

Climatic Perspectives

February 20 to 26, 1989

A weekly review of Canadian climate

Vol. 11 No. 9

Extensive ice cover off East Coast of Canada ... but offshore winds keep shipping lanes open

A continuation of colder than normal temperatures over northeastern Canada has produced favorable conditions for ice formation and expansion in coastal areas.

Off the Atlantic coast, the southern limit of the pack ice is about normal for this time of year (between 47 and 48°N). However the eastern ice edge is about 140 km further east than normal. In the Gulf of St. Lawrence, the amount of ice is greater than normal, especially along the Newfoundland coast. Prevailing westerly winds have continued to produce a general eastward ice drift.

The forecast for March from the Ice Centre in Ottawa calls for a continuation of the trend of the past several weeks with colder than normal winds from the northwest along the Labrador coast. Brief periods of northerly winds, combined with ice growth may advance the ice edge to near St. John's, especially during the first half of March.

H. McRuer,
Ice Centre, AES Ottawa

Stormy week in the Maritimes

The Maritimes finally got a taste of winter weather this past week. Prior to this period, the winter storm season had been particularly quiet. The absence of cold outbreaks, combined with light precipitation, and numerous days with above-normal temperatures helped diminish the usual rigors of winter. Last week saw a change in this pattern.

According to Frank Amirault (AES Halifax) "It seems that winter is playing catch-up". It was very mild early in the week with the mercury rising to 16°C at Greenwood on the 21st when rain arrived and continued through the 22nd, dumping 30 to 58 mm of water across the Maritimes. Several parts of Nova Scotia experienced flooding which forced the closure of some highways. Snow and freezing rain accompanied a cold outbreak on the 22nd and 23rd resulting in numerous automobile accidents. Following a brief respite, another 10-20 cm of snow fell over most regions on Saturday. Moncton

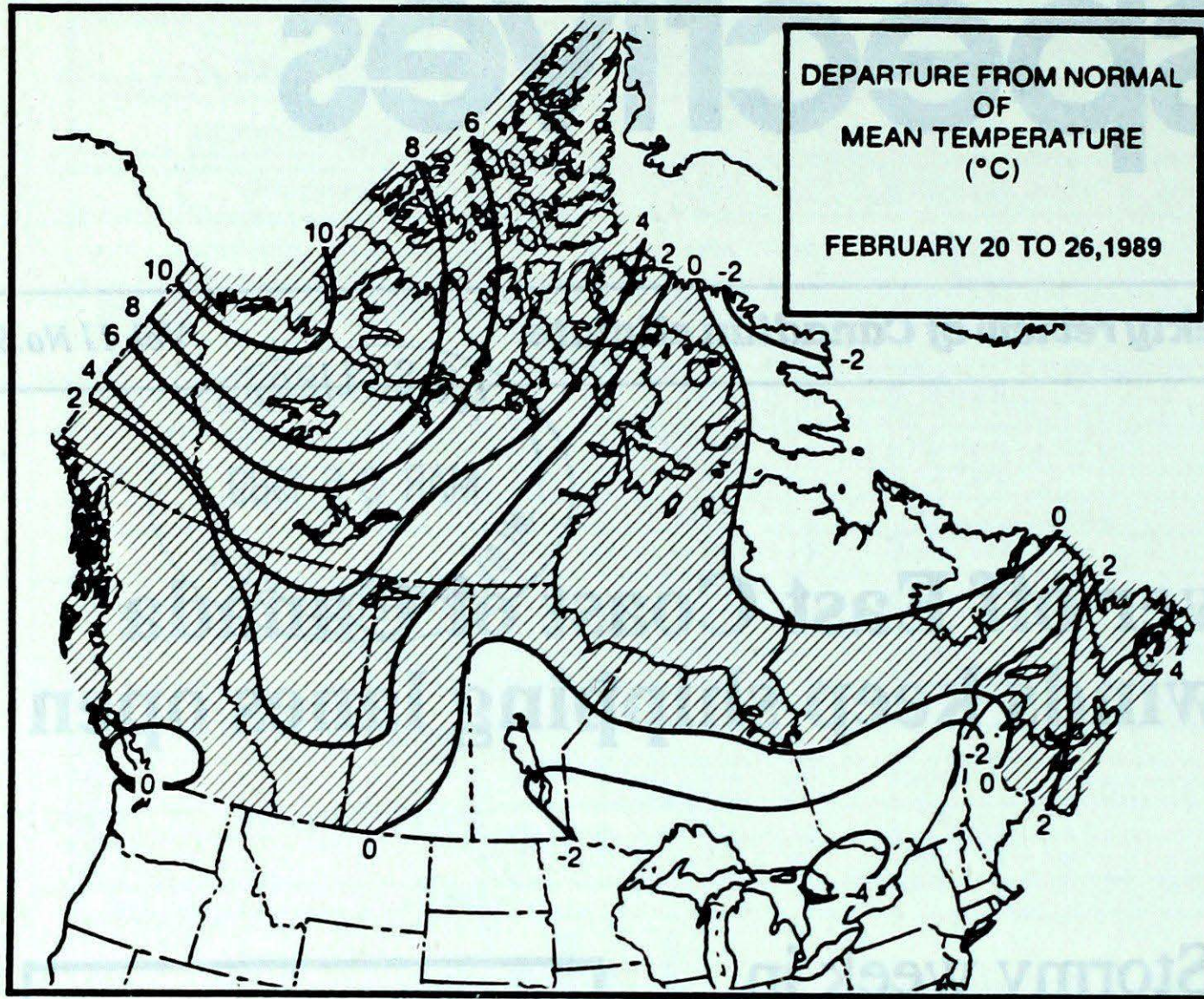
**Cool March
predicted for
most of Canada**

The 30-day forecast issued by the Canadian Climate Centre for the month of March predicts generally cool weather for most of Canada. Southern and central Ontario as well as the north-western corner of the N.W.T. are expected to be above normal.

However, some warmer temperatures are expected over most of the Prairies and Ontario during the second week of the month.

Aaron Gerye,
Canadian Climate Centre

recorded nearly 38 cm. In many locations, this snowfall raised total accumulations for February above the combined total over the three previous months!



DEPARTURE FROM NORMAL OF MEAN TEMPERATURE (°C)
FEBRUARY 20 TO 26, 1989

Normal Snowfall for the Month of March.

Vancouver	6.6 cm
Victoria	6.1 cm
Whitehorse	16.4 cm
Yellowknife	14.4 cm
Iqaluit	25.3 cm
Calgary	19.9 cm
Edmonton	18.6 cm
Regina	18.3 cm
Winnipeg	21.1 cm
Toronto	22.3 cm
Ottawa	35.7 cm
Montréal	35.7 cm
Québec	54.2 cm
Fredericton	48.7 cm
Halifax	45.5 cm
Charlottetown	61.6 cm
Goose	74.6 cm
St. John's	65.0 cm

Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Kamloops 13	Dease Lake -25	Estevan Point 87
Yukon Territory	Whitehorse 1	Watson Lake -31	Whitehorse 1
Northwest Territories	Fort Smith 0	Shepherd Bay A -44	Inuvik 6
Alberta	Edson 8	Fort Chipewyan -31	Red Deer 14
Saskatchewan	Estevan 4	Uranium City -34	Swift Current 13
Manitoba	Gretna 2	Thompson -37	Norway House 3
Ontario	London 8	Nagagami -37	London 18
Québec	Sherbrooke 4	Kuujuarapik -40	Lac Eon 40
New Brunswick	Moncton 11	Charlo -24	Moncton 72
Nova Scotia	Greenwood 14	Greenwood -19	Sable 125
Prince Edward Island	Charlottetown 8	Charlottetown -14	Charlottetown 78
Newfoundland	St John's 11	Wabush Lake -31	Burgeo 101

Across The Country...

Warmest Mean Temperature	Kindakun Point (BC) 6
Coollest Mean Temperature	Eureka (NWT) -34

CLIMATIC PERSPECTIVES
VOLUME 11

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The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

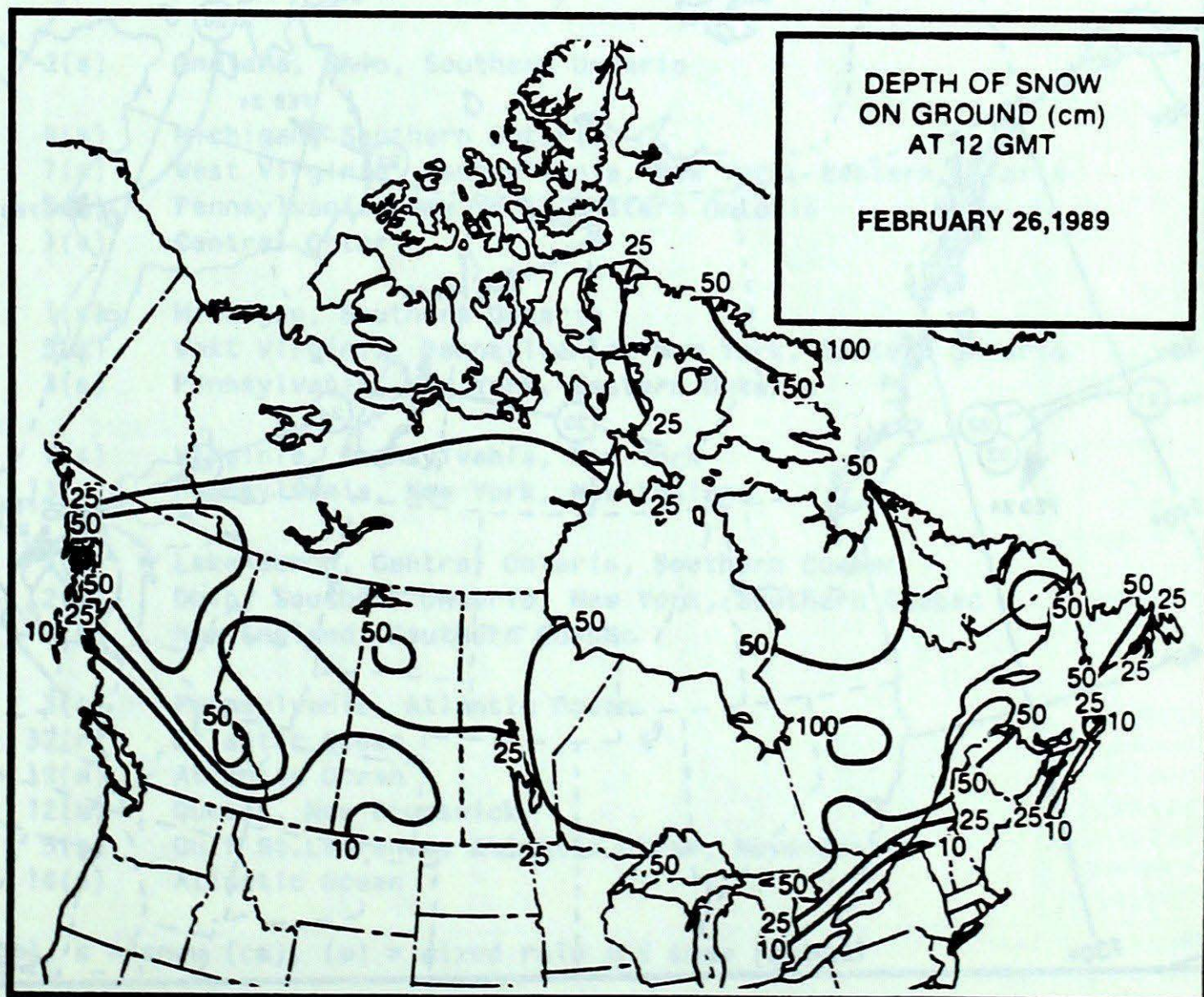
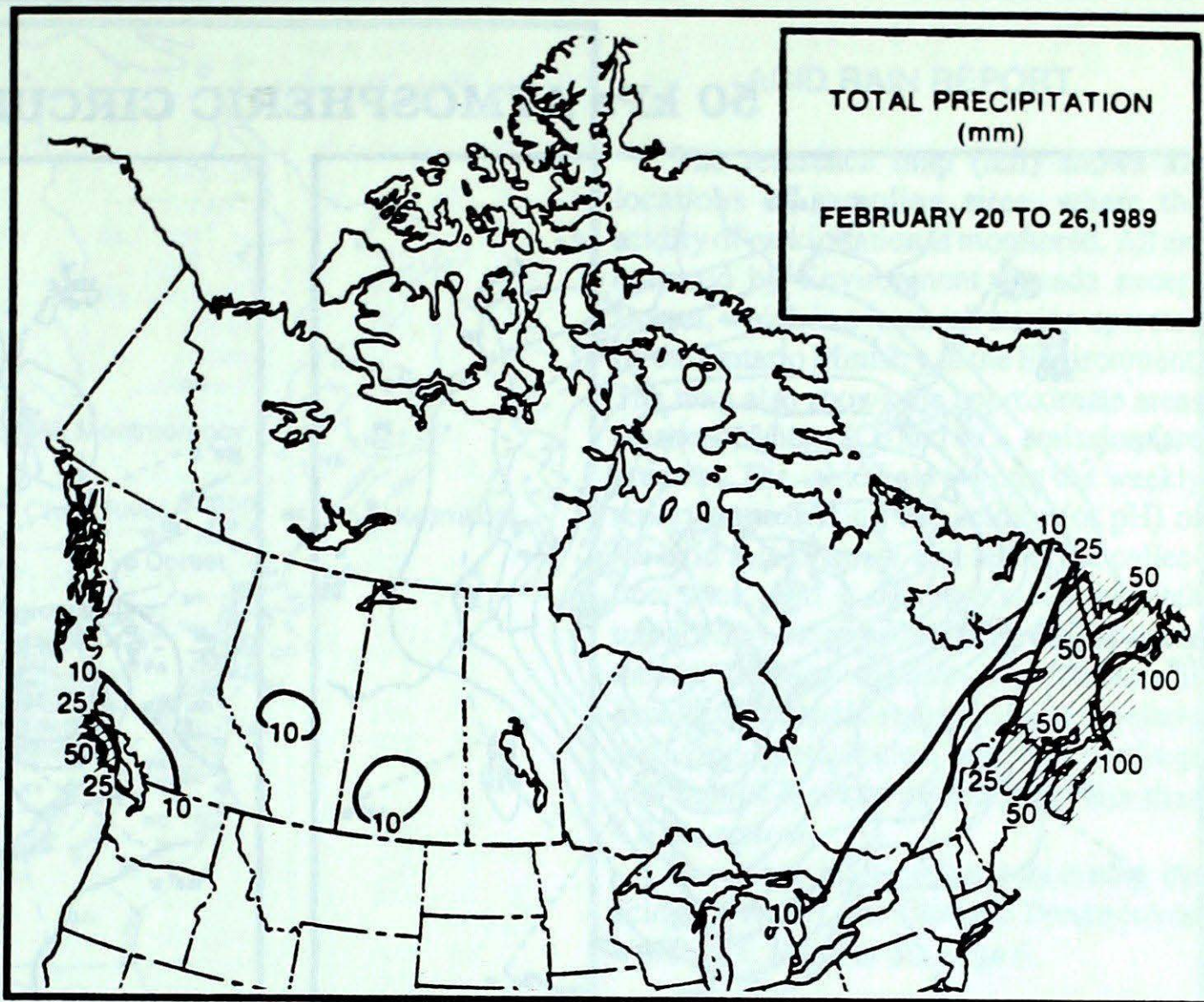
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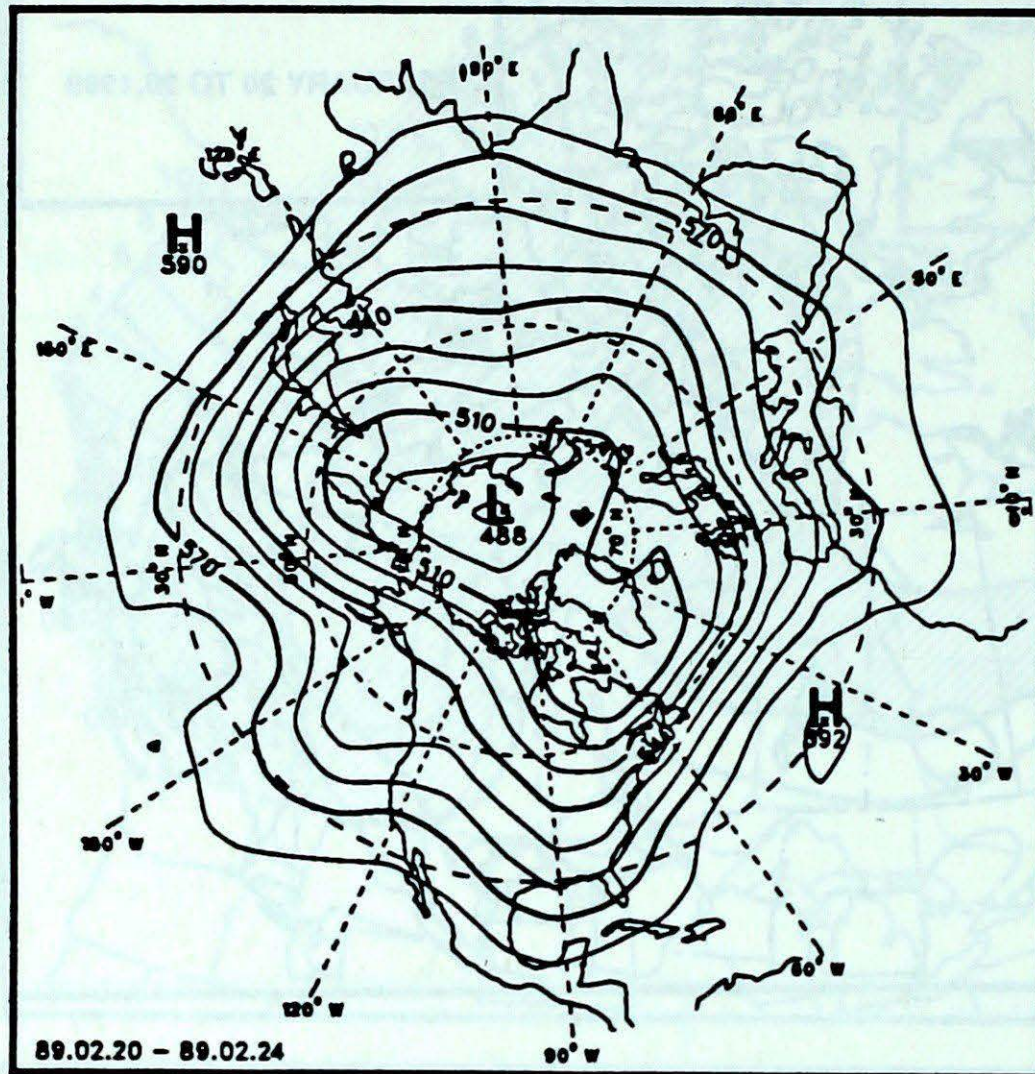
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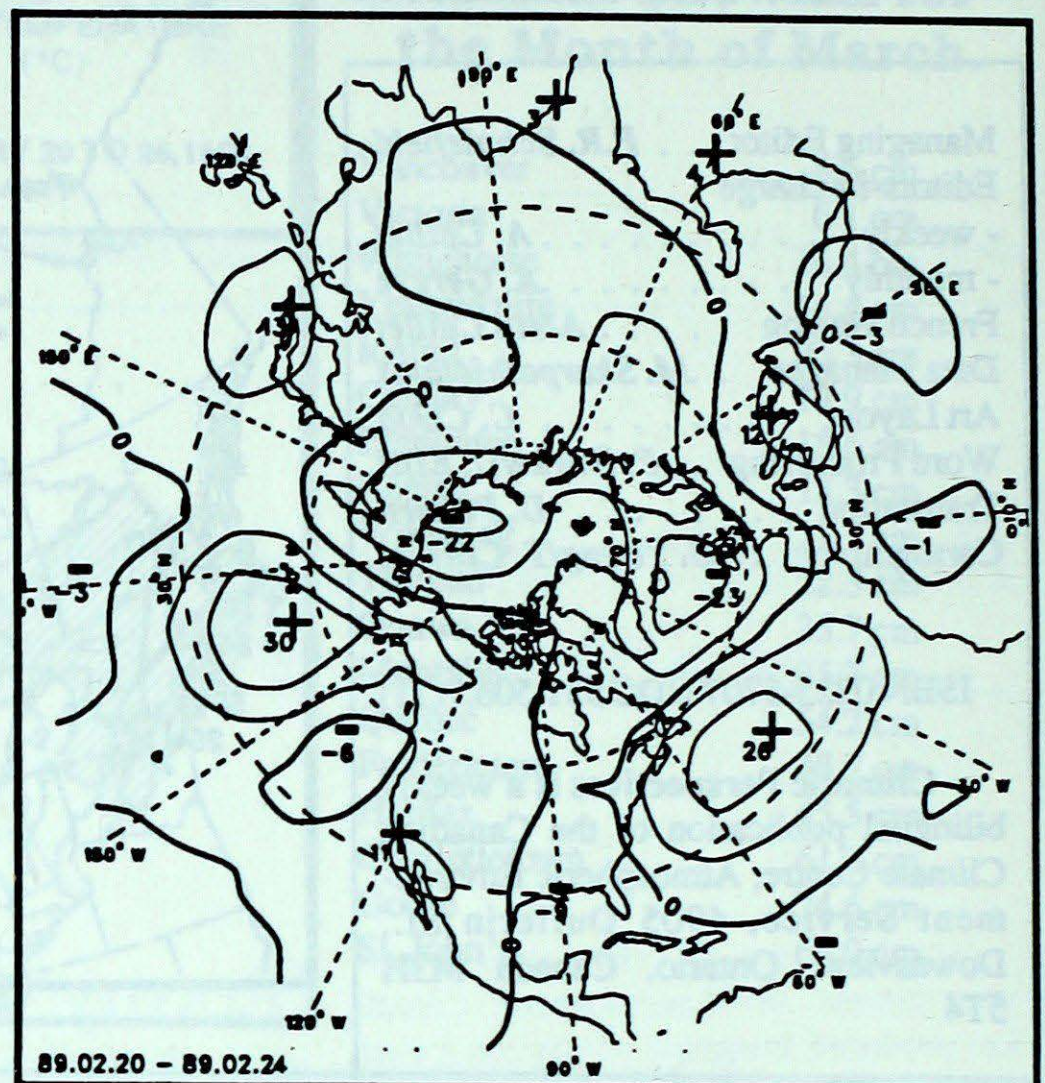
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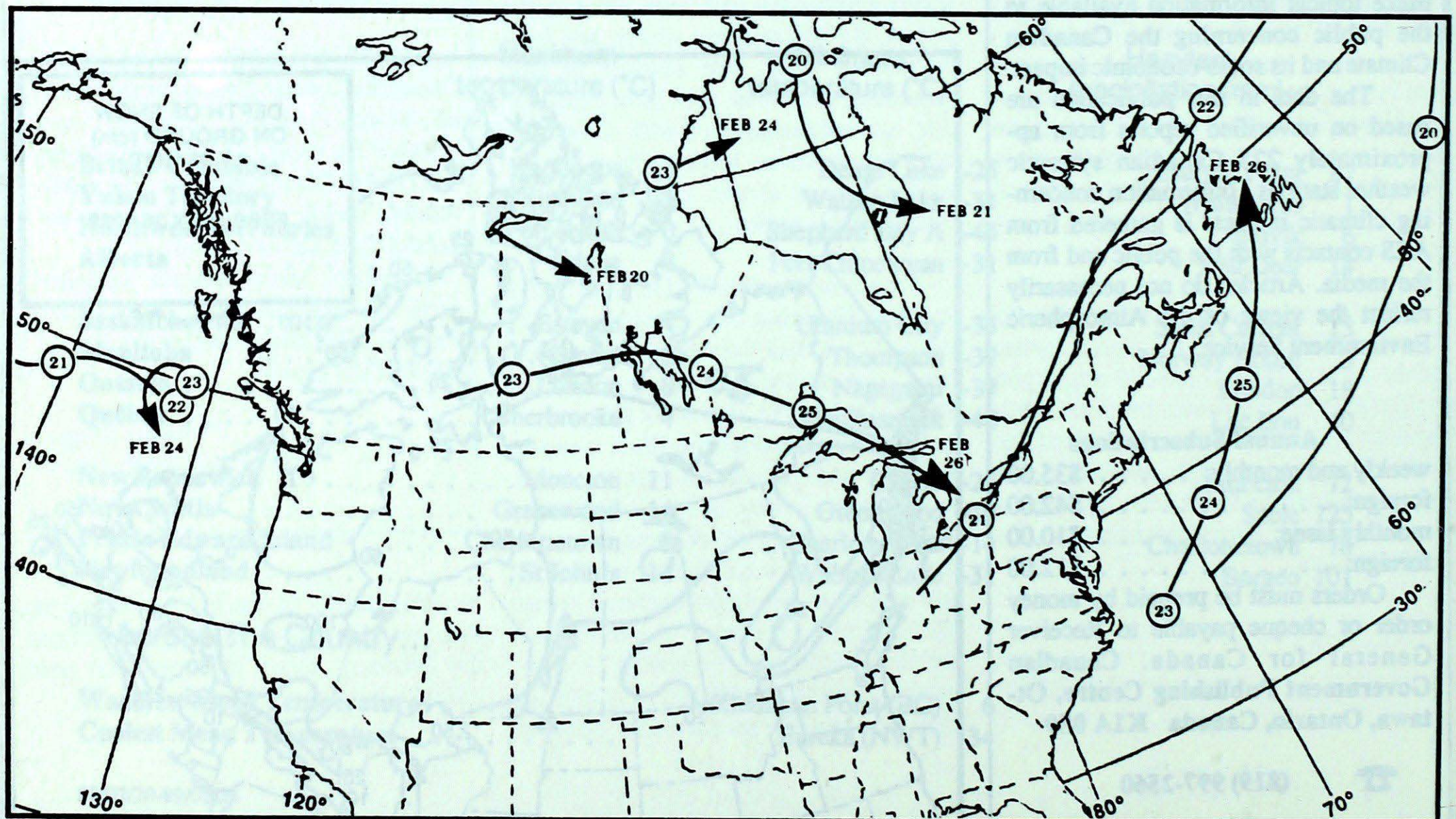
50 kPa ATMOSPHERIC CIRCULATION



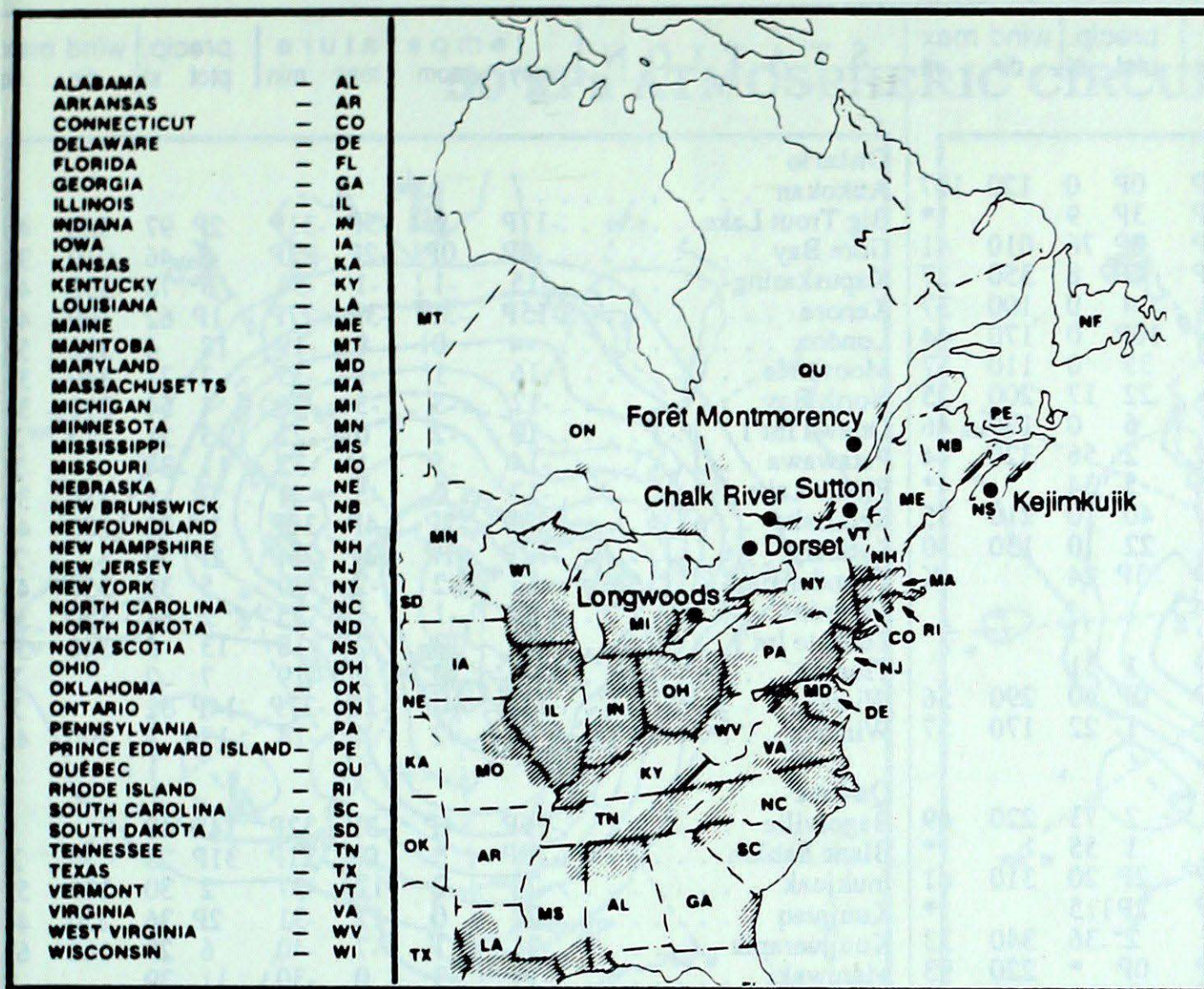
Mean geopotential height
50 kPa level (10 decameter intervals)



Mean geopotential height anomaly
50 kPa level (10 decameter intervals)



Storm track - Position of storm at 12 GMT each day during the period.



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 SO₂ and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the acid 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 readings less than 4.7, while pH readings less than 4.0 are serious.

For more information concerning the acid rain report, see Climatic Perspectives, Volume 5, Number 50, page 6.

FEBRUARY 19 TO FEBRUARY 25, 1989

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	25	4.0	2(s)	Indiana, Ohio, Southern Ontario
Dorset	19	4.1	4(s)	Michigan, Southern Ontario
	20	4.4	7(s)	West Virginia, Pennsylvania, New York, Eastern Ontario
	21	4.4	5(s)	Pennsylvania, New York, Eastern Ontario
	22	4.3	1(s)	Central Ontario
Chalk River	19	4.1	1(s)	Michigan, Southern Ontario
	20	4.2	5(s)	West Virginia, Pennsylvania, New York, Eastern Ontario
	21	4.3	3(s)	Pennsylvania, New York, Eastern Ontario
Sutton	20	3.9	7(s)	Virginia, Pennsylvania, New York
	21	4.1	13(r)	Pennsylvania, New York, New England
Montmorency	19	4.2	3(s)	Lake Huron, Central Ontario, Southern Quebec
	20	4.1	2(s)	Ohio, Southern Ontario, New York, Southern Quebec
	21	4.6	7(s)	New England, Southern Quebec
Kejimikujik	20	4.3	3(s)	Pennsylvania, Atlantic Ocean
	21	4.8	32(r)	Atlantic Ocean
	22	4.6	19(m)	Atlantic Ocean
	23	4.9	12(s)	Quebec, New Brunswick
	24	4.9	5(s)	Gulf St. Lawrence, Atlantic Ocean, Nova-Scotia
	25	4.8	18(s)	Atlantic Ocean

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

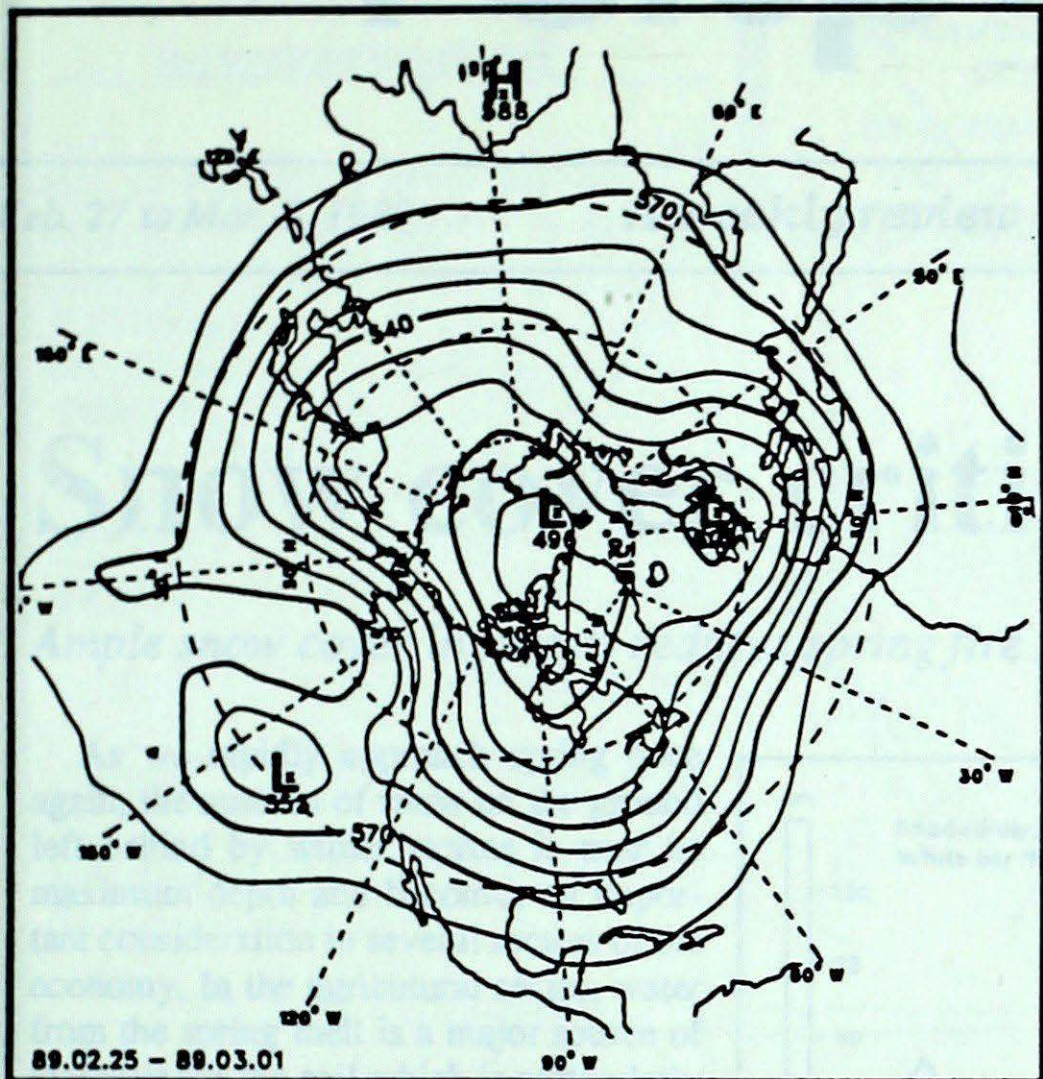
STATION	temperature				precip.		wind max		STATION	temperature				precip.		wind max	
	moy	anom	max	min	ptot	st	dir	vit		moy	anom	max	min	ptot	st	dir	vit
British Columbia									Ontario								
Cape St. James	6P	1P	9P	3P	0P	0	120	107	Atikokan								
Cranbrook	-2P	1P	6P	-13P	3P	9		*	Big Trout Lake	-17P	2	-5P	-31P	2P	97	360	46
Fort Nelson	-9P	5P	1P	-22P	0P	76	010	41	Gore Bay	-8P	0P	-2P	-23P	6	46	010	33
Fort St. John	-7P	2P	2P	-18P	4P	8	350	37	Kapusking	-15	-1	-1	-34	3	78	330	41
Kamloops	2	2	13	-8	4	0	100	37	Kenora	-15P	-3P	-3P	-27P	1P	62	190	48
Penticton	2	0	6	-6	10P	0	170	44	London	-4	0	8	-19	18	4	320	54
Port Hardy	4	0	8	-1	35	0	110	57	Moosonee	-16	1	-1	-35	2	71	340	33
Prince George	-4	1	5	-16	22	17	200	35	North Bay	-12	-3	-3	-26	4	54	010	39
Prince Rupert	3	-1	10	-3	5	0	170	46	Ottawa Int'l	-10	-2	0	-22	15	21		X
Revelstoke	1P	2P	6P	-3P	2	56	320	44	Petawawa	-14	-5	1	-32	11	34		X
Smithers	-3	1	5	-18	5	34		*	Pickle Lake	-17	0	-5	-31	3P	*	330	39
Vancouver Int'l	5	1	10	-1	40	0	210	35	Red Lake	-16P	-2P	-4P	-30P	1P	90	200	46
Victoria Int'l	4	-1	12	-3	22	0	130	50	Sudbury	-12P	-1P	-2P	-26P	2P	59		X
Williams Lake	-3P	0	6P	-17P	3P	24		X	Thunder Bay	-13	-2	-2	-30	5	35	350	41
Yukon Territory									Timmins								
Komakuk Bay	-14	12	-5	-29	1	31			Toronto Int'l	-7	-3	2	-18	13	5	340	57
Watson Lake	-15P	1P	0P	-31P	0P	60	290	56	Trenton	-6	-2	2	-19	7	2		X
Whitehorse	-10	0	1	-27	1	22	170	57	Warton	-11P	-4P	-2P	-27P	14P	32		X
Northwest Territories									Windsor								
Alert	-28	6	-16	-35	2	73	220	69		-4	-2	4	-14	13	1	290	46
Baker Lake	-30	2	-20	-38	1	55		*	Québec								
Cambridge Bay	-27P	8P	-19P	-33P	2P	20	310	61	Bagotville	-16P	-4P	-3P	-32P	14P	48		*
Cape Dyer	-26P	-2P	-19P	-33P	2P	115		*	Blanc Sablon	-10P	*	0P	-21P	31P	23		X
Clyde	-33	-5	-25	-39	2	36	340	33	Inukjuak	-27	-2	-12	-37	2	30	180	59
Coppermine	-23P	6	-14P	-32P	0P	*	220	93	Kuujuuaq	-22	0	-12	-31	2P	36	250	44
Coral Harbour	-28	1	-20	-40	1P	17		X	Kuujuuarapik	-21	1	-7	-40	6	29	160	67
Eureka	-34	5	-23	-43	3	21	150	48	Maniwaki	-14	-3	0	-30	11	39		*
Fort Smith	-15	5	0	-34	2P	34		X	Mont Joli	-10	-1	-2	-24	20	33	030	44
Iqaluit	-27	-1	-18	-35	2	20	350	43	Montréal Int'l	-8	-1	2	-20	14P	4	020	33
Hall Beach	-32	0	-20	-40	2P	40	300	31	Natashquan	-10	1	-2	-21	17	49	080	41
Inuvik	-15P	12P	-4P	-28P	6P	*		X	Québec	-10	-1	-1	-22	23	63	090	41
Mould Bay	-26P	10P	-14P	-34P	3P	*		X	Schefferville	-20	0	-9	-39	3	44	240	59
Norman Wells	-16	8	-3	-29	1	19		X	Sept-Iles	-12	0	-1	-27	15	*	060	46
Resolute	-30	4	-24	-38	3	21	120	56	Sherbrooke	-9	1	4	-27	18	24	280	33
Yellowknife	-18P	4P	-8P	-36P	82P	*	330	76	Val D'or	-17	-4	-4	-34	1	45	240	33
Alberta									New Brunswick								
Calgary Int'l	-5P	1P	7P	-17P	1P	8	270	50	Charlo	-11	-1	2	-24	33	102		*
Cold Lake								*	Chatham	-7P	0P	1P	-19P	39	*	040	50
Coronation	-10	1	2	-23	0	0		*	Fredericton	-3P	3P	11P	-20P	46	*	240	63
Edmonton Namao	-6P	3P	3P	-14P	2P	*	290	31	Moncton	-2P	5P	11P	-13P	72	*	200	94
Fort McMurray	-11P	2P	3P	-25P	3P	22		X	Saint John	-5P	1P	7P	-19P	64	*	360	57
High Level	-12	3	0	-28	4	40	360	56	Nova Scotia								
Jasper	-2	3	8	-14	1	24		X	Greenwood	-3P	1P	14P	-19P	77	27	190	106
Lethbridge	-4P	1P	5P	-18P	2P	*	250	87	Shearwater	-1P	2P	9P	-9P	97	*	230	87
Medicine Hat	-6	1	5	-20	2	3	180	63	Sydney	-3P	2P	8P	-14P	101	*	210	70
Peace River	-10	1	1	-21	4	13	360	41	Yarmouth	1P	3P	10P	-7P	70	*	180	70
Saskatchewan									Prince Edward Island								
Cree Lake	-15	1	0	-34	2	50	020	39	Charlottetown	-3P	3P	8P	-14P	78	*	040	70
Estevan	-11	0	4	-24	3	12	350	67	Summerside	-4P	2P	9P	-13P	60	*	030	61
La Ronge	-13P	0P	-1P	-26P	5P	36		*	Newfoundland								
Regina	-9P	3P	2P	-25P	*	8	290	59	Cartwright	-12P	0P	-5P	-22P	4P	93	230	46
Saskatoon	-10P	4P	1P	-23P	1P	4	300	44	Churchill Falls	-18	2	-6	-31	6	73	240	46
Swift Current	-9P	1P	3P	-22P	13P	23		X	Gander Int'l	-5P	2P	4P	-17P	46	*	200	93
Yorkton	-14	0	2	-28	1	22	300	54	Goose	-16P	-1P	-6P	-26P	6P	32	240	44
Manitoba									Port-Aux-Basques								
Brandon	-14	0	2	-30	1	14	290	56		-4	2	5	-13	85P	53	200	83
Churchill	-23	2	-11	-34	2	36	320	56	St John's	-1P	3P	11P	-13P	60	11	250	104
Lynn Lake	-18	0	0	-33	1	47	320	33	St Lawrence	-1P	4P	6P	-9P	81	8		X
The Pas	-18P	-2	-5P	-33P	1P	19	350	43	Wabush Lake	-18P	3P	-6P	-31P	4P	0	240	43
Thompson	-20	-1	-6	-37	1P	48	010	41	89/02/20-89/02/26								
Winnipeg Int'l	-15P	-2P	0P	-28P	2P	22	190	74									

mean = mean weekly temperature, °C
 max = maximum weekly temperature, °C
 min = minimum weekly temperature, °C
 anom = mean temperature anomaly, °C

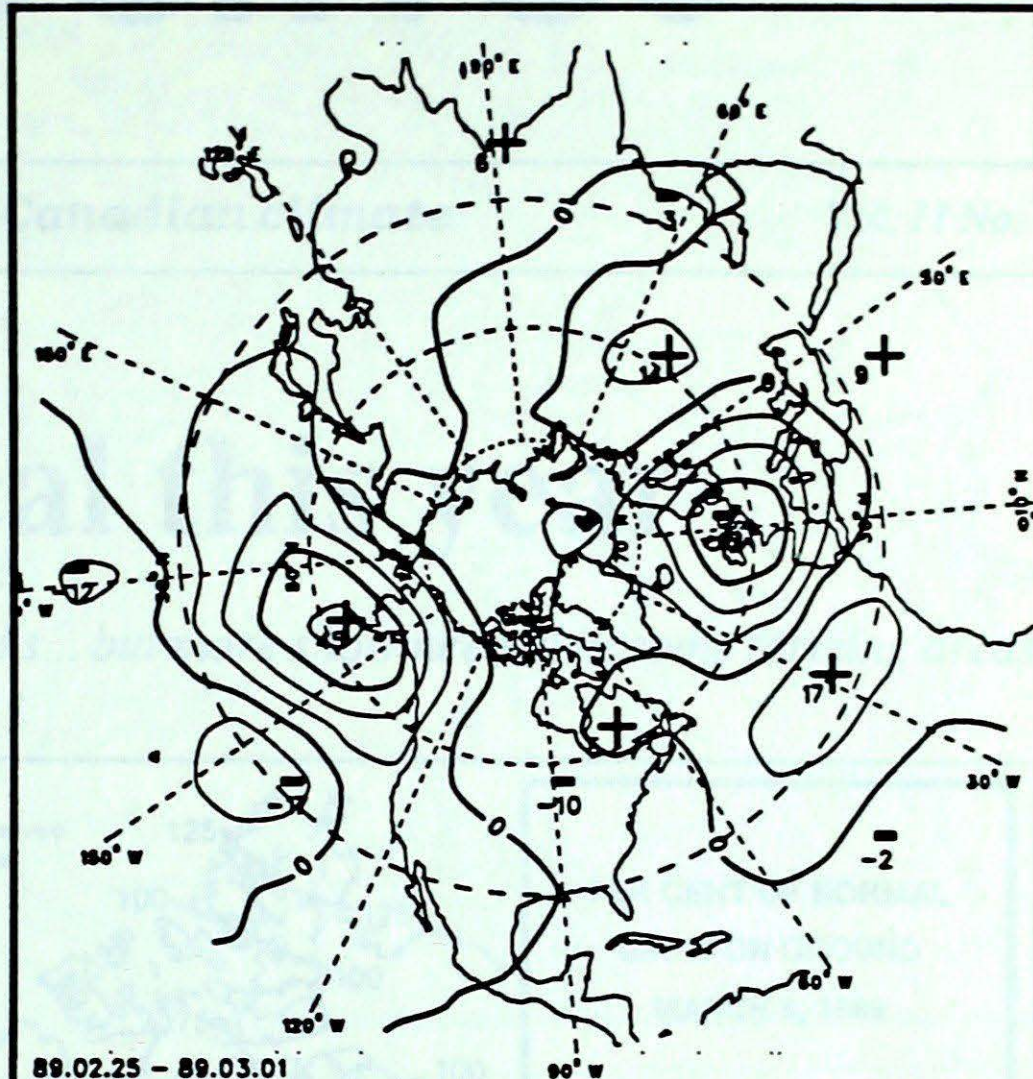
ptot = weekly precipitation total in mm
 st = snow thickness on the ground in cm
 dir = direction of max wind, deg. from north.
 vit = wind speed in km/h

- Annotations -
 X = no observation
 P = less than 7 days of data
 * = missing data when going to printing.

50 kPa ATMOSPHERIC CIRCULATION



Mean geopotential height
50 kPa level (10 decameter intervals)



Mean geopotential height anomaly
50 kPa level (10 decameter intervals)



Environment Canada
Environnement Canada
Atmospheric Environment Service
Service de l'environnement atmosphérique

MONTHLY TEMPERATURE FORECAST

Normal temperatures for the month of March, °C

Whitehorse	-8	Toronto	-1
Yellowknife	-19	Ottawa	-3
Iqaluit	-23	Montreal	-3
Vancouver	6	Quebec	-5
Victoria	6	Fredericton	-2
Calgary	-4	Halifax	-1
Edmonton	-6	Charlottetown	-3
Regina	-8	Goose Bay	-9
Winnipeg	-8	St. John's	-2

Canada

