



Climatic Perspectives

Mar. 30 to Apr. 5, 1992

A weekly review of Canadian climate and water

Vol. 14 No. 14

Northern communities salute spring!

After the stormy, dark days of winter, northerners are celebrating the arrival of spring. This time of year is the sunniest period of the year, with longer days and "cabin fever" setting in. All communities hold a spring fair or carnival, which consists of games such as dog, snowshoe, cross-country ski races, ice sculpturing, snowmobile activities, dances and western-style barbecues, featuring delicacies such as moose and caribou.

On the weekend of 27th, two big events took place in the Northwest Territories: Yellowknife's Caribou Festival and one of the last cross-country ski meets this season. The weather was very comfortable for the ski competition. However, the snow surface hardened by refreezing, irritated the paws of some sled-dogs. Unfortunately, the celebration of the Snow Golf Competition in Fort Providence, on the 3rd, was cancelled due to a major spring snowstorm, which dumped about 20 cm of snow.

Another major annual event is the Yukon Quest dog race. Top North American dog mushers compete in a 1600 km dog sled race between Fairbanks, Alaska and Whitehorse, Yukon.

Although the warm spell had caused the deterioration of the snow base in southern Yukon, mid-March saw one of the most successful Arctic Winter Games yet. The grooming machines were brought in, and teams from Alaska, Russia, Greenland, and western Canada competed at Whitehorse.

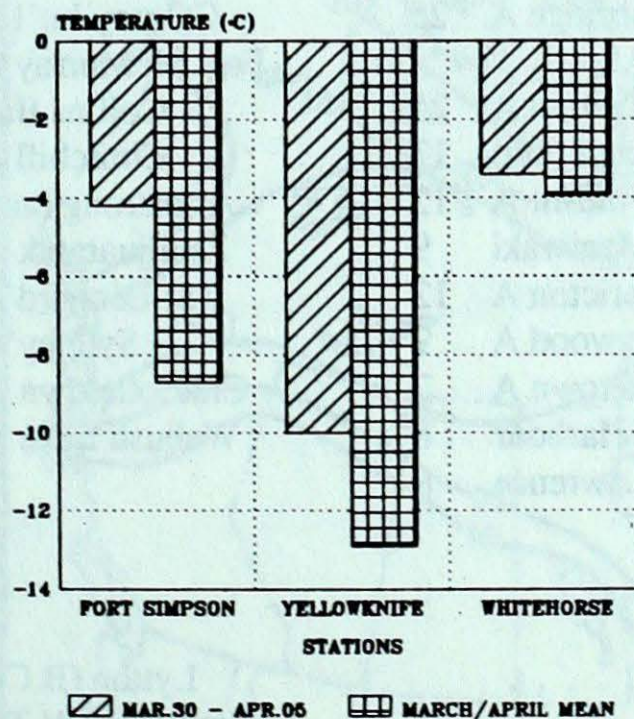
More precipitation...

The week began with sunshine and record breaking daily maximum temperatures over the southern regions of British Columbia. But, the warm weather enticed mosquitoes to appear six weeks early! However, on Thursday, a moist frontal system slid southward, bringing in a cooler, unstable airmass in its wake. Significant amounts of snow fell in north-eastern British Columbia and southeastern Yukon. Fort Liard, Northwest Territories, received 31 cm on the 2nd, and a further 14 cm the next day. The same storm, which hit Fort Providence on the 3rd, dropped as much as 50 cm of snow in the area bordering Northwest Territories, the Yukon and British Columbia, resulting in the closure of the Alaska highway for a day and a half.

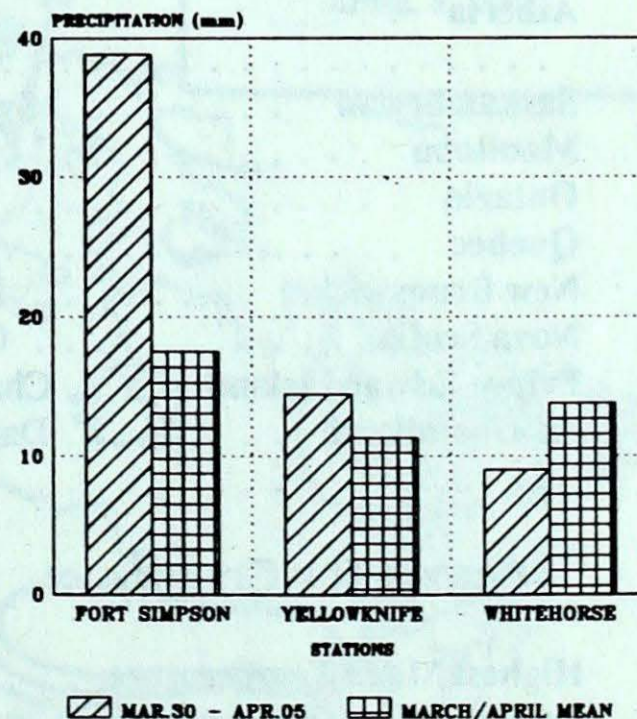
A few low pressure systems, which slipped into the Prince Rupert area gave weekly precipitation total of 173.1 mm, exceeding the normal weekly value by more than 130 mm.

A look ahead...

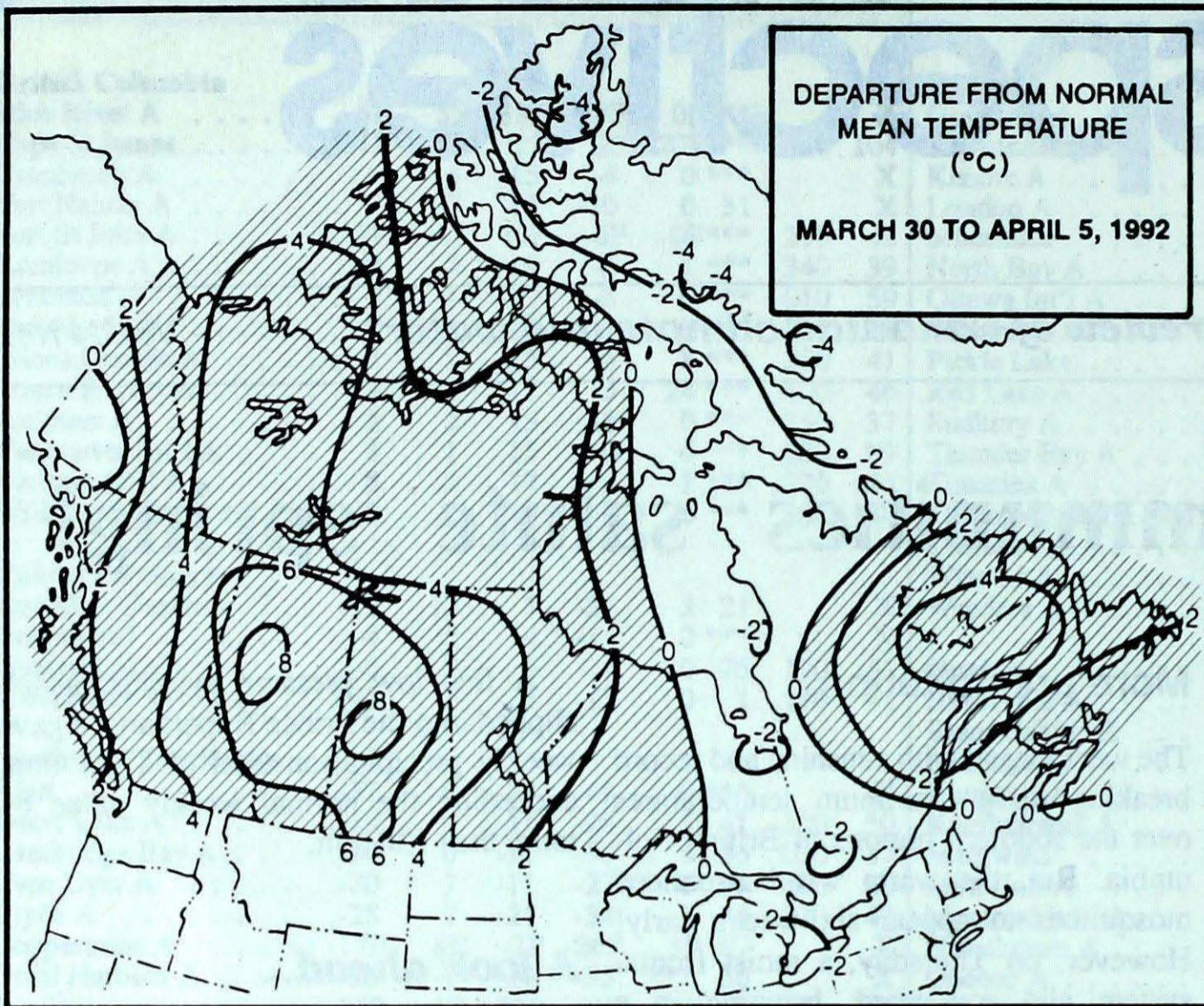
For the week of April 13, above normal temperatures are expected for most of the country except below normal temperatures are expected across northern Quebec and the Atlantic region. The warm core of air will persist across the southern Prairies where temperatures may be up to 10°C above normal. Precipitation is likely across British Columbia, the Yukon, the Mackenzie District of the Northwest Territories as well as the Atlantic region.



Mean temperatures for March and April compared to weekly mean temperatures for March 30 to April 05.



Averaged March - April precipitation compared to weekly precipitation for March 30 to April 05.



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	2.8	-8.0
Iqaluit A	-12.5	-22.5
Yellowknife A	-6.9	-19.2
Vancouver Int'l A	11.5	3.8
Victoria Int'l A	11.8	3.1
Calgary Int'l A	6.6	-5.3
Edmonton Int'l A	4.2	-6.9
Regina A	3.9	-6.8
Saskatoon A	3.3	-7.1
Winnipeg Int'l A	2.9	-7.1
Ottawa Int'l A	5.7	-3.1
Toronto (Pearson Int'l A)	7.5	-1.8
Montréal Int'l A	5.9	-2.2
Québec A	3.6	-4.6
Fredericton A	6.2	-3.7
Saint John A	5.2	-3.9
Halifax (Shearwater)	5.7	-1.8
Charlottetown A	3.7	-3.8
Goose A	0.5	-9.4
St John's A	2.7	-3.8

Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Kamloops A 28	Dease Lake -10	Prince Rupert A 173
Yukon Territory	Dawson A 8	Komakuk Beach A -31	Watson Lake A 15
Northwest Territories	Fort Simpson A 10	Eureka -44	Fort Simpson A 39
Alberta	Lethbridge A 25	Calgary Int'l A -10	Edmonton Int'l A 24
		Fort McMurray A -10	
Saskatchewan	Swift Current A 25	Collins Bay -17	Estevan A 7
Manitoba	Gretna (aut) 13	Churchill A -21	Lynn Lake A 7
Ontario	Windsor A 12	Armstrong (aut) -23	Windsor A 17
Quebec	Maniwaki 9	Kuujuarapik A -25	Blanc Sablon A 31
New Brunswick	Fredericton A 12	St-Léonard A -8	St-Léonard A 25
Nova Scotia	Greenwood A 9	Sydney A -3	Sydney A 41
Prince Edward Island	Charlottetown A 7	Charlottetown A -3	Charlottetown A 20
Newfoundland	Daniels Harbour 8	Wabush Lake A -11	Cartwright 53
	St Lawrence 8		

Across The Country...

Highest Mean Temperature	Lytton (B.C.) 12
Lowest Mean Temperature	Eureka (N.W.T.) -39

CLIMATIC PERSPECTIVES
VOLUME 14

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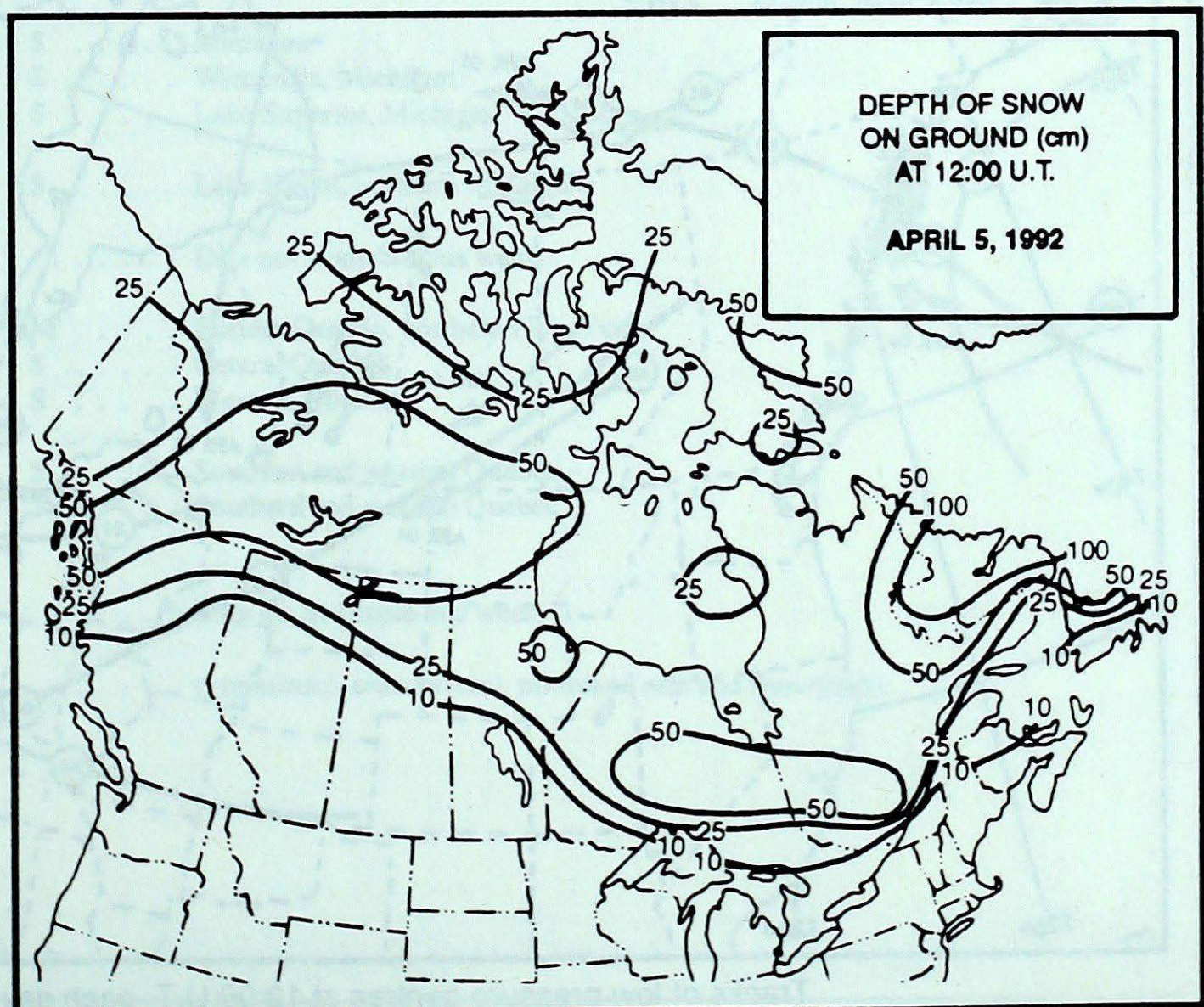
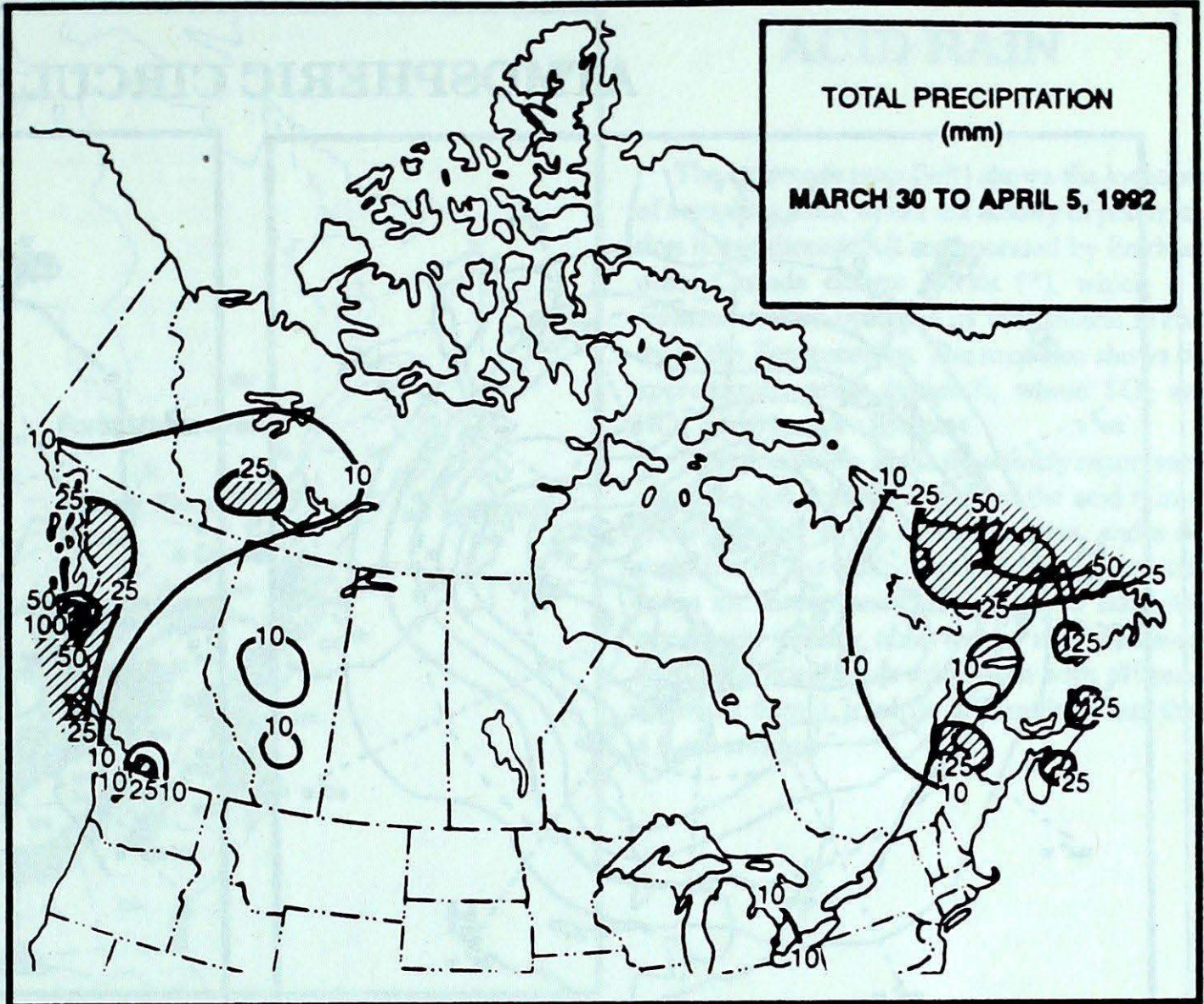
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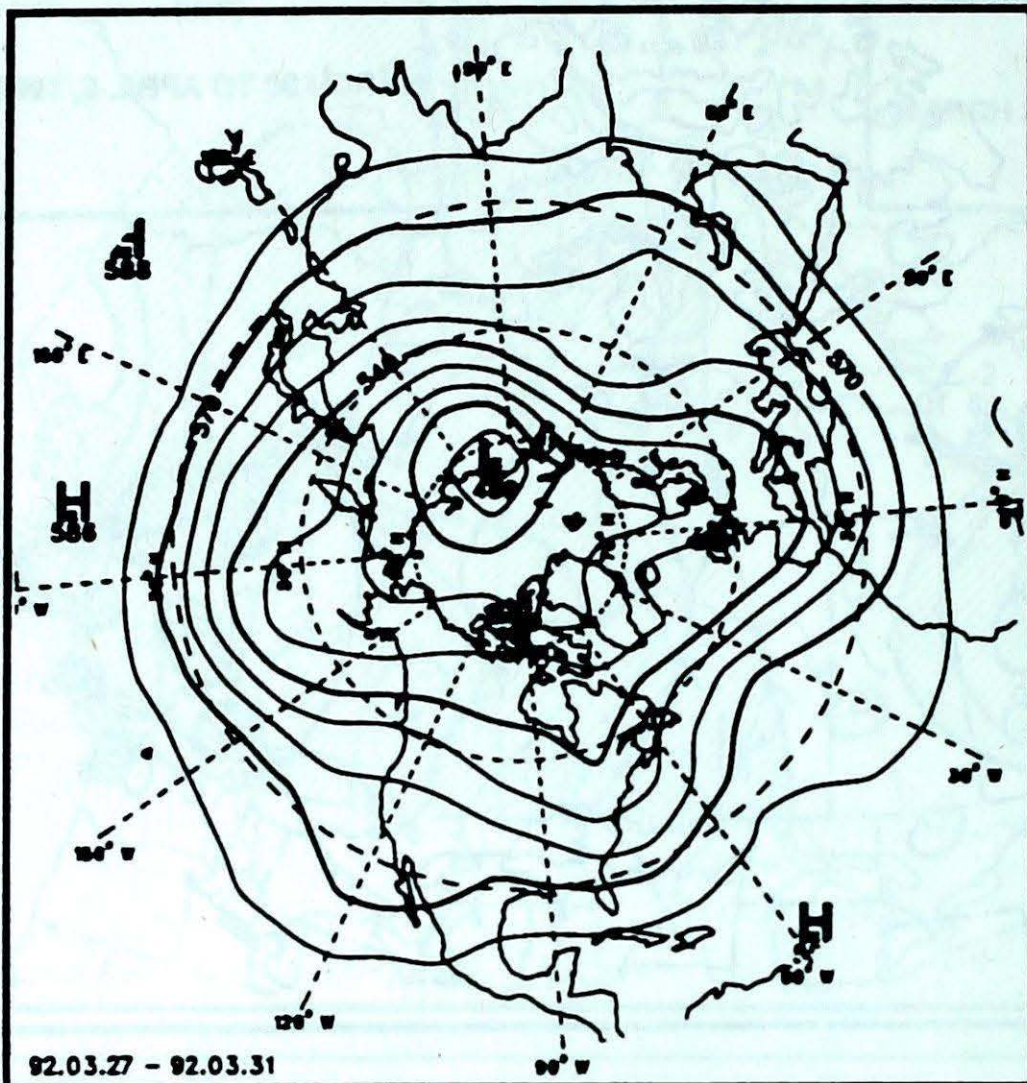
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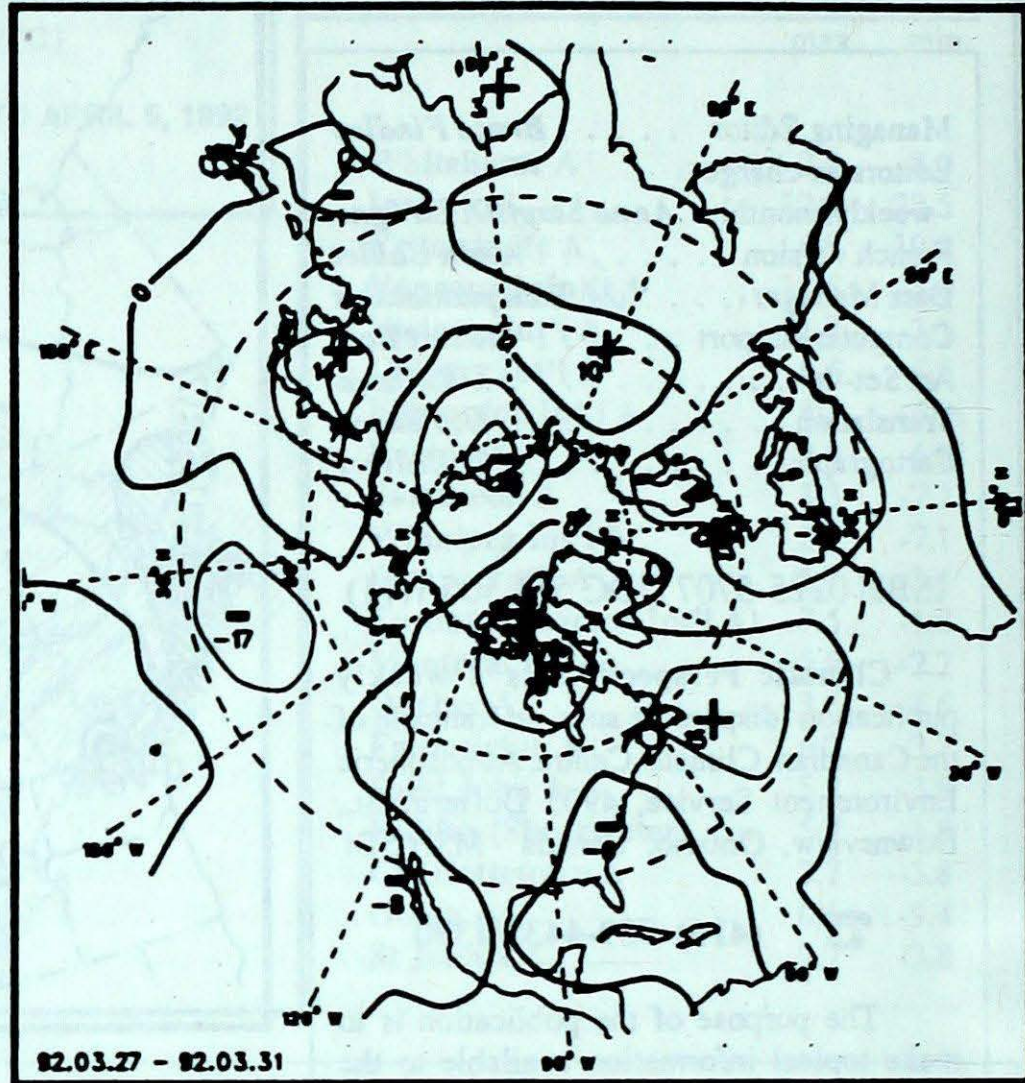
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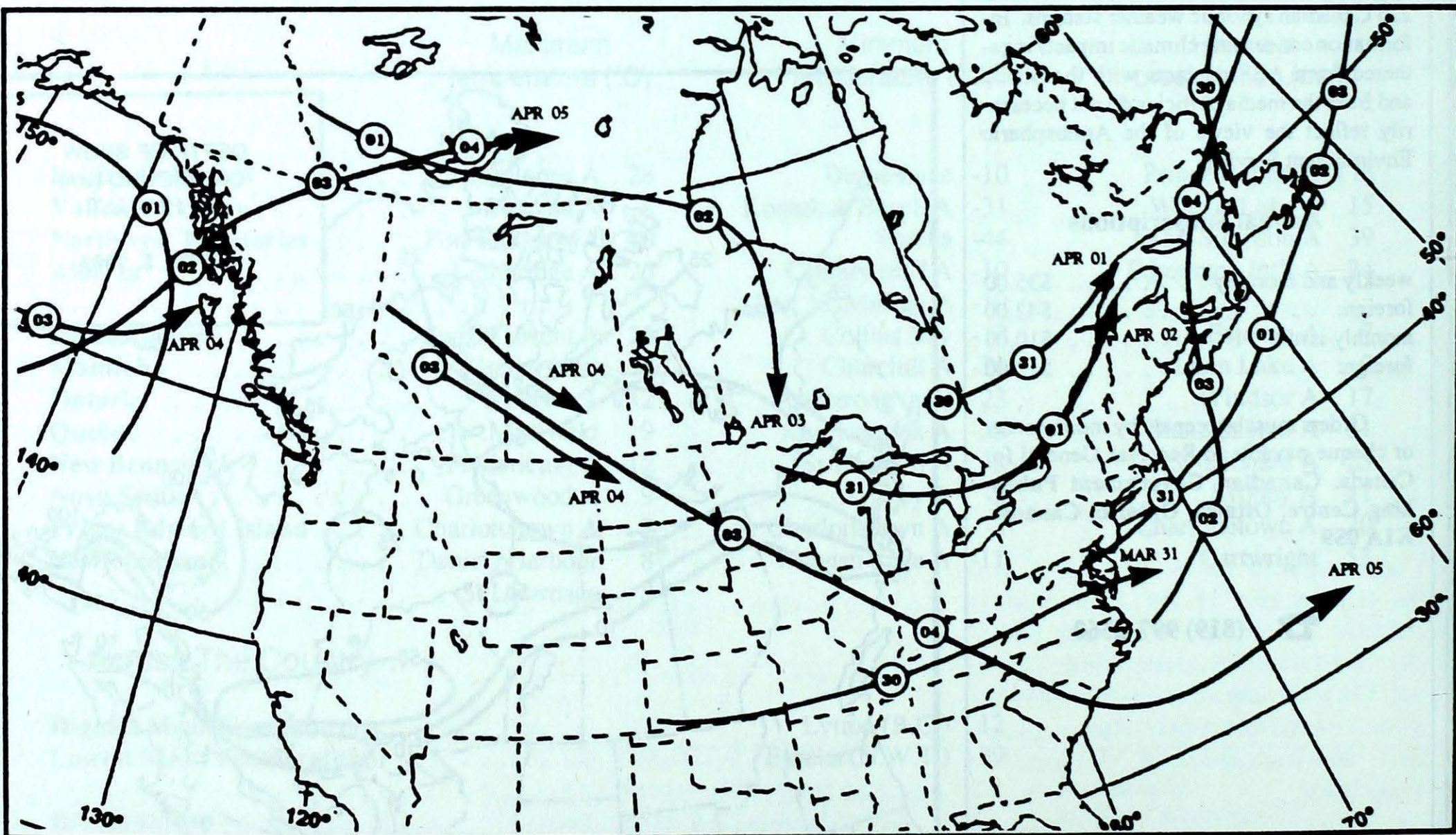
ATMOSPHERIC CIRCULATION



Mean geopotential height
50-kPa level (10-decametre intervals)



Mean geopotential height anomaly
50-kPa level (10-decametre intervals)

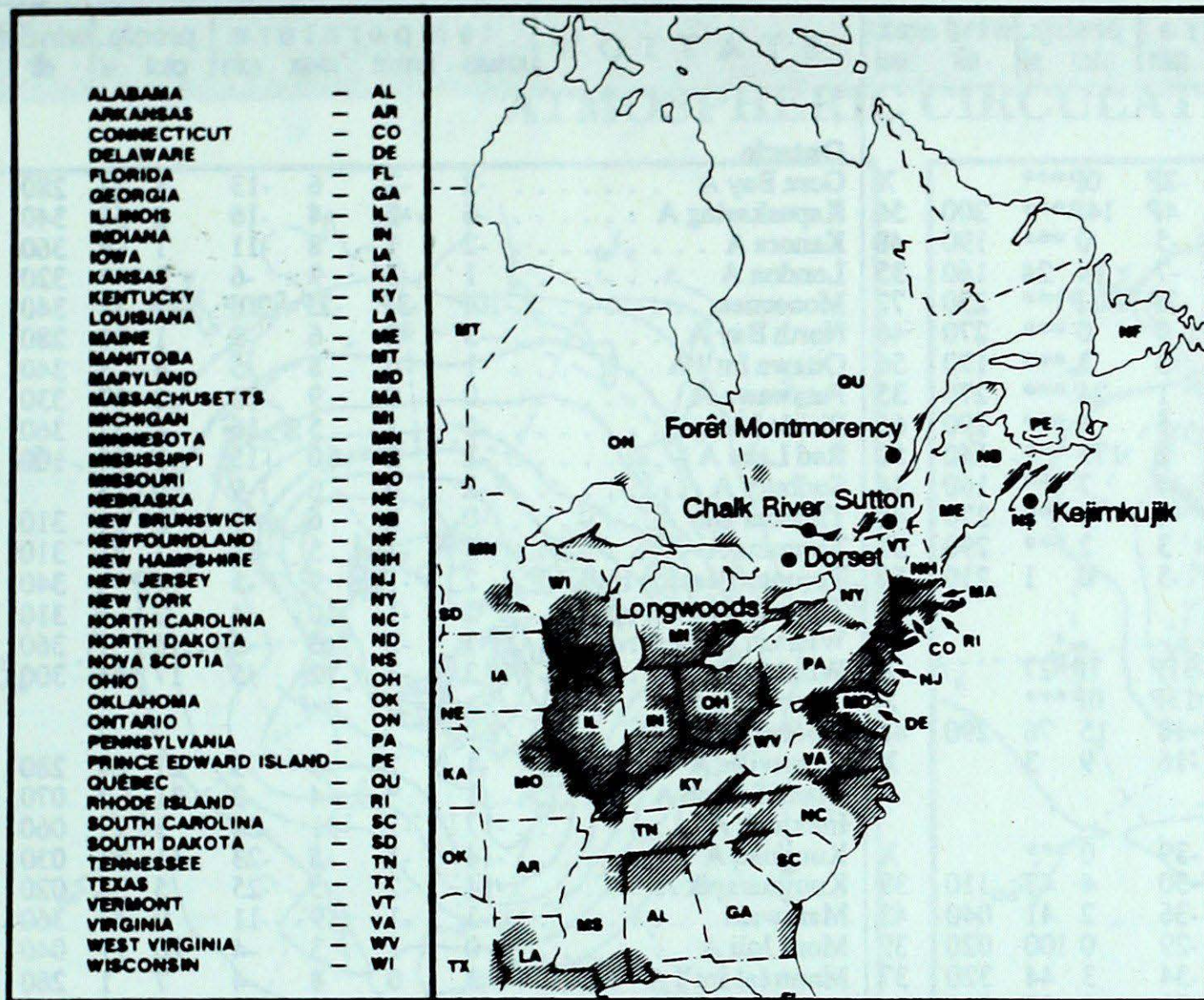


Tracks of low pressure centres at 12:00 U.T. each day during the period.

ACID RAIN

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.



Site	day	pH	amount	air path to site
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March 29 to April 4, 1992

Longwoods	29	4.7	3 S	Michigan
	31	5.2	7 S	Wisconsin, Michigan
	01	4.4	3 S	Lake Superior, Michigan
Dorset*	31	4.6	1 S	Lake Huron, northern Michigan
Chalk River				Data not available this week
Sutton	01	3.9	8 M	Eastern Ontario, northern New York
	02	4.7	2 S	Central Quebec
	04	5.0	5 S	Western Quebec
Montmorency	31	4.3	1 S	Southern and western Quebec
	01	4.5	9 S	Southern and western Quebec
Kejimikujik				Data not available this week

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

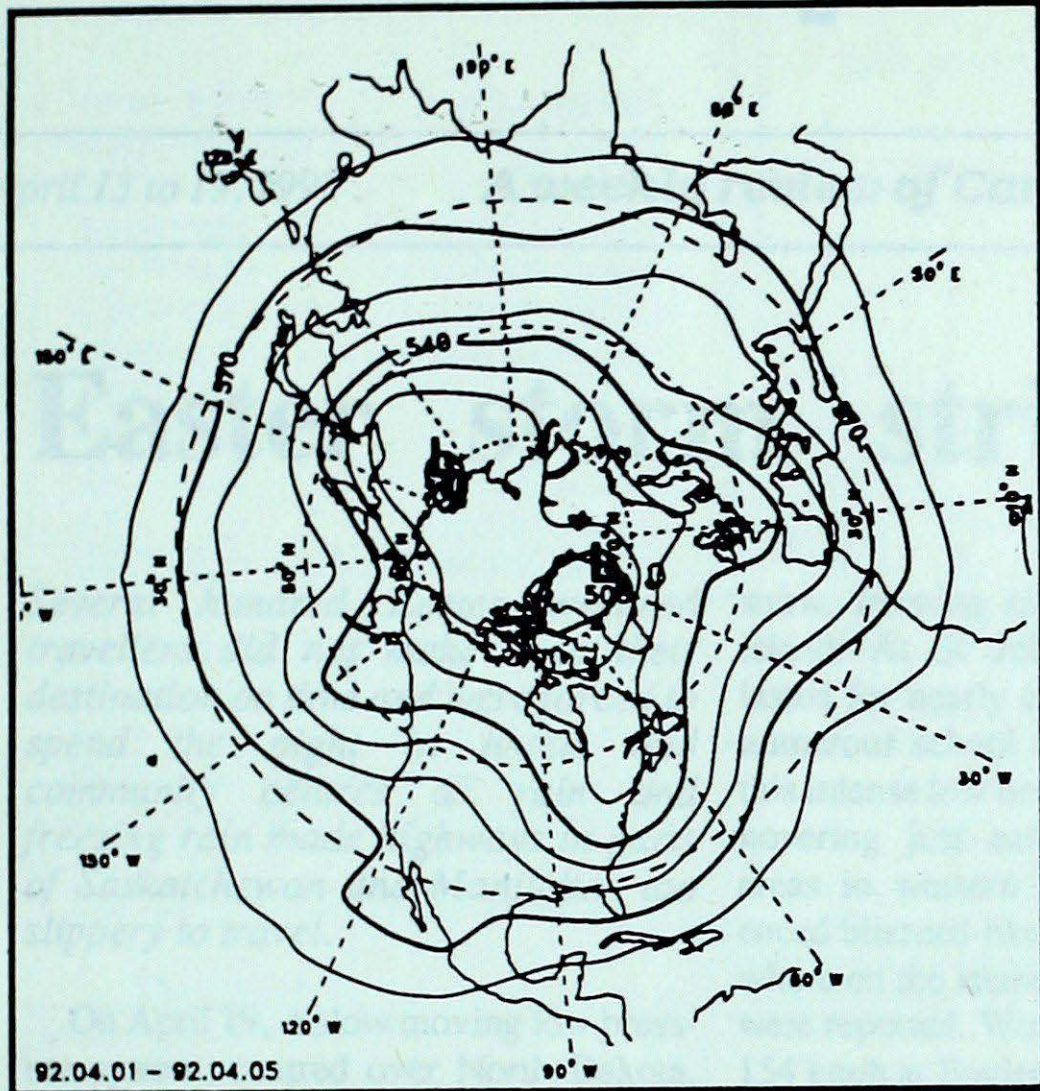
STATION	temperature				precip. ptot	st	wind dir	max vel	STATION	temperature				precip. ptot	st	wind dir	max vel
	mean	anom	max	min						mean	anom	max	min				
British Columbia								Ontario									
Blue River A	6P	4P	21P	-2P	0P***		X	Gore Bay A	-2	-2	6	-13	8	13	280	44	
Cape St James	7P	1P	9P	4P	14P***	200	56	Kapuskasing A	-6	-2	4	-16	2	56	340	37	
Cranbrook A	8	4	22	-5	0 ***	190	48	Kenora A	-2	1	8	-11	1	9	360	41	
Fort Nelson A	1	5	13	-7	14 24	160	35	London A	1	-2	9	-6	9 ***	320	57		
Fort St John A	7P	8P	20P	-2P	1P***	250	72	Moosonee	-10P	-3P	-2P	-20P	0P	38	340	39	
Kamloops A	10	3	28	0	0 ***	270	46	North Bay A	-3	-2	6	-9	1	31	280	32	
Penticton A	10	3	23	-3	3 ***	170	56	Ottawa Int'l A	1	0	8	-5	4	3	340	39	
Port Hardy A	8	2	16	1	24 ***	270	35	Petawawa A	0	0	9	-10	0	17	330	37	
Prince George A	6	4	22	-6	8 ***	290	65	Pickle Lake	-5	1	5	-16	8	52	360	50	
Prince Rupert A	7	3	12	2	173 ***	140	52	Red Lake A	-2	2	10	-15	1	26	100	41	
Smithers A	5	3	19	-4	7 ***	160	74	Sudbury A	-2	0	6	-9	0	25		X	
Vancouver Int'l A	10	3	22	4	4 ***	270	48	Thunder Bay A	0	2	6	-9	2	1	310	43	
Victoria Int'l A	10	3	22	3	2 ***	290	57	Timmins A	-5	-1	5	-15	1	51	310	33	
Williams Lake A	7	4	21	-5	0 1	210	52	Toronto(Pearson Int'l A)	2	-1	9	-5	4 ***	340	54		
Yukon Territory								Trenton A									
Komakuk Beach A	-20P	4P	-13P	-31P	7P 27		X	Warton A	-1	-2	6	-5	6	1	360	32	
Teslin (aut)	-3P	*	5P	-13P	0P***		X	Windsor A	2	-3	12	-5	17 ***	300	48		
Watson Lake A	-3	2	7	-18	15 76	290	48	Québec									
Whitehorse A	-3	-1	7	-16	9 3		X	Bagotville A	-1	1	5	-9	21	44	280	41	
Northwest Territories								Blanc Sablon A									
Alert	-32	-1	-24	-39	0 ***		X	Inukjuak A	-17	-1	-11	-24	1	17	060	61	
Baker Lake A	-20	4	-11	-30	4 43	110	39	Kuujuuaq A	-14	-1	-8	-23	11	33	030	48	
Cambridge Bay A	-28	1	-20	-36	2 41	040	43	Kuujuuarapik A	-14	-2	-5	-25	5	34	020	32	
Cape Dyer A	-22	-4	-13	-29	0 100	020	39	Maniwaki	-1	-1	9	-11	9	47	360	35	
Clyde A	-28	-5	-22	-34	3 44	320	37	Mont Joli A	0	1	3	-4	26	17	040	52	
Coppermine A	-20	8	-7	-31	2 87	090	44	Montréal Int'l A	2	0	8	-4	7	1	260	46	
Coral Harbour A	-22	-1	-11	-31	1 34		X	Natashquan A	1	4	5	-3	4	11	090	43	
Eureka	-39	-4	-31	-44	1 21		X	Québec A	1	2	6	-4	6	41	230	43	
Fort Smith A	-4	4	9	-19	7 58	140	59	Schefferville A	-7	3	-1	-16	23	100	060	44	
Hall Beach A	-27	-2	-16	-37	1 37	280	37	Sept-Îles A	1	4	5	-2	21	27	100	50	
Inuvik A	-17	4	-6	-28	7 49		X	Sherbrooke A	-1	-1	6	-8	9	7	280	37	
Iqaluit A	-21	-4	-11	-29	0 7	330	52	Val-d'Or A	-5	-2	8	-16	1	55	330	39	
Mould Bay A	-28	3	-23	-34	1 18		X	New Brunswick									
Norman Wells A	-9	5	2	-16	9 10	120	61	Fredericton A	3	2	12	-4	10	1	310	69	
Resolute A	-30	-2	-19	-36	1 14	070	67	Miscou Island (aut)	0P	2P	4P	-5P	0P***				
Yellowknife A	-10	3	2	-27	15 67	090	69	Moncton A	2	1	8	-3	13	10	260	52	
Alberta								Saint John A									
Calgary Int'l A	7	6	24	-10	10 ***	290	65	2	2	10	-4	8	1	300	44		
Cold Lake A	4	6	21	-8	1 ***	340	41	Nova Scotia									
Edmonton Namao A	6	7	22	-7	17 4	310	54	Greenwood A	3	0	9	-2	16 ***	280	76		
Fort McMurray A	4	7	18	-10	0 2	100	59	Shearwater A	2	0	8	-2	28	1	180	59	
High Level A	1	8	13	-10	1 7	140	43	Sydney A	1	2	7	-3	41	5	240	56	
Jasper	6	4	21	-9	3 ***		X	Yarmouth A	3	-1	7	-2	18 ***	280	56		
Lethbridge A	8	5	25	-9	0 ***	250	70	Prince Edward Island									
Medicine Hat A	8	5	24	-7	0 ***	250	61	Charlottetown A	1	2	7	-3	20	4	140	56	
Peace River A	6	9	19	-5	0 ***	270	57	East Point (auto)	0P	*	3P	-2P	0P***				
Saskatchewan								Newfoundland									
Cree Lake	-3	6	9	-17	5 32	200	57	Cartwright	-1	4	2	-7	53	236	340	74	
Estevan A	3	3	22	-10	7 ***	300	61	Churchill Falls A	-5	4	0	-11	28	100	040	57	
La Ronge A	0	6	10	-13	4 14	320	43	Gander Int'l A	1	3	6	-3	19	1	220	52	
Regina A	4	6	21	-10	0 ***	290	67	Goose A	-2	2	2	-8	46	80	050	59	
Saskatoon A	5	7	20	-8	1 ***	130	59	St John's A	1	2	6	-3	8	1	260	70	
Swift Current A	6	6	25	-12	0 ***	260	70	St Lawrence	1	1	8	-3	31	1		X	
Yorkton A	0	3	14	-8	0 1	310	46	Wabush Lake A	-5	4	2	-11	19	64	030	63	
Manitoba								92/03/30-92/04/05									
Brandon A	0	3	11	-11	4 ***	290	57										
Churchill A	-12	3	2	-21	3 35	340	50										
Lynn Lake A	-6	4	2	-19	7 36	290	33										
The Pas A	-2	3	11	-11	4 10	340	41										
Thompson A	-6	5	4	-17	4 45	040	37										
Winnipeg Int'l A	0	2	12	-10	1 ***	020	52										

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

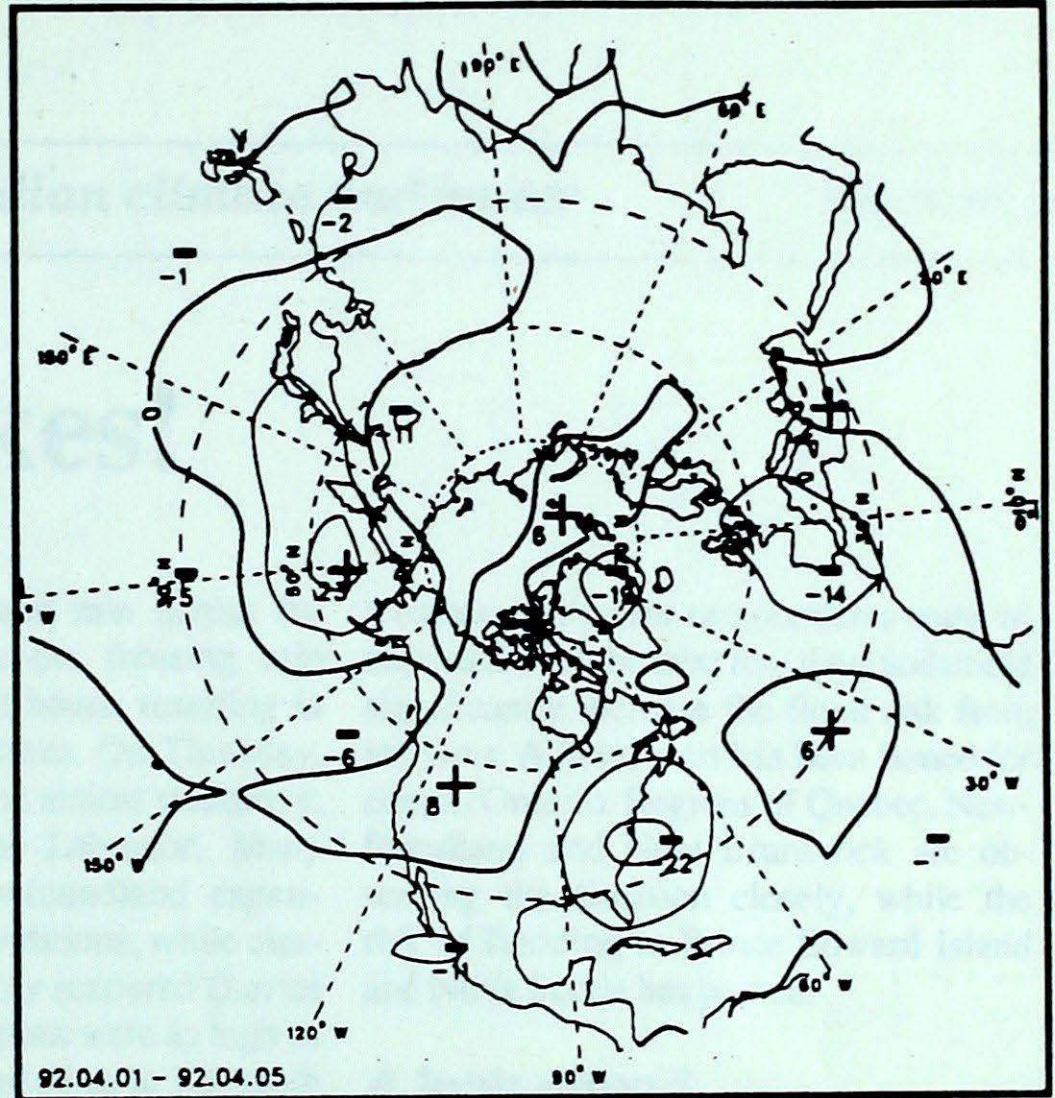
ptot = weekly precipitation total in mm
 st = snow thickness on the ground in cm
 dir = direction of max wind, deg. from north.
 vel = wind speed in km/h

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

ATMOSPHERIC CIRCULATION



Mean geopotential height
50-kPa level (10-decametre intervals)



Mean geopotential height anomaly
50-kPa level (10-decametre intervals)

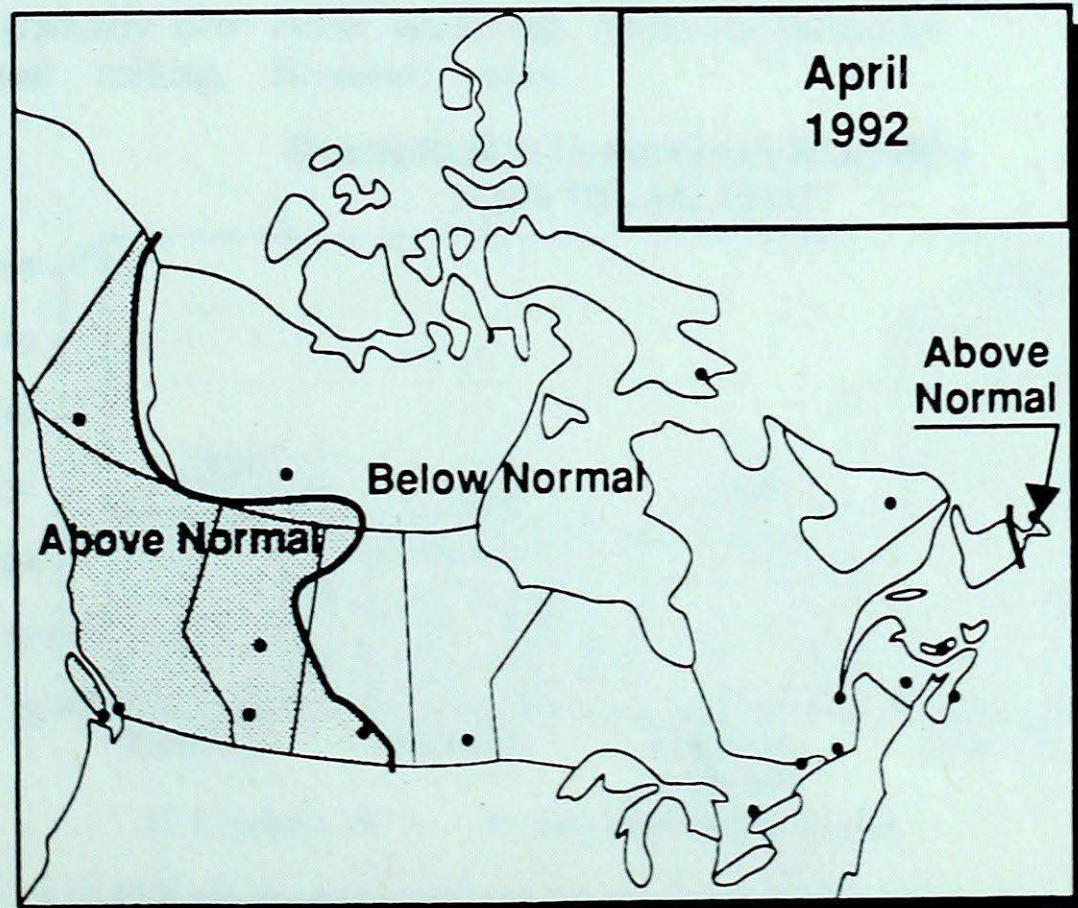


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MONTHLY TEMPERATURE FORECAST

Normal temperatures for the month of April, °C

Whitehorse	0	Toronto	6
Yellowknife	-7	Ottawa	6
Iqaluit	-14	Montréal	6
Vancouver	9	Québec	3
Victoria	8	Fredericton	4
Calgary	3	Halifax	4
Edmonton	4	Charlottetown	2
Regina	3	Goose Bay	-2
Winnipeg	3	St. John's	1



Canada