

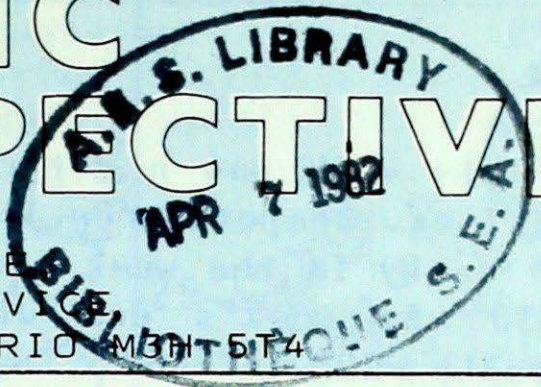


Environment Canada / Environnement Canada

Atmospheric Environment / Environnement atmosphérique

**A WEEKLY REVIEW OF CANADIAN CLIMATE**

# CLIMATIC PERSPECTIVES



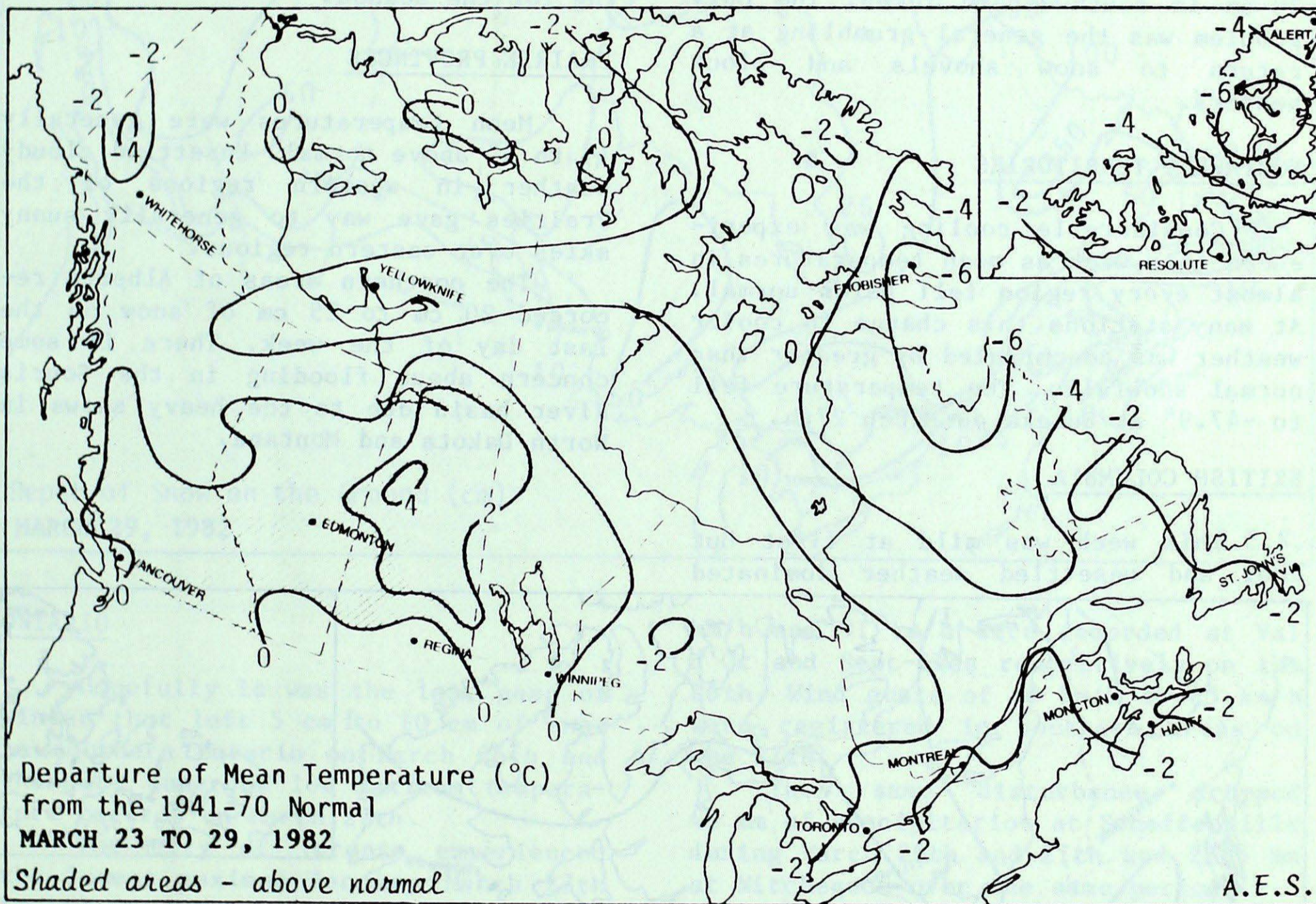
**Canada**

THE CANADIAN CLIMATE CENTRE  
ATMOSPHERIC ENVIRONMENT SERVICE  
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

APRIL 2, 1982

(Aussi disponible en français)

VOL.4 NO.12



**WEATHER HIGHLIGHTS FOR THE PERIOD - MARCH 23 TO 29, 1982**

*Winter makes a brief return*

An outbreak of cold air swept over most of the country during the latter half of the week, bringing a return of winter. Record low temperatures were set in Ontario and the Maritimes and high wind-chill factors were recorded in Quebec. Even Yukoners were starting to complain.

The ice is starting its annual retreat from the Gulf of St. Lawrence. A 60 km lead has opened along the east coast of Newfoundland.

Temperatures varied from 18.7° at Hope, B.C. to -47.9° at Eureka, N.W.T. McInnes Island, B.C. measured 64.6 mm of precipitation.

**NOTE:** The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON

This week saw a return of winter conditions. Temperatures which were  $0^{\circ}$  to  $5^{\circ}$  early in the week dropped to  $-5^{\circ}$  to  $-10^{\circ}$  by week's end with minimums generally  $-20^{\circ}$  to  $-35^{\circ}$ .

The change to colder weather was accompanied by snowfalls of 5 cm to 20 cm in southwestern Yukon. The only problem was the general grumbling at a return to snow shovels and block heaters.

NORTHWEST TERRITORIES

Considerable cooling was experienced this week as mean temperatures in almost every region fell below normal. At many stations this change to cooler weather was accompanied by greater than normal snowfalls. The temperature fell to  $-47.9^{\circ}$  at Eureka on March 27th.

BRITISH COLUMBIA

This week was mild at first but cool and unsettled weather dominated

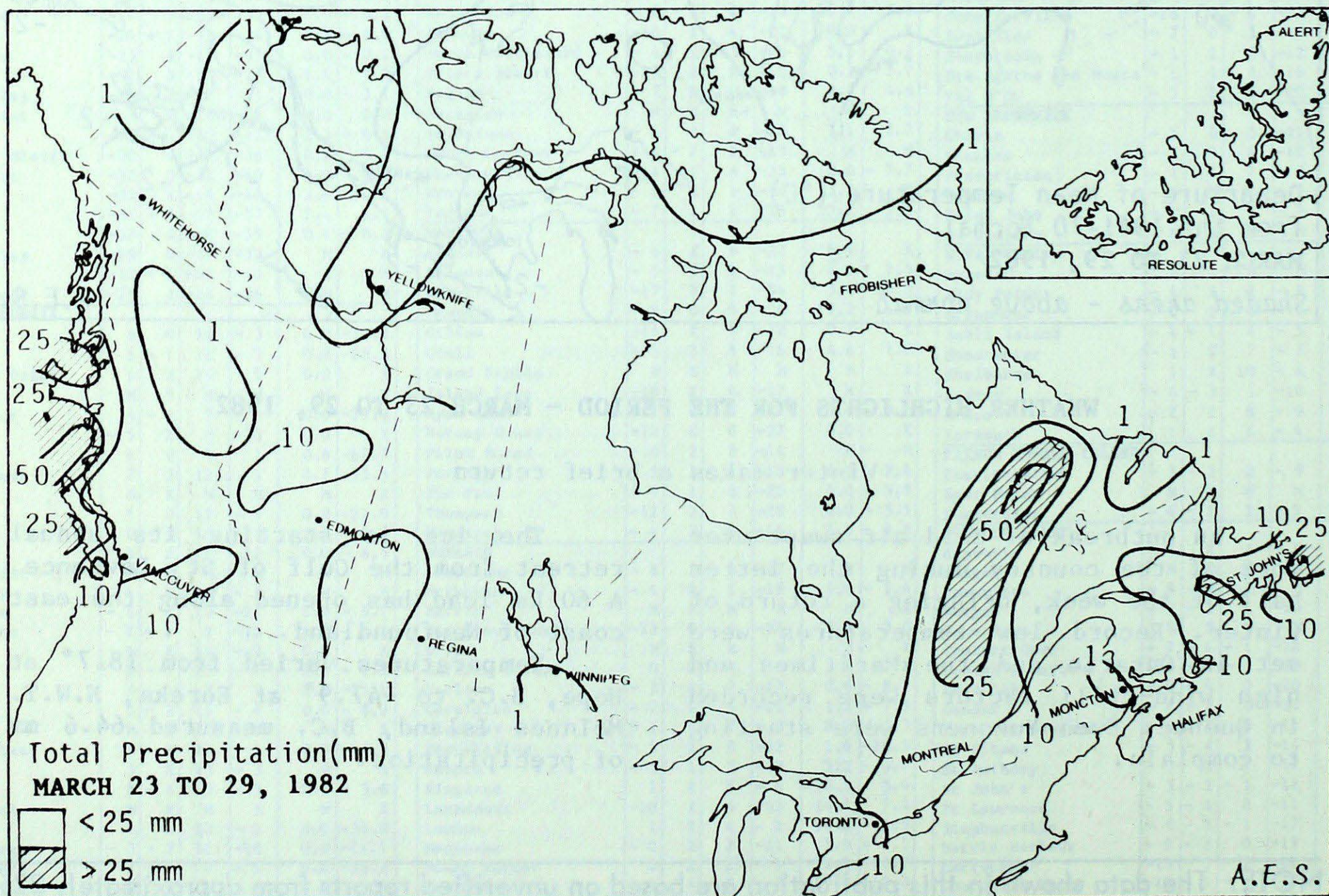
the latter half of the week. Some daily temperature records were set at the beginning of the week. The highest temperature in the country,  $18.7^{\circ}$ , was recorded at Hope on March 25th.

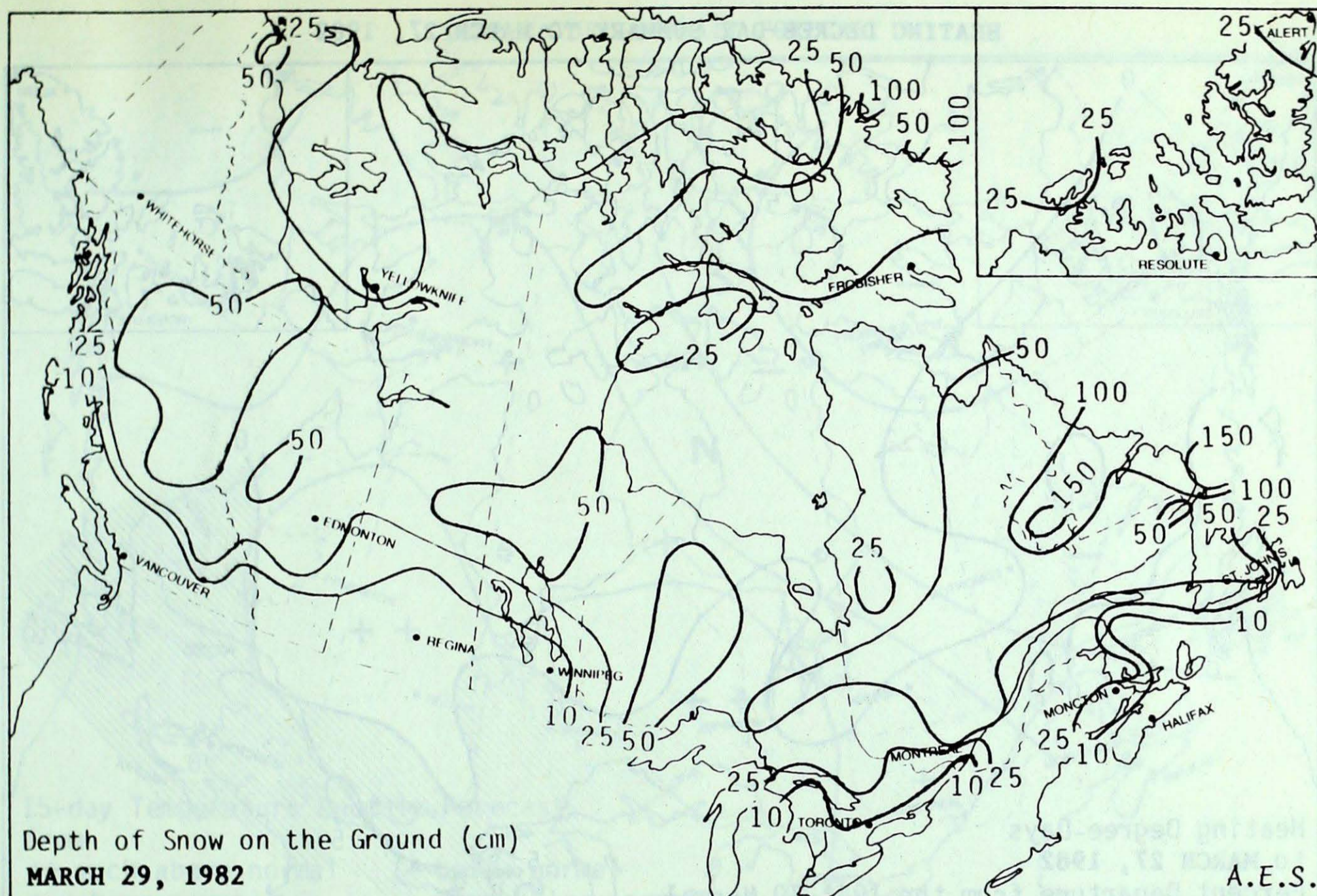
Some flooding is possible at Prince George as 51 cm of snow remains on the ground. Logging is still active in the Fort Nelson area but is finishing for the season.

PRAIRIE PROVINCES

Mean temperatures were generally  $1^{\circ}$  to  $3^{\circ}$  above normal. Unsettled cloudy weather in western regions of the Prairies gave way to generally sunny skies over eastern regions.

The northern areas of Alberta recorded 20 cm to 25 cm of snow on the last day of the week. There is some concern about flooding in the Souris River basin due to the heavy snows in North Dakota and Montana.





### ONTARIO

Hopefully it was the last gasp of winter that left 5 cm to 10 cm of snow in southern Ontario on March 26th and then set numerous low maximum temperature records on March 27th.

The city of Toronto experienced the lowest maximum for any March 27th in 142 years of records as the temperature rose to only  $-6^{\circ}$ . Kingston's maximum was only  $-4^{\circ}$ , breaking the old mark of  $-3^{\circ}$  set in 1896. Cold temperatures then remained through March 28th as Warton's minimum temperature of  $-14^{\circ}$  broke the previous minimum of  $-11^{\circ}$  set in 1959.

### QUEBEC

Quebec experienced a marked cooling between March 26th and 28th as a disturbance passed through and produced strong winds. The winds, combined with the cold temperatures, resulted in high wind chill factors, unusual for this time of year. Wind gusts of 87

km/h and 91 km/h were recorded at Val d'Or and Sept-Iles respectively on the 26th. Wind gusts of 60 km/h to 85 km/h were registered in southern areas on the 27th.

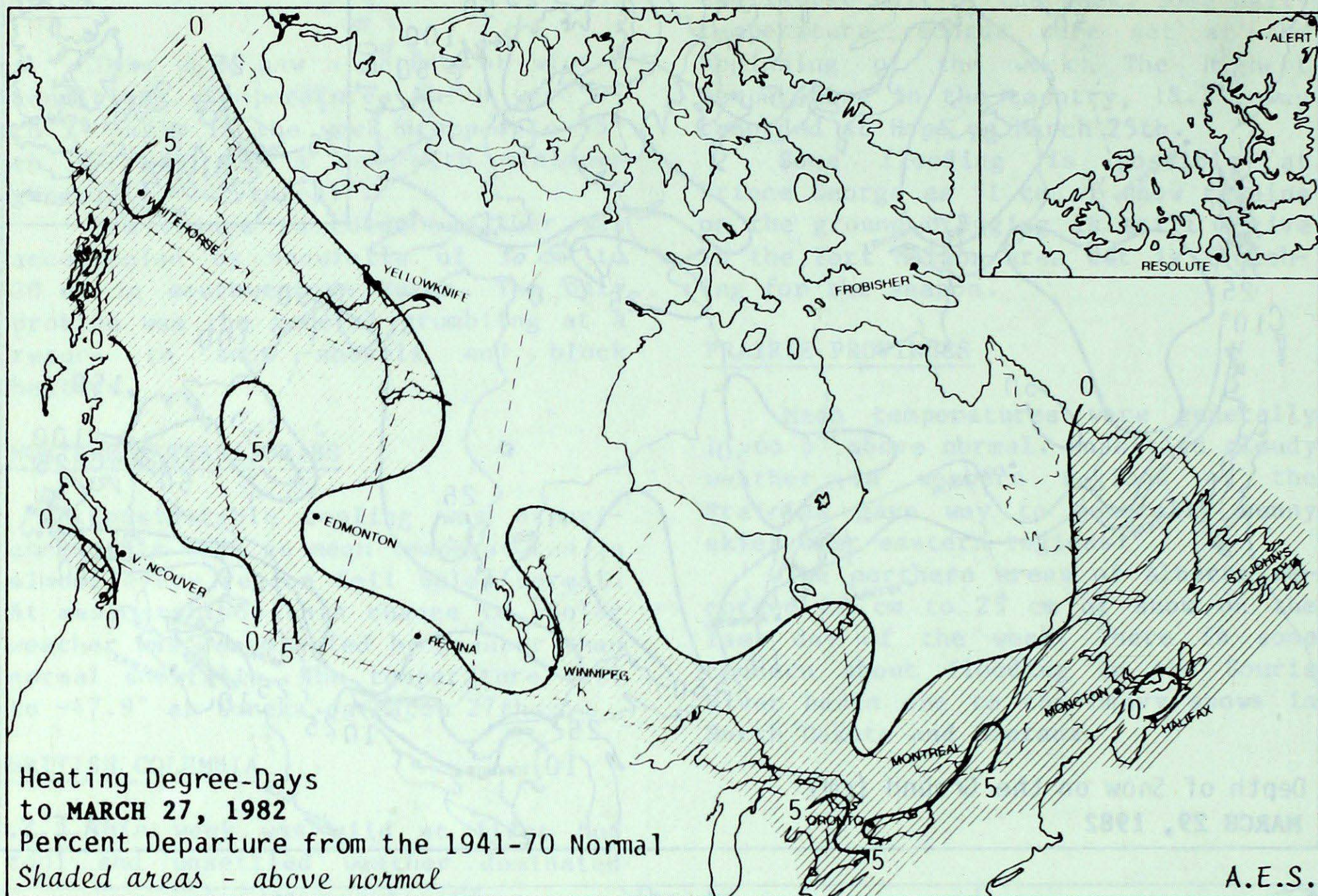
This same disturbance dropped 48 mm of precipitation at Schefferville during March 26th and 27th and 23.5 mm at Nitchequon over the same period.

### ATLANTIC PROVINCES

The Atlantic Provinces enjoyed mild weather for most of the week, but the mercury plunged to record low levels on the 28th in the Maritimes and to near record low levels in Newfoundland the next day. The minimum temperature of  $-15^{\circ}$  recorded at Charlottetown on the 28th broke the previous record of  $-14^{\circ}$  set in 1880 and 1923.

The northwestern half of the Gulf of St. Lawrence is mostly open water. There is a 60 km wide lead of open water along the eastern coast of Newfoundland.

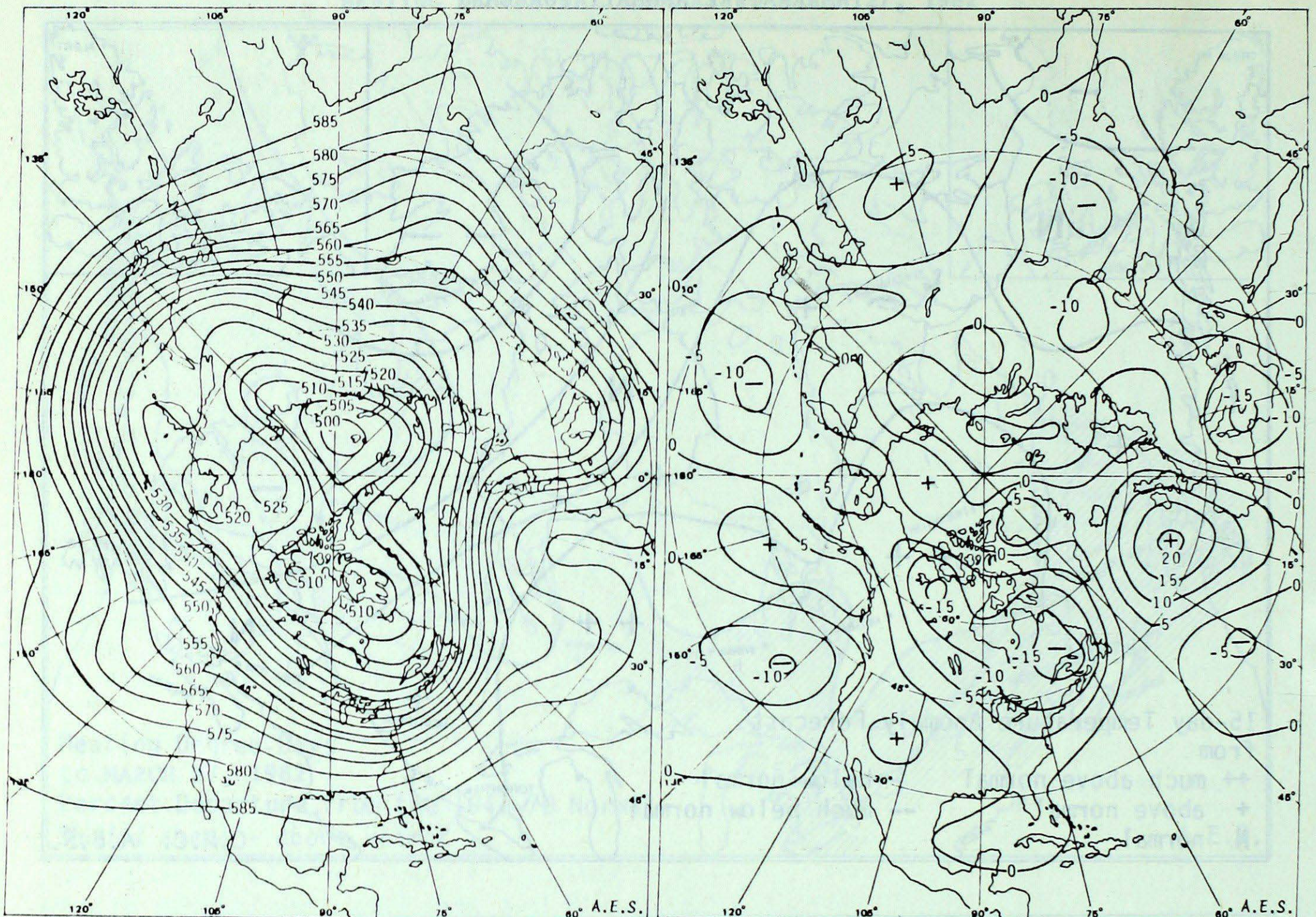
## HEATING DEGREE-DAY SUMMARY TO MARCH 27, 1982



STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	1384.5	45.5	9367.5	-323.5	97
Inuvik	1111.5	-51.5	7960.0	-263.0	97
Whitehorse	732.5	24.5	6130.0	393.0	107
Vancouver	344.5	11.5	2396.0	-36.0	99
Edmonton Mun	647.0	-3.0	4729.5	-30.5	99
Calgary	632.5	19.5	4577.0	168.0	104
Regina	755.5	22.5	5191.5	127.5	103
Winnipeg	717.0	-9.0	5028.5	-23.5	100
Thunder Bay	684.0	15.0	4908.0	143.0	103
Windsor	489.5	25.5	3368.5	299.5	110
Toronto	561.0	38.0	3743.0	308.0	109
Ottawa	594.5	6.5	4157.5	146.5	104
Montreal	581.0	17.0	4096.0	272.0	107
Quebec	632.0	16.0	4451.0	196.0	105
Saint John, N.B.	573.5	2.5	3937.0	103.0	103
Halifax	522.0	8.0	3310.5	85.5	103
Charlottetown	587.5	6.5	3706.0	47.0	101
St. John's, Nfld.	585.5	28.5	3644.0	40.0	101



## ATMOSPHERIC CIRCULATION



7-day Mean 50 kPa Height (dam)  
MARCH 22 TO 28, 1982

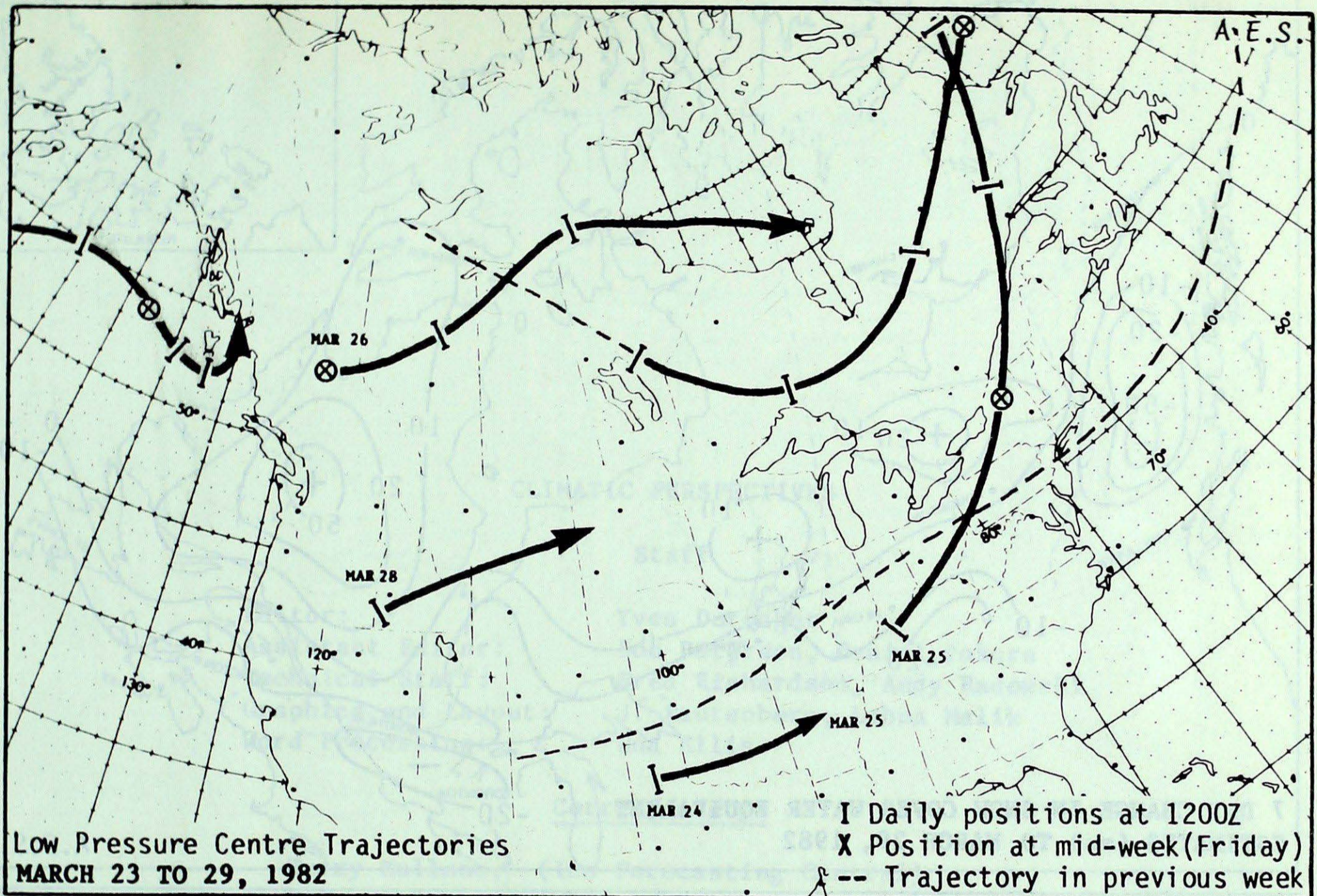
7-day Mean 50 kPa Height Anomaly  
(5 dam intervals)  
MARCH 22 TO 28, 1982

Large amplitude waves progressed slowly eastwards across the continent. During the latter half of the period major troughs controlled the weather regime over both the western and eastern parts of the country; needless to say, weather conditions were unsettled in these areas. A tropospheric ridge was predominant over the Canadian prairies and central plains. Due to averaging these features are not depicted well on the seven day mean charts.

The few weather systems that crossed the continental interior were disorganized. Many of these converged on Labrador.

One disturbance which formed in the American south during the first half of the period tracked northeastward and developed rapidly as it crossed the lower great lakes basin. High winds and significant precipitation were the result; a large portion of the precipitation fell as snow. In the wake of this system a strong high pressure cell associated with very cold Arctic air swept southeastwards from the Northwest Territories. As a result numerous low temperature records were set across Ontario, Quebec and the Maritimes during the latter part of the period.

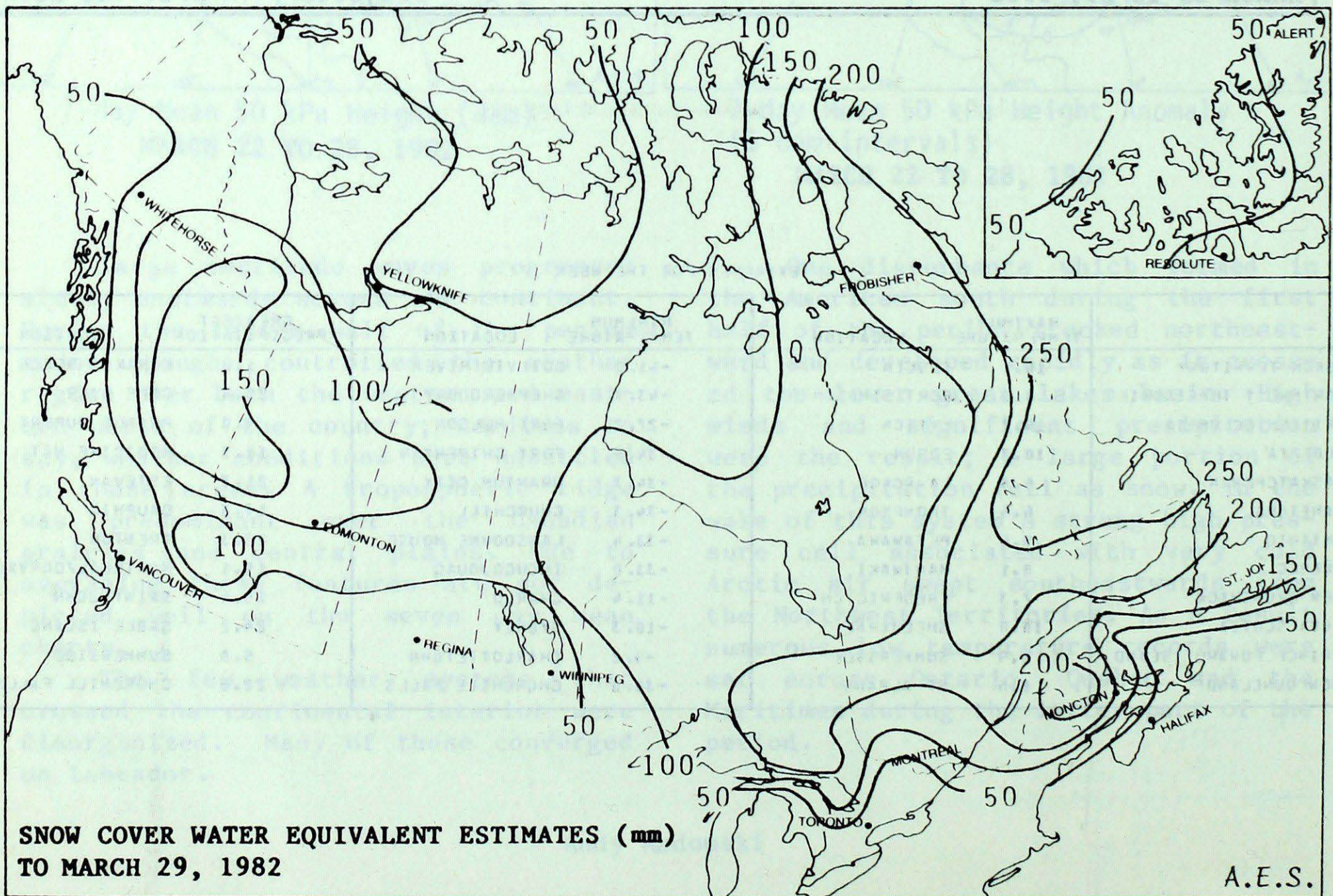
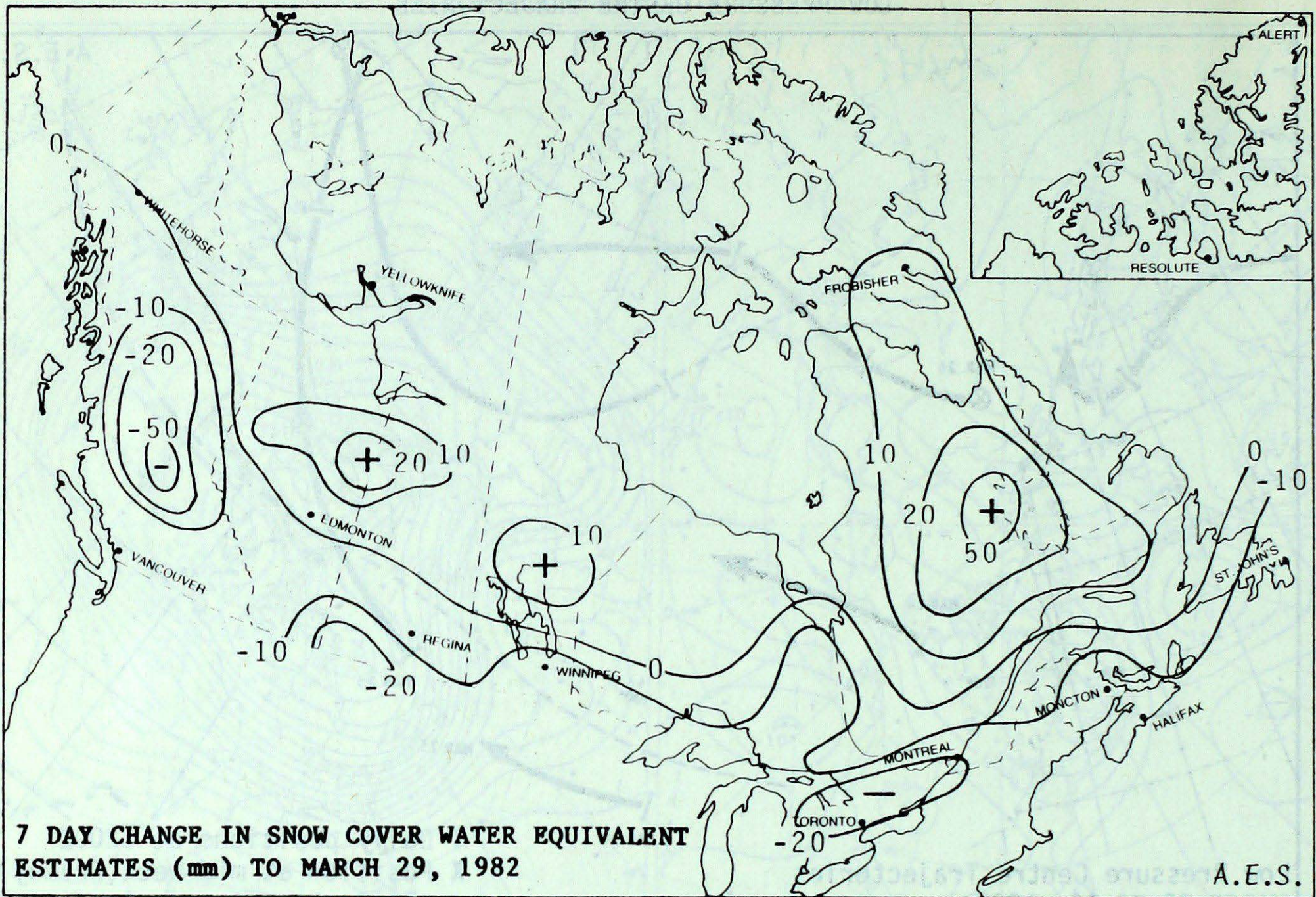
## LOW PRESSURE CENTRE TRAJECTORIES



## EXTREMES FOR THE WEEK

	MAXIMUM TEMPERATURE	LOCATION	MINIMUM TEMPERATURE	LOCATION	GREATEST PRECIPITATION	LOCATION
YUKON TERRITORY	10.1	TESLIN	-41.0	OGILVIE RIVER	1.0	KOMAKUK BEACH
NORTHWEST TERRITORIES	8.9	FORT SIMPSON	-43.7	SHEPHERD BAY	20.4	CAPE DYER
BRITISH COLUMBIA	14.7	LYTTON	-27.2	FORT NELSON	9.0	PRINCE RUPERT
ALBERTA	10.3	EDSON	-34.5	FORT CHIPEWYAN	11.3	MEDICINE HAT
SASKATCHEWAN	6.8	LA Ronge	-34.7	URANIUM CITY	21.7	ESTEVAN
MANITOBA	6.6	THOMPSON	-34.3	CHURCHILL	17.3	DAUPHIN
ONTARIO	9.4	PETAUAWA	-33.4	LANSDOWNE HOUSE	23.3	TRENTON
QUEBEC	8.1	MANIWAKI	-33.0	INCUCOJOUAC	19.1	MONTREAL/DORVAL
NEW BRUNSWICK	7.3	FREDERICTON	-11.4	CHARLO	19.4	SAINT JOHN
NOVA SCOTIA	10.0	SHELBURNE	-10.3	SYDNEY	24.2	SABLE ISLAND
PRINCE EDWARD ISLAND	1.9	SUMMERSIDE	-9.2	CHARLOTTETOWN	5.0	SUMMERSIDE
NEWFOUNDLAND	1.6	ST ALBANS	-30.0	CHURCHILL FALLS	22.6	CHURCHILL FALLS

SEASONAL MAPS





## CLIMATIC PERSPECTIVES

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TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. MARCH 30, 1982

Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
<b>YUKON</b>							Smithers	0	0	8	-10	1.4	-4.1	Petawawa	-3	X	10	-16	13.0	X
Burwash	-14	-5	-1	-32	5.3	4.5	Stewart	3	X	10	-5	M	X	Pickle Lake	-9	X	6	-32	4.6	-2.6
Dawson	-11	-2	5	-32	0.0	-2.9	Terrace	3	0	10	-3	14.6	-3.4	Red Lake	-6	-1	6	-25	1.9	-1.9
Faro	M	X	M	M	M	X	Vancouver	7	0	15	0	9.7	-7.8	Simcoe	M	M	10P	-5P	M	M
Komakuk Beach	-25	0	-18	-34	0.0	-0.8	Victoria	6	-1	14	-2	0.8	-11.8	Sioux Lookout	-6	-1	6	-24	1.4	-7.1
Mayo A	-8	-1	5	-23	0.8	-1.1	Williams Lake	1	0	11	-9	2.4	-2.0	Sudbury	-6	-1	4	-20	6.5	-4.5
Shingle Point	-24	-1	-13	-38	2.7	0.5	<b>ALBERTA</b>							Thunder Bay	-5	-2	6	-19	5.1	-5.6
Tealin	M	X	5P	-21P	M	X	Banff	-1	1	13	-13	M	M	Timmins	-7	0	6	-23	3.0	-10.1
Watson Lake	-7	0	4	-16	1.4	-3.6	Calgary	-1	1	8	-10	4.1	-0.7	Toronto	-1	-3	8	-11	7.0	-4.3
Whitehorse	-6	-1	3	-23	8.2	5.2	Cold Lake	-3	2	3	-15	1.1	-3.2	Trenton	-2	-4	9	-13	11.4	-4.5
<b>NORTHWEST TERRITORIES</b>							Coronation	-3	0	4	-14	0.0	-3.5	Upsala	M	X	M	M	M	X
Cape Parry	-28	-2	-18	-36	1.4	0.1	Edmonton Intl	-3	2	6	-13	1.4	-1.2	Wawa	-7	X	4	-22	1.0	X
Cape Young	-27	0	-17	-35	0.0	-0.7	Edmonton Namao	-3	0	3	-12	3.3	0.5	Warton	-2	-1	6	-14	1.4	-12.7
Clinton Point	-25	0	-12	-34	0.0	-0.9	Edson	-2	2	5	-11	10.6	3.8	Windsor	1	-3	10	-8	5.6	-10.2
Contwoyto Lake	M	M	M	M	M	M	Fort Chipewyan	-10	0	2	-29	3.6	-1.1	<b>QUÉBEC</b>						
Coppermine	-25	0	-11	-38	0.8	-1.5	Fort McMurray	-5	1	5	-19	21.0	17.5	Bagotville	-6	-3	11	-24	10.2	-3.6
Fort Reliance	-20	-2	-5	-31	3.4	0.2	Grande Prairie	-4	-1	3	-17	9.7	5.2	Bale Comeau	-7	-3	5	-21	5.3	-14.6
Fort Simpson	-15	-2	5	-34	6.9	2.6	High Level	-8	-1	3	-19	1.2	-3.8	Blanc Sablon	-6	-2	4	-22	M	M
Fort Smith	-11	-1	-1	-28	2.4	-0.1	Jasper	1	1	11	-8	3.2	-1.0	Border	M	M	M	M	M	M
Hay River	-14	-2	1	-26	0.2	-3.9	Lac La Biche	M	X	M	M	M	X	Chevery	M	X	M	M	M	X
Inuvik	-24	0	-12	-42	1.4	-2.7	Lethbridge	-1	-1	8	-9	3.9	-1.0	Chibougamau	M	X	6P	-28	M	X
Lady Franklin Point	-28	0	-19	-37	0.0	-0.1	Medicine Hat	0	-1	8	-10	1.0	-3.0	Gaspé	-5	X	8	-19	4.8	X
Nicholson Peninsula	-28	-3	-15	-36	7.0	5.8	Peace River	-5	0	6	-16	3.6	0.3	Grindstone Island	-4	-2	3	-14	2.6	-11.8
Norman Wells	-15	0	2	-32	6.6	3.6	Red Deer	-2	1	5	-10	2.2	-1.5	Inoucdjouac	-22	-5	-8	-32	5.2	2.4
Port Radium	M	X	M	M	M	X	Rocky Mountain House	-2	0	5	-13	4.7	0.0	Kuujuuaq	-21	-6	-5	-29	9.8	2.1
Robertson Lake	M	X	M	M	M	X	Slave Lake	-3	1	4	-15	13.8	8.1	Lac Eon	M	X	M	M	M	X
Tuktoyaktuk	-27	-2	-17	-39	3.6	2.7	Vermilion	-4	1	3	-16	0.0	-2.8	Grande Riviere	-16	X	3	-35	8.2	X
Yellowknife	-17	-3	-3	-32	0.6	-2.0	Whitecourt	-2	1	4	-13	7.9	3.3	Maniwaki	-4	-1	7	-18	14.2	0.3
Baker Lake	-27	-2	-13	-36	4.6	2.3	<b>SASKATCHEWAN</b>							Matagami	-8	X	7	-26	M	X
Coral Harbour	-26	-4	-16	-35	2.8	-0.7	Broadview	-4	X	4	-13	4.8	X	Mont-Joli	-3	-1	12	-20	4.7	-10.6
Ennadai Lake	M	M	M	M	M	M	Buffalo Narrows	-5	5	1	-21	M	M	Montréal	-1	-2	8	-15	18.0	0.9
Jenny Lind Island	-30	-1	-19	-38	0.8	0.2	Collins Bay	-12	X	3	-24	4.4	X	Natashquan	-7	-3	2	-19	12.8	-4.1
Pelly Bay	-30	-1	-20	-39	0.2	-0.8	Cree Lake	-9	X	4	-22	6.1	X	Nitchequon	-16	-6	2	-35	31.0	-21.4
Rankin Inlet	-27	X	-12	-35	1.6	X	Eastend Cypress	M	X	M	M	M	X	Parent	M	X	M	M	M	X
Shepherd Bay	-30	-1	-17	-39	2.0	1.2	Eatevan	-4	-2	3	-14	1.4	-3.2	Port Menier	M	M	M	M	M	M
Alert	-35	-2	-29	-40	M	M	Hudson Bay	-4	2	6	-19	M	M	Poste-de-la-Baleine	-17	-4	0	-32	M	M
Broughton Island	-27	-4	-21	-34	0.0	-0.9	Kindersley	-2	1	7	-10	0.0	-1.1	Québec	-5	-3	7	-21	17.4	-0.6
Cape Dorset	-26	X	-14	-36	M	X	La Ronge	-6	3	4	-18	4.1	-2.2	Rivière du Loup	M	M	M	M	M	M
Cape Dyer	-25	-3	-16	-33	1.8	-4.8	Meadow Lake	-4	X	2	-12	0.0	X	Roberval	-7	-3	8	-26	34.8	20.5
Cape Hooper	-27	-3	-20	-32	0.8	-1.1	Moose Jaw	-3	-1	5	-15	3.2	-0.9	Schefferville	-17	-5	1	-31	63.2	52.6
Clyde	-27	-3	-21	-33	0.6	-0.7	Nipawin	-6	X	1	-19	7.4	X	Sept-Îles	-8	-3	4	-25	1.7	-19.9
Dewar Lakes	-27	-1	-20	-32	0.0	-1.3	North Battleford	-3	2	5	-13	0.0	-3.6	Sherbrooke	-4	-2	11	-18	11.1	-10.7
Eureka	-43	-7	-31	-48	M	M	Prince Albert	-3	3	3	-14	2.9	-0.4	Ste Agathe des Monts	-6	-2	7	-20	16.8	-2.3
Frobisher Bay	-27	-7	-14	-37	8.6	3.4	Regina	-5	0	3	-17	3.2	-0.8	Val D'Or	-7	-1	8	-22	6.4	-5.5
Gladman Point	-30	1	-17	-39	6.0	4.7	Rockglen	M	X	M	M	M	X	<b>NEW BRUNSWICK</b>						
Hall Beach	-31	-4	-18	-40	0.8	-2.3	Saskatoon	-2	3	6	-10	0.2	-3.1	Charlo	-5	-2	12	-18	2.1	-20.3
Longstaff Bluff	-30	-4	-20	-40	0.0	-2.2	Swift Current	-2	0	7	-13	M	M	Chatham	-4	-3	11	-16	0.2	-19.4
Mackay Inlet	M	M	-19P	-39	0.8	0.1	Uranium City	-11	2	-1	-24	6.8	3.4	Fredericton	-3	-3	11	-23	2.0	-12.8
Pond Inlet	-32	X	-23	-38	0.0	X	Wynyard	-3	X	3	-12	5.5	X	Moncton	-3	-3	12	-15	0.4	-18.9
Resolute	-33	-3	-22	-41	0.8	0.2	Yorkton	-3	2	4	-16	6.7	0.6	Saint John	-5	-4	9	-16	2.0	-20.2
Byron Bay	-29	1	-19	-37	M	M	<b>MANITOBA</b>							St Stephen	M	X	M	M	M	X
Cambridge Bay	-30	-1	-17	-37	1.7	0.7	Bissett	-5	X	7	-23	5.1	X	<b>NOVA SCOTIA</b>						
Mould Bay	-33	-3	-27	-38	0.0	-0.6	Brandon	-3	2	8	-15	4.4	-3.1	Amherst	M	X	M	M	M	X
Sachs Harbour	M	M	-19P	-37P	M	M	Churchill	-19	-1	-2	-31	3.2	-2.5	Eddy Point	-4	X	5	-15	13.0	X
<b>BRITISH COLUMBIA</b>							Dauphin	-4	1	7	-21	2.8	-6.8	Greenwood	-1	-3	14	-13	3.4	-10.8
Abbotsford	7	0	17	-1	17.7	-11.5	Gillam	-14	X	1	-30	3.6	X	Sable Island	0	-2	5	-9	5.6	-16.8
Alert Bay	5	-1	10	-1	7.5	-21.4	Gimli	-5	0	7	-16	4.2	-1.6	Shearwater	-2	-3	6	-12	8.0	-16.0
Amphitrite Point	6	X	11	2	48.1	X	Grand Rapids	M	X	M	M	M	X	Shelburne	0	X	10	-10	4.8	X
Blue River	M	X	M	M	M	X	Island Lake	-9	X	5	-25	M	X	Sydney	-3	-2	6	-13	15.0	-8.9
Bull Harbour	5	0	11	0	25.2	-9.3	Lynn Lake	-11	3	3	-25	1.1	-4.6	Truro	-1	-2	10	-14	M	M
Burns Lake	-2	X	8	-14	M	X	Norway House	-10	X	4	-29	13.0	X	Yarmouth	1	-2	13	-11	1.4	-20.7
Cape Scott	5	-1	9	0	53.8	-7.0	Pilot Mound	-3	1	7	-14	4.0	-1.2	<b>PRINCE EDWARD ISLAND</b>						
Cape St James	5	0	12	0	32.8	4.0	Portage	-3	1	9	-15	0.5	-11.0	Charlottetown	-3	-2	9	-15	2.3	-14.2
Clinton	M	X	M	M	M	X	The Pas	-7	0	4	-25	4.9	0.3	East Point	M	X	M	M	M	X
Comox	6	1	13	0	11.6	-9.2	Thompson	-11	1	4	-31	2.4	-5.4	Summerside	-2	-2	10	-14	1.2	-13.1
Cranbrook	3	1	15	-5	M	M	Winnipeg	-3	1	8	-13	0.2	-8.7	<b>NEWFOUNDLAND</b>						
Denase Lake	-5	0	6	-19	0.7	-3.1	<b>ONTARIO</b>							Argentia	-1	X	9	-11	10.1	X
Eatevan Point	M	M	M	M	M	M	Armstrong	-8	-1	5	-33	M	M	Badger	M	X	M	M	M	X
Ethelda Bay	4	X	10	-1	M	X	Atikokan	-6	-1	6	-27	4.9	-5.0	Bonavista	-2	-1	9	-11	10.7	-5.6
Fort Nelson	-8	-2	5	-19	5.7	0.4	Barrie	M	X	M	M	M	X	Burgeo	-3	-2	3	-12	31.0	-12.4
Fort St John	-3	0	3	-13	0.2	-5.0	Big Trout Lake	-12	-1	5	-32	1.1	-3.3	Cape Race	M	X	M	M	M	X
Hope	7	X	19	0	8.5	X	Britt	M	X	M	M	M	X	Comfort Cove	-3	-2	9	-15	4.8	-18.0
Kamloops	6	0	18	-4	5.2	4.0	Caribou Island	M	X	M	M	M	X	Daniel's Harbour	-4	-2	9	-19	M	M
Langara	3	-1	7	0	35.2	6.1	Earlton	-5	-1	7	-22	M	M	Deer Lake	-3	-1	1			