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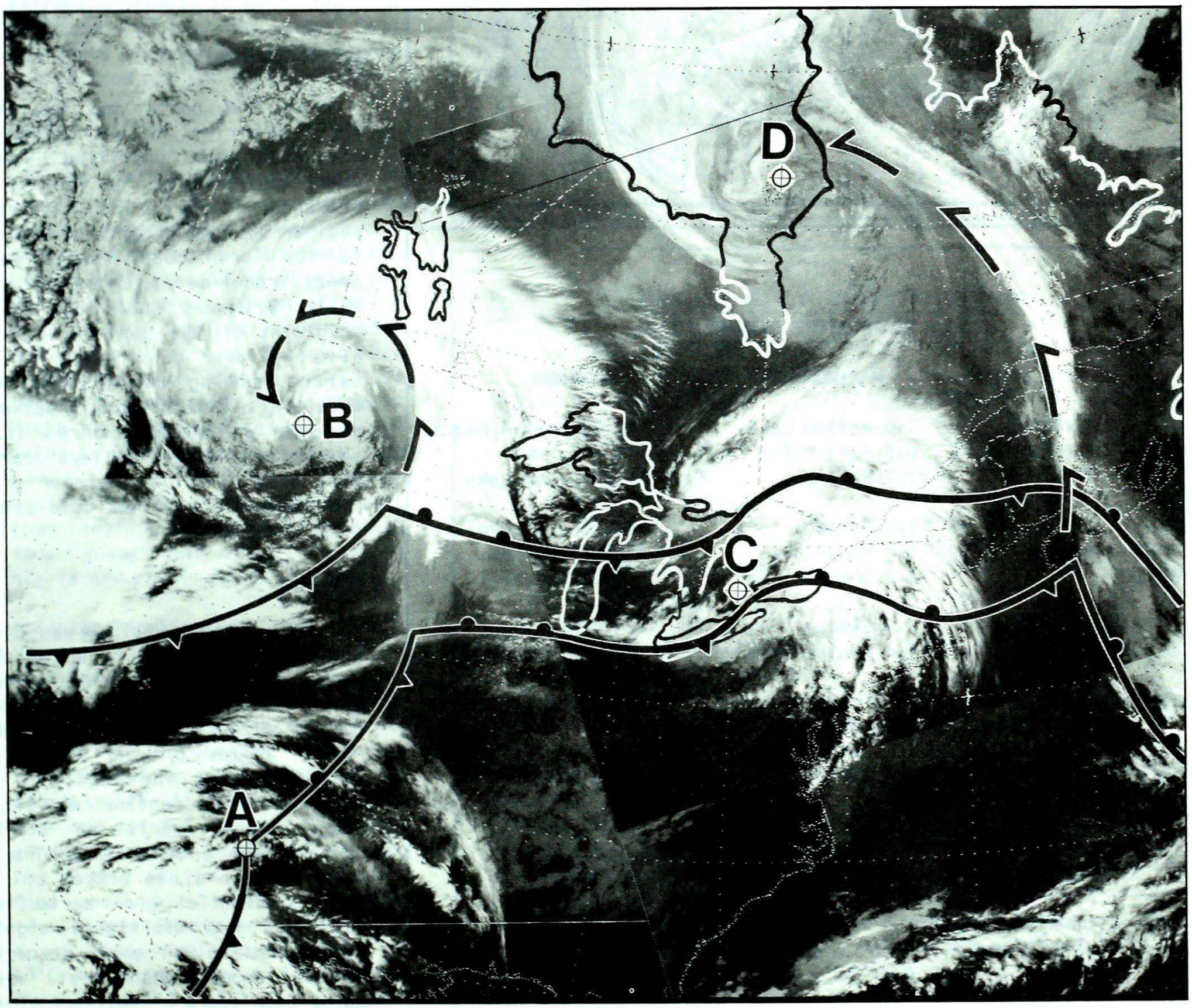
Climatic Perspectives

A weekly review of Canadian climate | March 26 to April 1, 1985 | Vol.7 NO.13

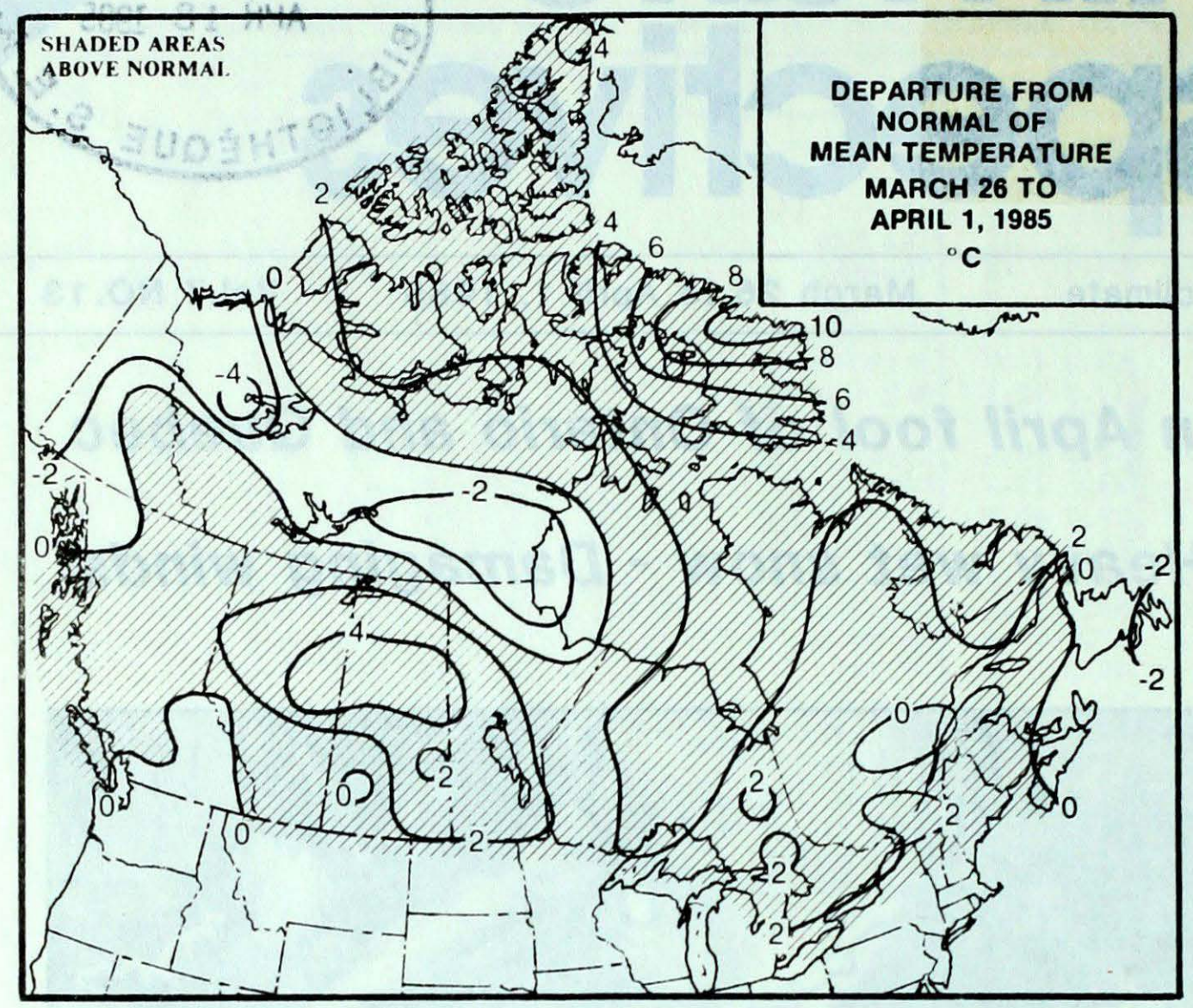
• *Nature makes an April fool of Ontario and Quebec*

Freezing rain - Heavy wet snow - Damaging winds



This NOAA 9 satellite image of March 28, 1985 shows several storms crossing the continent.
For more detail see page 3.

Canada



WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	7.5	Watson Lake	-32.2	Komakuk Beach
NORTHWEST TERRITORIES	6.5	Fort Smith	-46.0	Eureka
BRITISH COLUMBIA	21.7	Kamloops	-16.7	Dease Lake
ALBERTA	18.8	Calgary	-24.5	High Level
SASKATCHEWAN	16.2	Moose Jaw	-30.0	Cree Lake
MANITOBA	10.5	Brandon	-28.1	Churchill
ONTARIO	18.9	Simcoe	-24.5	Big Trout Lake
QUEBEC	13.4	Montréal/Dorval	-28.0	Nitchequon
NEW BRUNSWICK	14.5	Fredericton	-9.7	Charlo
NOVA SCOTIA	14.4	Yarmouth	-12.5	Truro
PRINCE EDWARD ISLAND	7.1	Summerside	-11.3	Charlottetown
NEWFOUNDLAND	6.9	Burgeo	-25.3	Wabush Lake

ACROSS THE NATION

Warmest mean temperature	7.4	Lytton, B.C.
Coolest mean temperature	-32.6	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

It was generally cloudy and unseasonably cool in the Yukon and Mackenzie District. On the other hand, above normal mean temperatures were observed in the eastern Arctic, especially on Baffin Island. Daily temperatures ranged from a low -46°C at Eureka to a high of 8°C at Watson Lake. Some areas in the Yukon and the eastern Arctic received 10 cm of new snow. Whitehorse has set a new winter season snowfall record up to the end of March with 175 cm. The normal snowfall for the same period is 122.3 cm.

British Columbia

In the north and the Peace River District it was relatively pleasant, but unsettled weather conditions plagued the rest of the province. A series of approaching weather systems brought heavy rains to the north coast, while inland areas received substantial snowfalls. Frequent snow fell in the mountains of the central interior, allowing for a continuation of good spring skiing conditions. Many mountain highways were treacherous and some avalanches occurred. In the southern interior valleys farmers were burning off the winter grass. The temperature at Kamloops climbed to 22°C on April 1.

Prairies

The weather picture was cloudy and damp in the east, while skies were variably sunny in the west. Temperatures were seasonably cool, but gradually moderated to above normal values by the end of the period. During the middle of the week, several centimetres of new snow covered parts of southern Saskatchewan and Manitoba. The ice on most rivers has broken up. The flood potential in agricultural districts has diminished significantly due to extremely favourable weather conditions. Last week's major snow storm in southern Alberta was very beneficial, increasing the soil moisture reserves for the upcoming growing season.

Ontario

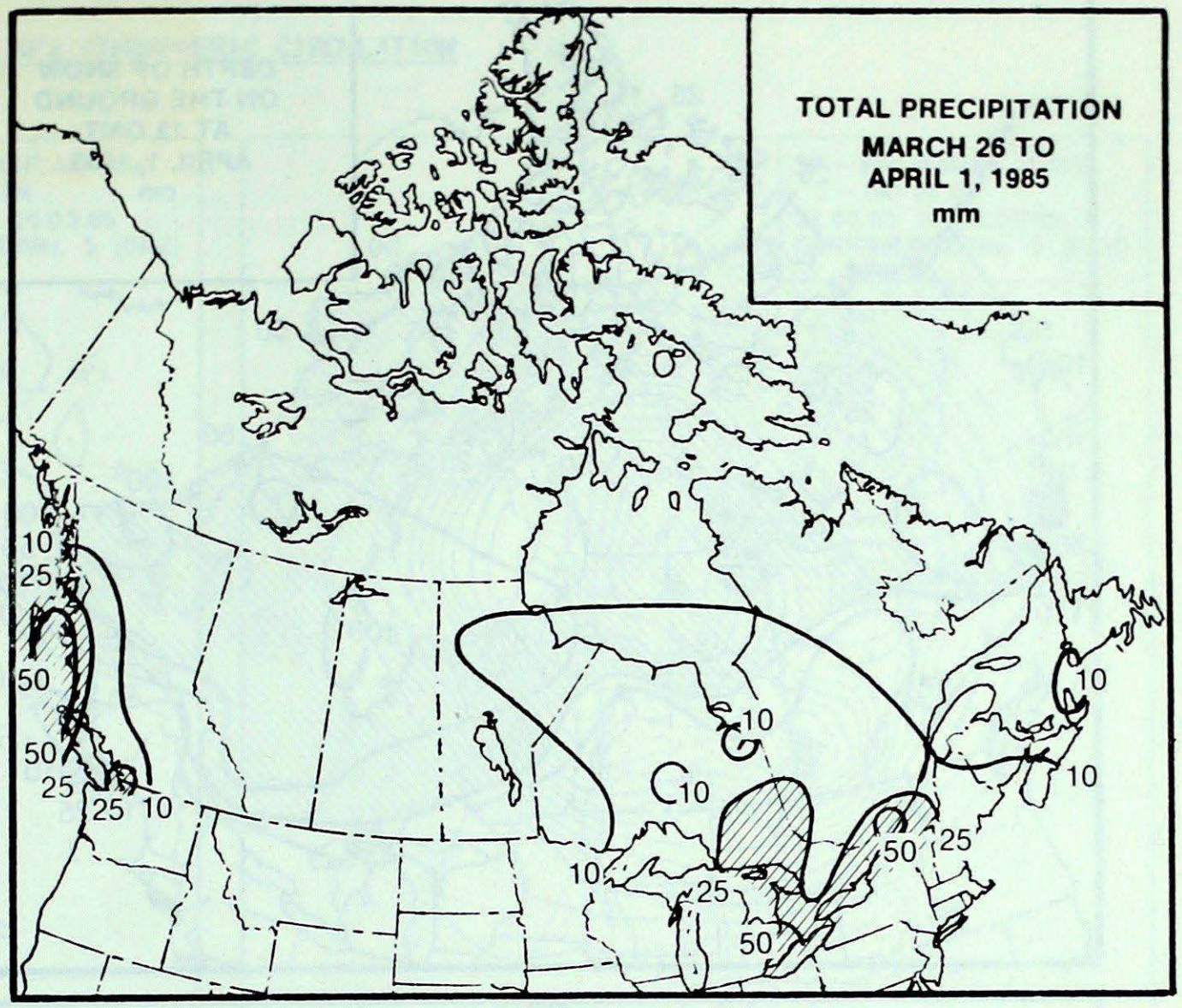
A vigorous storm tracked out of the mid-west on March 31, bringing a combination of freezing rain, heavy snow and gale force winds to a large portion of the province. In southern Ontario many large trees weighted by a thick coating of ice were unable to withstand the 70 km/h winds, and toppled across hydro lines and roads. In some cases electric power was not restored until the next day. Many southern locations received between 10 and 15 millimetres of freezing rain, while up to 25 cm of snow fell in central Ontario. In the extreme northwest 20 cm of new snow fell earlier in the week. Only residents in northern Ontario were spared from the inclement weather.

Québec

On April 1, between 15 and 20 centimetres of new snow blanketed southwestern Québec, pleasing most skiing enthusiasts. Montréal received more than 40 mm of precipitation this week, 20 mm of which fell as rain earlier in the week. Temperatures across the province fluctuated from day to day, but generally averaged near normal. Maple syrup production was in full swing in the Eastern Townships, but near the St. Lawrence Valley weather conditions have been less than ideal. To stimulate a good sap flow sunny warm days and cool nights are required.

Atlantic Provinces

Varying amounts of cloud and sun were reported over the Maritimes and Newfoundland during the period, while Labrador, under the influence of an on-shore flow, was cloudy with frequent periods of snow and drizzle. Temperatures were generally mild, especially during the middle of the week, when daytime readings soared to the mid-teens. Both Charlo and Halifax set a new daily temperature record of 13°C on March 29, while temperatures climbed to 15°C in New Brunswick. An approaching storm on April 1 dumped up to 20 cm of fresh snow in central Nova Scotia, resulting in the closure of rural schools.

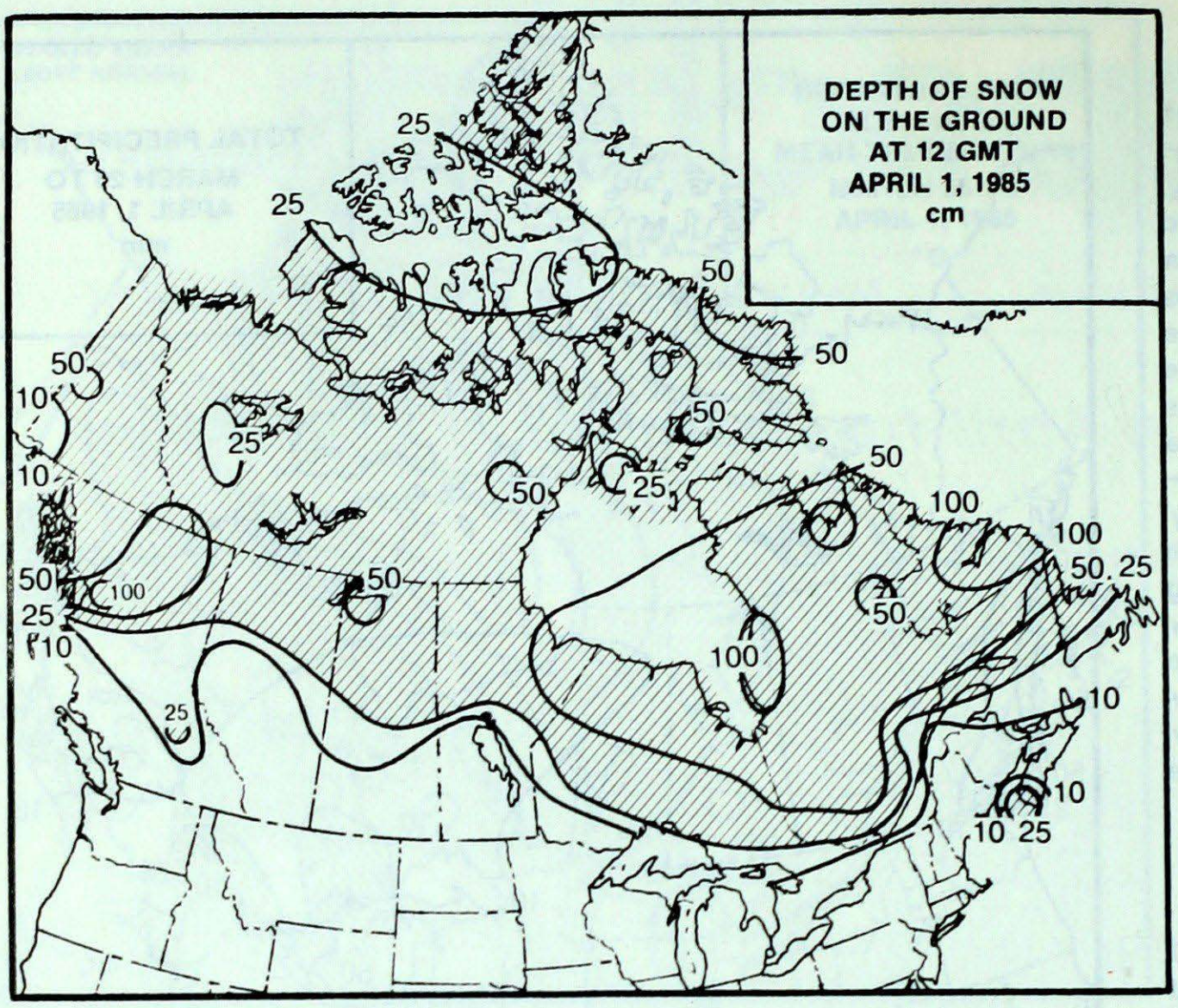


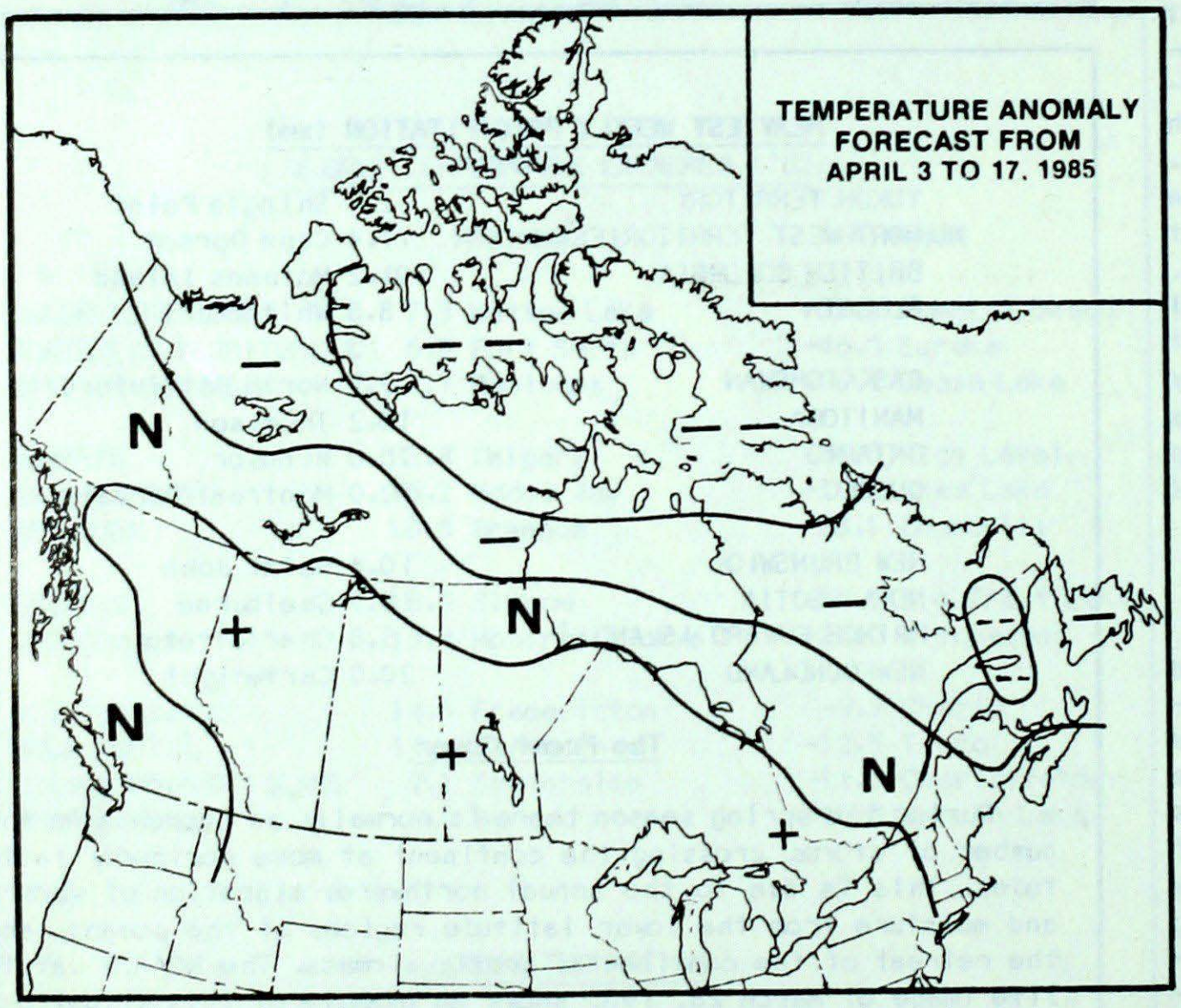
HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON TERRITORY	2.7	Shingle Point
NORTHWEST TERRITORIES	11.4	Cape Dorset
BRITISH COLUMBIA	91.2	McInnes Island
ALBERTA	8.8	Whitecourt
SASKATCHEWAN	9.1	North Battleford
MANITOBA	10.2	Thompson
ONTARIO	75.6	Windsor
QUEBEC	52.0	Montreal/Dorval
NEW BRUNSWICK	10.4	Saint John
NOVA SCOTIA	18.7	Shelburne
PRINCE EDWARD ISLAND	6.8	Charlottetown
NEWFOUNDLAND	20.0	Cartwright

The Front Cover

During the spring season there is normally an increase in the number of storms crossing the continent at more northerly latitudes. This is due to the annual northwards migration of warmth and moisture from the lower latitude regions of the oceans, and the retreat of the continental arctic airmass. The NOAA 9 satellite image of March 28, 1985 shows an example of this situation, and reveals four storms, each in a different stage of development, centred at A,B,C, and D. Temperatures south of the frontal system linking storms A and C were in the mid to high 20's while temperatures over Canada were near or below freezing.





Temperature Anomaly Forecast

This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

++	much above normal
+	above normal
N	normal
-	below normal
--	much below normal

CLIMATIC PERSPECTIVES VOLUME 7

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It began in 1978 and in 1983 was expanded to include a monthly supplement (formerly known as the Canadian Weather Review). The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socioeconomic impact.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

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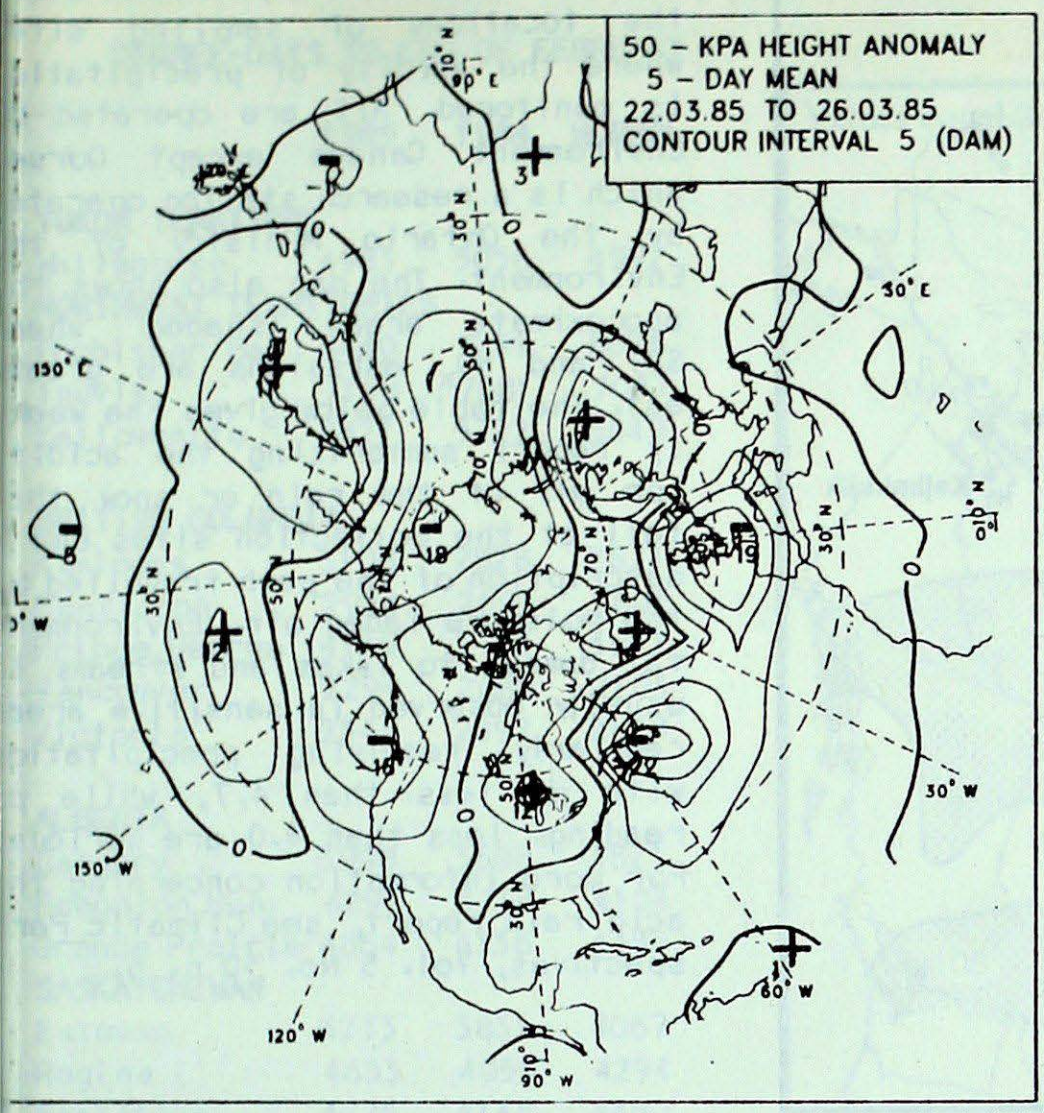
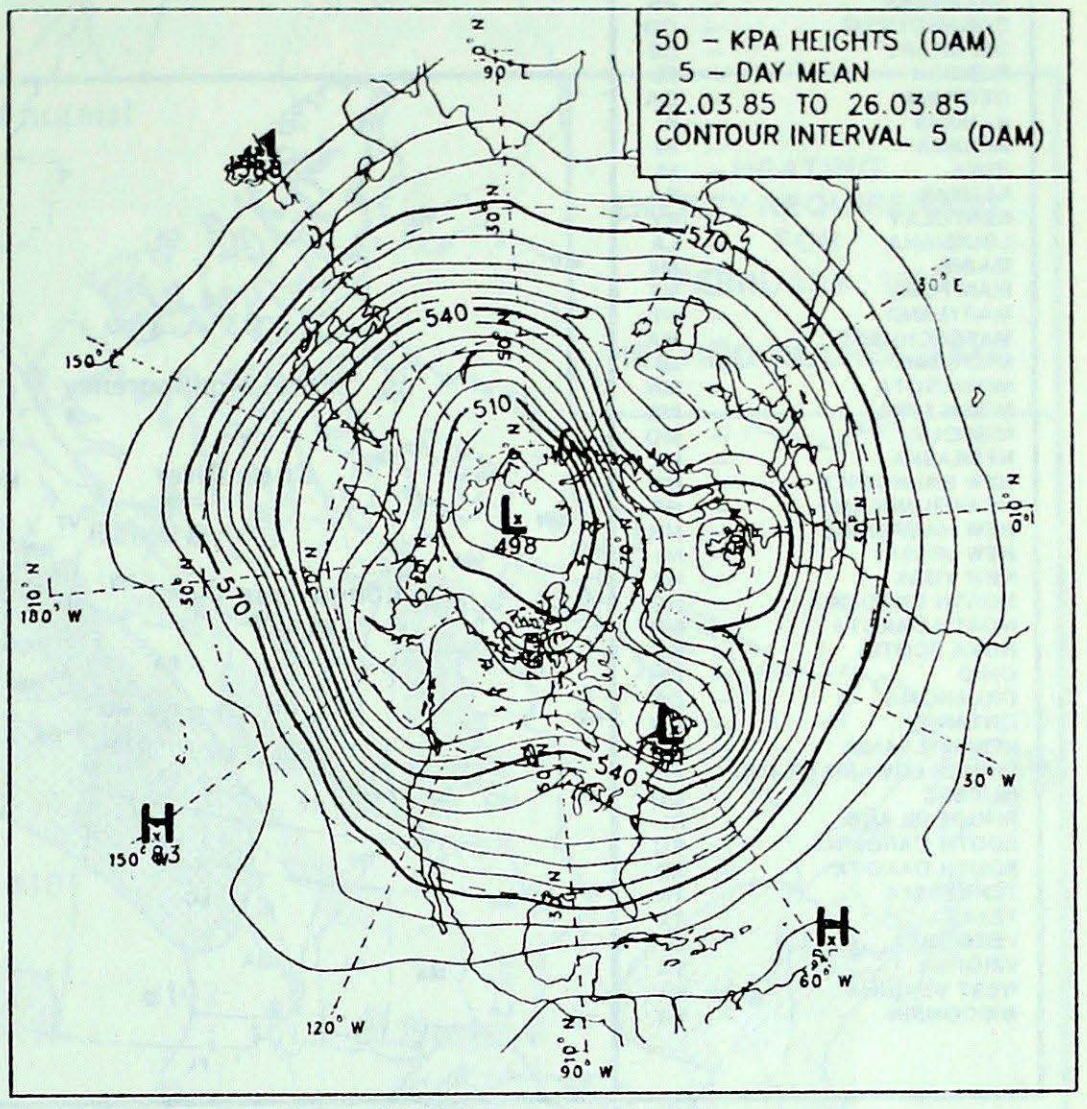
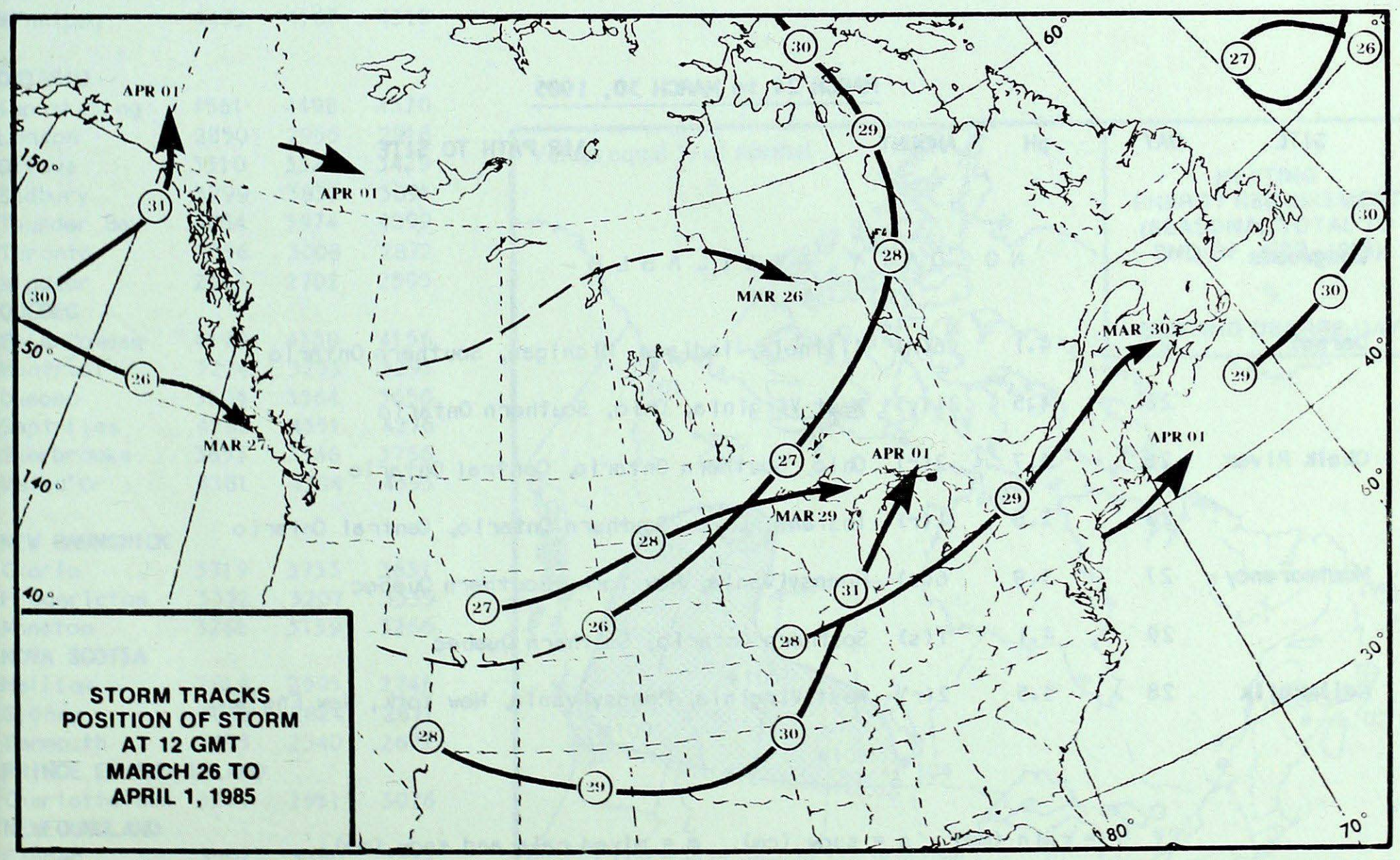
50 KPa ATMOSPHERIC CIRCULATION



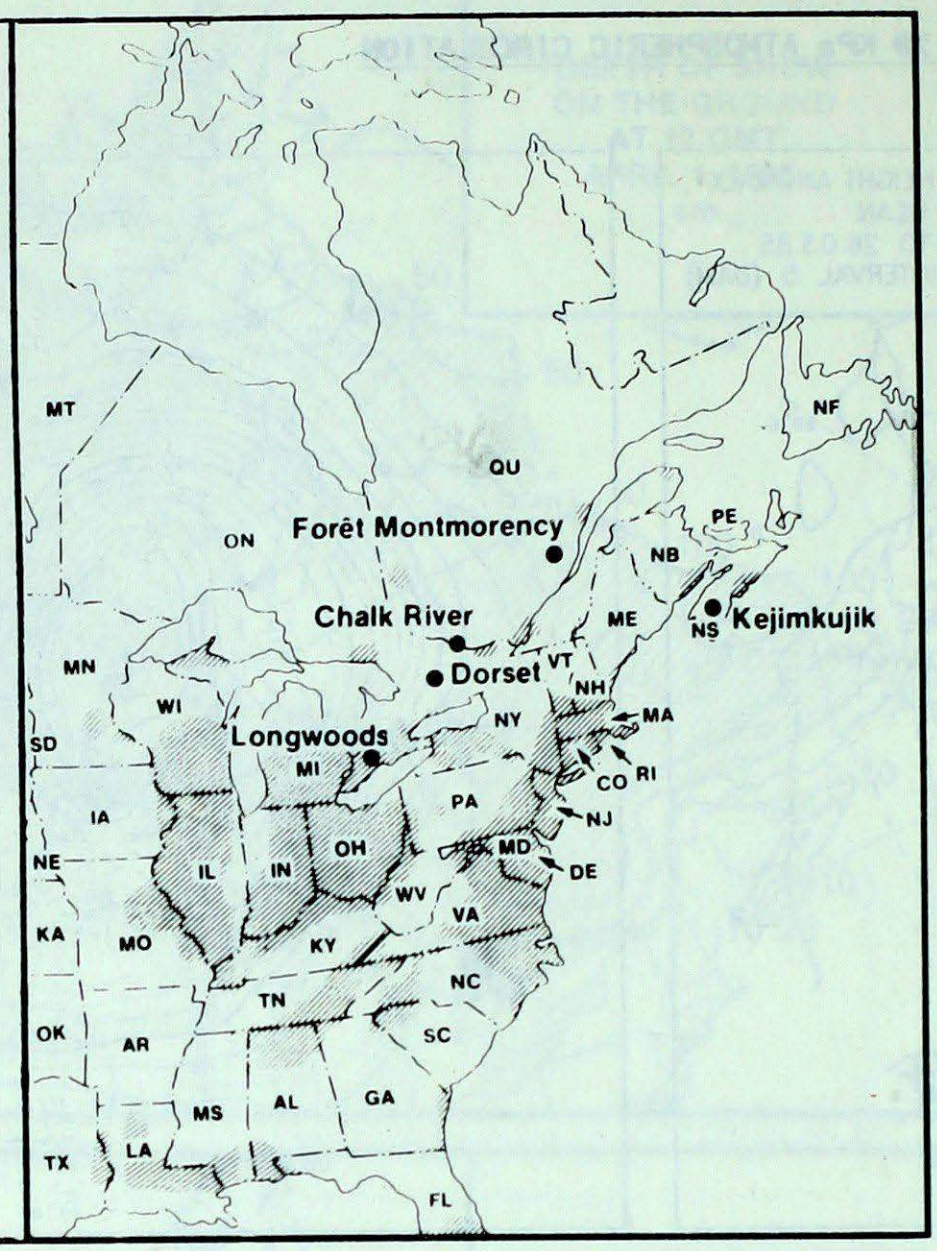
MEAN 50 KPa HEIGHT ANOMALY (dam)
March 22 to March 26, 1985



MEAN 50 KPa HEIGHTS (dam)
March 22 to March 26, 1985



ALABAMA	—	AL
ARKANSAS	—	AR
CONNECTICUT	—	CO
DELAWARE	—	DE
FLORIDA	—	FL
GEORGIA	—	GA
ILLINOIS	—	IL
INDIANA	—	IN
IOWA	—	IA
KANSAS	—	KA
KENTUCKY	—	KY
LOUISIANA	—	LA
MAINE	—	ME
MANITOBA	—	MT
MARYLAND	—	MD
MASSACHUSET	—	MA
MICHIGAN	—	MI
MINNESOTA	—	MN
MISSISSIPPI	—	MS
MISSOURI	—	MO
NEBRASKA	—	NE
NEW BRUNSWICK	—	NB
NEWFOUNDLAND	—	NF
NEW HAMPSHIRE	—	NH
NEW JERSEY	—	NJ
NEW YORK	—	NY
NORTH CAROLINA	—	NC
NORTH DAKOTA	—	ND
NOVA SCOTIA	—	NS
OHIO	—	OH
OKLAHOMA	—	OK
ONTARIO	—	ON
PENNSYLVANIA	—	PA
PRINCE EDWARD ISLAND	—	PE
QUÉBEC	—	QU
RHODE ISLAND	—	RI
SOUTH CAROLINA	—	SC
SOUTH DAKOTA	—	SD
TENNESSEE	—	TN
TEXAS	—	TX
VERMONT	—	VT
VIRGINIA	—	VA
WEST VIRGINIA	—	WV
WISCONSIN	—	WI



ACID RAIN REPORT

The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where SO_2 and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the rain or snow that fell at the collection sites and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

MARCH 24 to MARCH 30, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods		N O D A T A A V A I L A B L E		
Dorset	27	4.1	6(r)	Illinois, Indiana, Michigan, Southern Ontario
	28	4.5	21(r)	West Virginia, Ohio, Southern Ontario
Chalk River	26	3.7	2(r)	Ohio, Southern Ontario, Central Ontario
	28	3.8	1(r)	Indiana, Ohio, Southern Ontario, Central Ontario
Montmorency	27	3.9	6(s)	Pennsylvania, New York, Southern Quebec
	29	4.1	1(s)	Southern Ontario, Southern Quebec
Kejimkujik	28	3.5	2(r)	West Virginia, Pennsylvania, New York, New England

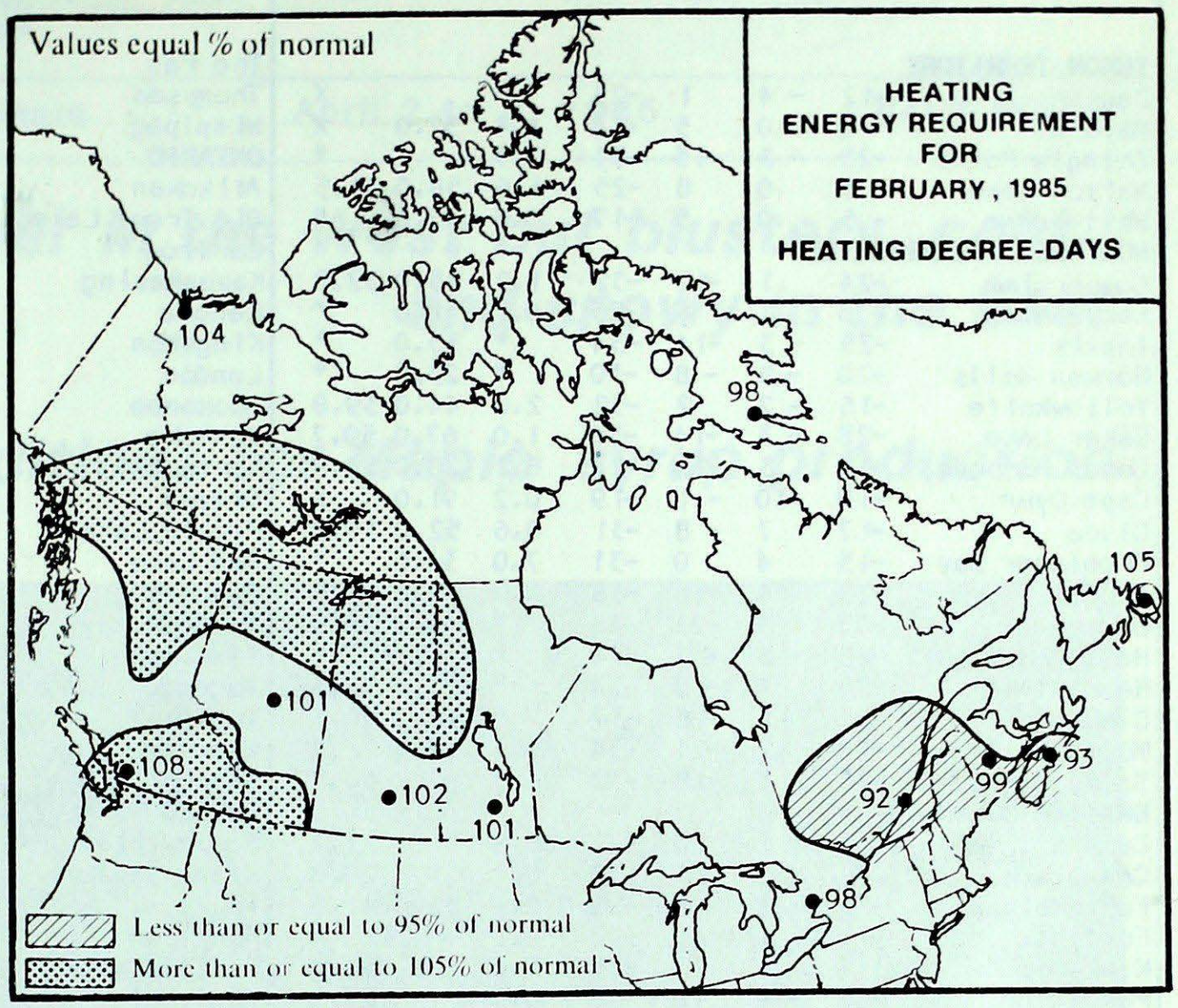
r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).

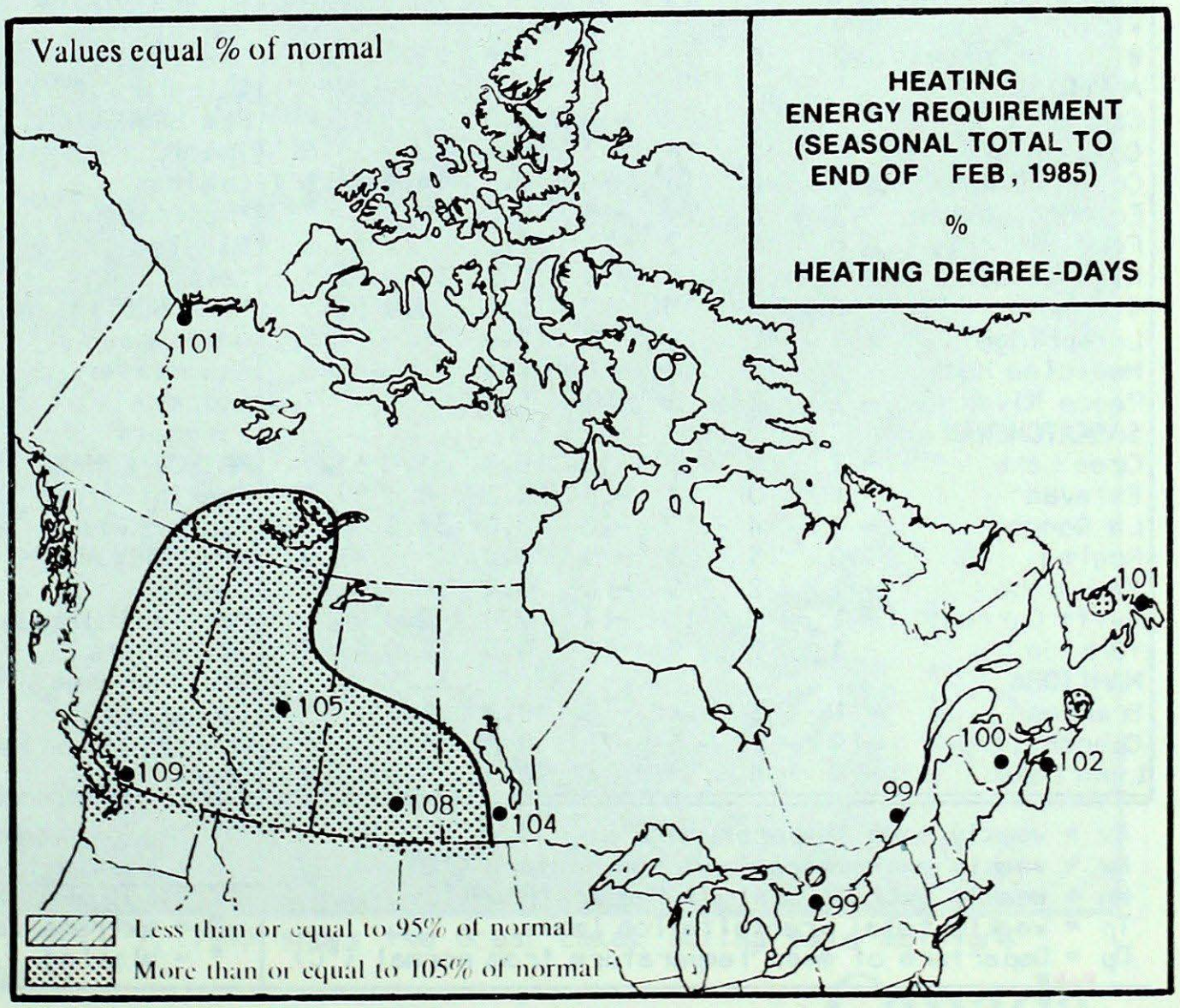
CORRECTED HEATING DEGREE-DAY DATA FOR FEBRUARY 1985

SEASONAL TOTAL OF HEATING ENERGY REQUIREMENT

DEGREE-DAYS TO END OF FEBRUARY

	1985	1984	NORMAL
YUKON TERRITORY			
Whitehorse	4983	5056	4992
NORTHWEST TERRITORIES			
Frobisher Bay	6440	7259	6676
Inuvik	7158	7081	7067
Yellowknife	6421	5722	6049
BRITISH COLUMBIA			
Kamloops	3108	2828	2871
Penticton	2924	2592	2601
Prince George	4129	3722	3933
Vancouver	2294	2080	2103
Victoria	2341	2097	2128
ALBERTA			
Calgary	3998	3608	3821
Edmonton Mun.	4293	3718	4104
Grande Prairie	4864	4136	4482
SASKATCHEWAN			
Estevan	4273	3831	4067
Regina	4653	4059	4294
Saskatoon	4776	4148	4480
MANITOBA			
Brandon	4744	4111	4427
Churchill	6200	5841	6191
The Pas	5158	4479	4922
Winnipeg	4495	4167	4318
ONTARIO			
Kapuskasing	4561	4498	4570
London	2850	2955	2918
Ottawa	3310	3327	3429
Sudbury	3799	3852	3891
Thunder Bay	4084	3974	4099
Toronto	2856	3008	2872
Windsor	2583	2702	2595
QUEBEC			
Baie Comeau	4178	4130	4156
Montréal	3274	3253	3293
Quebec	3604	3564	3650
Sept-Iles	4286	4351	4276
Sherbrooke	3653	3546	3766
Val-d'Or	4381	4304	4393
NEW BRUNSWICK			
Charlo	3719	3733	3631
Fredericton	3332	3207	3335
Moncton	3261	3139	3266
NOVA SCOTIA			
Halifax	2814	2595	2746
Sydney	3033	2824	2871
Yarmouth	2635	2540	2672
PRINCE EDWARD ISLAND			
Charlottetown	3205	2951	3076
NEWFOUNDLAND			
Gander	3502	3380	3332
St. John's	3119	3034	3082





TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT APRIL 2, 1985

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	-12	- 4	1	-25	*		X
Mayo A	- 6	0	5	-18	1.4	32.0	X
Shingle Point	-25	- 3	-15	-31	2.7		*
Watson Lake	- 5	0	8	-25	1.6	58.0	31.5
Whitehorse	- 5	0	5	-17	0.6	32.0	*
NORTHWEST TERRITORIES							
Coppermine	-24	1	-12	-32	1.2	25.0	32.8
Fort Smith	- 8	1	7	-25	0.7	40.0	*
Inuvik	-25	- 3	-14	-34	*	35.0	*
Norman Wells	-20	- 5	- 8	-30	*	23.0	*
Yellowknife	-16	- 2	2	-32	2.0	44.0	39.8
Baker Lake	-28	- 3	-14	-36	1.0	67.0	59.7
Coral Harbour	-18	3	-11	-27	8.2	20.0	14.9
Cape Dyer	-10	10	- 1	-19	0.2	91.0	X
Clyde	-17	7	- 8	-31	0.6	52.0	39.0
Frobisher Bay	-15	4	0	-31	7.0	34.0	*
Alert	-27	4	-10	-38	0.0	45.0	41.6
Eureka	-33	3	-21	-46	*	35.0	46.9
Hall Beach	-20	6	- 7	-34	*		X
Resolute	-25	4	-15	-34	*	17.0	42.3
Cambridge Bay	-27	1	-16	-37	*	40.0	50.2
Mould Bay	-28	2	-21	-34	0.4	17.0	*
Sachs Harbour	-26	1	-18	-32	*		50.1
BRITISH COLUMBIA							
Cape St. James	6	1	10	2	26.8		27.7
Cranbrook	2	0	13	- 7	0.4		29.8
Fort Nelson	- 3	1	12	-14	0.4	53.0	44.6
Fort St. John	- 1	1	10	-10	2.1		X
Kamloops	7	1	22	- 3	2.0		34.0
Penticton	6	- 1	18	- 6	6.8		25.7
Port Hardy	5	0	10	- 1	82.0		19.2
Prince George	2	0	9	- 8	3.6		28.3
Prince Rupert	4	0	10	- 4	56.4		27.8
Revelstoke	3	0	8	- 5	20.2		23.6
Smithers	1	0	7	- 8	13.7		17.7
Vancouver	7	- 1	14	1	35.6		10.6
Victoria	7	0	16	0	19.7		17.0
Williams Lake	2	0	13	- 8	1.8	22.0	*
ALBERTA							
Calgary	3	2	19	- 7	0.0		43.9
Cold Lake	1	5	14	- 7	0.4		33.6
Coronation	- 2	0	13	-10	0.7	14.0	46.1
Edmonton Namao	2	4	14	- 6	0.0		*
Fort McMurray	0	5	12	-11	2.1		40.6
High Level	- 7	1	10	-24	0.2	30.0	37.5
Jasper	0	0	10	-10	5.6	0.0	32.3
Lethbridge	3	1	19	- 7	2.0		*
Medicine Hat	3	0	18	- 6	1.3		46.6
Peace River	- 1	2	8	-12	1.3		X
SASKATCHEWAN							
Cree Lake	- 7	X	8	-30	6.0	31.0	31.5
Estevan	- 1	0	14	-13	8.2	0.0	52.7
La Ronge	- 4	4	12	-20	0.0	34.0	*
Regina	0	3	15	- 9	0.0		48.9
Saskatoon	- 1	2	9	-10	0.4		*
Swift Current	- 1	0	15	-14	2.0	2.0	*
Yorkton	- 3	2	9	-14	0.0	7.0	47.8
MANITOBA							
Brandon	- 1	3	11	- 8	0.0	1.0	*
Churchill	-19	- 2	- 5	-28	*	31.0	*
Lynn Lake	- 8	4	4	-24	10.0	36.0	35.9
The Pas	- 3	4	5	-13	0.8	9.0	62.6
Thompson	- 8	3	5	-21	10.2	23.0	52.8
Winnipeg	0	3	8	- 6	*		*
ONTARIO							
Atikokan	- 2	2	7	-16	7.0	3.0	*
Big Trout Lake	- 8	3	7	-24	10.0	80.0	44.6
Earlton	- 2	1	7	-15	*	42.0	X
Kapuskasing	- 4	1	7	-17	25.4	31.0	*
Kenora	- 1	2	7	- 7	0.4	3.0	X
Kingston	2	1	12	- 7	*	2.0	*
London	5	2	16	- 6	57.4	0.0	*
Moosonee	- 6	2	6	-20	9.4	63.0	*
Muskoka	1	2	13	-11	*	7.0	X
North Bay	- 1	1	10	- 9	26.4	46.0	16.0
Ottawa	2	2	15	- 7	32.8	10.0	26.3
Pickle Lake	- 5	1	5	-19	12.4	54.0	X
Red Lake	- 4	0	6	-14	8.6	15.0	42.6
Sudbury	- 2	2	6	-10	31.2	29.0	17.1
Thunder Bay	0	2	8	-10	11.1	2.0	*
Timmins	- 3	2	8	-19	34.0	63.0	X
Toronto	4	2	18	- 6	23.3	0.0	X
Trenton	3	1	15	- 4	42.6		X
Wiarton	2	1	12	- 8	38.6	1.0	20.7
Windsor	6	2	17	- 3	75.6		X
QUEBEC							
Bagotville	- 3	0	6	-14	8.6	21.0	X
Blanc-Sablon	- 2	2	4	-13	5.9	59.0	*
Inukjuak	-14	3	- 4	-24	4.6	66.0	28.8
Kuujjuaq	-13	1	3	-24	4.8	121.0	24.3
Kuujjuarapik	-10	2	2	-23	11.7	32.0	30.6
Maniwaki	0	2	10	-15	22.8	38.0	23.0
Mont-Joli	- 2	0	6	-11	1.2	1.0	36.6
Montréal	2	1	13	-10	52.0	8.0	28.8
Natashquan	- 2	2	5	-14	*	11.0	*
Nitchequon	-13	- 2	1	-28	1.0	93.0	40.0
Québec	- 1	0	7	-12	14.4	46.0	33.0
Schefferville	-11	0	1	-28	3.8	43.0	28.0
Sept-Iles	- 3	2	8	-14	4.0	79.0	48.4
Sherbrooke	0	3	11	-12	35.4	16.0	50.8
Val-d'Or	- 5	0	6	-17	32.6	62.0	17.4
NEW BRUNSWICK							
Charlo	- 2	1	13	-10	2.2	16.0	36.5
Chatham	0	1	11	- 9	2.4	0.0	35.2
Fredericton	1	1	15	- 8	6.4		*
Moncton	0	0	9	- 9	4.2	1.0	31.9
Saint John	1	1	13	- 7	10.4		*
NOVA SCOTIA							
Greenwood	2	0	13	- 6	13.1	0.0	X
Shearwater	1	- 1	12	- 8	13.7		33.2
Sydney	*	*	*	- 9	11.6	0.0	23.0
Yarmouth	3	0	14	- 4	16.2	28.0	48.9
PRINCE EDWARD ISLAND							
Charlottetown	- 2	- 1	5	-11	6.8	6.0	*
Summerside	- 1	- 1	7	- 9	5.1	4.0	26.7
NEWFOUNDLAND							
Gander	- 3	- 1	4	-11	3.4	21.0	31.7
Port aux Basques	- 2	- 1	5	- 9	11.1	12.0	*
St. John's	- 3	- 2	3	-12	*	16.0	42.2
St. Lawrence	- 3	- 3	3	-10	2.4	21.0	X
Cartwright	- 3	3	1	-11	20.0	134.0	1.0
Churchill Falls	- 8	2	3	-24	4.8	93.0	27.3
Goose	- 3	3	5	-14	14.7	102.0	12.9

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

X = not observed
P = extreme value based on less than 7 days
* = missing