltable.xls	
Advice Data #2	<i>dsp1798f.ZIP</i> ⇒	dsp1798f.xls
	dsptable.xls	
	dvi1995f.xls	
	<i>dvs1807f.ZIP</i> ⇒	dvs1807f.xls
Advice Data #3	dmk1780f.xls	
	dmkdiary.xls	
Advice Data #4	dgj1831.xls	
	dpm1831.xls	
	<i>dat1845f.ZIP</i> ⇒	dat1845f.xls
Advice Data #5	dbh1854f.xls	
	<i>djt1820f.ZIP</i> ⇒	djt1820f.xls
Advice Proc #1	psp+001.xls	
	psp+002.xls	
	psp+003.xls	
	psp+004.xls	
	psp+005.xls	
	psp+006.xls	
	psp+007.xls	
Advice Proc #2	psp+008.xls	
Advice Proc #3	prl+001.xls	
	prl+002.xls	
	prl+003.xls	
	prl_004.xls	
Advice CPRN #1	d1x_comd.prn	
	d2x_comd.prn	
	dhs_comd.prn	
	dmk_comd.prn	
	dnh_comd.prn	
	<i>drl_cprn.ZIP</i> ⇒	drl_comd.prn
	<i>dsp_cprn.ZIP</i> ⇒	dsp_1_cd.prn dsp_2_cd.prn
Advice CPRN #2	dpm_comd.prn	
	dvs_comd.prn	
	<i>djt_cprn.ZIP</i> ⇒	djt_comd.prn
	<i>dgj_cprn.ZIP</i> ⇒	dgj_1_cd.prn dgj_2_cd.prn

Diskette:	File names	
Advice CPRN #3	dbh_comd.prn	
	<i>dat_cprn.ZIP</i> ⇒	dat_1_cd.prn dat_2_cd.prn dat_3_cd.prn dat_4_cd.prn dat_5_cd.prn
Advice DPRN #1	d1x_dotd.prn	
	d2x_dotd.prn	
	dhs_dotd.prn	
	dmk_dotd.prn	
	dnh_dotd.prn	
	<i>drl_dprn.ZIP</i> ⇒	drl_dotd.prn
	<i>dsp_dprn.ZIP</i> ⇒	dsp_1_dd.prn dsp_2_dd.prn
Advice DPRN #2	dpm_dotd.prn	
	dvs_dotd.prn	
	<i>djt_dprn.ZIP</i> ⇒	djt_dotd.prn
	<i>dgj_dprn.ZIP</i> ⇒	dgj_1_dd.prn dgj_2_dd.prn
Advice DPRN #3	dbh_dotd.prn	
	<i>dat_dprn.ZIP</i> ⇒	dat_1_dd.prn dat_2_dd.prn dat_3_dd.prn dat_4_dd.prn dat_5_dd.prn
Advice notes	atnotes.doc	
	bhnotes.doc	
	gjnotes.doc	
	hsnotes.doc	
	jtnotes.doc	
	mknotes.doc	
	nhnotes.doc	
	pmnotes.doc	
	rlnotes.doc	
	spnotes.doc	
	vsnotes.doc	
	x1notes.doc	
	x2notes.doc	
	cprn_not.doc	
	dprn_not.doc	
	excl_not.doc	
file_not.doc		

Gísli Kristjánsson

The Icelandic Meteorological Office,
Bústaðavegur 9,
IS-150 Reykjavík,
Iceland
e-mail: gisli@centrum.is

Archive Excel (5.0 / 7.0) files descriptions.

FILE NAME:	SIZE (kb):	FILE DATE:	DISKETTE:	FILE DESCRIPTION:	DATA SOURCE:
dat1845f.xls	3874	19.06.98	DATA #4	A. O. Thorlacius weather observations at Stykkishólmur (1845 - 1860). This file is contained in a ZIP archive named dat1845f.zip	Manuscripts in the archives of Veðurstofa Íslands, Gamalt 178.
dbh1854f.xls	782	19.06.98	DATA #5	Björn Halldórsson's weather observations at Laufás (1854 - 1882).	National Library, LBS 326, fol.
dgj1831.xls	67	19.06.98	DATA #4	Grímur Jónsson's weather observations at Möðurvellir (1831).	National Library: Óskráð veðurgögn, kassi II.
dhs1779f.xls	77	23.06.98	DATA #1	Helgi Sivertsen's weather observations at Skálholt (1779 - 1780).	National Library, ÍB 234, a-b, 4to.
djt1820f.xls	1975	19.06.98	DATA #5	Jón Thorsteinsson's and Jónas Jónasson's weather observations at Reykjavík and Nes (1820 - 1859). This file is contained in a ZIP archive named djt1820f.zip	National Library, LBS Óskráð veðurgögn, kassi I and kassi VI.
dmk1780f.xls	337	23.06.98	DATA #3	Magnús Ketilsson's weather observations at Búðardalur Period: (1780 - 1797).	National Library LBS 573, 4to
dmkdiary.xls	352	16.06.98	DATA #3	Magnús Ketilsson's weather diary from the years 1786-91 with additional two months: July 1796 and April 1797.	National Library LBS 573, 4to
dnh1749f.xls	68	19.06.98	DATA #1	Niels Horrebow's weather observations at Bessastaðir (1749 - 1751).	Horrebow, N. (1752): Tilforladelige Efterretninger om Island, København
dpm1831.xls	277	19.06.98	DATA #4	Páll Melsteð's weather observations at Ketilsstaðir (1831).	National Library: Óskráð veðurgögn, kassi II.
dr11779f.xls	2089	19.06.98	DATA #1	Rasmus Lievog's weather observations at Bessastaðir and Lambhús (1779-85, 1789). This file is contained in a ZIP archive named dr11779f.zip	National Library, ÍB 234a-b, 4to and LBS. Óskráð veðurgögn, kassi II.
dr1table.xls	62	19.06.98	DATA #1	Original weather tables compiled by Rasmus Lievog himself.	National Library, ÍB 234a-b, 4to and LBS. Óskráð veðurgögn, kassi II. Summaries from 1785-87 in Kongelig bibliotek, NKS 2749 quarto
dsp1798f.xls	2193	24.06.98	DATA #2	Sveinn Pálsson's weather observations at Kotmúli, Vík, Reykjavík and var. locations (1798 - 1812). This file is contained in a ZIP archive named dsp1798f.zip	National Library ÍB.5 fol, (1798-1811), ÍB. 22, 4to (1812), LBS. 306.

FILE NAME:	SIZE (kb):	FILE DATE:	DISKETTE:	FILE DESCRIPTION:	DATA SOURCE:
dsptable.xls	46	19.06.98	DATA #2	Original weather tables compiled by Sveinn Pálsson himself. Period: 1792-1794, 1798-1801.	1792-1995: Pálsson, S., (1983) Ferðabók Sveins Pálssonar (2nd edition), vol. I - II, (The Travel Journal of Sveinn Pálsson). Örn and Örlygur, Reykjavík 1798-1802: National Library ÍB.5 fol, (1798-1811), ÍB. 22, 4to (1812), LBS. 306.
dvs1807f.xls	1876	23.06.98	DATA #2	von Scheel's weather observations at Akureyri (1807 - 1814). This file is contained in a ZIP archive named dvs1807f.zip	National Library LBS. Óskráð veðurgögn, kassi V and kassi VI.
d1x1763.xls	40	19.06.98	DATA #1	Weather observations from an unknown station (1763).	National Library, ÍB 5 fol.
d2x1776f.xls	115	19.06.98	DATA #5	Weather observations from an unknown station (1776 - 1777, 1779).	National Library, Óskráð veðurgögn, kassi II.
dvi1995f.xls	431	18.06.98	DATA #2	Average pressure diff. in Akureyri (modern) - Reykjavík (modern) grouped by wind dir. and month. Period: 1995 - 1997.	Files of Icelandic Met. Office
prl+001.xls	26	18.06.98	PROC #3	A comparison of pressure in Lievog [corr.] and Ketilsson [uncorr.] series.	Processed data
prl+002.xls	581	18.06.98	PROC #3	A comparison of pressure in Lievog [corr.] and Ketilsson [uncorr.] series.	Processed data
prl+003.xls	642	19.06.98	PROC #3	A pressure comparison of 4 overlapping series: Lievog, Finnsson, Ketilsson and an unknown station. Period: 1.1.1779 - 31.12.1780.	Processed data
prl_004.xls	93	24.06.98	PROC #3	Lievog series (corr) and grid comparison. Comparison of monthly pressure means in Lievog and Reykjavík (mod) series. Statistics on data (pressure hPa) in Lievog 1779 - 1789 (corrected) series.	Processed data, CRU-grid
psp+001.xls	258	23.06.98	PROC #1	Pressure statistics and comparison in Sveinn Pálsson (corr.), von Scheel (corr.) and Reykjavík modern series.	Processed data

FILE NAME:	SIZE (kb):	FILE DATE:	DISKETTE:	FILE DESCRIPTION:	DATA SOURCE:
psp+002.xls	387	23.06.98	PROC #1	Pressure comp.: S. Pálsson/Southw. Icel. pressure ser. and v.Scheel/Akureyri ser. Distrib. of 12 year mov. means (pressure) in southw. Icel. pressure ser.(1823-1996). Distr. of monthly means in Akureyri (1874-1996).	Processed data
psp+003.xls	63	19.06.98	PROC #1	A pressure comparison of S. Pálsson (corr.) ser., v. Scheel (corr.) ser. And grid.	Processed data
psp+004.xls	47	23.06.98	PROC #1	Day - to - day pressure difference (January - April, 1808) in S. Pálsson (corr.) and v.Scheel (corr.) series.	Processed data
psp+005.xls	71	19.06.98	PROC #1	Average pressure difference (v.Sch - SvP) grouped by wind direction observations at Kotmúli and by month. Uncorrected data.	Processed data
psp+006.xls	91	19.06.98	PROC #1	Average pressure difference (v.Sch - SvP) grouped by wind direction observations at Kotmúli and by month. Corrected data.	Processed data
psp+007.xls	288	02.07.98	PROC #1	Pressure diff. (Sv.P. [corr] - v.Sch. [corr]) versus pressure from Sv.P. series [corr]. 30 highest & 30 lowest pressure values in v. Sch. series [2. corr.] with corresp. values from Sv. Pálss. series [1. corr.]. Obs. period: 1.9.1807 - 9.10.1809.	Processed data
psp+008.xls	1276	23.06.98	PROC #2	Day-to-day pressure diff. in S. Pálsson, v. Scheel, Reykjavík (modern) and Akureyri modern) series.	Processed data

Auvice prn (comma decimal point format) files locations and descriptions.

FILE NAME:	SIZE (kb):	FILE DATE:	DISKETTE:	FILE DESCRIPTION:	DATA SOURCE:
d1x_comd.prn	26	04.06.98	CPRN #1	A prn file with a comma decimal point format. Weather observations from an unknown station (1763).	National Library, ÍB 5 fol.
d2x_comd.prn	97	04.06.98	CPRN #1	A prn file with a comma decimal point format. Weather observations from an unknown station (1776 - 1777, 1779).	National Library, Óskráð veðurgögn, kassi II.
dhs_comd.prn	71	23.06.98	CPRN #1	A prn file with a comma decimal point format. Helgi Sivertsen's weather observations at Skálholt (1779 - 1780).	National Library, ÍB 234, a-b, 4to.
dmk_comd.prn	250	04.06.98	CPRN #1	A prn file with a comma decimal point format. Magnús Ketilsson's weather observations at Búðardalur Period: (1780 - 1797).	National Library LBS 573, 4to
dnh_comd.prn	56	04.06.98	CPRN #1	A prn file with a comma decimal point format. Niels Horrebow's weather observations at Bessastaðir (1749 - 1751).	Horrebow, N. (1752): Tilforladelige Efterretninger om Island, København
drl_cprn.ZIP	113 <i>Unzipped: 1447</i>	21.06.98	CPRN #1	A ZIP archive containing a prn file (drl_comd.prn) with a comma decimal point format. Rasmus Lievog's weather observations at Bessastaðir and Lambhús (1779-85, 1789).	National Library, ÍB 234a-b, 4to and LBS. Óskráð veðurgögn, kassi II.
dsp_cprn.ZIP	163 <i>Unzipped: 1978 total</i>	21.06.98	CPRN #1	A ZIP archive containing 2 prn files (dsp_1_cd.prn and dsp_2_cd.prn) with a comma decimal point format. Sveinn Pálsson's weather observations at Kotmúli, Vík, Reykjavík and var. locations (1798 - 1812).	National Library ÍB.5 fol, (1798-1811), ÍB. 22, 4to (1812), LBS. 306.
dpm_comd.prn	188	04.06.98	CPRN #2	A prn file with a comma decimal point format. Páll Melsteð's weather observations at Ketilsstaðir (1831).	National Library: Óskráð veðurgögn, kassi II.
dvs_comd.prn	777	04.06.98	CPRN #2	A prn file with a comma decimal point format. von Scheel's weather observations at Akureyri (1807 - 1814).	National Library LBS. Óskráð veðurgögn, kassi V and kassi VI.
djt_cprn.ZIP	144 <i>Unzipped: 1477</i>	21.06.98	CPRN #2	A ZIP archive containing a prn file (djt_comd.prn) with a comma decimal point format. Jón Thorsteinsson's and Jónas Jónasson's weather observations at Reykjavík and Nes (1820 - 1859).	National Library, LBS Óskráð veðurgögn, kassi I and kassi VI.

FILE NAME:	SIZE (kb):	FILE DATE:	DISKETTE:	FILE DESCRIPTION:	DATA SOURCE:
dgj_cprn.ZIP	8 <i>Unzipped: 65 total</i>	21.06.98	CPRN #2	A ZIP archive containing 2 prn files (dgj_1_cd.prn and dgj_2_cd.prn) with a comma decimal point format. Grímur Jónsson's weather observations at Möðurvellir (1831).	National Library: Óskráð veðurgögn, kassi II.
dbh_comd:prn	673	04.06.98	CPRN #3	A prn file with a comma decimal point format. Björn Halldórsson's weather observations at Laufás (1854 - 1882).	National Library, LBS 326, fol.
dat_cprn.ZIP	510 <i>Unzipped: 5501 total</i>	21.06.98	CPRN #3	A ZIP archive containing 5 prn files (dat_1_cd.prn, dat_2_cd.prn, dat_3_cd.prn, dat_4_cd.prn and dat_5_cd.prn) with a comma decimal point format. A. O. Thorlaciuss weather observations at Stykkishólmur (1845 - 1860).	Manuscripts in the archives of Veðurstofa Íslands, Gamalt 178.

Advice prn (dot decimal point format) files locations and descriptions.

FILE NAME:	SIZE (kb):	FILE DATE:	DISKETTE:	FILE DESCRIPTION:	DATA SOURCE:
d1x_dotd.prn	26	04.06.98	DPRN #1	A prn file with a dot decimal point format. Weather observations from an unknown station (1763).	National Library, ÍB 5 fol.
d2x_dotd.prn	97	04.06.98	DPRN #1	A prn file with a dot decimal point format. Weather observations from an unknown station (1776 - 1777, 1779).	National Library, Óskráð veðurgögn, kassi II.
dhs_dotd.prn	64	23.06.98	DPRN #1	A prn file with a dot decimal point format. Helgi Sivertsen's weather observations at Skálholt (1779 - 1780).	National Library, ÍB 234, a-b, 4to.
dmk_dotd.prn	281	04.06.98	DPRN #1	A prn file with a dot decimal point format. Magnús Ketilsson's weather observations at Búðardalur Period: (1780 - 1797).	National Library LBS 573, 4to
dnh_dotd.prn	57	04.06.98	DPRN #1	A prn file with a dot decimal point format. Niels Horrebow's weather observations at Bessastaðir (1749 - 1751).	Horrebow, N. (1752): Tilforladelige Efterretninger om Island, København
drl_dprn.ZIP	113 <i>Unzipped: 1448</i>	21.06.98	DPRN #1	A ZIP archive containing a prn file (drl_dotd.prn) with a dot decimal point format. Rasmus Lievog's weather observations at Bessastaðir and Lambhús (1779-85, 1789).	National Library, ÍB 234a-b, 4to and LBS. Óskráð veðurgögn, kassi II.
dsp_dprn.ZIP	164 <i>Unzipped: 1993 total</i>	21.06.98	DPRN #1	A ZIP archive containing 2 prn files (dsp_1_dd.prn and dsp_2_dd.prn) with a dot decimal point format. Sveinn Pálsson's weather observations at Kotmúli, Vík, Reykjavík and var. locations (1798 - 1812).	National Library ÍB.5 fol, (1798-1811), ÍB. 22, 4to (1812), LBS. 306.
dpm_dotd.prn	174	04.06.98	DPRN #2	A prn file with a dot decimal point format. Páll Melsted's weather observations at Ketilsstaðir (1831).	National Library: Óskráð veðurgögn, kassi II.
dvs_dotd.prn	777	04.06.98	DPRN #2	A prn file with a dot decimal point format. von Scheel's weather observations at Akureyri (1807 - 1814).	National Library LBS. Óskráð veðurgögn, kassi V and kassi VI.
djt_dprn.ZIP	151 <i>Unzipped: 1632</i>	21.06.98	DPRN #2	A ZIP archive containing a prn file (djt_dotd.prn) with a dot decimal point format. Jón Thorsteinsson's and Jónas Jónasson's weather observations at Reykjavík and Nes (1820 - 1859).	National Library, LBS Óskráð veðurgögn, kassi I and kassi VI.

<i>FILE NAME:</i>	<i>SIZE (kb):</i>	<i>FILE DATE:</i>	<i>DISKETTE:</i>	<i>FILE DESCRIPTION:</i>	<i>DATA SOURCE:</i>
dgj_dprn.ZIP	8 <i>Unzipped: 67 total</i>	21.06.98	DPRN #2	A ZIP archive containing 2 prn files (dgj_1_dd.prn and dgj_2_dd.prn) with a dot decimal point format. Grímur Jónsson's weather observations at Möðurvellir (1831).	National Library: Óskráð veðurgögn, kassi II.
dbh_dotd.prn	711	04.06.98	DPRN #3	A prn file with a dot decimal point format. Björn Halldórsson's weather observations at Laufás (1854 - 1882).	National Library, LBS 326, fol.
dat_dprn.ZIP	508 <i>Unzipped: 5370 total</i>	21.06.98	DPRN #3	A ZIP archive containing 5 prn files (dat_1_dd.prn, dat_2_dd.prn, dat_3_dd.prn, dat_4_dd.prn and dat_5_dd.prn) with a dot decimal point format. A. O. Thorlacius weather observations at Stykkishólmur (1845 - 1860).	Manuscripts in the archives of Veðurstofa Íslands, Gamalt 178.

Niels Horrebow 1749 – 1751

Code descriptions:

- *ppp:*

ppp(UC): Original pressure readings in hPa.

Note: The pressure is not adjusted for height above sea level or gravity.

- *ttt:*

ttt(UC): Original temperature readings in °C

- *dd:*

1:	N	5:	E	9:	S	13:	W
2:	NNE	6:	ESE	10:	SSW	14:	WNW
3:	NE	7:	SE	11:	SW	15:	NW
4:	ENE	8:	SSE	12:	WSW	16:	NNW

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Station location:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Observation Period
14	Bessastaðir	Southwest	64°06'	22°00'	August 1 st 1749 – July 30 th 1751

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Unknown Station 1763

Code descriptions:

- **PPP:**

ppp (UC): Original pressure readings in hPa.

Note: The pressure is not adjusted for height above sea level or gravity.

- **dd:**

1:	N	9:	S
3:	NE	11:	SW
5:	E	13:	W
7:	SE	15:	NW

❖ ❖ ❖

Station location:

Possibly Garðar or Viðey.

Name	Part of country	lat(N)	lon(W)	Observation Period
Garðar	Southwest	64°06'	22°00'	January 1 st 1763 – December 31 st 1763
Viðey	Southwest	64°10'	21°51'	

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Unknown Station 1776 - 1777, 1779

Code descriptions:

- **ppp:**

ppp (UC): Original pressure readings in hPa.

Note: The pressure is not adjusted for height above sea level or gravity.

- **ttt:**

ttt (UC): Original temperature readings in °C

- **dd:**

1:	N	9:	S
3:	NE	11:	SW
5:	E	13:	W
7:	SE	15:	NW

❖ ❖ ❖

Station locations:

Unknown, probably Viðey or Reykjavík

Name	Part of country	lat(N)	lon(W)	Observation Period
Reykjavík	Southwest	64°08'	21°54'	January 1 st 1776 – December 31 st 1777, January 1 st 1779 – December 31 st 1779
Viðey	Southwest	64°10'	21°51'	

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Helgi Sívertsen 1779 - 1780

Code descriptions:

- **ppp:**

ppp (UC): Original pressure readings in hPa.

Note: The pressure is not adjusted for height above sea level or gravity.

- **ttt:**

ttt (UC): Original temperature readings in °C

- **dd:**

1: N
3: NE
5: E
7: SE

9: S
11: SW
13: W
15: NW

❖ ❖ ❖

Station location:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Observation Period
933	Skálholt	south	64°07'	20°32'	January 1 st 1779 – December 31 st 1780

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Lievog 1779 – 1785, 1789

Code descriptions:

- **ppp:**

ppp(UC): Original pressure readings in hPa.
 ppp(EC): Pressure data in hPa adjusted for “obvious” errors.
 ppp(C1): Adjusted pressure data in hPa (*see below*).

Note: The pressure is not adjusted for height above sea level or gravity.

- **ttt:**

ttt(UC): Original temperature readings in °C. Degr. Reamaur have been converted to °C.
 ttt(EC): Temperature data in °C adjusted for dubious values (e.g. sun on thermometer)

- **dd:**

5: NE	23: SW	99: Variable/calm
9: E	27: W	50: No record
14: SE	32: NW	
18: S	36: N	

- **ff:** (*subjective scale, approx. Beaufort / 2. Transcribed as 1-6*)

- **N:** (*subjective scale transcribed as 1-8*)

- **Sun index:**

0: The sun doesn't shine on thermometer
 1: The sun shines on thermometer

note: Relates to morning observations except evenings the first year 1779.

- **rrr:**

Amount of precipitation in Danish inches per 36 Danish square inches (one Danish inch probably equals 25.58 mm).

- **ww:**

1: Thick / overcast skies.	36: Drifting snow.	68: Sleet (snow and rain).
2: Broken cloud.	45: Fog.	70: Light intermittent snow.
3: Scattered cloud or broken skies.	50: Drizzle.	71: Light snow.
5: Haze.	58: Rain and drizzle.	73: Snow.
8: Moonlight.	60: Light intermittent rain.	87: Hail (pellets).
9: Aurora.	61: Light rain.	
	63: Rain.	
	65: Heavy rain.	



Station locations:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Observation Period
14	Bessastaðir	Southwest	64°06'	22°00'	August 10 th 1779 – December 24 th 1779
14	Lambhús	Southwest	64°06'	22°00'	December 24 th 1779 – June 30 th 1785 and January 1 st 1789 – December 31 st 1789.

The Lievog series pressure adjustments.

ppp(UC)

Raw pressure data. The original French inches (27,07 mm.) have been converted to hPa. Dubious values as original.

ppp(EC)

Here "obvious" errors have been adjusted in pressure.

ppp(C1)

1. The pressure means for the Lievog series (period 1779-1785, 1789) was calculated and grouped by months. The same was done with the Southwest Iceland pressure series (Period: Jan. 1874 - Dec. 1976).
2. A 10th degree polynomial fit was calculated for each of the two 12 value series. The difference of the January value of the polynomial in #2 and the corresponding value in #1 was then calculated. A likewise calculation was made for every calendar month. The difference between these two fitted series was calculated. This resulted in a singular 12 value series with one adjustment value for each month. These values were then added to the ppp (EC) to adjust the pressure in the Lievog series.

Magnús Ketilsson 1780 – 1797

Code descriptions:

- **ppp:**

ppp(UC): Original pressure readings in hPa.

Note: The pressure is not adjusted for height above sea level or gravity.

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Station location:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Observation Period
192	Búðardalur	West	65°19'	22°08'	July 5 th 1780 – January 5 th 1797 with numerous gaps

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Sveinn Pálsson 1798 – 1812

Code descriptions:

- **ppp:**
 - ppp(UC): Original pressure readings in hPa.
 - ppp(EC): Pressure data in hPa adjusted for “obvious” errors.
 - ppp(C1): Pressure data in hPa adjusted for a seasonally dependent correction (*See notes below*).
 - ppp(C2): A 3 hPa index adjustment was added to ppp (C1) (*See notes below*).
- **ttt:**
 - ttt(UC): Original temperature readings in °C
 - ttt(EC): Temperature adjusted for “obvious” errors. Extremely high temperatures on clear winter days when the sun presumably has shined on the thermometer, have been deleted.
- ***t* - indicator (as observed in the original lists in the absence of a thermometer reading):**
 - (+): Temperature above 0 °C
 - (-): Temperature below 0 °C
- **dd:**

5:	NE	14:	SE	23:	SW	32:	NW
9:	E	18:	S	27:	W	36:	N
- ***ff* (subjective scale):**

0:	Calm	4:	Strong wind	8:	Hurricane
2:	Light wind	6:	Gale or strong gale		
- ***dd*_(cloud): (An estimation of wind direction in clouds. Same codes as *dd*)**
- ***ff*_(cloud): (An estimation of wind velocity in clouds. Transcribed as 0 – 5)**

0:		3:		5:
2:		4:		
- ***dd-18*:**

Wind direction 18-years earlier (Moon age hypothesis of recurrent weather).
- **ww:**

2:	Dry	56:	Freezing drizzle	71:	Light snow
15:	Mountain showers	58:	Rain and drizzle	80:	Rain showers
		60:	Rain	85:	Snow showers
36:	Drifting snow	68:	Sleet (snow and rain)	87:	Hail (pellets)
45:	Fog			95:	Thunder
49:	Rime	70:	Light intermittent snow		
50:	Drizzle				



Station locations:

Stat. Nr.	Name	Part of Country	Lat(N)	Lon(W)	Observation Period
846	Kotmúli	South	63°44'	20°06'	January 26 th 1798 – June 24 th 1809 with numerous gaps
798	Vík	South	63°25'	19°01'	June 24 th 1809 – December 31 st 1812 with numerous gaps
001	Reykjavík	Southwest	64°08'	21°54'	December 1803 – July 16 th 1804
999		Var locations			August 1801 – October 1812. Sv. P. on travel.

Note: Some observations made in Reykjavík occasionally throughout the years until 1810, as Pálsson visited the town.

The Sveinn Pálsson series pressure adjustments.

ppp(UC)

Raw pressure data. The original French inches (27,07 mm.) have been converted to hPa. Dubious values as original.

ppp(EC)

Here “obvious” errors have been adjusted in pressure.

ppp(C1)

Here the 1st pressure adjustment has been implemented. It was obtained after making two statistical observations.

1. The pressure difference between the von Scheel and the Sveinn Pálsson series in their mutual observation period was calculated by using the last common observation time each day (usually the evening observation). These resulting values were grouped by months.
2. The mean of monthly means each year was calculated (by months) for pressure in the Akureyri series and corresponding values in the south-west series during the period of Jan. 1874 – Des. 1996.

These two operations result in two 12 value series (one mean for each month). A 10th degree polynomial fit was calculated for each of the two series. The difference of the January value of the polynomial in #2 and the corresponding value in #1 was then calculated. A similar calculation was made for other calendar months. This resulted in a singular 12 value series with one adjustment value for each month. These values were then used to adjust the pressure in the Sveinn Pálsson series. This procedure is supported by an investigation of the pressure difference at different wind directions (*see excel files: psp+005.xls and psp+006.xls*).

ppp(C2)

This is the result of 2nd pressure adjustment. Three hPa were added to the pressure values from the 1st adjustment [ppp(C1)]. This adjustment sets the average of the whole series approximately equal to the annual average during the period 1961 – 1990.

von Scheel 1807 – 1814

Code descriptions:

- **ppp:**

ppp(UC): Original pressure readings in hPa.
 ppp(C1): Pressure data in hPa adjusted for estimated instrument temperature, height above sea level and gravity. (See notes below.)
 ppp(C2): C1 Pressure data in hPa including 5 hPa index adjustment. (See notes below.)

- **ttt:**

ttt(UC): Original temperature readings. Degr. Reamaur have been converted to degr. Celsius.

- **dd:**

0:	Calm	14:	SE	25:	WSW
2:	NNE	16:	SSE	27:	W
5:	NE	18:	S	32:	NW
9:	E	23:	SW	36:	N

- **ff (subjective scale):**

0:	Calm	1:	Breeze (light to strong)	9:	Gale or Storm
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- **ww:**

45:	Fog	71:	Light snow
46:	Heavy fog	73:	Snow
61:	Light rain	87:	Hail (pellets)
63:	Rain		

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Station location:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Observation Period
422	Akureyri	North	65°40'	18°05'	September 1 st 1807 – August 18 th 1814

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The von Scheel series pressure adjustments.

ppp(UC)

Raw pressure data. The original French inches (27.07 mm.) have been converted to hPa.

ppp(C1)

1. The instrument temperature is not available but has been estimated. The instrument was located in an unheated room. The relationship between the ambient temperature at the barometer (t_{t_b}) and outside temperature (t_{t_o}) is here based on comparative measurements at Nes near Reykjavík made in 1822-1829.

$$t_{t_b} = 0,813 * t_{t_o} + 2,309$$

It is assumed that in the case of very low outside temperatures ($t_{t_o} < -6,5 \text{ }^\circ\text{C}$), the inside temperature will not fall below $-3 \text{ }^\circ\text{C}$.

The Celsius freezing point is used as reference for the adjustment which is $0,16917 \text{ mb/}^\circ\text{C}$.

Because mercury expands as temperature increases the adjustment is negative at temperatures above freezing point (Celsius) and positive below zero.

2. An adjustment was made for height above sea level (+0,6 hPa) and gravity (+1,5 hPa).

ppp(C2)

5 hPa index adjustment has been added to the ppp(C1) series.

Jón Thorsteinsson 1820 – 1854

Jónas Jónasson 1857 – 1859

Code descriptions:

- **ppp:**

ppp(UC): Original pressure readings in hPa.
 ppp(EC): Pressure data in hPa adjusted for "obvious" errors.
Note: The pressure is not adjusted for height above sea level or gravity.

- **ttt:**

ttb: Original instrument (barometer) temperature readings in °C
 ttt (UC): Original temperature readings in °C
 ttt sea: Original sea surface temperature readings in °C

- **rrr:**

Amount of precipitation in Danish square inches (See notes later in document)

- **dd:**

0: Calm	6: ESE	12: WSW
1: N	7: SE	13: W
2: NNE	8: SSE	14: WNW
3: NE	9: S	15: NW
4: ENE	10: SSW	16: NNW
5: E	11: SW	99: Variable

- **ff (subjective scale):**

0: Calm	3: Moderate to fresh breeze	7: Strong gale
1: Light air	4: Strong breeze	8: Storm
2: Light to gentle breeze	5: Near gale	9: Hurricane
	6: Gale	

- **ww:**

0: Clear	61: Rain
1: Sunshine	63: Heavy rain
2: Mostly clear, partly cloudy	68: Rain and snow, snow and sleet, sleet
3: Cloudy	70: Slight snow
4: Overcast	71: Snow
5: Haze	73: Heavy snow
6: Blurred skies	80: Rain showers
10: Mist	81: Heavy rain showers
36: Drifting snow	83: Rain and snow showers
45: Fog	85: Snow showers
50: Drizzle	86: Heavy snow showers
58: Rain and drizzle	87: Hail (pellets)
60: Slight rain	95: Thunder



Station locations:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Observation Period
001	Reykjavík	Southwest	64°08'	21°54'	August 1 st 1820 – February 28 th 1854
001	Nes	Southwest	64°10'	22°00'	December 9 th 1857 – June 20 th 1859

Grímur Jónsson 1831

Code descriptions:

- **ppp:**
ppp(UC): Original pressure readings in hPa.
Note: The pressure is not adjusted for height above sea level or gravity.

- **ttt:**
ttt (UC): Original temperature readings in °C

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Station location:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Digitized Period
419	Möðruvellir	North	64°47'	18°16'	January 1 st 1831 – December 31 st 1831

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Páll Melsted 1831

Code descriptions:

- **ppp:**

ppp(UC): Original pressure readings in hPa.

Note: The pressure is not adjusted for height above sea level or gravity.

- **ttt & ttb:**

ttt (UC): Original temperature readings in °C

ttb (UC): Original instrument (barometer) temperature in °C

- **dd:**

0: Calm

14: SE

27: W

5: NE

18: S

32: NW

9: E

23: SW

36: N

- **ff (subjective scale - not deciphered):**

0: Calm

3:

1:

4:

2:

❖ ❖ ❖

Station location:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Digitized Period
572	Ketilsstaðir	East	65°12'	14°33'	January 1 st 1831 – December 31 st 1831

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A. O. Thorlacius 1845 – 1860

Code descriptions:

- **ppp:**

ppp(UC): Original pressure readings in hPa.
 ppp(EC): Pressure data in hPa adjusted for "obvious" errors.
 ppp(TC): Pressure data in hPa adjusted for instrument temperature

Note: The pressure is not adjusted for height above sea level, gravity or instrument (index).

- **ttt & ttb:**

ttt (UC): Original temperature readings in °C
 ttb (UC): Original instrument (barometer) temperature in °C

- **T_d and T_w (hygrometer readings):**

T_d (UC): Dry temperature. T_w (UC): Wet temperature.

- **dd:**

5: NE	14: SE	23: SW	32: NW
9: E	18: S	27: W	36: N

- **Calm Index:**

9: Calm or light wind

- **ff (subjective scale):**

1: Calm or light wind	6: Strong breeze to gale	9: Strong gale to storm
5: Light to fresh breeze	8: Gale	12: Hurricane

- **Dry Index:**

1: No precipitation

- **ww and WW (including additional information):**

0: Earthquake	45: Fog	66: Freezing rain	85: Snow
5: Haze	48: Rime fog	70: Light intermittent snow	showers
9: Aurora	58: Rain and drizzle	71: Snow	87: Hail (pellets)
15: Mountain showers	60: Light intermittent rain	80: Rain showers	95: Thunder

- **N:**

0: Scattered / clear	6: Overcast / broken	9: Overcast and dark
4: Scattered	8: Overcast	

- **rrr:**

Amount of precipitation in Danish inches per Danish square feet.

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Station location:

Stat nr.	Name	Part of country	lat(N)	lon(W)	Digitized Period
178	Stykkishólmur	West	65°05'	22°44'	September 1 st 1845 – December 31 st 1860

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Björn Halldórsson 1854 - 1882

Code descriptions:

- *ppp*:

ppp (UC): Original pressure readings in hPa.

ppp (EC): Pressure data in hPa adjusted for "obvious" errors.

Note: The pressure is not adjusted for height above sea level or gravity.

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Station location:

Stat. nr.	Name	Part of country	lat(N)	lon(W)	Observation Period
434	Laufás	North	65°54'	18°05'	November 16 th 1854 – December 12 th 1882

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Sveinn Pálsson: Pressure data statistics in months with at least 23 days of observations.

stat	Kotmúli (# 846)	date	(All)	Monthly means after final adjustments											
year	Data (hPa)	1	2	3	4	5	6	7	8	9	10	11	12	all months	
1798	Average:			997,2	990,9	1001,3	1004,9	997,6		994,0					
	StdDev:			14,1	7,1	5,5	10,8	6,0		9,2					
	Max:			1014,5	1004,9	1021,8	1025,0	1009,4		1018,0					
	Min:			959,7	974,9	982,7	972,3	983,9		975,9					
1799	Average:	990,2	1001,0	996,6	1005,7	1013,9	1013,5	1008,2	1006,7	1003,6	1001,3	992,7	1016,7	1004,5	
	StdDev:	17,8	9,6	15,4	11,3	11,4	9,1	6,0	4,7	6,6	12,6	15,5	11,3	13,6	
	Max:	1016,3	1021,6	1030,1	1025,4	1028,7	1036,4	1020,0	1015,4	1014,4	1020,0	1017,3	1032,5	1036,4	
	Min:	961,5	971,7	967,8	971,2	990,5	996,4	998,9	997,3	985,5	977,9	953,2	989,5	953,2	
1800	Average:	993,6	1001,3	1000,4	994,9	1015,3	1012,9			998,0	1001,3		1002,2		
	StdDev:	16,9	11,4	9,6	11,9	13,4	9,5			12,4	9,8		12,4		
	Max:	1031,3	1021,6	1022,9	1017,9	1034,7	1029,5			1015,0	1028,4		1024,4		
	Min:	953,1	981,6	973,9	971,8	983,6	991,9			956,3	978,8		974,5		
1801	Average:	995,0		1001,8	1012,2	1015,4				1004,8		1003,2	1011,8		
	StdDev:	18,0		14,0	11,0	8,5				10,7		10,8	10,9		
	Max:	1032,2		1031,0	1033,8	1031,7				1019,5		1020,3	1029,5		
	Min:	956,1		977,8	987,8	990,5				981,3		982,1	983,5		
1802	Average:	993,8	996,2	996,2	998,1	1022,0	1006,3	1010,6	1004,8		999,0		994,1		
	StdDev:	22,8	14,1	13,0	14,7	8,3	6,1	5,2	7,8		11,6		11,8		
	Max:	1030,7	1021,6	1030,1	1028,4	1036,2	1017,5	1020,0	1019,9		1018,8		1019,6		
	Min:	952,5	956,0	975,4	968,8	1003,7	996,4	992,9	989,8		966,7		970,9		
1803	Average:	1003,1	991,4	1000,4	994,8	1001,8	1014,5	1004,4	998,7						
	StdDev:	13,8	20,5	17,4	11,3	17,2	10,4	8,1	11,4						
	Max:	1030,1	1029,7	1034,9	1020,9	1028,7	1031,0	1017,0	1017,5						
	Min:	979,6	930,4	959,7	969,7	964,6	988,9	986,9	967,2						
1804	Average:	997,3	1007,4	1002,8	1006,1		1004,0		996,7	996,7	981,2	995,8	997,7		
	StdDev:	13,3	13,2	11,1	8,2		9,0		7,3	10,0	7,7	11,8	14,8		
	Max:	1021,1	1021,6	1022,0	1019,4		1020,5		1010,2	1014,4	996,8	1015,2	1016,6		
	Min:	972,1	965,0	976,9	980,3		979,9		983,2	975,9	967,6	972,2	940,2		
1805	Average:	977,3			1000,3	1006,4		1008,2	1001,3	997,6					
	StdDev:	16,1			12,6	10,4		8,4	6,7	11,1					
	Max:	1011,2			1014,9	1020,6		1020,0	1012,3	1018,0					
	Min:	937,5			972,7	983,6		991,4	979,3	956,3					
1806	Average:	993,8	991,8	1012,2	1017,2	1016,0	1011,3					987,8			
	StdDev:	17,3	16,1	8,9	7,9	8,7	10,4					14,0			
	Max:	1020,2	1019,2	1038,5	1035,0	1029,6	1030,4					1011,3			
	Min:	956,1	943,4	999,4	998,9	995,6	982,9					954,1			
1807	Average:		994,3	1015,7	1009,0			1003,0	1000,0			1006,3	1002,6		
	StdDev:		20,4	15,4	9,1			8,6	9,1			14,9	13,9		
	Max:		1034,2	1045,1	1026,9			1017,0	1016,3			1030,8	1031,0		
	Min:		962,0	975,4	988,7			986,0	984,4			978,2	971,5		
1808	Average:	993,4	1011,8		1014,5	1006,8			1007,7	1005,5	998,7				
	StdDev:	16,0	17,0		15,5	7,4			5,6	10,4	11,9				
	Max:	1026,2	1049,2		1035,9	1020,6			1019,3	1026,4	1023,9				
	Min:	963,0	974,1		979,7	991,1			996,4	980,4	971,3				
1809	Average:		1001,0	1011,9						1007,6					
	StdDev:		11,8	14,3						6,4					
	Max:		1022,8	1031,9						1022,5					
	Min:		977,7	946,8						992,4					
Total Average:	993,3	999,7	1002,7	1004,2	1011,0	1009,8	1005,5	1002,4	1000,9	996,5	996,9	1003,7	1003,0		
Total StdDev:	17,9	16,5	14,8	13,9	12,5	10,1	8,3	8,6	10,8	13,2	15,0	14,8	14,2		
Total Max:	1032,2	1049,2	1045,1	1035,9	1036,2	1036,4	1020,0	1019,9	1026,4	1028,4	1030,8	1032,5	1049,2		
Total Min:	937,5	930,4	946,8	968,8	964,6	972,3	983,9	967,2	956,3	966,7	953,2	940,2	930,4		

Monthly ppp [C1] Averages

date	(All)
hour	(All)

Statistics on data (pressure hPa) from Lievog 1779 - 1789 (adjusted) series.

Statistics only calculated for months with at least 23 observation days

year	Data	month												Grand Total
		1	2	3	4	5	6	7	8	9	10	11	12	
1779	Average								1009,5	1002,5	994,7	1009,0	1008,6	
	StdDev								8,8	10,3	11,2	13,8	6,8	
	Max								1023,2	1018,7	1016,7	1030,2	1020,1	
	Min								988,6	979,6	969,5	976,0	994,0	
	Count								66	89	93	89	90	
1780	Average	1008,3	1003,9	993,3	1011,6	1008,1	1011,4	1006,9	1012,3	1004,6	996,2	1006,6	1002,7	1005,4
	StdDev	10,8	17,5	13,3	8,8	8,1	8,0	7,4	8,9	8,8	13,3	13,0	16,9	13,0
	Max	1025,2	1031,4	1022,1	1026,5	1026,6	1028,5	1018,6	1044,0	1018,1	1029,6	1038,3	1026,8	1044,0
	Min	986,4	952,6	961,1	985,6	994,4	997,0	987,6	993,8	984,1	959,9	972,1	957,0	952,6
	Count	92	85	92	89	93	88	91	92	90	92	84	93	1081
1781	Average	1005,8	989,1	999,1	1002,9	1016,7	1012,5	1008,6	1014,5	1002,5	1007,7	1000,2	993,3	1004,5
	StdDev	13,8	16,2	17,2	10,9	10,7	9,3	8,6	7,7	14,2	12,6	14,0	15,0	15,0
	Max	1032,1	1017,8	1031,8	1024,4	1035,7	1025,5	1025,2	1024,7	1025,3	1034,5	1023,8	1014,1	1035,7
	Min	976,4	958,6	958,1	981,4	990,4	988,5	992,1	983,8	953,2	968,9	968,5	957,6	953,2
	Count	93	83	92	90	92	89	92	93	89	93	90	93	1089
1782	Average	985,5	997,5	1008,0	1018,5	1018,5	1012,8	1013,5	1009,1	1013,8	1005,9	999,6	993,4	1006,3
	StdDev	12,2	18,7	18,0	11,2	6,2	6,4	4,6	6,3	13,1	12,7	15,7	15,8	16,0
	Max	1014,0	1023,2	1034,2	1038,0	1032,7	1024,0	1023,1	1022,0	1036,2	1033,0	1027,7	1031,6	1038,0
	Min	956,3	951,1	976,1	991,4	1005,6	996,1	996,7	995,3	985,6	972,8	955,6	962,4	951,1
	Count	93	84	93	90	89	90	87	92	89	93	89	93	1082
1783	Average	991,3	998,1	1003,2	1006,8	1013,7	1010,7	1007,6	1012,9	997,4	1003,3	1008,9	998,8	1004,4
	StdDev	15,3	17,1	15,1	16,3	15,3	6,9	9,4	8,8	12,9	12,6	12,5	13,2	14,8
	Max	1023,0	1023,2	1030,3	1033,8	1033,6	1023,1	1026,7	1029,2	1024,4	1023,9	1029,3	1023,1	1033,8
	Min	957,8	953,5	970,1	976,9	981,4	988,5	981,6	994,7	970,6	969,8	981,1	972,0	953,5
	Count	93	84	92	88	93	90	92	92	89	93	89	93	1088
1784	Average	1000,1	1012,9	1016,1	1011,0	1003,1	1014,9	1003,4	1009,5	1002,4	1008,4	1007,4	1012,6	1008,5
	StdDev	19,3	12,8	9,1	9,7	9,6	12,0	8,5	12,8	12,0	10,2	12,4	8,5	12,7
	Max	1032,1	1033,8	1032,7	1030,5	1020,6	1034,6	1020,1	1028,3	1020,2	1041,1	1032,3	1027,1	1041,1
	Min	962,3	983,5	986,6	982,3	977,8	992,4	978,6	978,7	973,0	989,3	977,5	985,6	962,3
	Count	92	87	93	90	93	90	93	93	90	93	90	93	1097
1785	Average	993,4	1007,4	1020,7	1005,3	1010,2	1013,6							
	StdDev	14,9	16,0	8,8	13,4	9,1	6,6							
	Max	1017,9	1038,3	1039,9	1030,8	1032,1	1027,0							
	Min	954,8	980,5	999,6	977,8	991,3	998,5							
	Count	93	84	93	90	92	90							
1789	Average	1005,4	988,2	1009,7	1004,1	1015,1	1013,7	1013,7	1005,1	1001,6	1002,0	1013,4	988,2	1005,1
	StdDev	14,4	16,8	11,4	10,1	6,8	8,1	6,5	11,6	16,0	10,7	15,3	11,8	14,8
	Max	1033,0	1019,9	1027,9	1030,5	1029,6	1029,1	1023,1	1024,4	1024,7	1035,1	1036,2	1022,8	1036,2
	Min	974,9	948,1	980,6	984,4	1002,6	994,6	996,7	979,3	964,6	980,9	982,6	963,6	948,1
	Count	93	84	93	90	93	90	92	90	90	93	90	93	1091
Total Average		998,5	999,7	1007,2	1008,6	1012,2	1012,8	1008,9	1010,5	1003,5	1002,6	1006,4	999,6	1005,8
Total StdDev		16,6	18,5	16,2	12,7	11,0	8,4	8,5	9,9	13,4	12,9	14,6	15,4	14,4
Total Max		1033,0	1038,3	1039,9	1038,0	1035,7	1034,6	1026,7	1044,0	1036,2	1041,1	1038,3	1031,6	1044,0
Total Min		954,8	948,1	958,1	976,9	977,8	988,5	978,6	978,7	953,2	959,9	955,6	957,0	948,1
Total Count		649	591	648	627	645	627	547	618	626	650	621	648	7497

Statistics on data (pressure hPa) from v.Scheel series

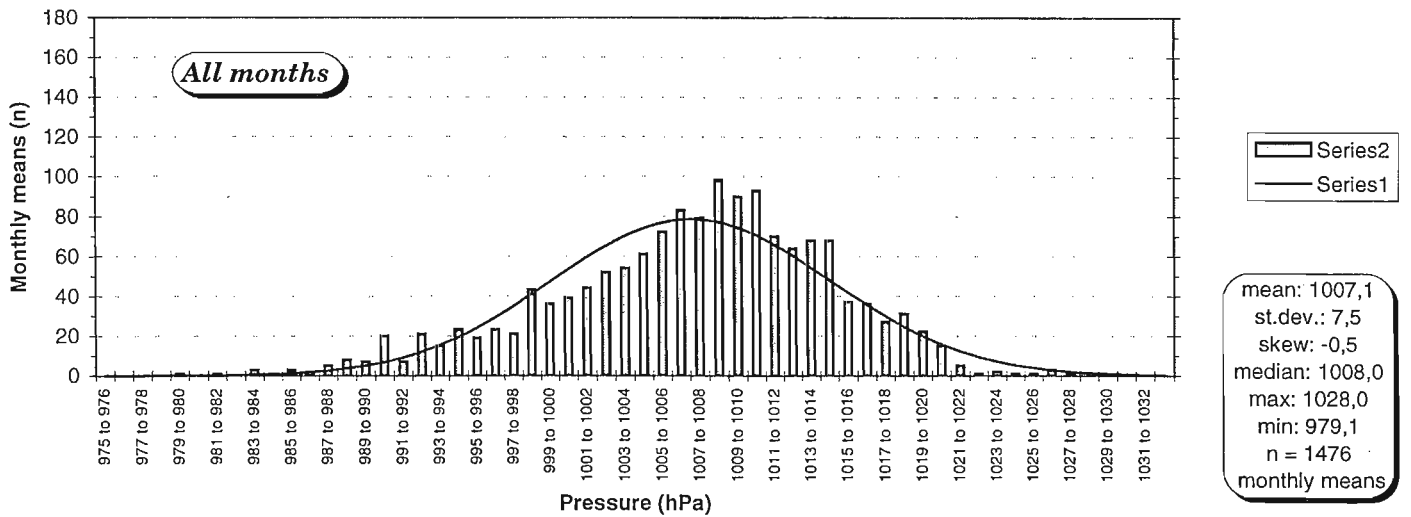
stat	422
date	(All)
t.o.d	(All)

ADJUSTED DATA

Year	Data (hPa)	Month												all months
		1	2	3	4	5	6	7	8	9	10	11	12	
1807	Average:									1009,5	1005,3	1009,6	1000,0	
	StdDev:									11,5	11,2	13,6	12,5	
	Max:									1027,0	1026,0	1029,0	1027,0	
	Min:									988,0	974,0	980,0	973,0	
1808	Average:	994,0	1009,6	1016,8	1013,4	1010,1	1011,2	1011,2	1009,7	1008,3	998,6	1006,6	1015,6	1008,7
	StdDev:	14,0	17,0	14,5	15,6	8,4	7,2	9,1	7,5	10,5	12,2	11,8	12,6	13,6
	Max:	1026,0	1050,0	1037,0	1037,0	1022,0	1025,0	1026,0	1021,0	1036,0	1025,0	1025,0	1036,0	1050,0
	Min:	970,0	968,0	989,0	979,0	985,0	994,0	984,0	987,0	981,0	969,0	978,0	985,0	968,0
1809	Average:	1013,1	1006,1	1009,7	1015,6	1013,2	1007,6	1010,5	1008,0	1004,4	1005,5	1009,6	994,1	1008,1
	StdDev:	16,3	13,1	15,5	7,7	8,5	8,1	5,9	6,7	8,9	10,9	14,4	12,2	12,4
	Max:	1041,0	1032,0	1038,0	1032,0	1027,0	1022,0	1021,0	1019,0	1022,0	1028,0	1036,0	1015,0	1041,0
	Min:	967,0	985,0	964,0	989,0	996,0	991,0	992,0	993,0	990,0	982,0	974,0	965,0	964,0
1810	Average:	1005,1	1007,3	1014,0	1014,7	1023,7	1016,6	1013,8	1011,1	1007,9	1008,0	1017,7	1009,1	1012,4
	StdDev:	14,7	16,0	14,8	10,5	7,7	6,8	7,2	10,8	7,8	10,4	9,4	13,1	12,3
	Max:	1030,0	1034,0	1036,0	1036,0	1039,0	1030,0	1030,0	1035,0	1027,0	1025,0	1034,0	1033,0	1039,0
	Min:	969,0	965,0	974,0	990,0	1005,0	996,0	996,0	977,0	987,0	987,0	1000,0	981,0	965,0
1811	Average:	1008,9	1002,8	1003,3	1021,5	1019,3	1013,1	1011,7	1008,3	1010,6	1003,5	1000,1	1012,3	1009,7
	StdDev:	21,5	14,5	14,7	16,2	7,7	6,3	5,8	9,7	12,0	13,3	12,3	15,9	14,6
	Max:	1044,0	1054,0	1034,0	1048,0	1036,0	1033,0	1023,0	1029,0	1027,0	1028,0	1022,0	1041,0	1054,0
	Min:	969,0	975,0	981,0	983,0	999,0	1001,0	996,0	985,0	968,0	972,0	978,0	975,0	968,0
1812	Average:	1009,9	1000,4	1021,4	1024,4	1024,8	1015,9	1019,2	1017,8	1005,6	1005,3	1019,5	1019,4	1015,5
	StdDev:	14,2	11,9	18,3	7,7	10,0	5,9	6,5	6,8	13,6	14,1	12,8	13,2	14,0
	Max:	1039,0	1030,0	1043,0	1039,0	1043,0	1029,0	1037,0	1036,0	1031,0	1025,0	1037,0	1043,0	1043,0
	Min:	980,0	978,0	972,0	1005,0	1003,0	1004,0	1005,0	1004,0	982,0	963,0	991,0	981,0	963,0
1813	Average:	998,0	993,5	996,0	1014,5	1017,2	1023,3	1010,7	1013,2	1013,4	1016,3	1003,4	1009,3	1009,1
	StdDev:	19,5	11,1	14,5	14,5	9,3	6,6	9,2	8,3	12,1	11,5	10,9	17,0	15,3
	Max:	1037,0	1024,0	1031,0	1047,0	1033,0	1033,0	1032,0	1027,0	1036,0	1036,0	1029,0	1038,0	1047,0
	Min:	961,0	970,0	969,0	988,0	997,0	1008,0	987,0	995,0	994,0	990,0	983,0	982,0	961,0
1814	Average:	1019,8	996,0	1001,8	1003,4	1022,4	1012,3	1010,3						
	StdDev:	13,1	14,8	10,5	8,4	10,7	9,6	5,3						
	Max:	1037,0	1022,0	1024,0	1021,0	1034,0	1029,0	1026,0						
	Min:	986,0	973,0	978,0	978,0	993,0	995,0	1000,0						
Total Average:		1007,0	1002,3	1009,0	1015,4	1018,7	1014,3	1012,5	1011,3	1008,6	1006,1	1009,5	1008,5	1010,3
Total StdDev:		18,3	15,2	17,0	13,5	10,3	8,6	7,7	9,1	11,3	13,0	13,9	16,0	13,9
Total Max:		1044,0	1054,0	1043,0	1048,0	1043,0	1033,0	1037,0	1036,0	1036,0	1036,0	1037,0	1043,0	1054,0
Total Min:		961,0	965,0	964,0	978,0	985,0	991,0	984,0	977,0	968,0	963,0	974,0	965,0	961,0

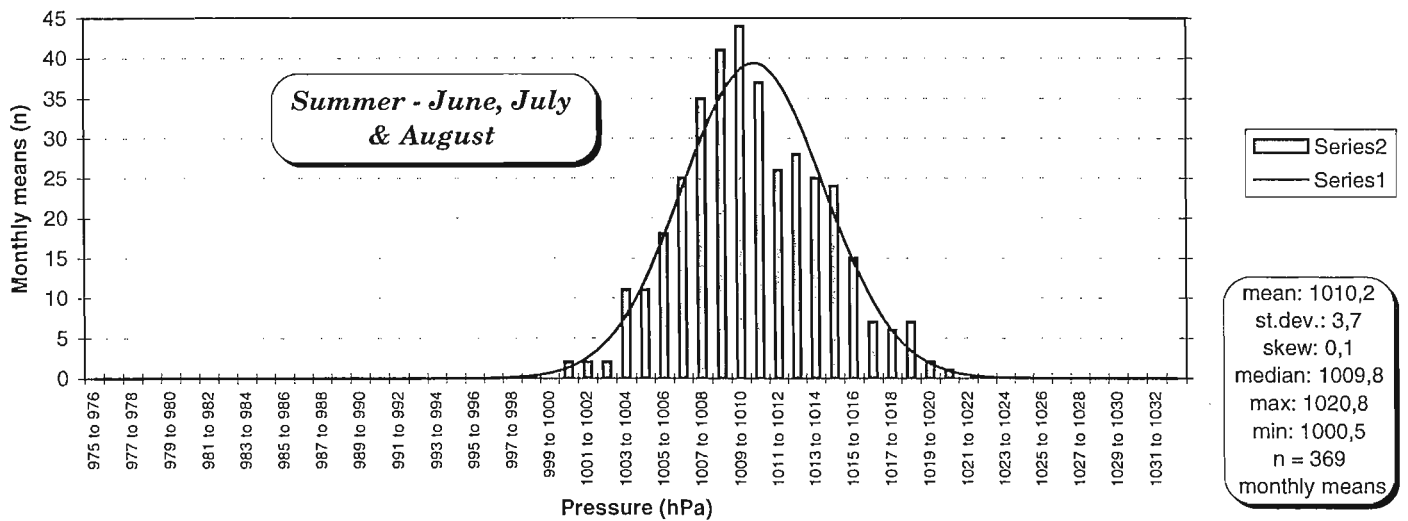
Distribution of monthly means (atm. press.) at Akureyri. Period: 1874 - 1996

Solid line: normal distribution



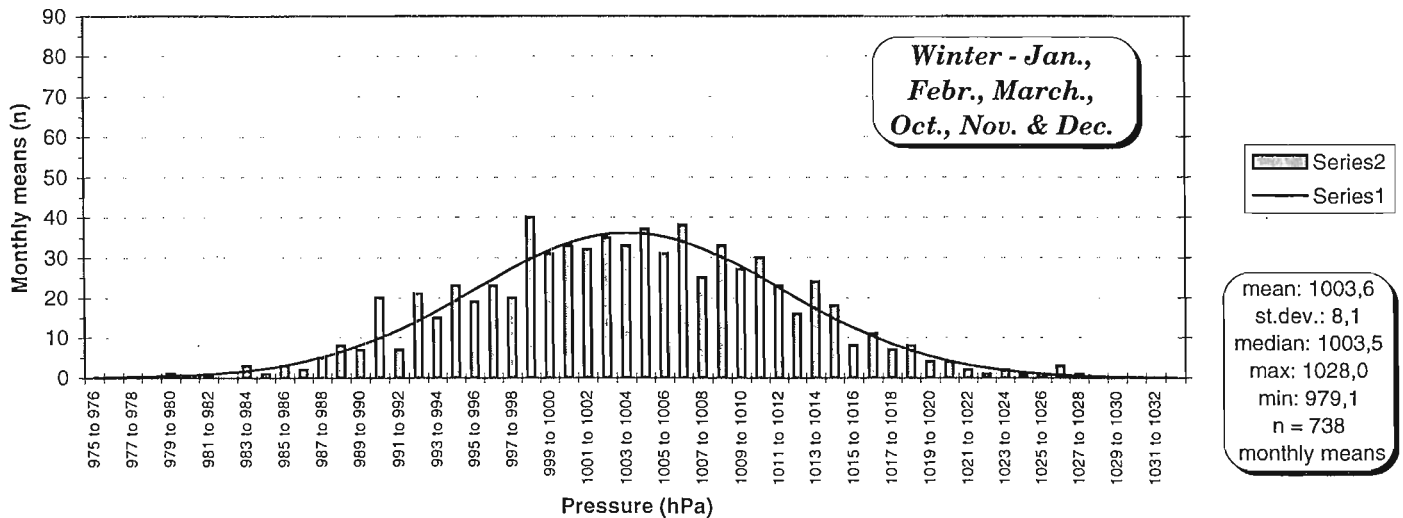
Distribution of monthly means (atm. press.) at Akureyri. Period: 1874 - 1996

Solid line: normal distribution

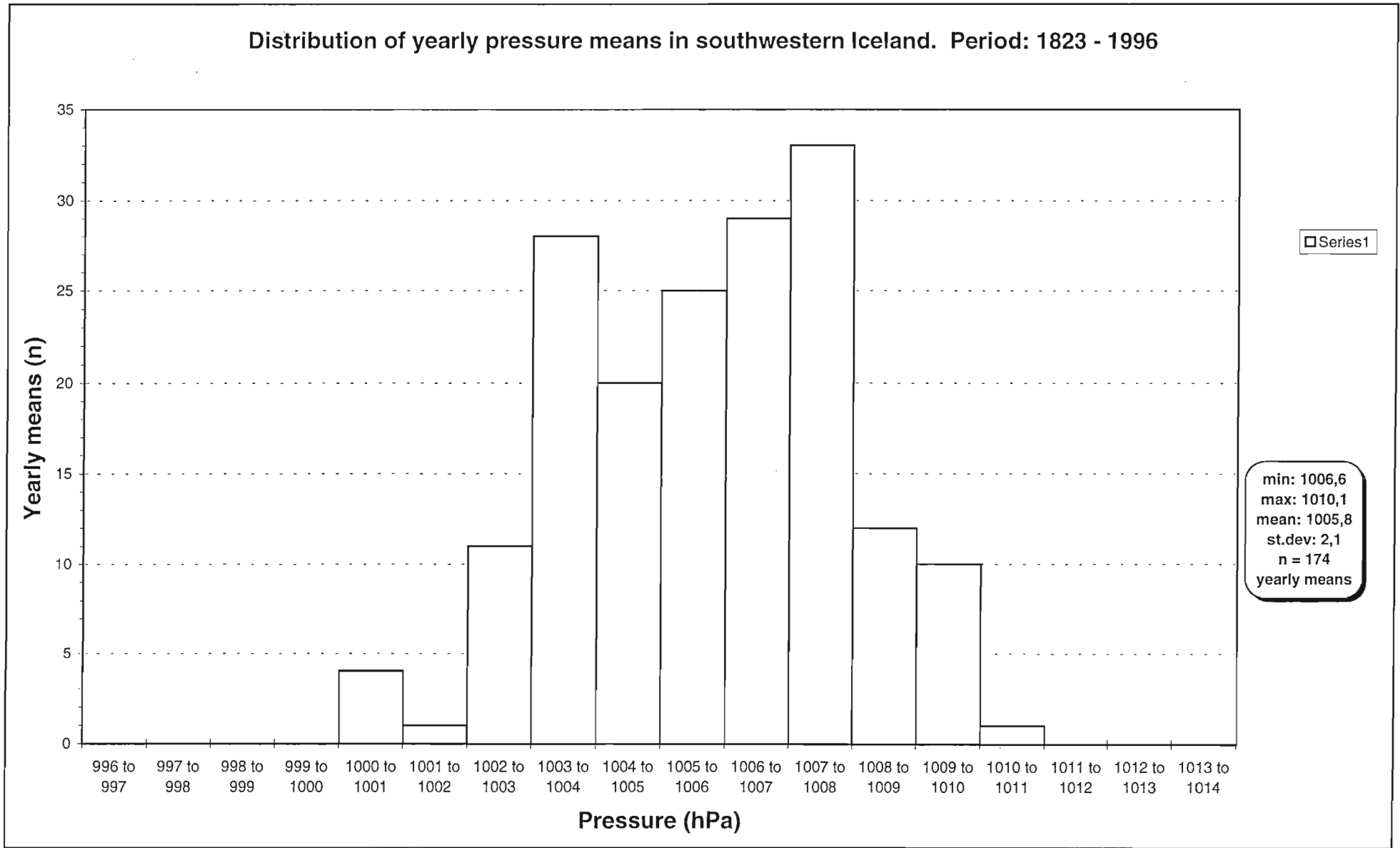


Distribution of monthly means (atm. press.) at Akureyri. Period: 1874 - 1996

Solid line: normal distribution



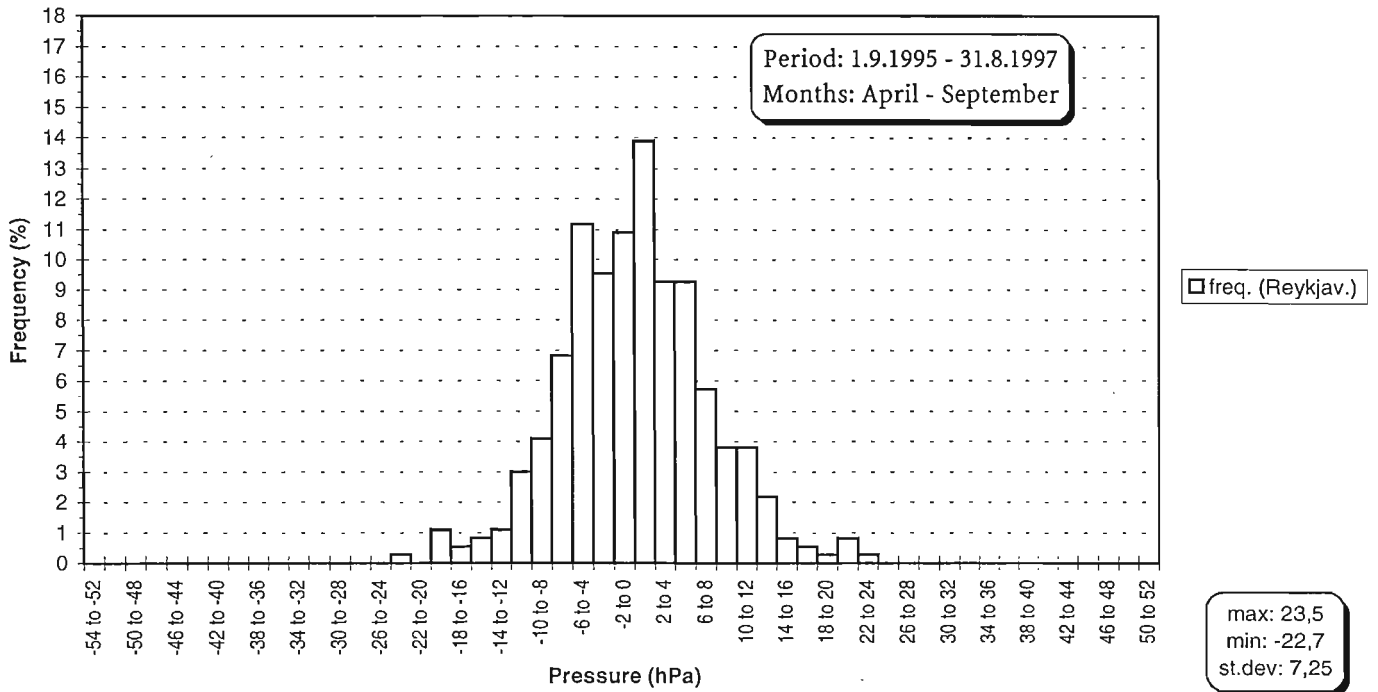
Southwest series Chart 2



Charts (1)

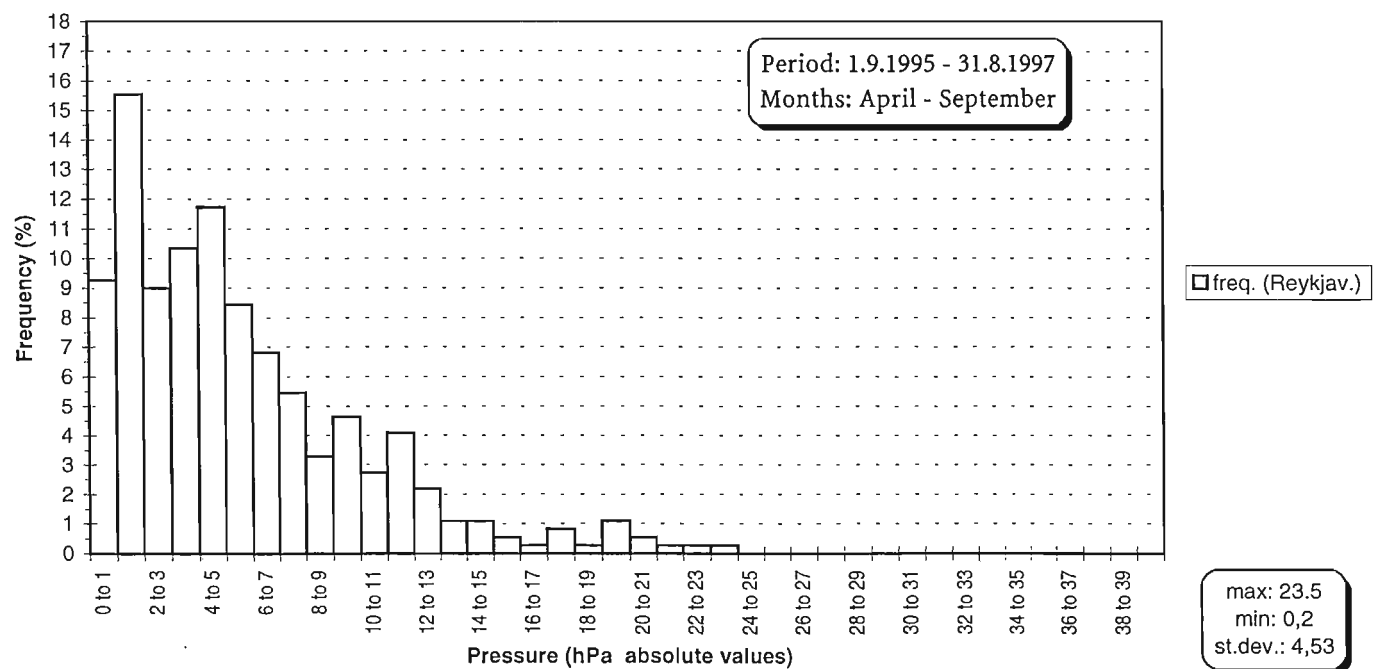
Day - to - day pressure difference at Reykjavík

(Summer half-year)



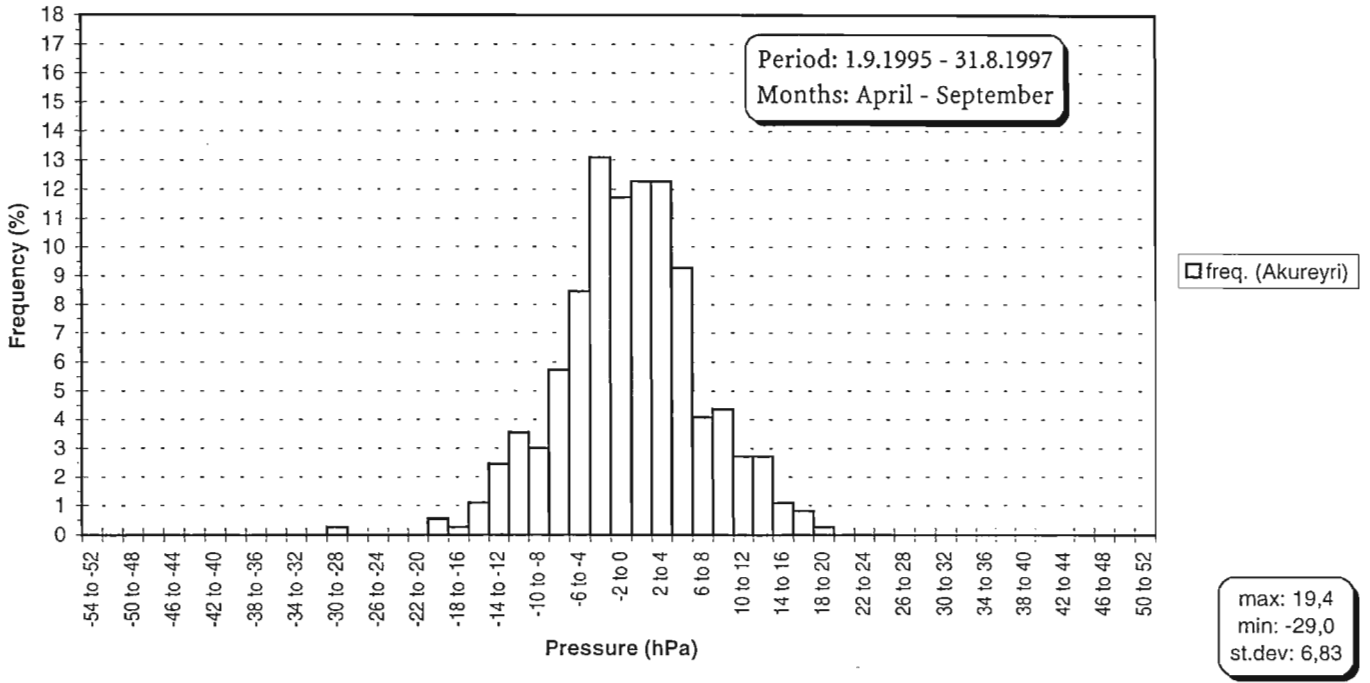
Day - to - day pressure difference at Reykjavík

(Summer half-year)



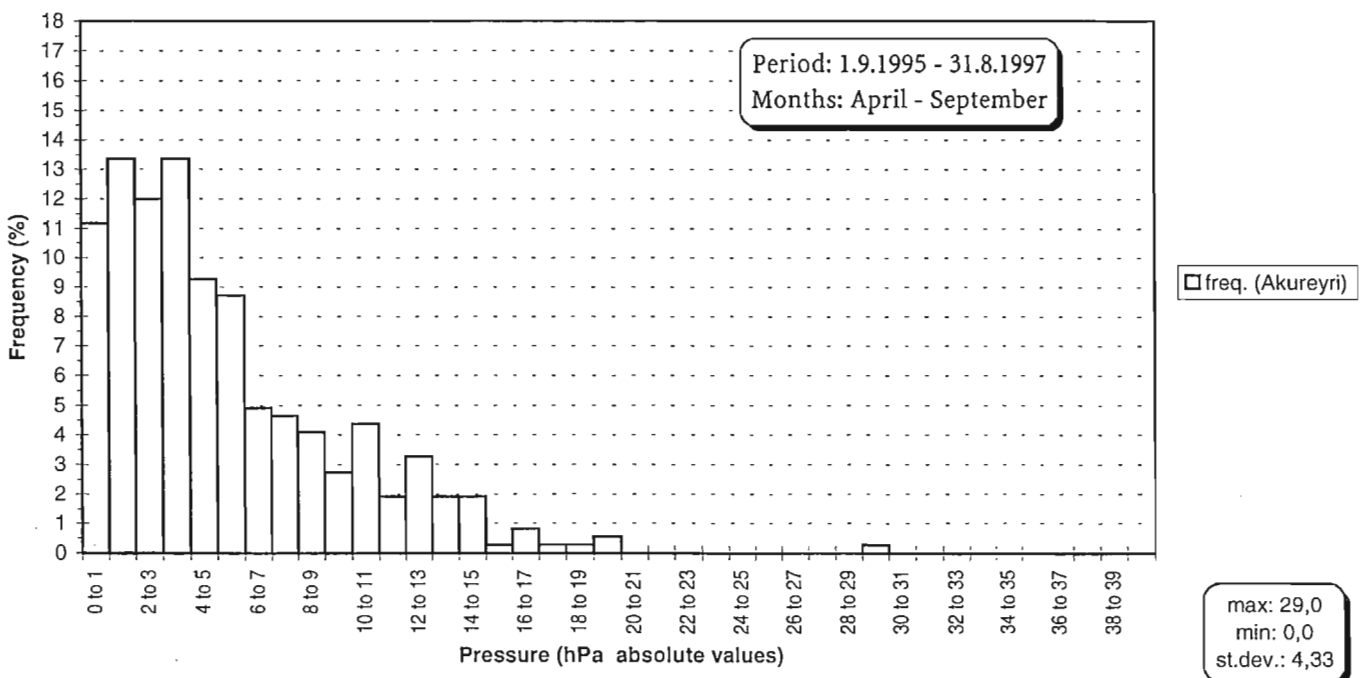
Day - to - day pressure difference at Akureyri

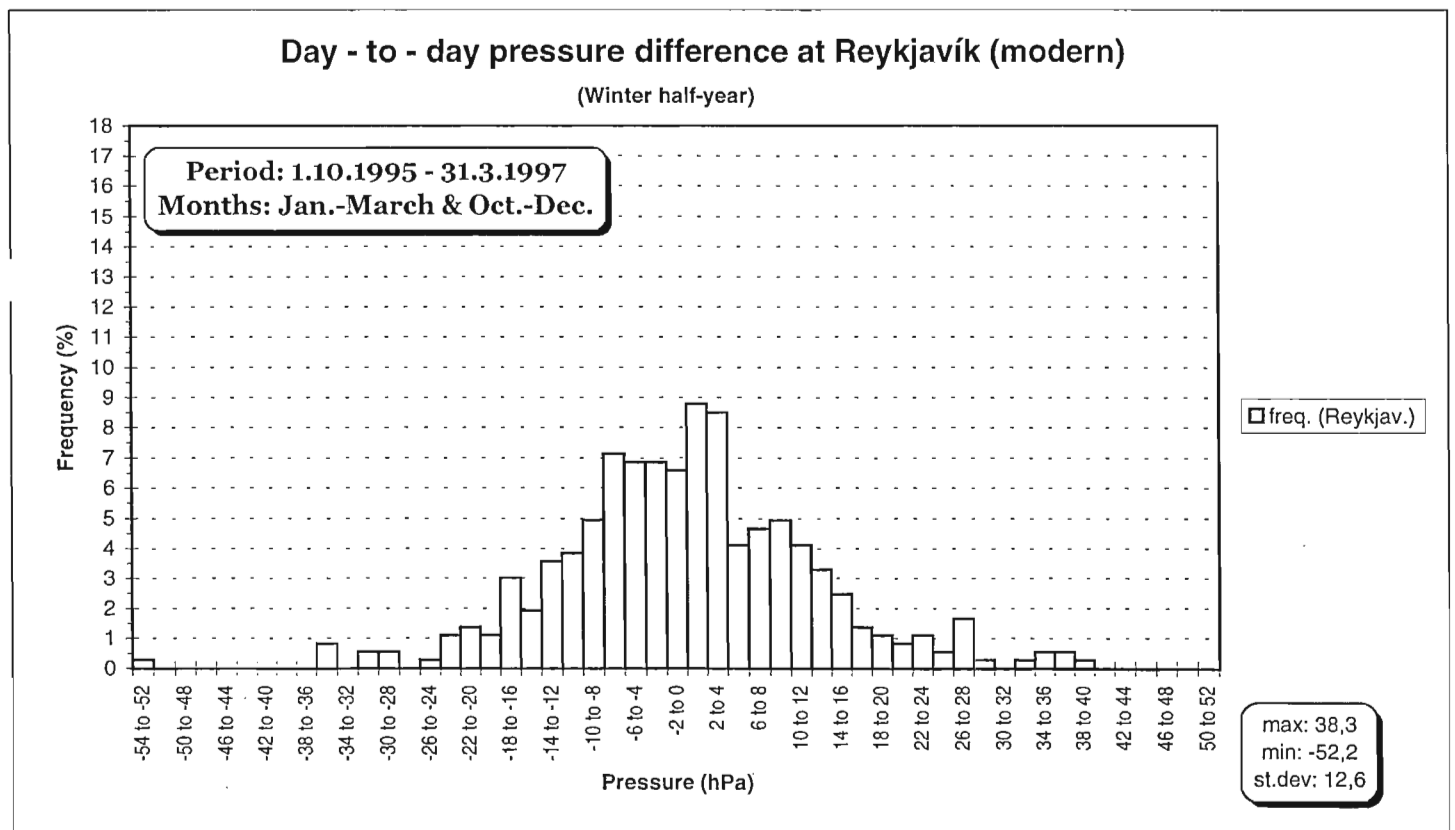
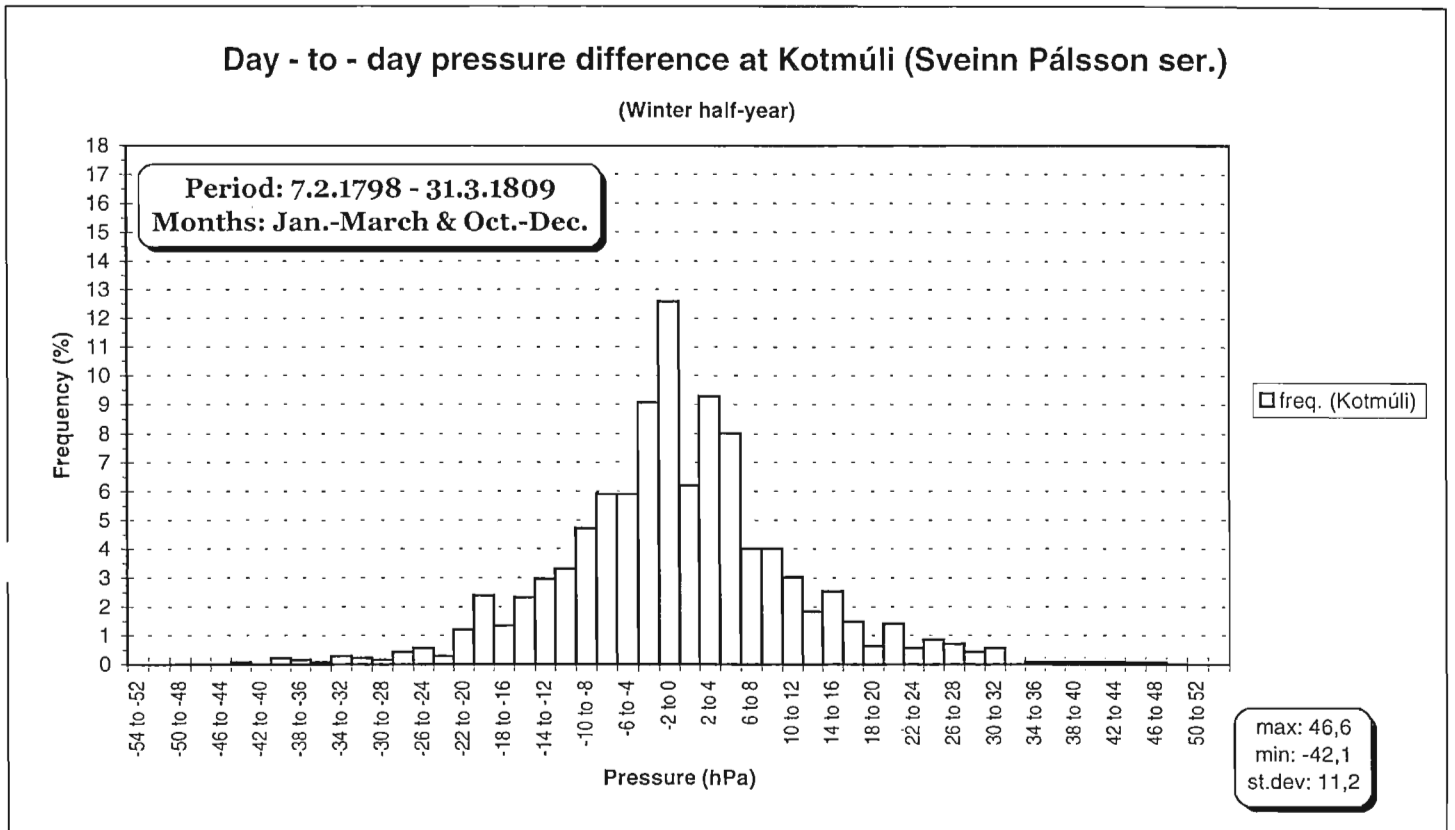
(Summer half-year)

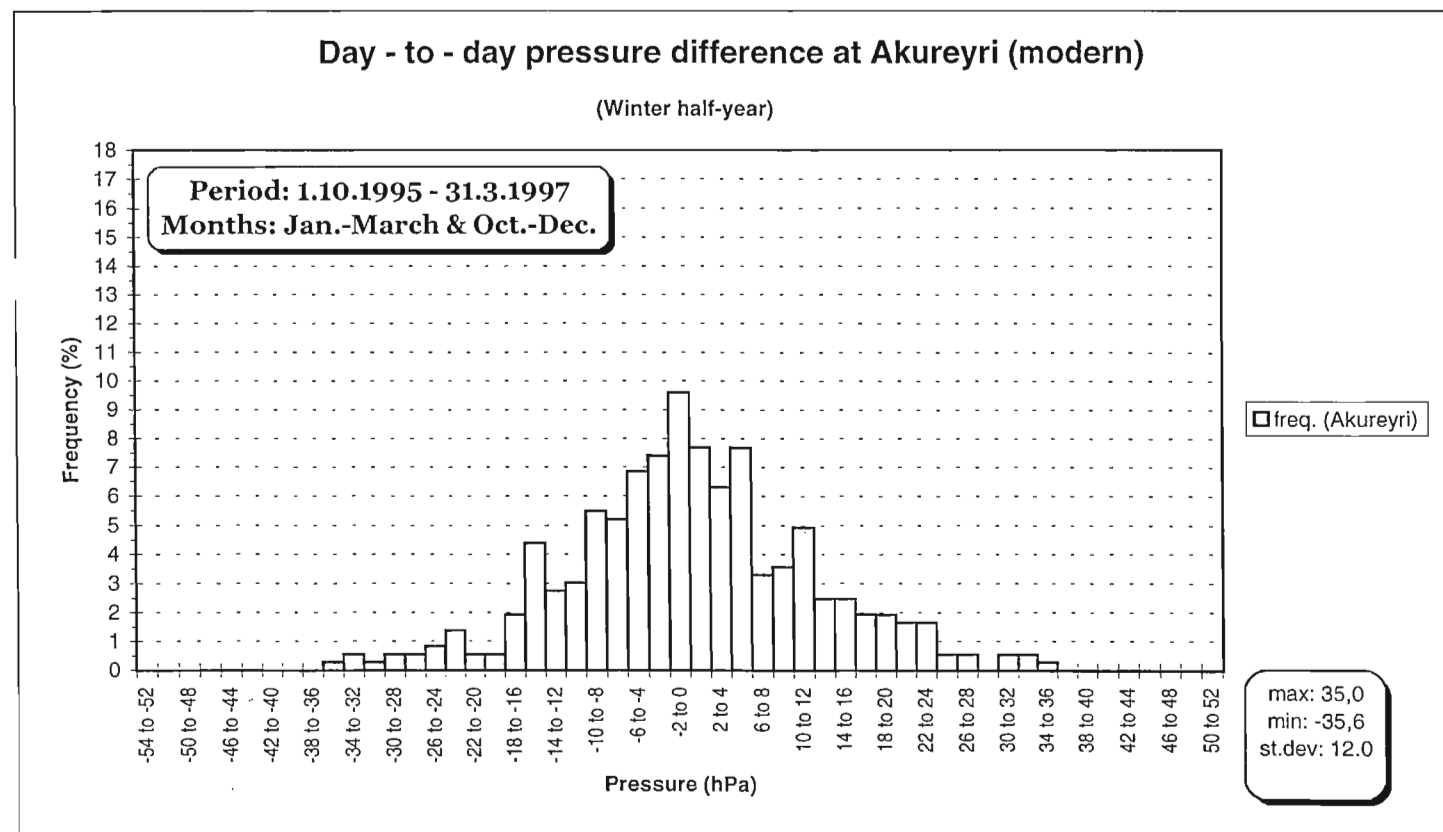
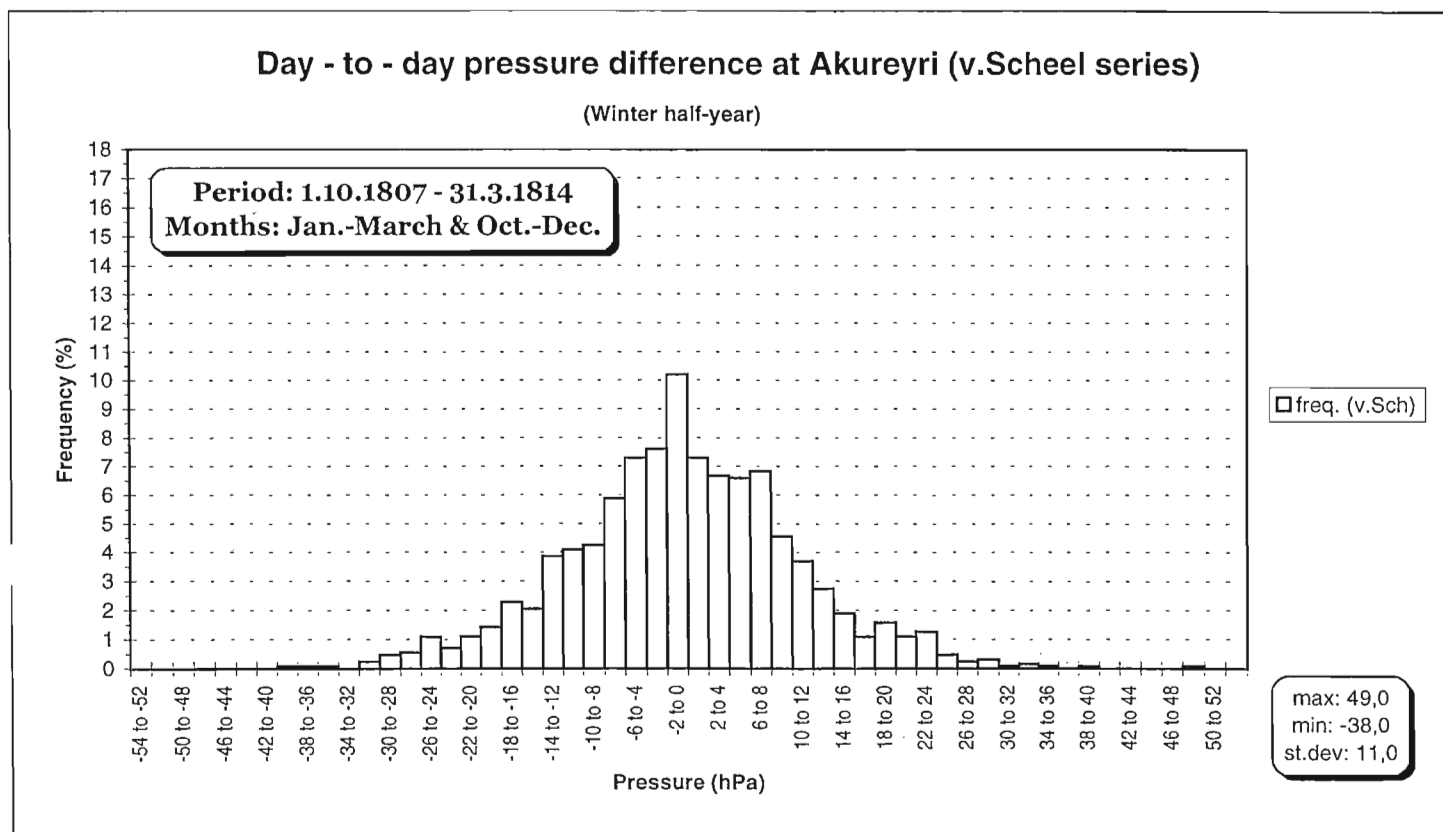


Day - to - day pressure difference at Akureyri

(Summer half-year)

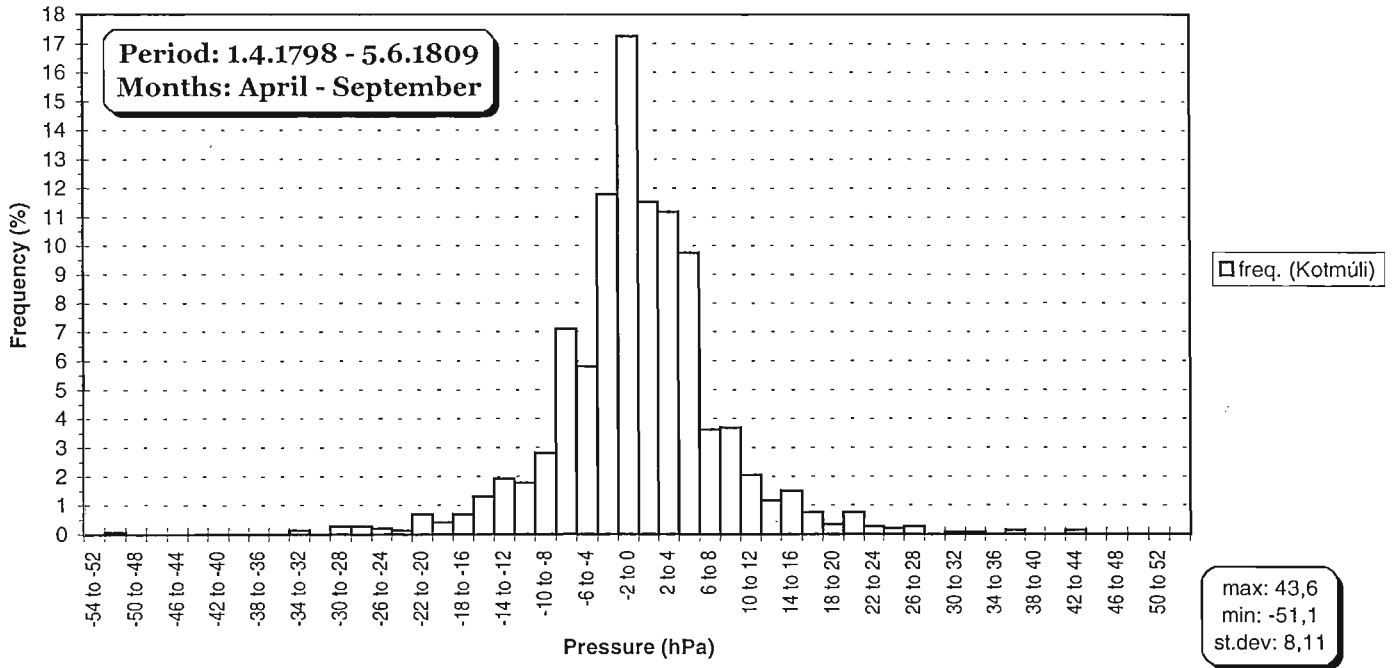






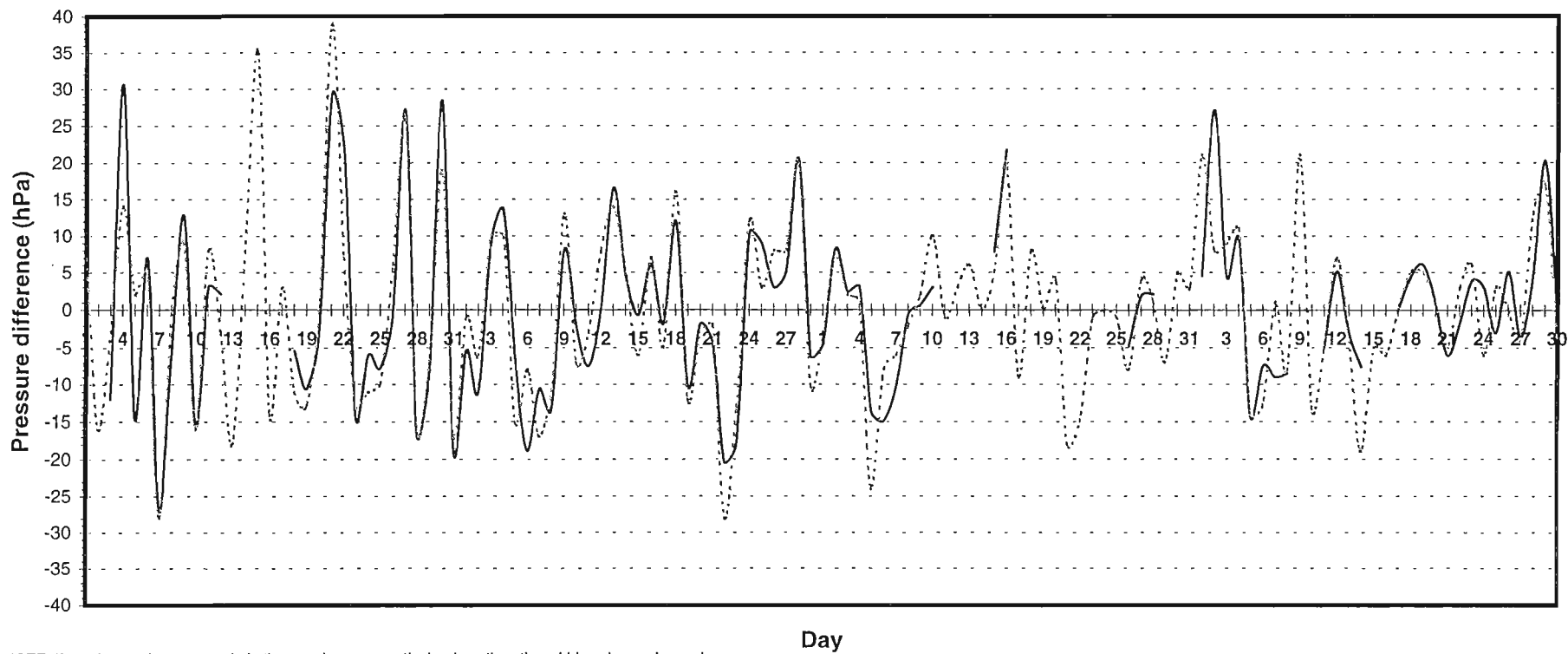
Day - to - day pressure difference at Kotmúli (Sveinn Pálsson ser.)

(Summer half-year)



Day - to - day pressure difference (January - April, 1808)

v. Scheel series: evening observations. S. Pálsson series: evening observations (see notes below).



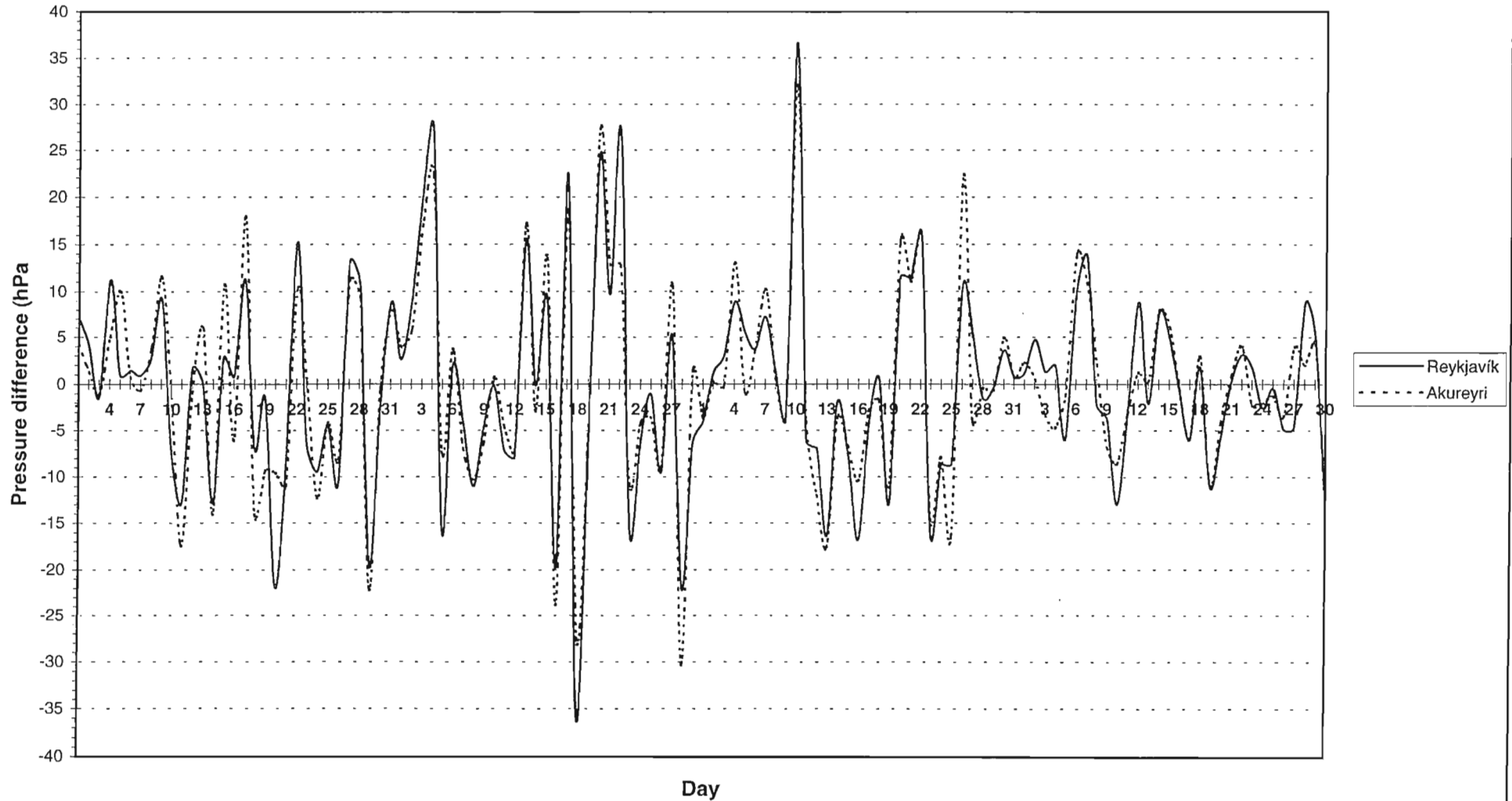
NOTE: If no observation was made in the evening on a particular day, then the midday observ. is used.
But if no observ. was made at midday then the morning observ. is used, if available.

Day

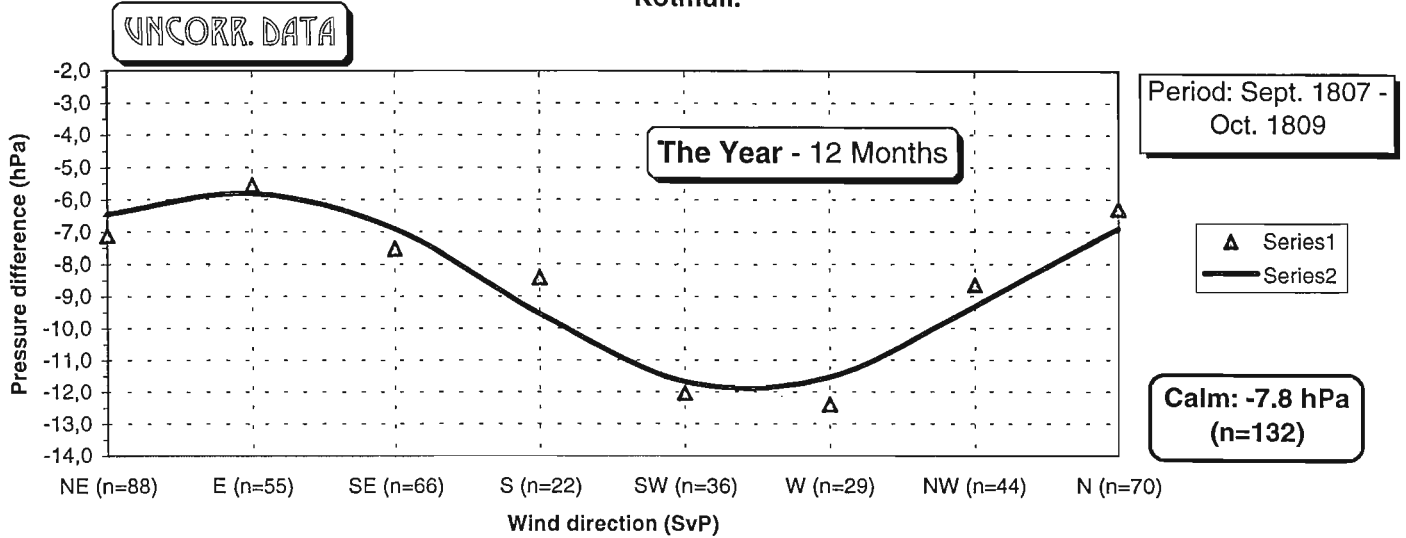
— Sv. Pálss. (corrected) - - - - - von Scheel (corrected)

Day - to - day pressure (January - April, 1996)

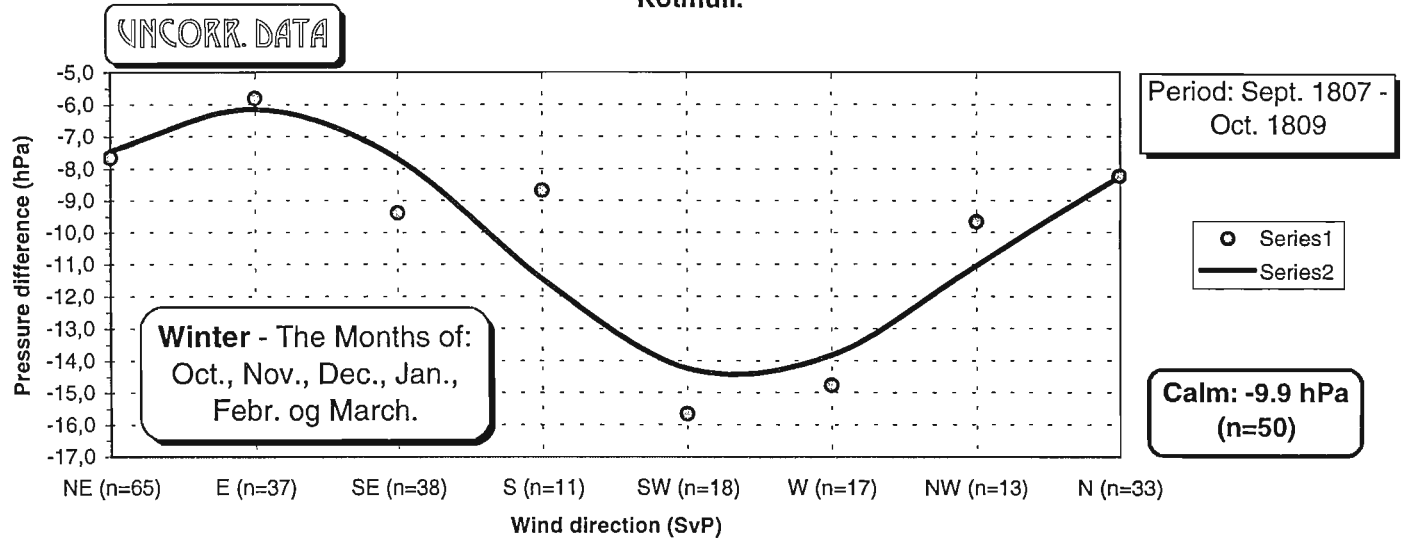
(Evening observations)



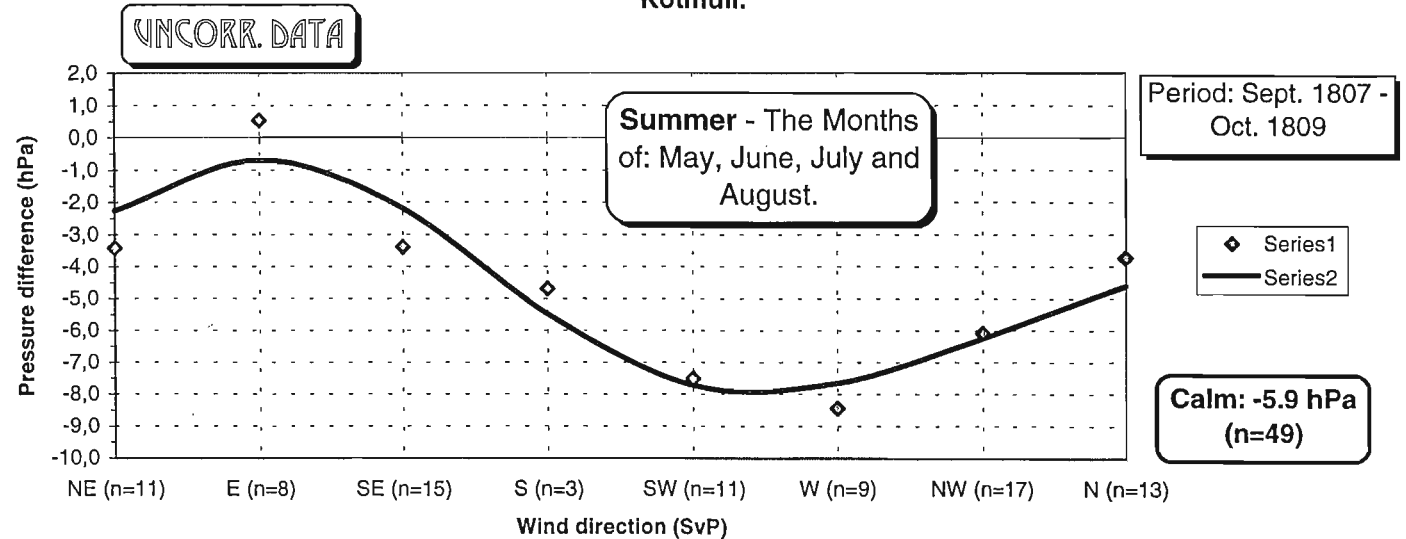
Average pressure difference (V.Sch - SvP) grouped by wind direction observations at Kotmúli.



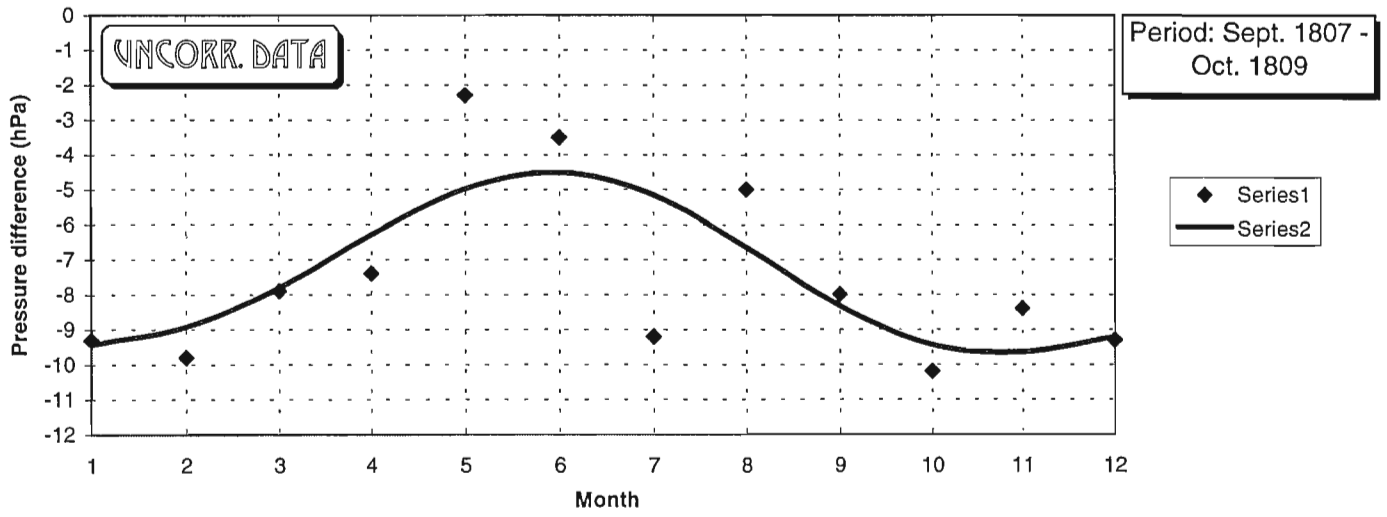
Average pressure difference (V.Sch - SvP) grouped by wind direction observations at Kotmúli.



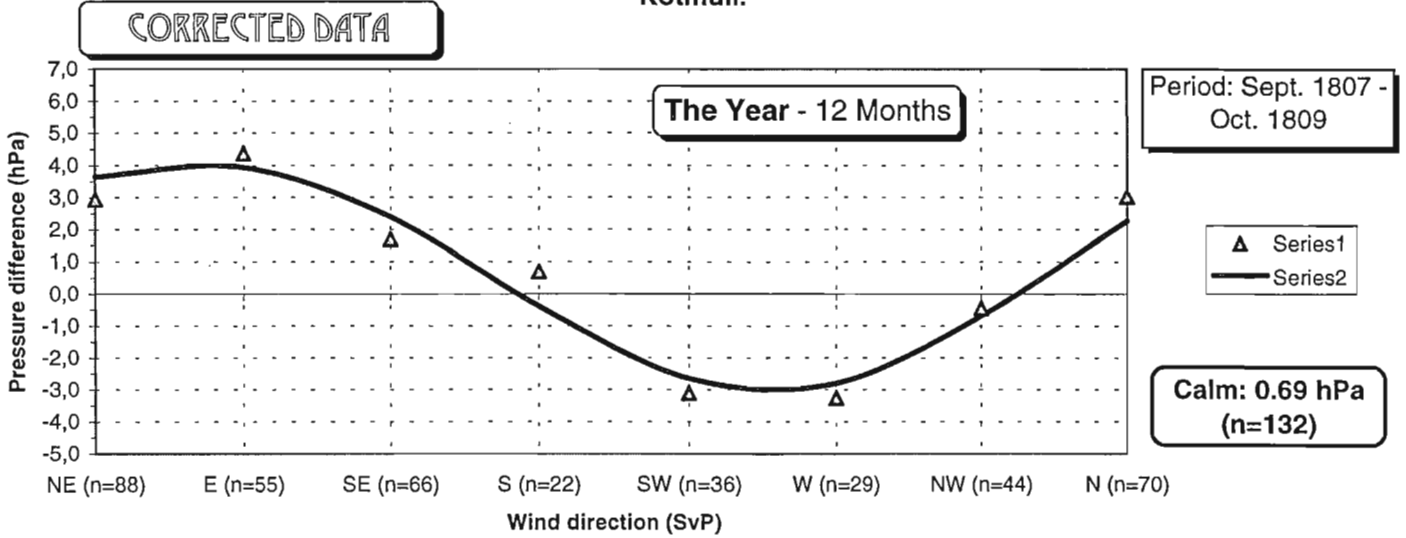
Average pressure difference (V.Sch - SvP) grouped by wind direction observations at Kotmúli.



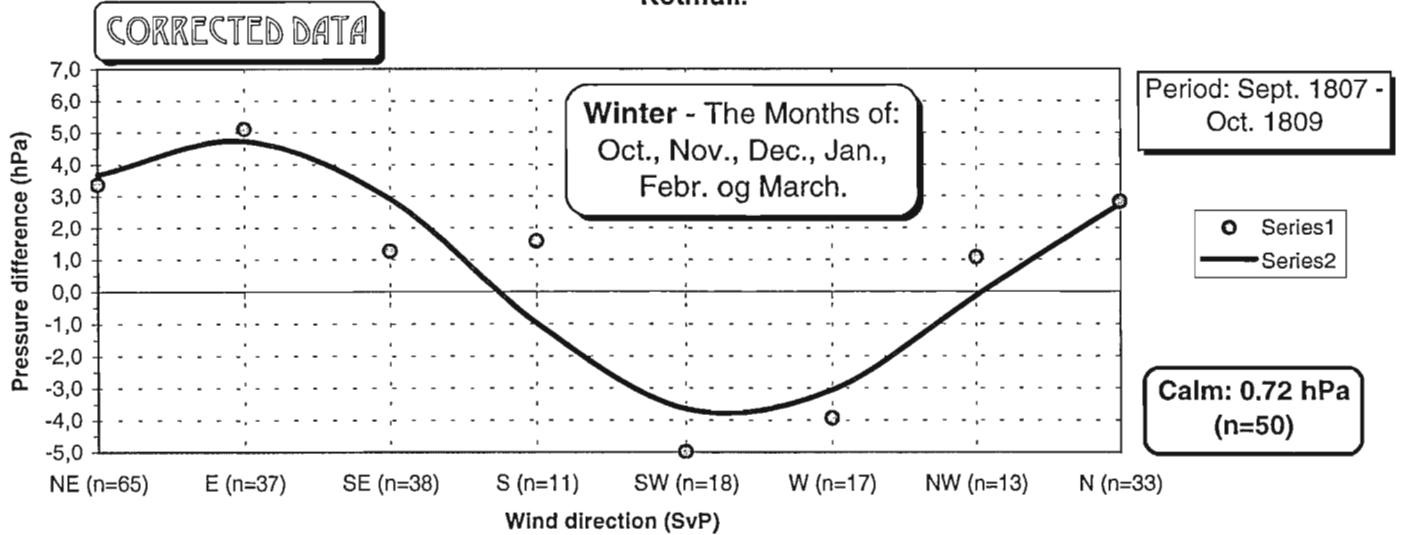
Average pressure difference (V.Sch - SvP) grouped by month.



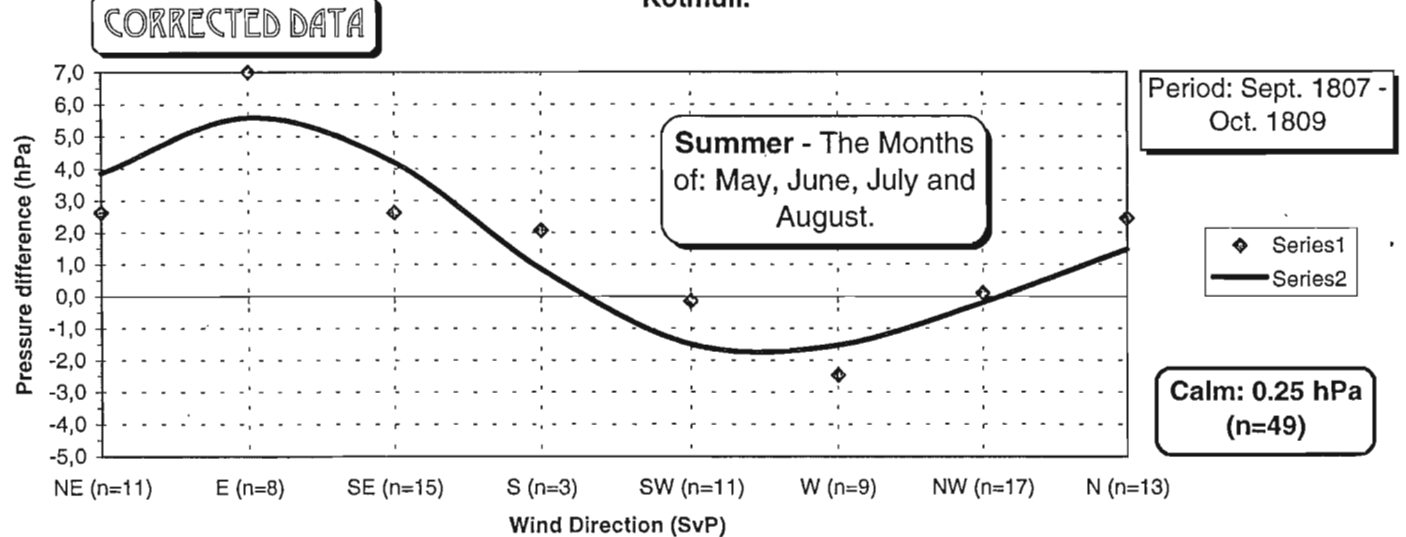
Average pressure difference (V.Sch - SvP) grouped by wind direction observations at Kotmúli.



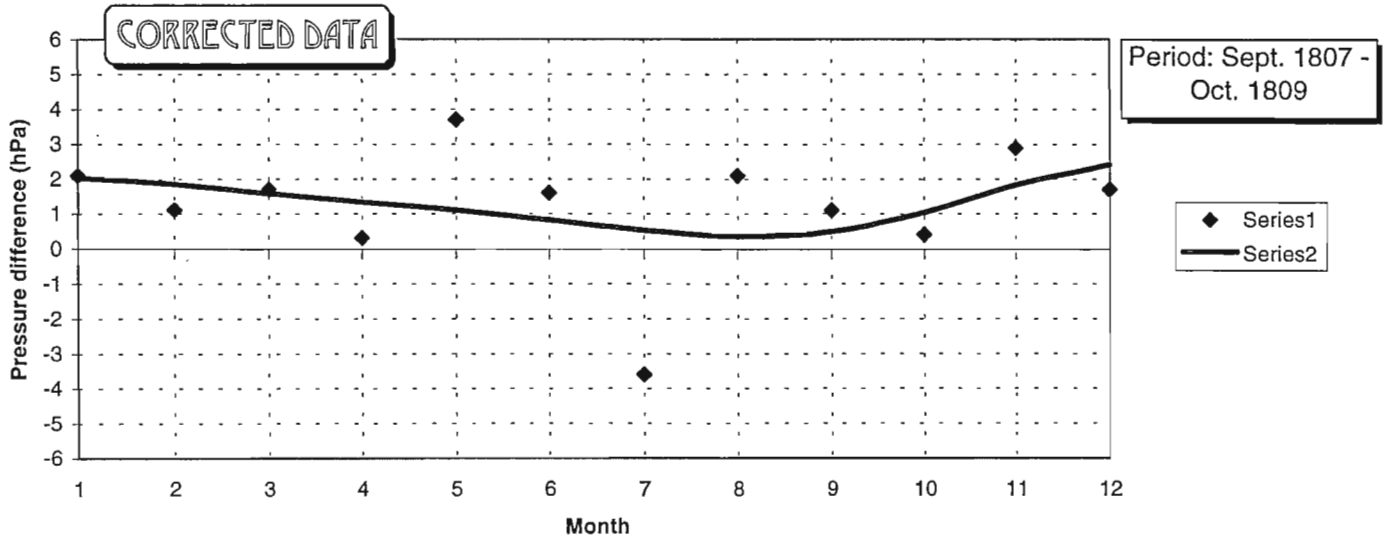
Average pressure difference (V.Sch - SvP) grouped by wind direction observations at Kotmúli.



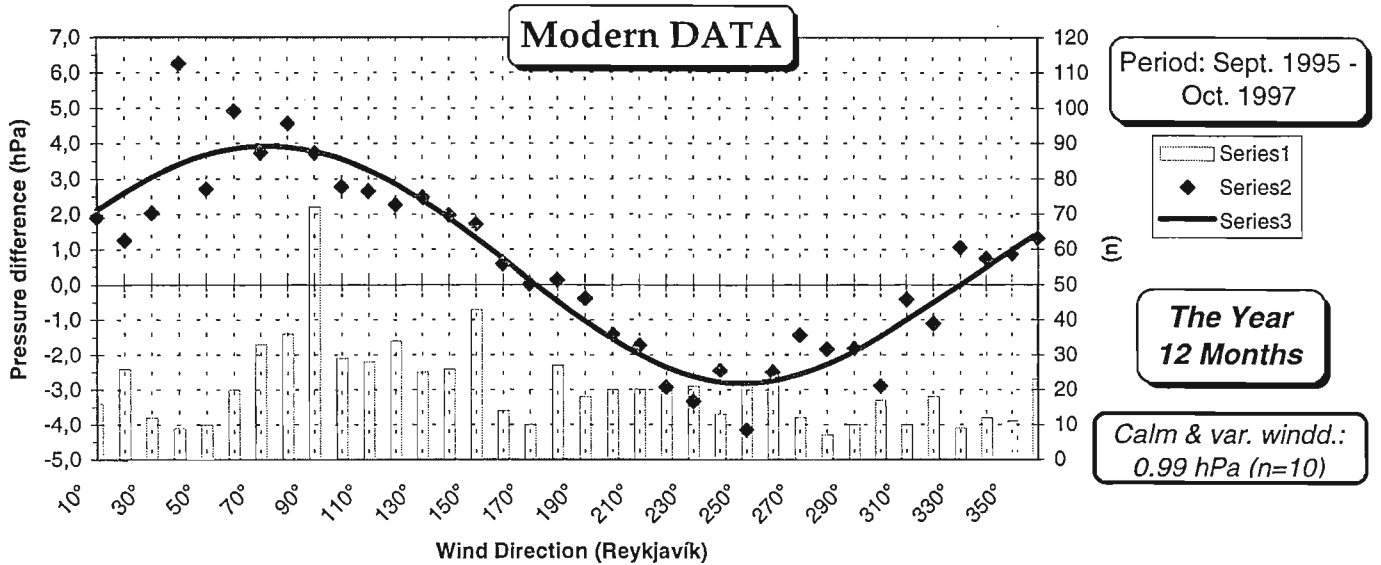
Average pressure difference (V.Sch - SvP) grouped by wind direction observations at Kotmúli.



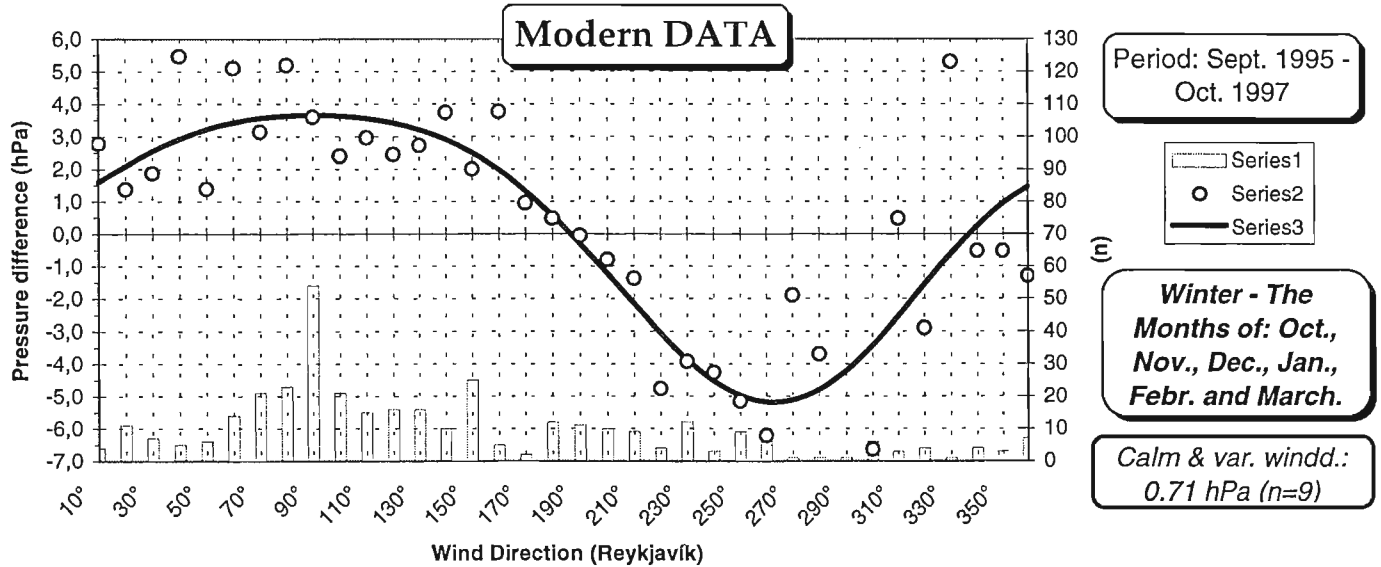
Average pressure difference (V.Sch - SvP) grouped by month.



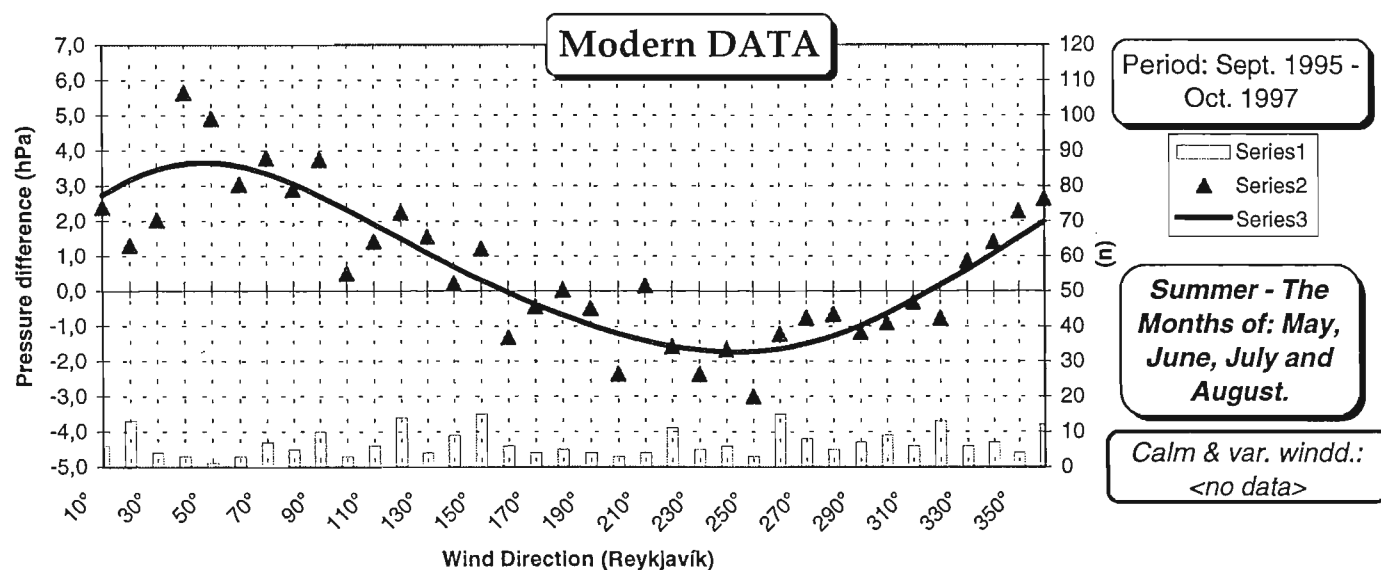
Average pressure difference (422-001) grouped by wind direction observations at Reykjavík.



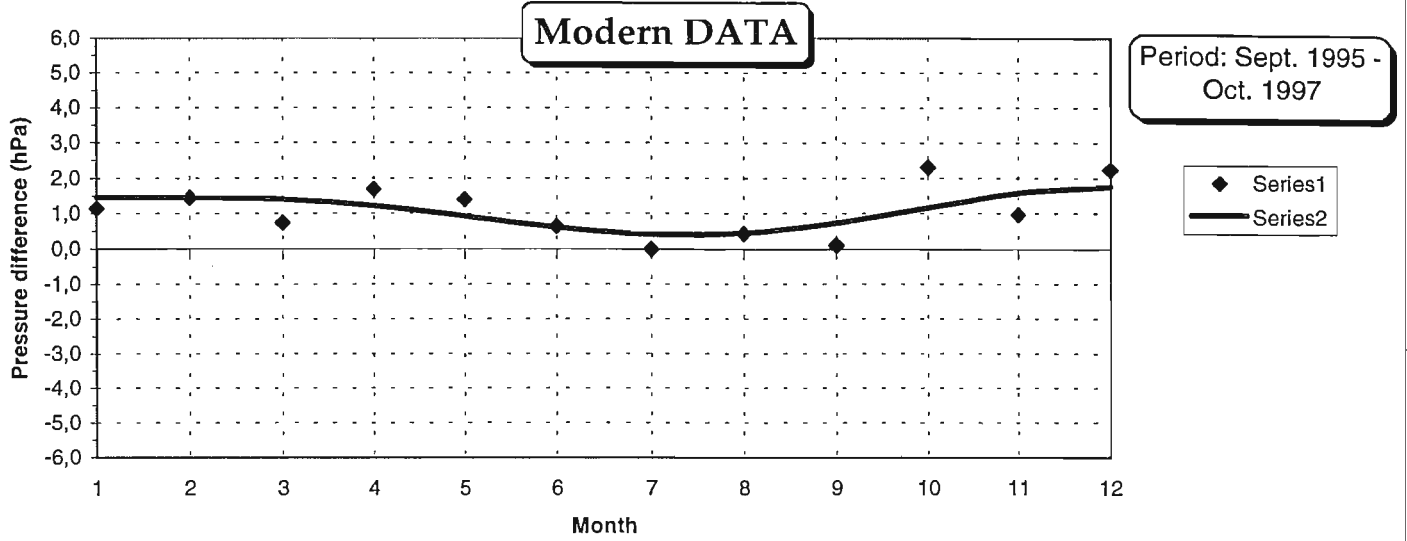
Average pressure difference (422-001) grouped by wind direction observations at Reykjavík.



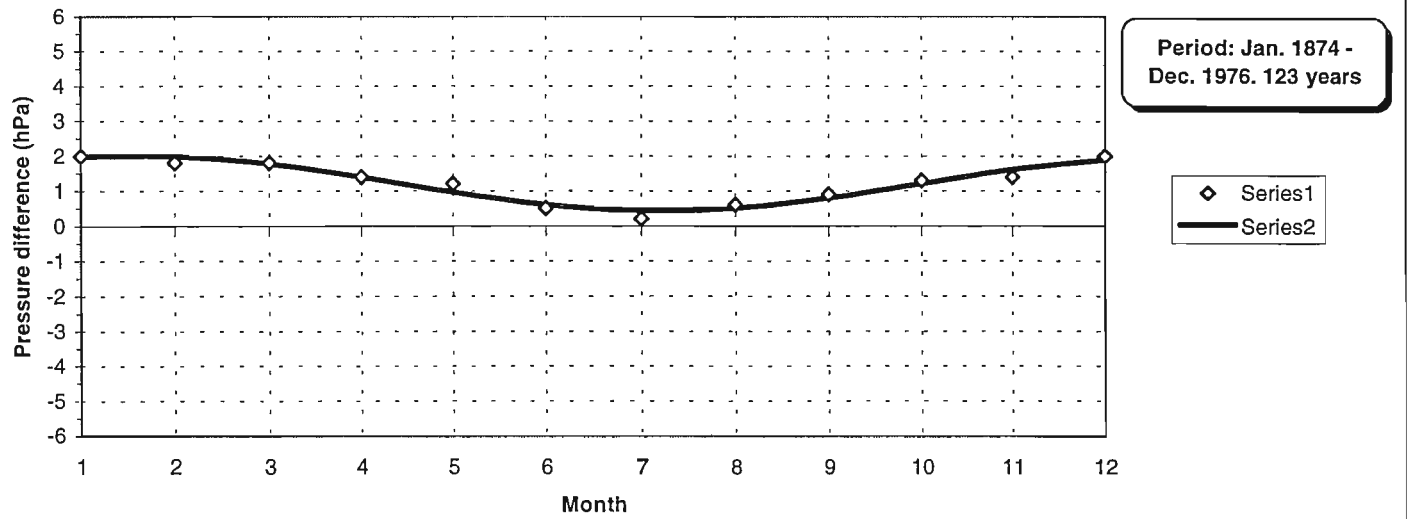
Average pressure difference (422-001) grouped by wind direction observations at Reykjavík.



Average pressure difference (422-001) grouped by month.



Average pressure difference in monthly averages (422 - sw coast series) grouped by month.



Ketilsson - monthly means

stat	(All)
date	(All)

Magnús Ketilsson (Búðardalur) - Pressure Data Statistics
 Statistics only calculated for months with 23 or more observation days

year	Data	month												Grand Total
		1	2	3	4	5	6	7	8	9	10	11	12	
1780	Average									983.7	978.0		982.5	
	StdDev									10.4	11.9		17.7	
	Max									997.0	1001.5		1007.5	
	Min									957.9	950.4		939.9	
	Count									23	28		27	
1781	Average	984.0	972.0	977.2		992.9						977.9		
	StdDev	12.9	17.0	18.0		11.6						13.2		
	Max	1009.0	998.5	1010.5		1010.5						998.5		
	Min	959.4	938.3	938.3		974.4						956.4		
	Count	31	28	31		24						23		
1782	Average	970.1	964.6	974.7	982.4					967.9				
	StdDev	13.5	19.5	17.0	9.2					12.9				
	Max	983.5	989.5	998.5	998.5					983.5				
	Min	938.3	917.3	947.4	959.4					938.3				
	Count	23	28	31	23					26				
1783	Average	963.9	968.4	974.2						957.8	967.7	974.7		
	StdDev	14.5	15.4	11.9						9.6	12.7	11.3		
	Max	992.5	989.5	992.5						971.4	986.5	995.5		
	Min	932.3	932.3	950.4						938.3	944.4	953.4		
	Count	31	25	26						23	25	28		
1784	Average	971.5				967.0						982.0		
	StdDev	18.6				8.2						15.3		
	Max	1001.5				983.5						1019.6		
	Min	942.9				948.9						953.4		
	Count	31				31						24		
1785	Average	977.5	992.0	1000.2									991.1	
	StdDev	15.2	15.8	9.0									14.6	
	Max	1001.5	1019.6	1019.6									1019.6	
	Min	956.4	968.4	983.5									965.4	
	Count	23	23	29									28	
1786	Average	975.9	987.7	991.0		991.0			984.8			990.1	977.6	
	StdDev	23.3	14.5	13.7		9.9			9.3			11.3	20.1	
	Max	1016.5	1010.5	1016.5		1007.5			1001.5			1007.5	1007.5	
	Min	935.3	956.4	968.4		965.4			965.4			968.4	938.3	
	Count	24	28	30		27			28			30	25	
1787	Average	972.9		976.4		993.6			986.0		988.3		987.9	
	StdDev	16.4		18.5		12.3			6.5		10.8		10.7	
	Max	992.5		1007.5		1016.5			998.5		1007.5		1001.5	
	Min	938.3		947.4		968.4			968.4		965.4		956.4	
	Count	25		24		29			24		25		26	
1788	Average	982.2	981.7	989.3	982.5	992.6			978.2	981.2		981.2	997.4	
	StdDev	11.4	11.9	13.4	10.2	8.7			7.4	8.8		16.4	8.9	
	Max	998.5	1009.0	1007.5	1007.5	1007.5			992.5	998.5		1007.5	1013.5	
	Min	953.4	956.4	965.4	965.4	974.4			965.4	968.4		950.4	974.4	
	Count	30	29	23	31	23			29	23		30	31	
1789	Average	994.1	979.7	992.2	986.7	995.0					983.7	997.3	974.0	
	StdDev	10.9	14.8	10.1	8.6	6.4					10.9	13.5	10.7	
	Max	1016.5	1001.5	1007.5	1004.5	1007.5					1010.5	1016.5	1004.5	
	Min	980.5	938.3	965.4	974.4	982.0					968.4	965.4	956.4	
	Count	26	23	31	24	30					24	24	28	

Ketilsson - monthly means

1790	Average	974.6	977.1	980.7	990.8	995.5	987.3	984.1	984.8	979.3	976.6	983.4	973.1	982.1
	StdDev	9.2	15.7	13.4	12.2	7.7	4.6	5.5	7.4	9.3	11.6	11.5	14.6	12.5
	Max	992.5	998.5	1001.5	1007.5	1010.5	995.5	995.5	992.5	995.5	992.5	1001.5	998.5	1010.5
	Min	959.4	941.4	938.3	965.4	983.5	977.4	974.4	962.4	956.4	947.4	956.4	938.3	938.3
	Count	29	29	25	25	28	23	30	31	24	29	30	31	334
1791	Average	959.7	964.1	969.6	998.6	983.3						981.6	980.3	
	StdDev	10.8	11.2	17.0	10.7	14.3						12.8	15.4	
	Max	986.5	989.5	1004.5	1016.5	1013.5						1007.5	1001.5	
	Min	932.3	938.3	935.3	979.0	956.4						947.4	941.4	
	Count	31	28	26	29	30						30	30	
1792	Average	991.2	981.6	977.3	983.0	989.9			990.9		985.8	982.7	971.8	
	StdDev	9.9	11.5	12.0	11.8	8.1			3.8		10.2	9.8	13.1	
	Max	1010.5	998.5	995.5	998.5	1004.5			998.5		1004.5	995.5	995.5	
	Min	971.4	956.4	956.4	962.4	974.4			983.5		968.4	959.4	947.4	
	Count	31	24	26	24	27			28		23	27	31	
1793	Average	982.0	970.1	975.5		986.1		985.7		981.2	975.6			972.2
	StdDev	12.1	11.4	13.6		10.1		5.3		7.7	8.5			15.7
	Max	1004.5	992.5	995.5		1004.5		992.5		992.5	998.5			992.5
	Min	959.4	947.4	950.4		968.4		974.4		968.4	965.4			942.9
	Count	28	28	31		24		27		23	25			31
1794	Average	968.4	965.9	962.2		986.2		985.1	988.4		975.5	982.1	981.6	
	StdDev	14.4	12.6	11.6		8.7		9.0	4.4		10.4	10.5	18.0	
	Max	992.5	986.5	983.5		998.5		995.5	995.5		992.5	1000.0	1010.5	
	Min	938.3	944.4	938.3		968.4		965.4	982.0		956.4	965.4	959.4	
	Count	30	27	31		26		25	24		25	27	28	
1795	Average	997.5	997.2	989.1	989.0	998.4		993.2	982.5		979.8			
	StdDev	13.5	10.0	8.9	11.3	10.7		6.2	4.3		11.6			
	Max	1016.5	1016.5	1001.5	1010.5	1015.0		1001.5	986.5		998.5			
	Min	953.4	968.4	974.4	974.4	974.4		977.4	971.4		960.9			
	Count	25	27	26	23	31		24	28		28			
1796	Average			989.4	983.2	987.5		984.3	974.4	982.0		986.7	991.3	
	StdDev			13.8	12.9	9.7		7.1	7.6	10.2		15.6	11.7	
	Max			1010.5	1004.5	1001.5		995.5	986.5	998.5		1016.5	1007.5	
	Min			959.4	956.4	965.4		974.4	959.4	962.4		959.4	965.4	
	Count			29	28	29		29	31	28		30	31	
Total Average		977.5	976.8	981.2	987.1	989.0	987.3	984.8	981.9	977.0	979.2	983.7	981.7	981.8
Total StdDev		17.4	17.4	16.8	12.1	12.6	4.6	8.2	10.2	13.3	12.6	13.9	16.6	15.2
Total Max		1016.5	1019.6	1019.6	1016.5	1016.5	995.5	1001.5	998.5	998.5	1019.6	1016.5	1019.6	1019.6
Total Min		932.3	917.3	935.3	956.4	948.9	977.4	965.4	938.3	938.3	944.4	947.4	938.3	917.3
Total Count		418	347	419	207	359	23	192	215	121	256	279	347	3183

A comparison of daily pressure values in two series: (Lievog [corr.] morn. obs. and Ketilsson [uncorr.]). Total number of observations: 1510

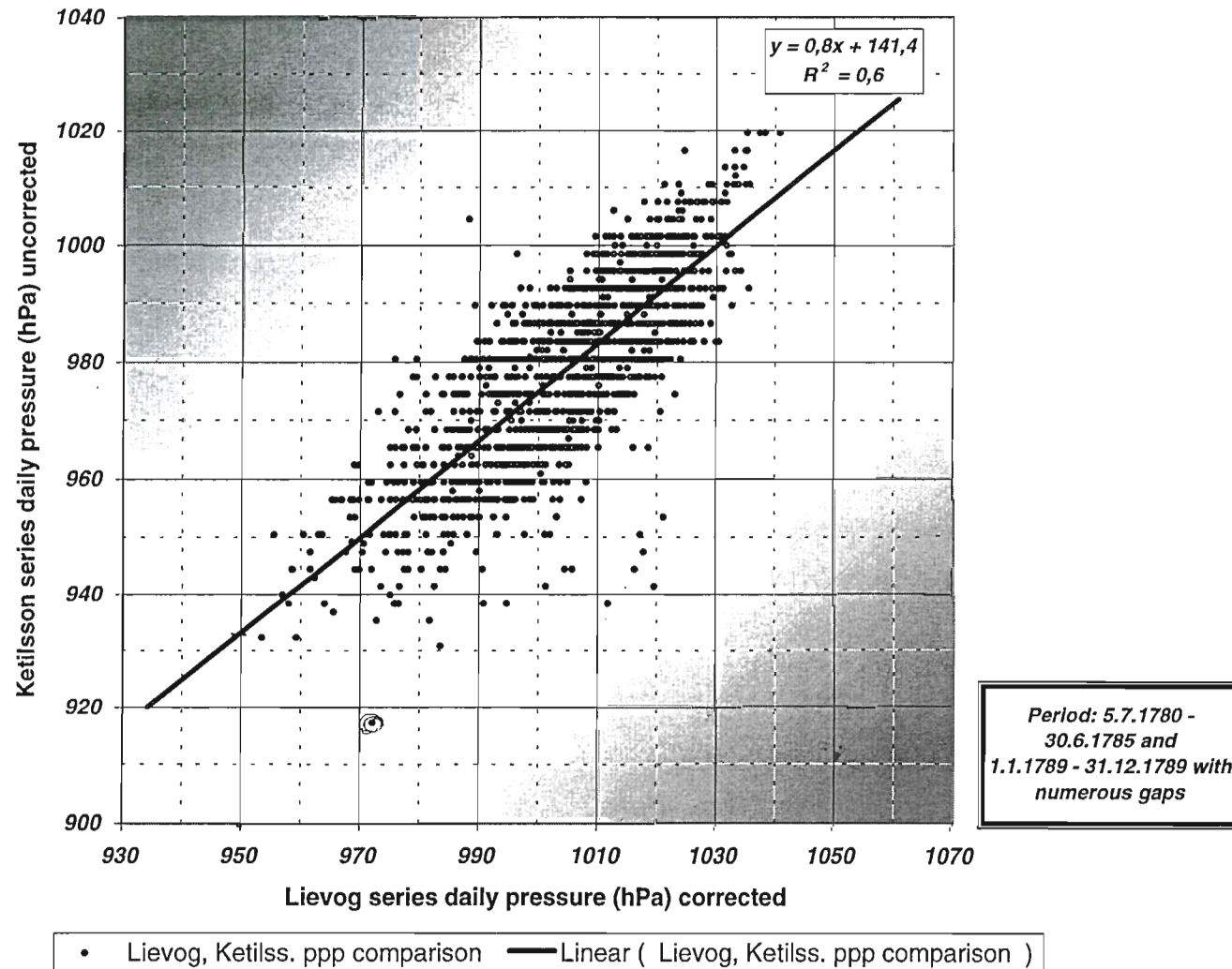
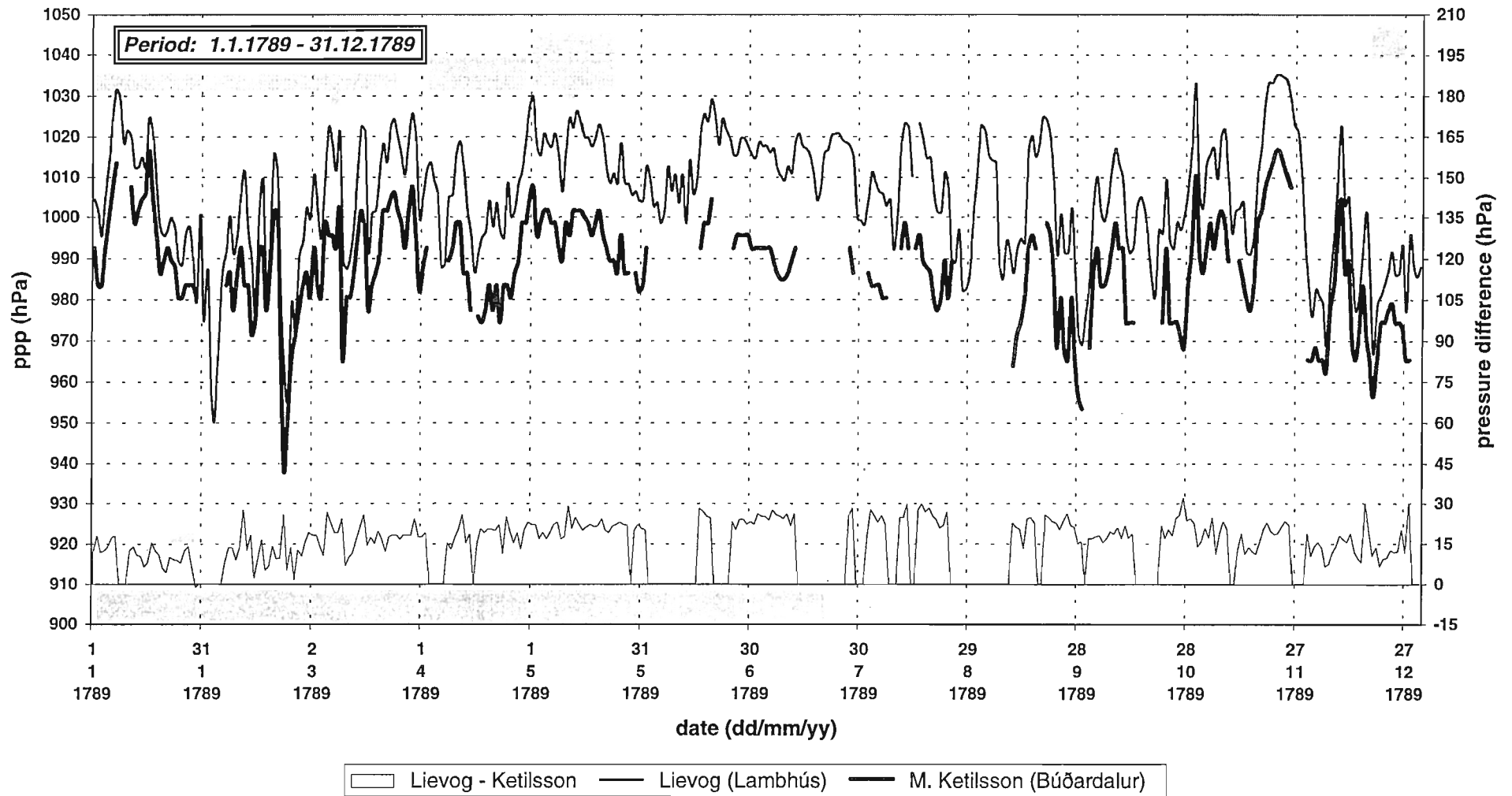


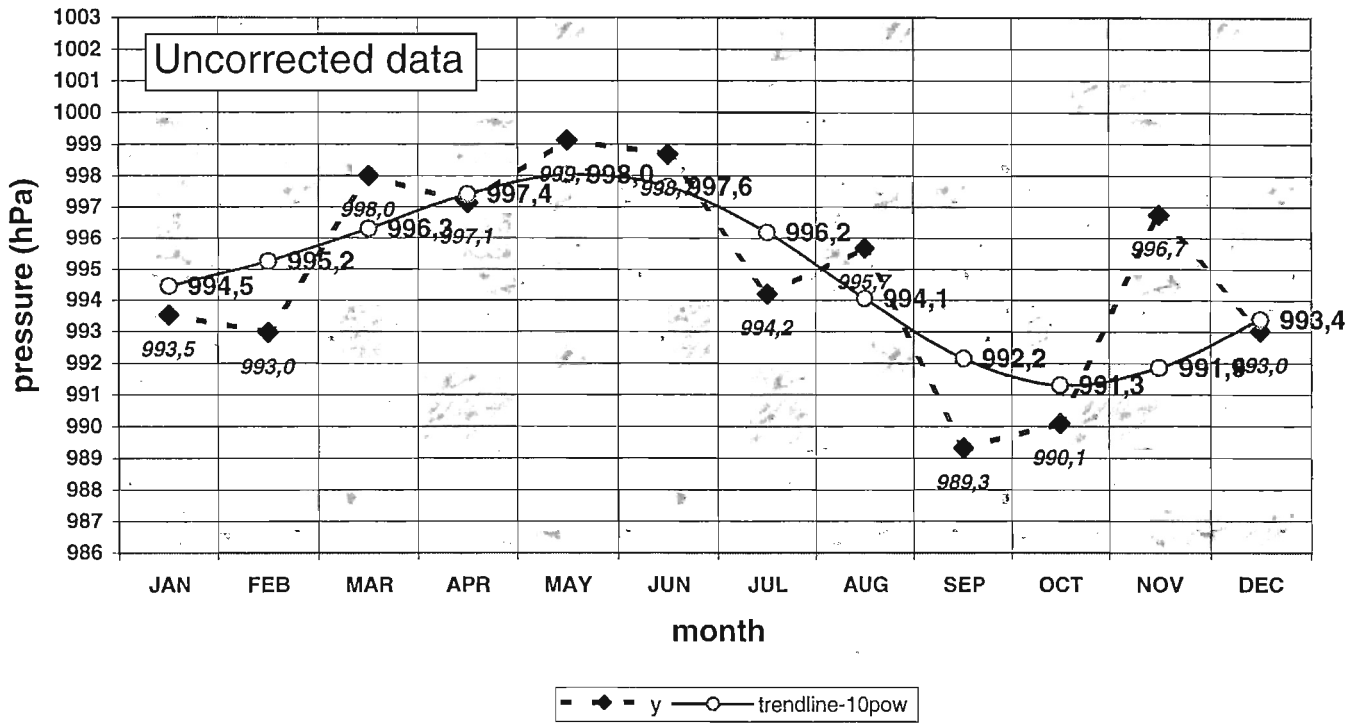
Chart 6

Comparison of daily pressure values in Lievog (corr. [morning obs.]) and Ketilsson (uncorr.) series.

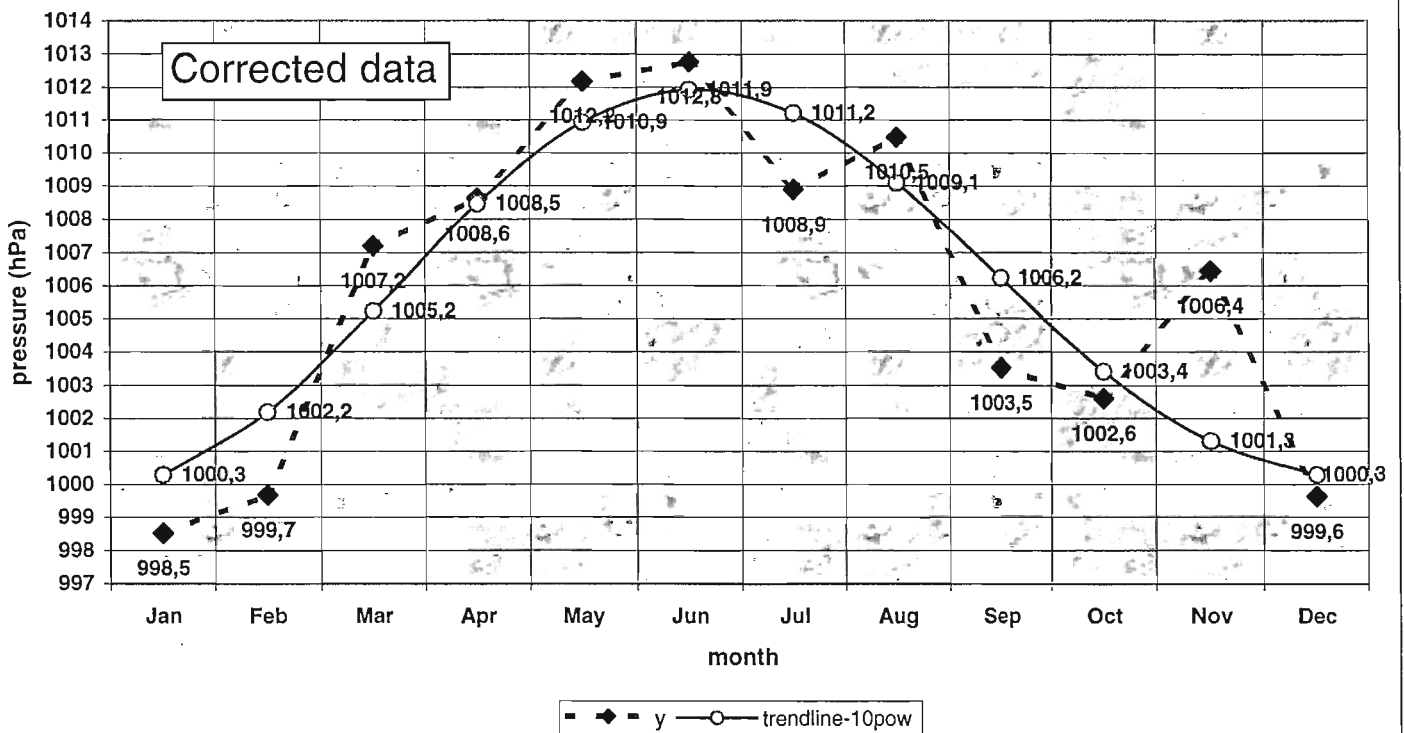


Charts 1

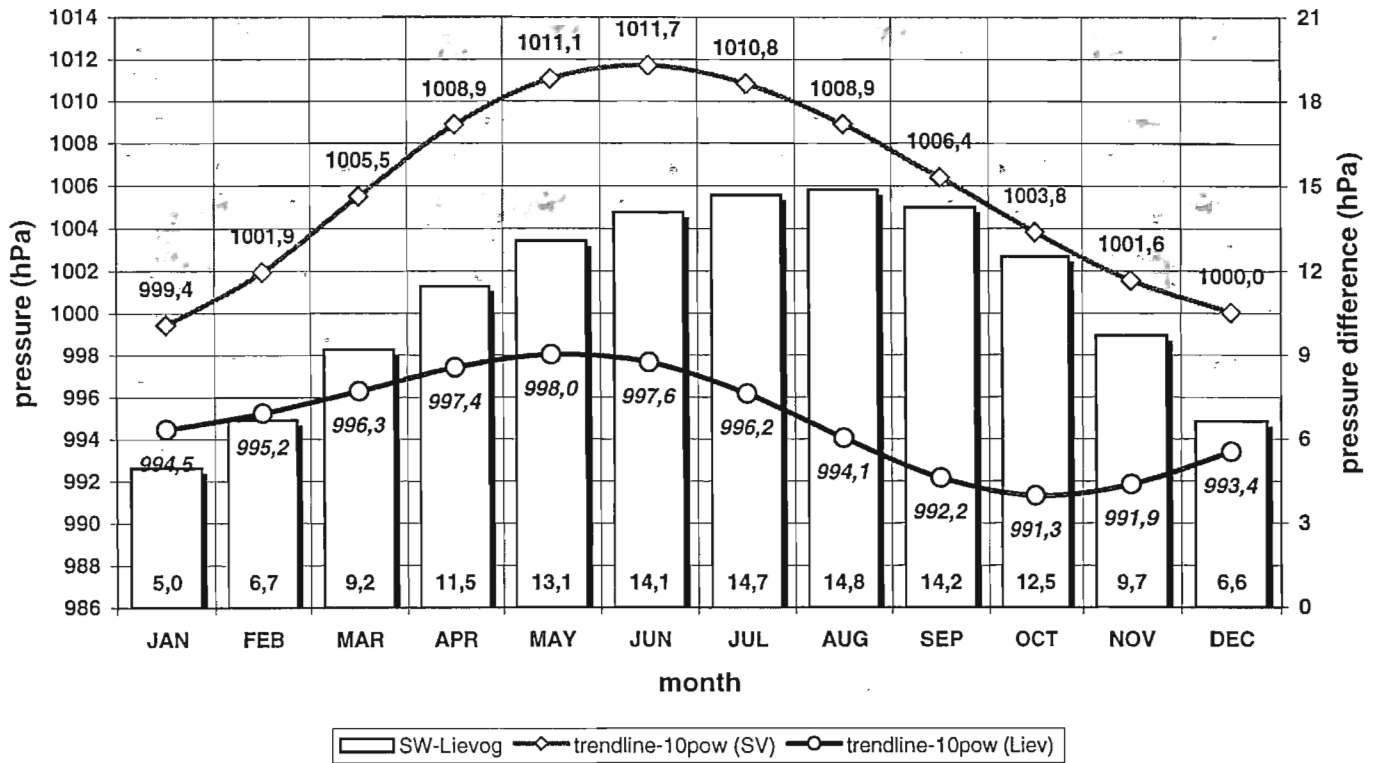
Lievog monthly means (ppp [EC] all observation times 1779-1789) with a 10. degr. polynomial fit



Lievog monthly means (ppp [C1] all observation times 1779-1789) with a 10. degr. polynomial fit



10 degr. polynomial fit for Lievog og Southwest ser. (ppp) with series difference.



Southwest ser. pressure monthly means (period: Jan. 1874 - Dec. 1976) with a 10. degr. polynomial fit

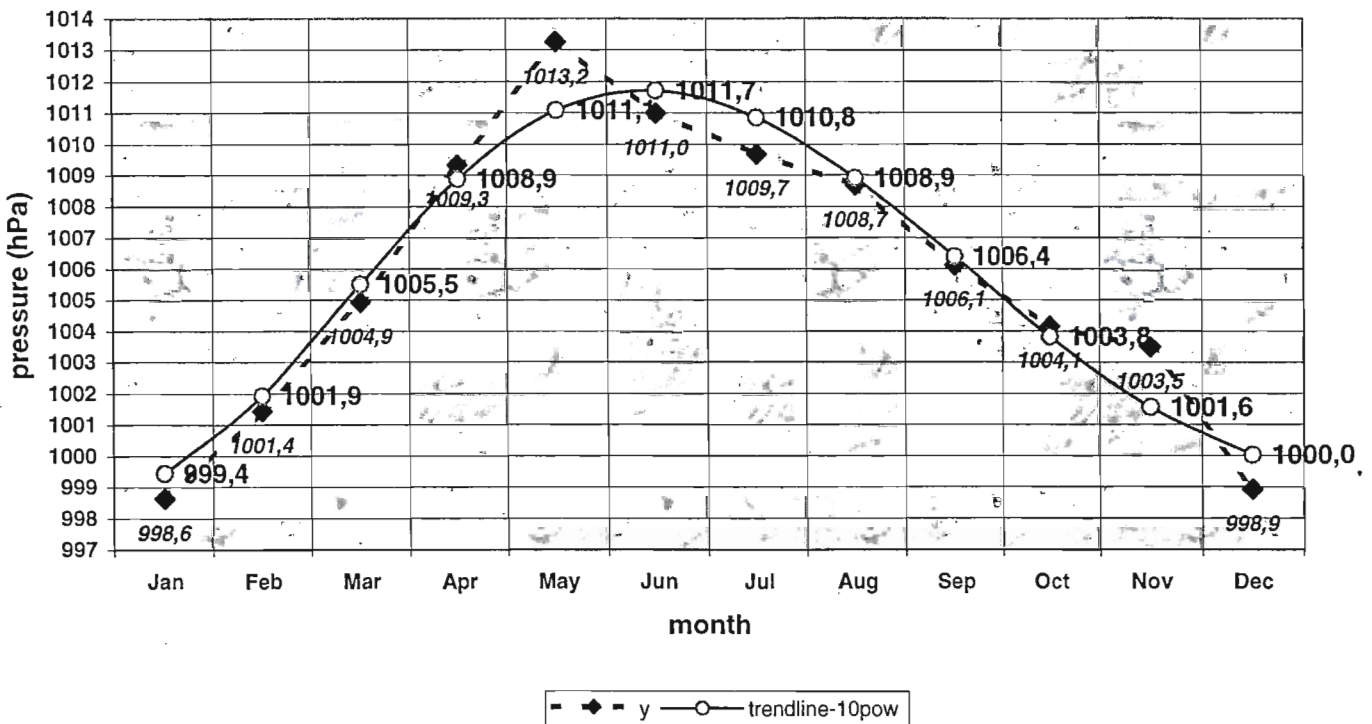


Chart1

A comparison of monthly means (ppp [EC]) in Lievog series (1779-1789) and in Reykjavík (1961-1990)

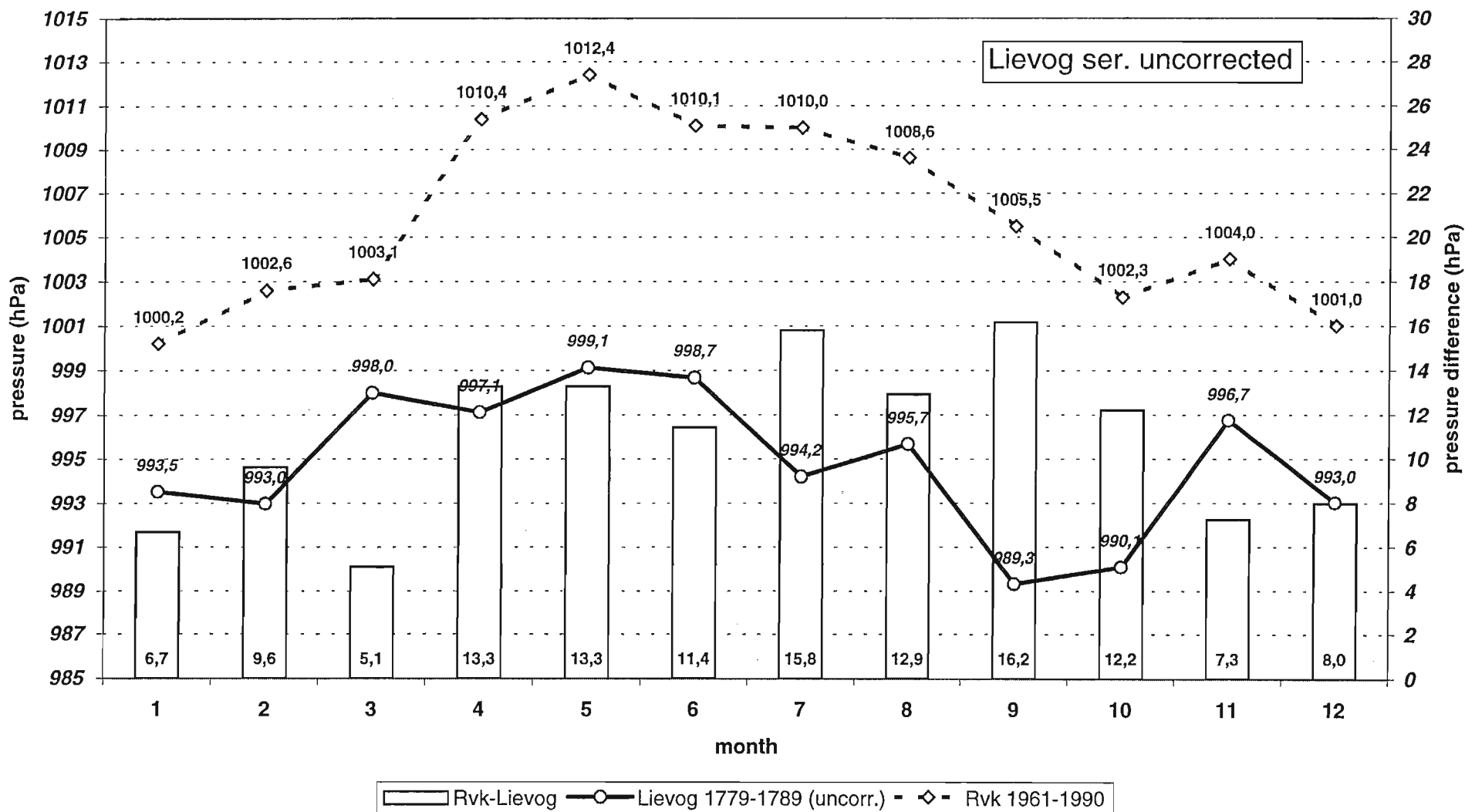
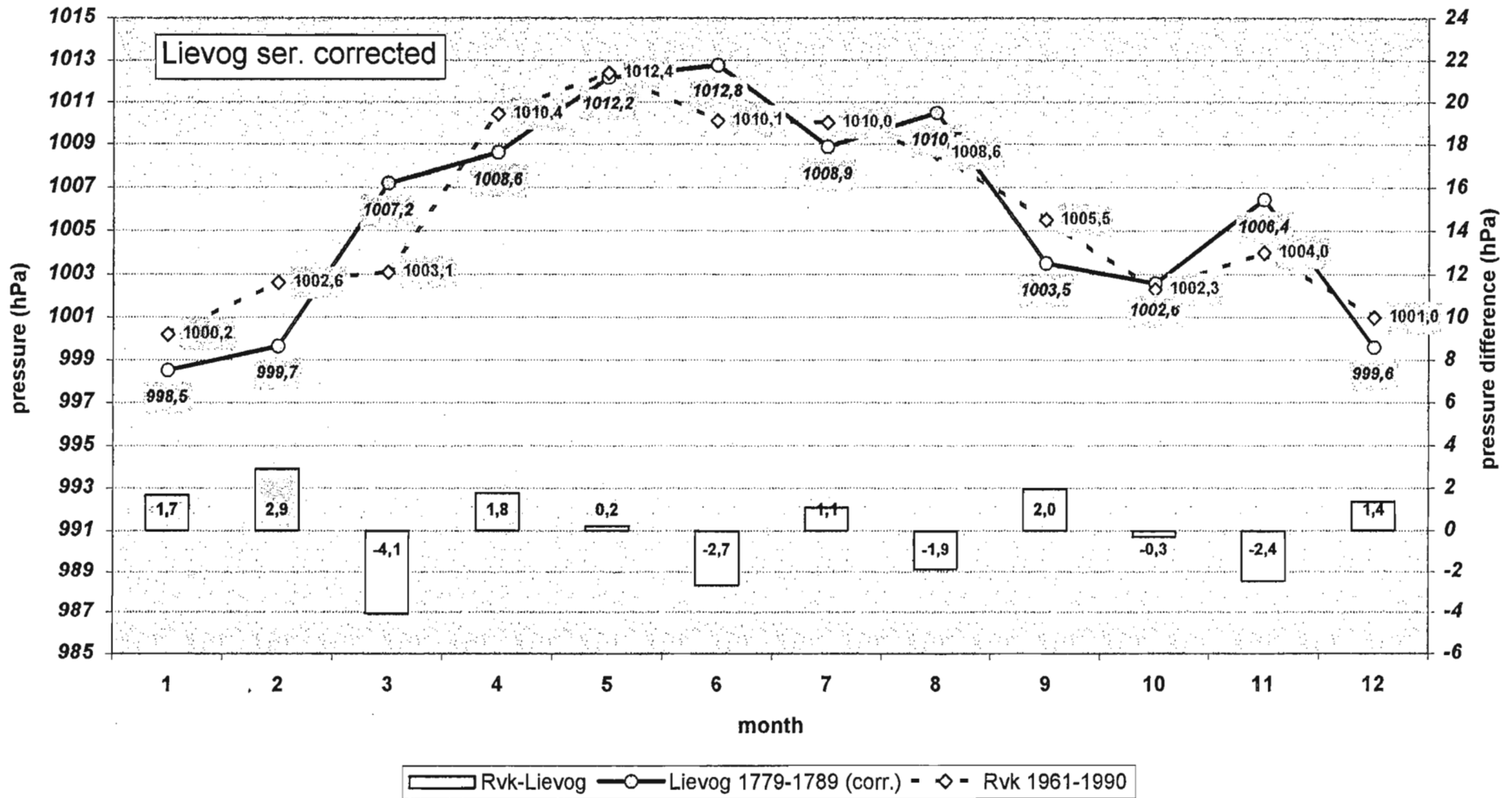


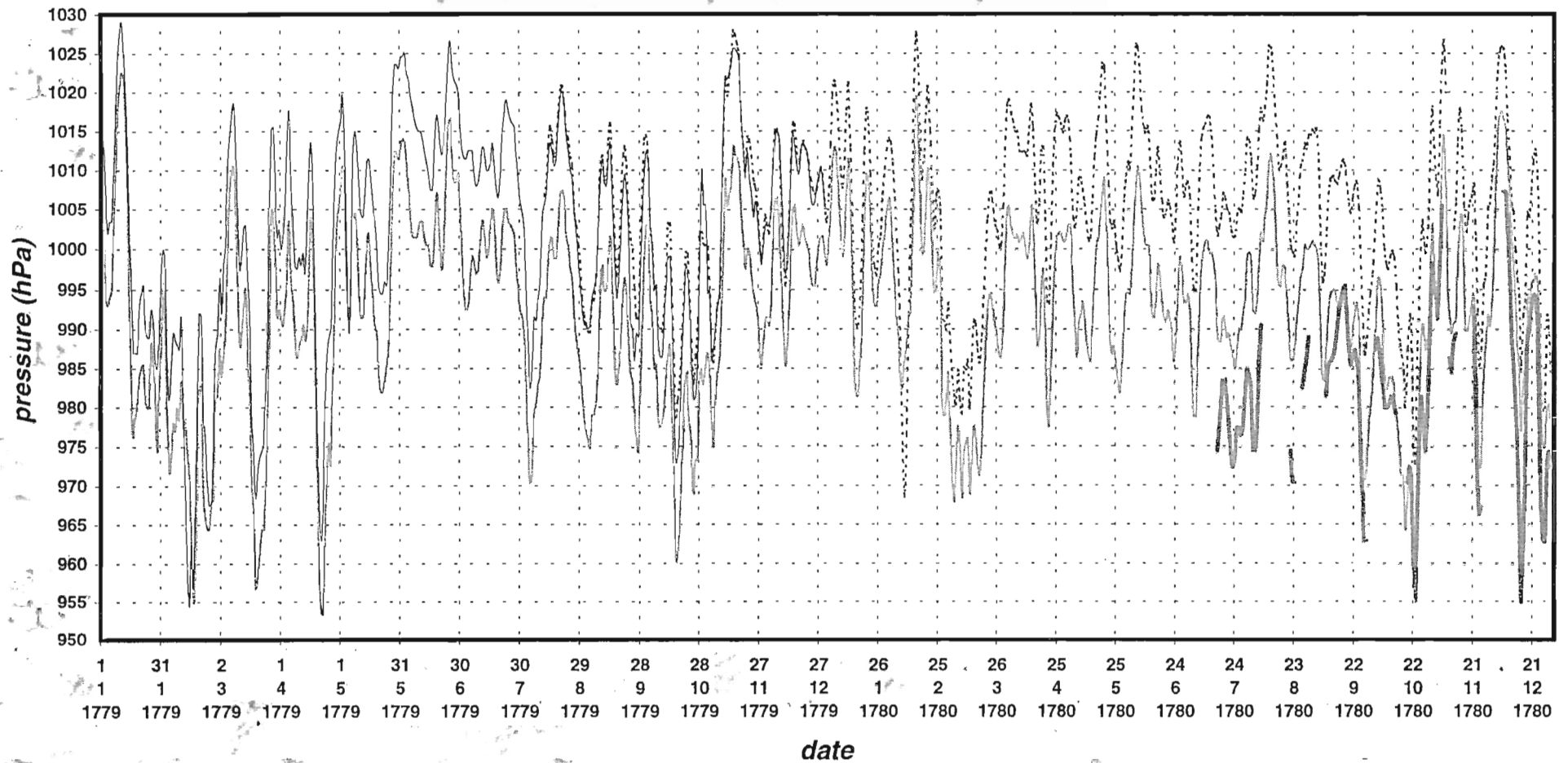
Chart5

A comparison of monthly means (ppp [C1]) in Lievog series (1779-1789) and in Reykjavík (1961-1990)



A comparison of 4 overlapping series: Lievog, Finnsson, Ketilsson and an unknown station. Period: 1.1.1779 - 31.12.1780. Lievog pressure series has been adjusted.

ppp: 3 day running average.



----- ppp (C1) Lievog — ppp (UC) Finnsson — ppp (UC) Unknown — ppp (UC) Ketilsson