



Climatic Perspectives

April 13 to 19, 1992

A weekly review of Canadian climate and water

Vol. 14 No. 16

Easter storm strikes!

Several hundred Easter weekend travellers did not make it to their destination on time and were forced to spend the night in hotels and community centres as rain and freezing rain made highways in parts of Saskatchewan and Manitoba too slippery to travel.

On April 19, a slow moving low pressure system, centred over North Dakota, carried copious amounts of freezing precipitation to southern Saskatchewan and Manitoba. Freezing rain, which changed to snow and blowing snow resulted in zero visibilities at times. Snow was heaviest in southwestern Manitoba, with amounts as high as 47 cm, 45 cm and 40 cm at Virden, Elkhorn and Melita, respectively.

Weekend precipitation totalled as high as 86 mm in southern Manitoba, and 40 mm in southeastern Saskatchewan, while other areas received as little as 2 mm. Hundreds of people were stranded by the road side as travel was hazardous. Power lines were knocked down, flights were delayed and diverted at the Winnipeg International Airport, and at least one fatal accident was blamed on the blizzard-like weather conditions. Following on the heels of the storm, gusty northerly winds announced an invasion of cold air into the region. Reports have also indicated that agricultural field work has been postponed for a few days because of saturated soils.

Over Newfoundland, stormy weather hit at the beginning of the week when an intense low pressure system brought

snow, freezing rain and rain across the island. At St John's the freezing rain lasted for nearly eight hours, resulting in numerous school closures. On Thursday, this intense low became almost stationary, hovering just east of Labrador. Many areas in western Newfoundland experienced blizzard-like conditions, while elsewhere on the island only scattered flurries were reported. Wind gusts were as high as 154 km/h at Englee and close to 120 km/h at St Anthony.

Flood potential over eastern Canada

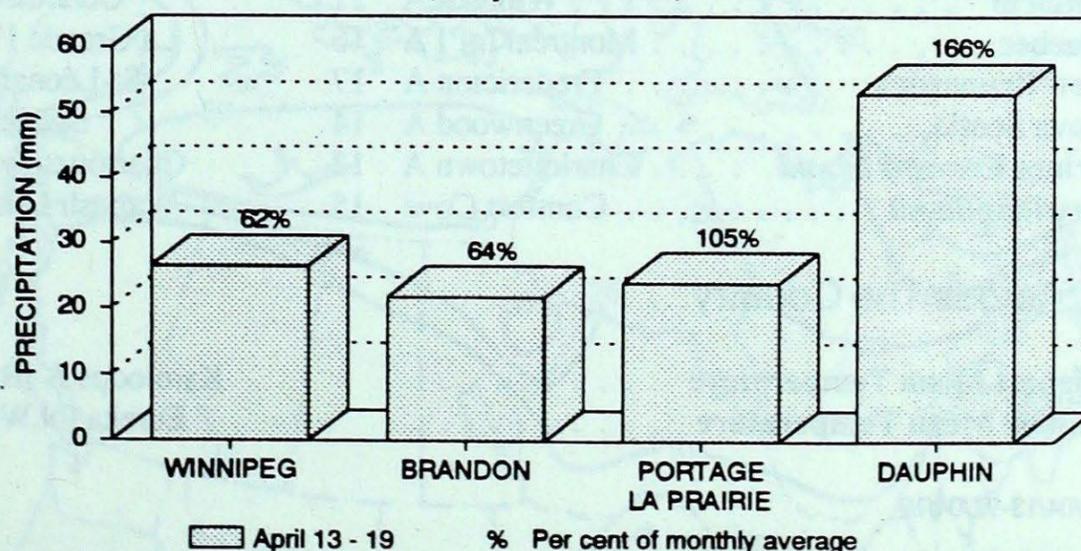
Cool, spring weather over eastern Canada has been responsible for lower than normal streamflow flooding for this time of the year. The snow cover has been reduced gradually over recent weeks by radiational melting. However, rainy

weather and warm temperatures may be expected over the next few days and could significantly increase the flood risk from ice jams. A flood alert has been issued for central Ontario. Regions of Quebec, Newfoundland and New Brunswick are observing the situation closely, while the risk of flooding in Prince Edward Island and Nova Scotia has passed.

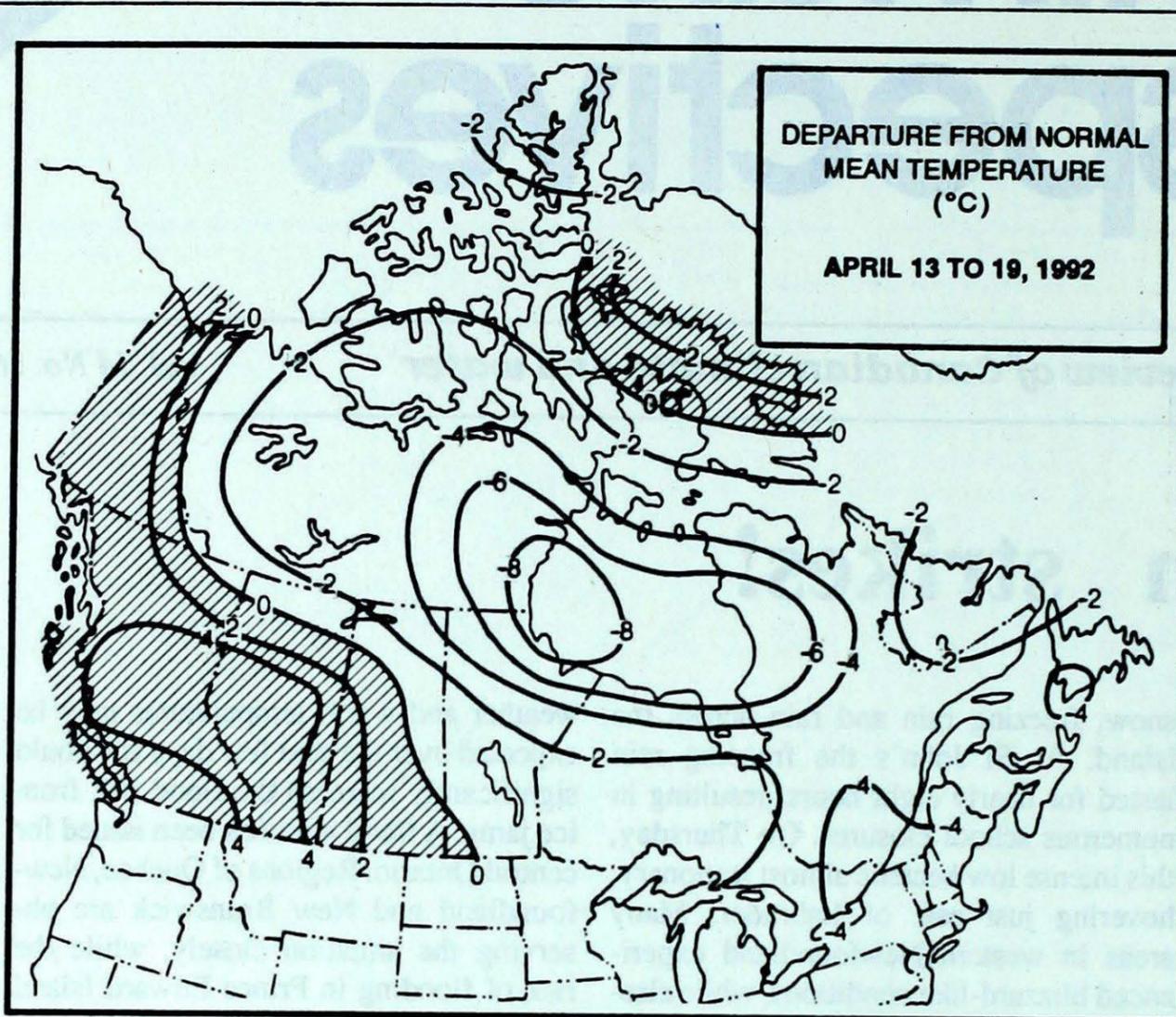
A look ahead ...

The week of April 27 will see most of the country under a cool north-westerly air flow which will result in slightly colder than normal temperatures for most of the regions. Warmer than normal temperatures are expected throughout British Columbia, Nouveau Quebec, Newfoundland, Labrador and the eastern part of the Northwest Territories.

Precipitation in southern Manitoba
April 13 - 19, 1992



The week's precipitation is expressed as total fall and as a percentage of average fall for April.



**Weekly normal
temperatures (°C)**

	max.	min.
Whitehorse A	5.0	-5.1
Iqaluit A	-10.0	-19.9
Yellowknife A	-1.3	-12.2
Vancouver Int'l A	12.2	4.6
Victoria Int'l A	12.2	3.7
Calgary Int'l A	9.3	-2.7
Edmonton Int'l A	8.5	-2.7
Regina A	10.5	-2.4
Saskatoon A	9.9	-1.8
Winnipeg Int'l A	10.4	-0.9
Ottawa Int'l A	12.3	1.1
Toronto (Pearson Int'l A)	12.9	1.3
Montréal Int'l A	12.2	1.4
Québec A	8.5	-0.9
Fredericton A	10.1	-1.3
Saint John A	8.4	-1.7
Halifax (Shearwater)	8.3	0.0
Charlottetown A	6.6	-1.6
Goose A	3.1	-6.7
St John's A	4.4	-2.2

Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Kamloops A 21	Fort Nelson A -11	Estevan Point (aut) 87
Yukon Territory	Watson Lake A 14	Komakuk Beach A -27	Watson Lake A 4
Northwest Territories	Fort Smith A 18	Eureka -38	Cape Dyer A 6
Alberta	Lethbridge A 23	High Level A -9	Cold Lake A 32
Saskatchewan	Estevan A 22	Collins Bay -23	Broadview 40
Manitoba	Dauphin A 16	Churchill A -30	Dauphin A 53
Ontario	Windsor A 21	Geraldton A -20	Toronto Int'l A 40
Quebec	Montréal Int'l A 16	La Grande IV A -33	Blanc Sablon A 17
New Brunswick	Fredericton A 17	St-Léonard A -13	Moncton A 1
Nova Scotia	Greenwood A 14	Sydney A -9	Yarmouth A 8
Prince Edward Island	Charlottetown A 12	Charlottetown A -10	Charlottetown A 0
Newfoundland	Comfort Cove 15	Wabush Lake A -22	Daniels Harbour 24

Across The Country...

Highest Mean Temperature	Kamloops A (B.C.) 13
Lowest Mean Temperature	Eureka (N.W.T.) -30

92/04/13-92/04/19

**CLIMATIC PERSPECTIVES
VOLUME 14**

Managing Editor *Bruce Findlay*
 Editors-in-charge
 - weekly/monthly *Anna Staff/D. Lavigne*
 French version *Alain Caillet*
 Data Manager *M. Skarpathiotakis*
 Computer support *Robert Eals*
 Art Set-up *K. Czaja*
 Translation *D. Pokorn*
 Cartography *T. Chivers*

ISBN 0225-5707 UDC 551.506.1(71)

Climatic Perspectives is a weekly publication (disponible aussi en français) of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ontario, Canada M3H 5T4

☎ (416) 739-4438/4330

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

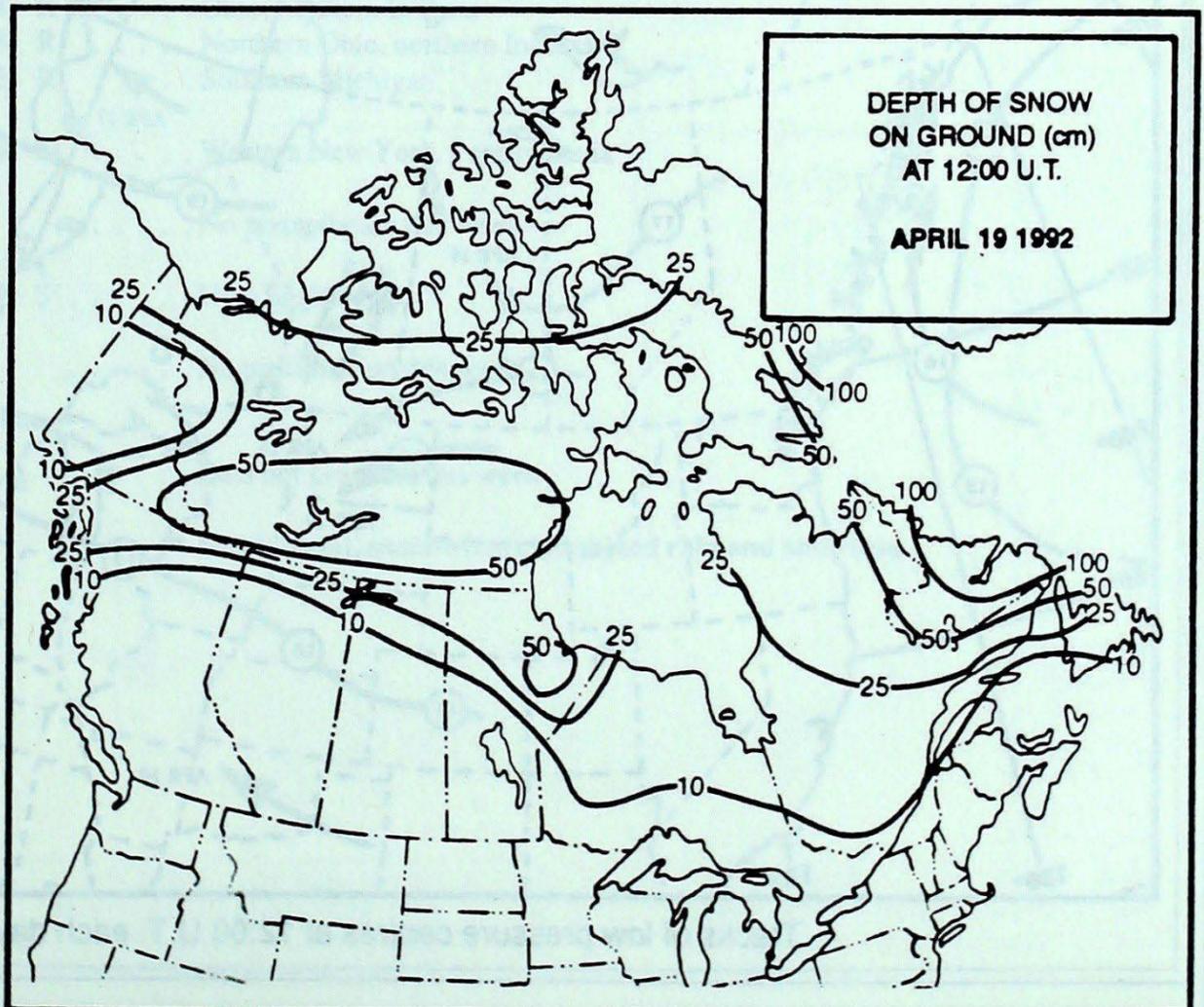
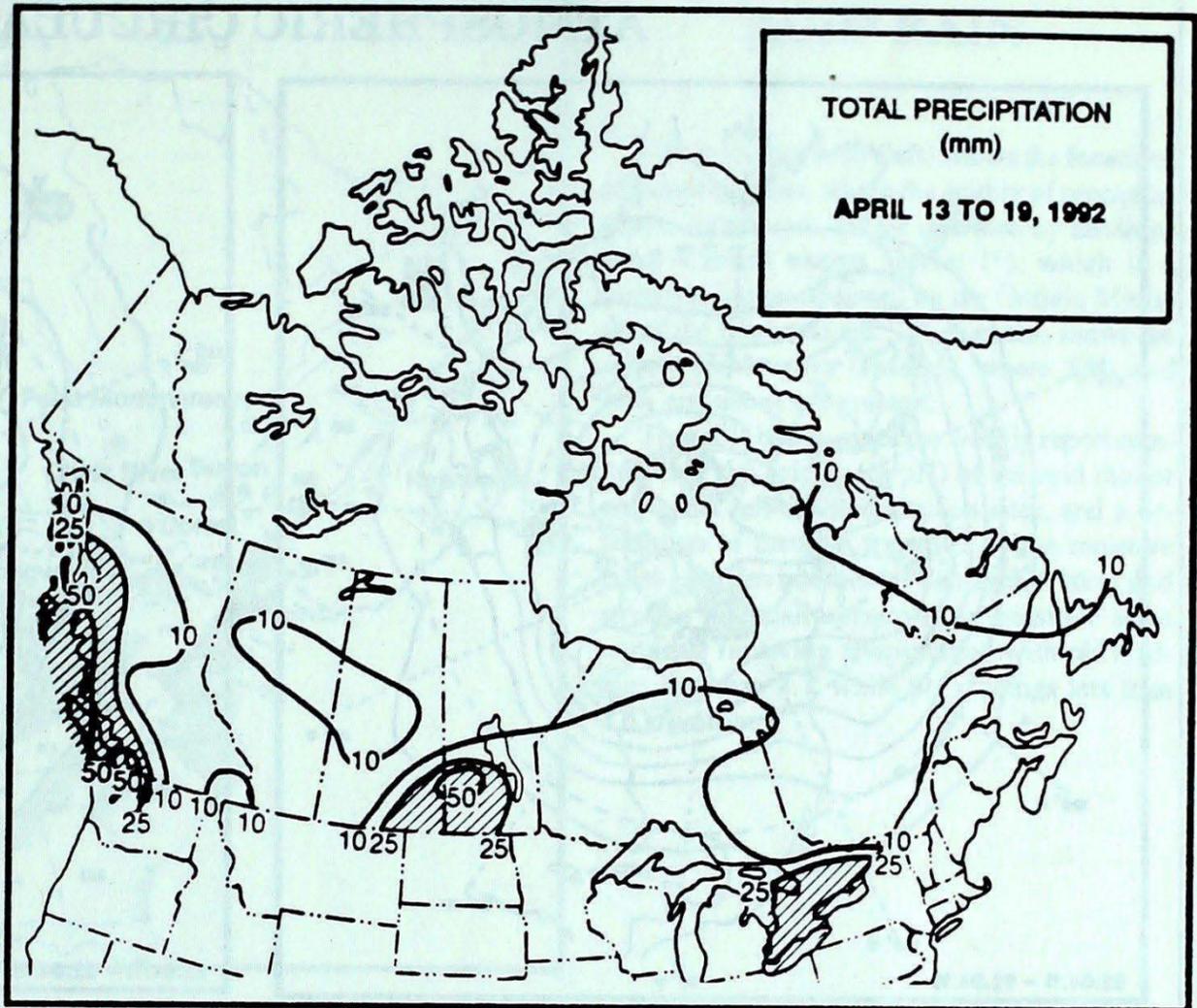
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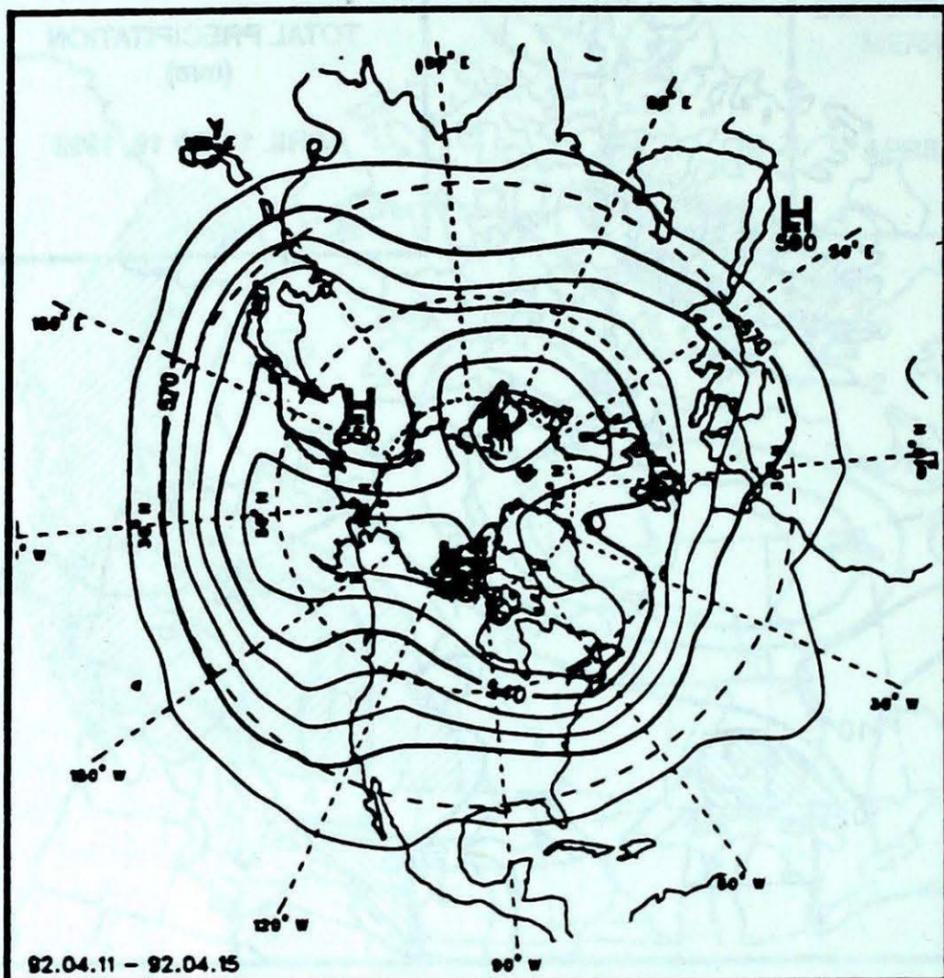
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 foreign: \$42.00
 monthly issue: \$10.00
 foreign: \$12.00

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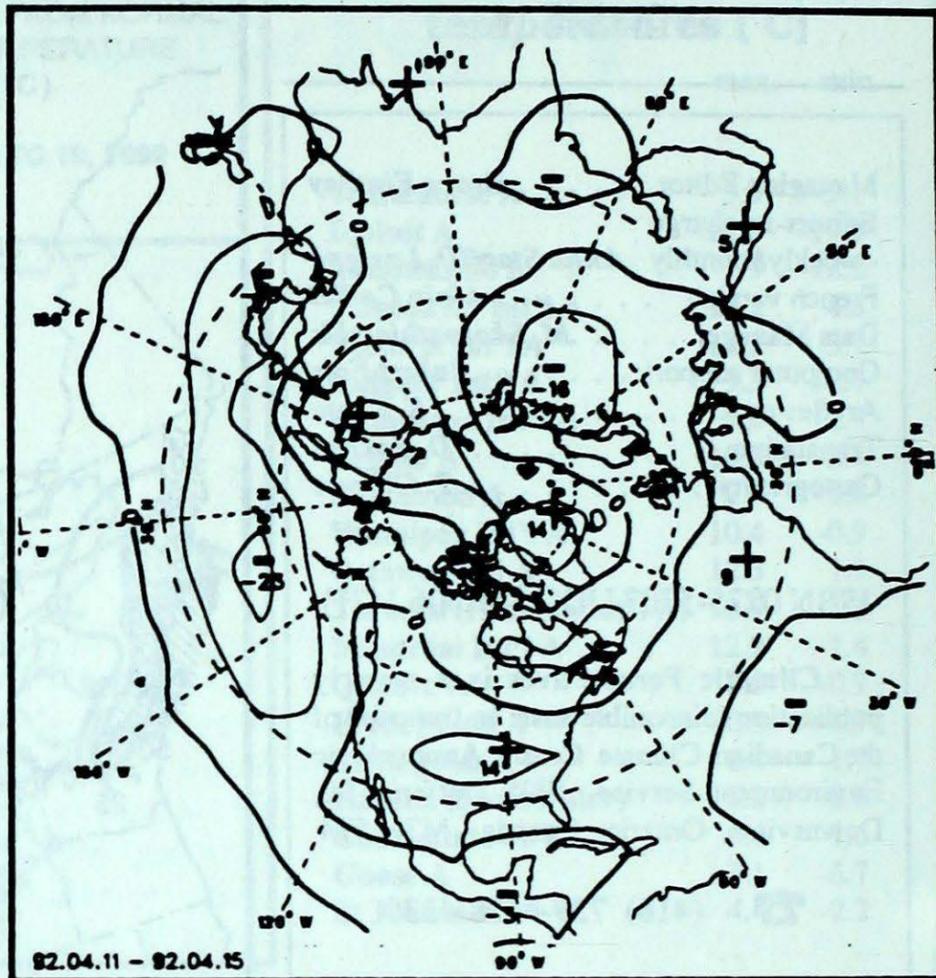
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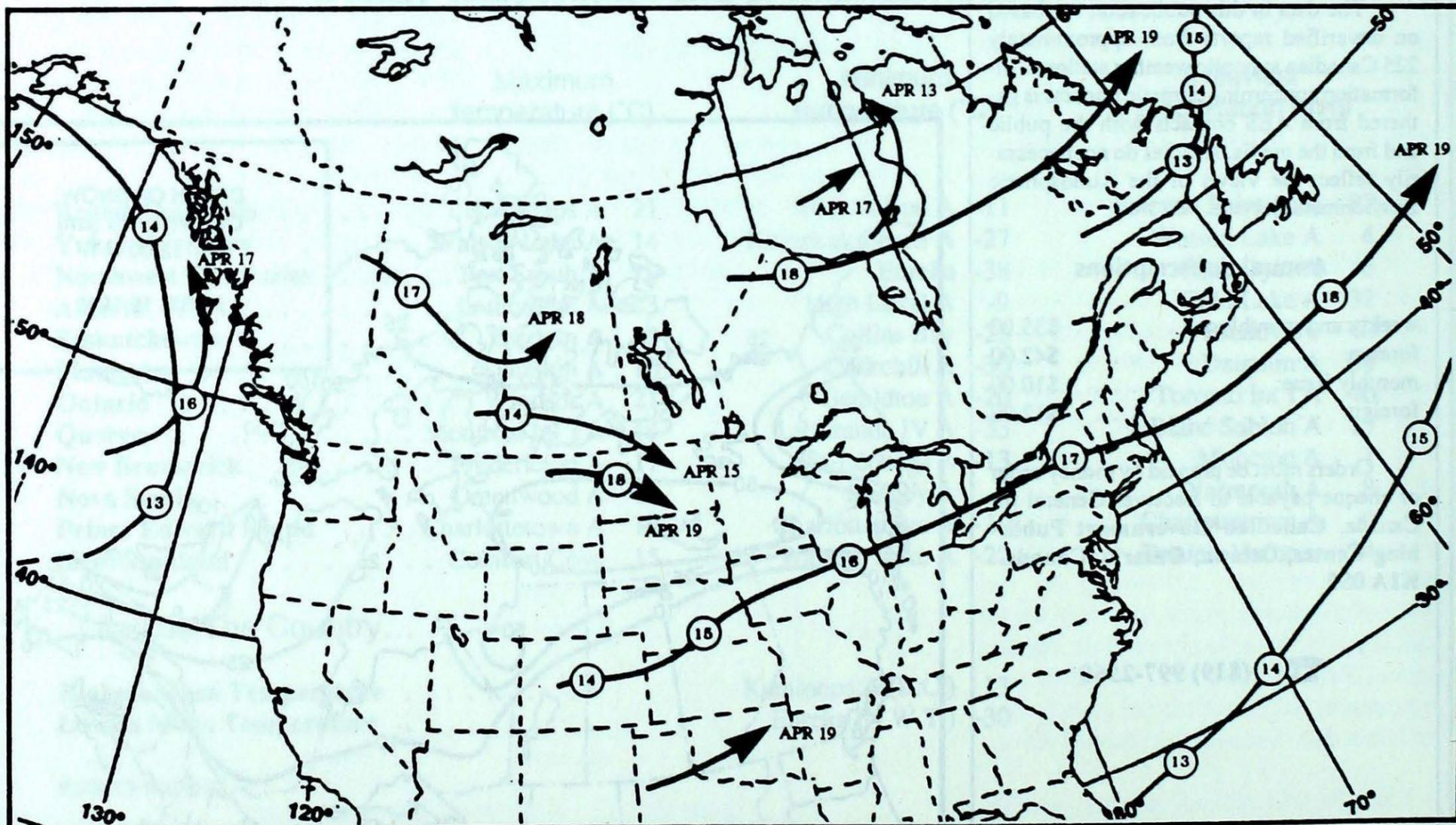
ATMOSPHERIC CIRCULATION



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



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

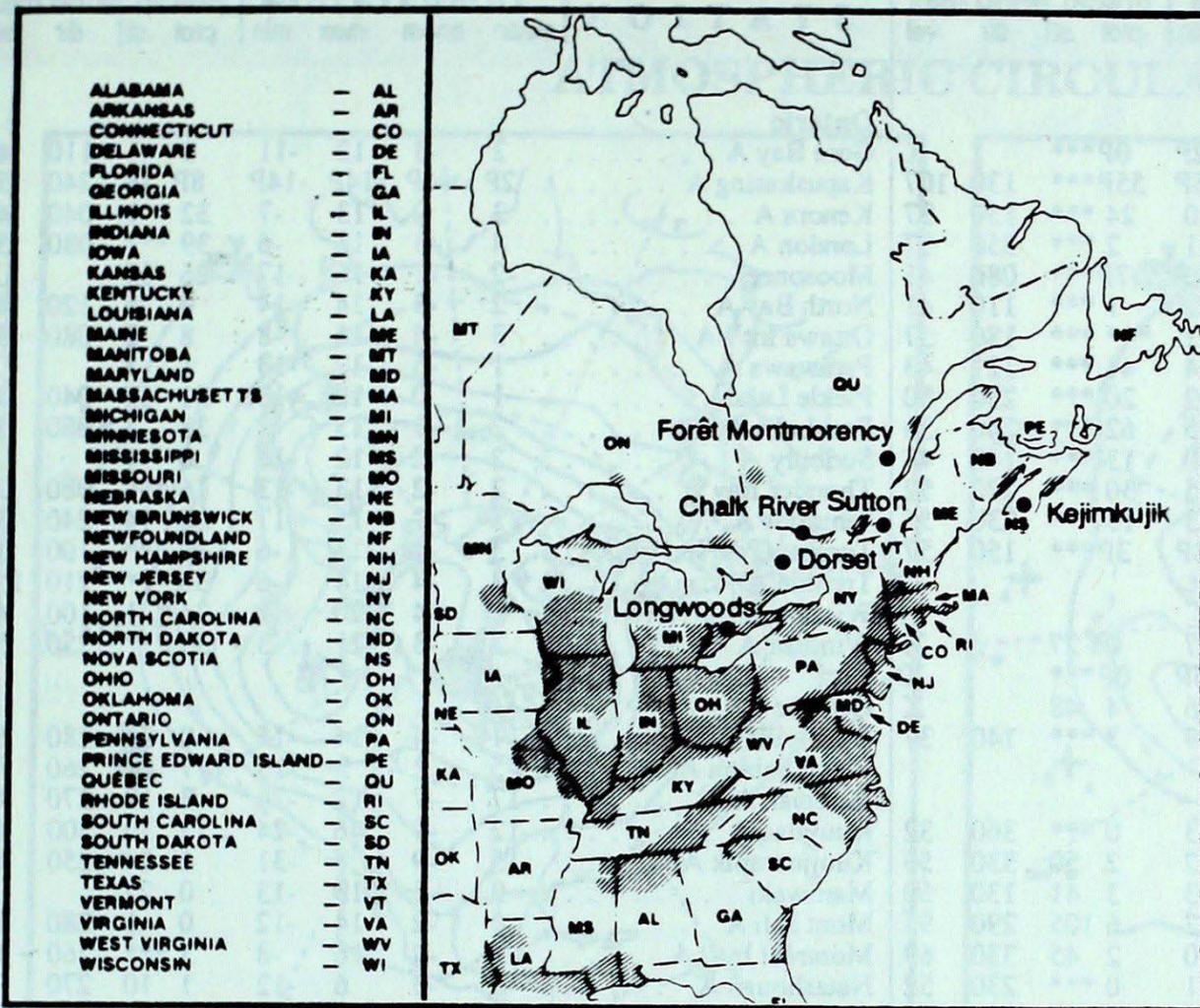


Tracks of low pressure centres at 12:00 U.T. each day during the period.

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
April 12 to 18, 1992				
Longwoods	15	3.6	14 R	Ohio, northern Indiana
	16	4.1	18 R	Northern Ohio, northern Indiana
	18	4.2	2 R	Southern Michigan
Dorset*	16	4.4	10 M	Western New York, Pennsylvania
Chalk River				No precipitation this week
Sutton	16	4.5	5 S	New England
Montmorency				No precipitation this week
Kejimikujik				Data not available this week

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

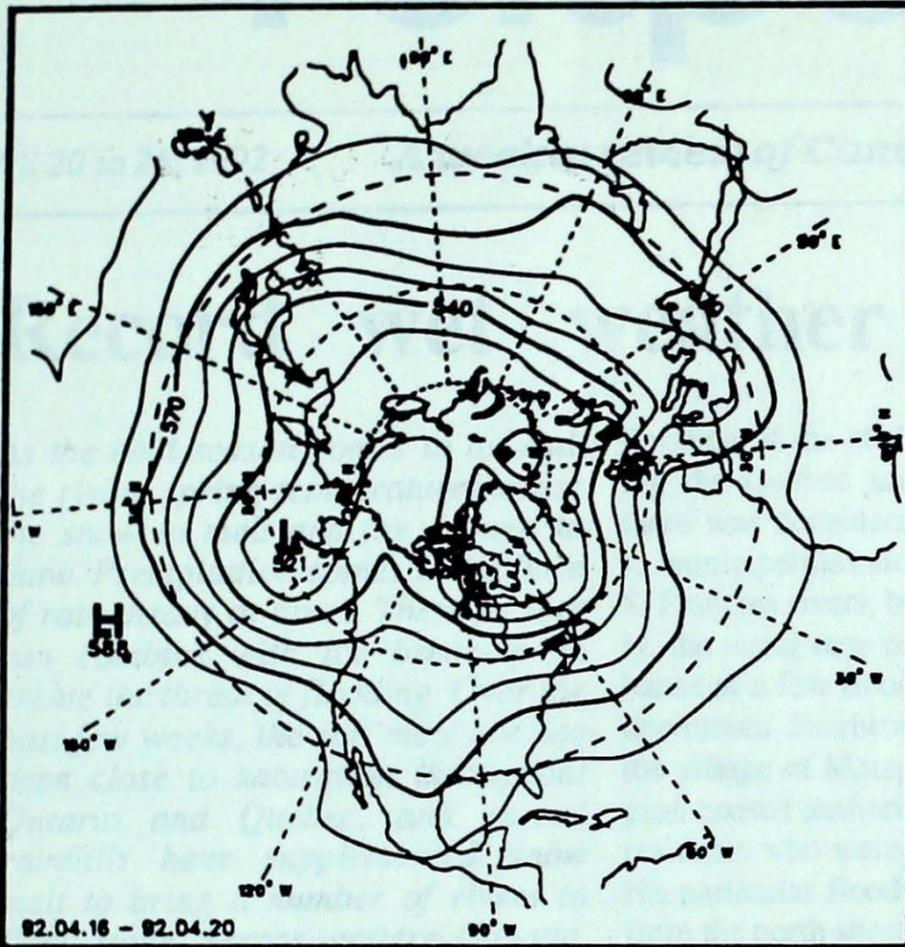
STATION	temperature				precip.		wind max		STATION	temperature				precip.		wind max	
	mean	anom	max	min	ptot	st	dir	vel		mean	anom	max	min	ptot	st	dir	vel
British Columbia								Ontario									
Blue River A	9P	6P	18P	-2P	0P***		X	Gore Bay A	2	-3	12	-11	9	1	110	48	
Cape St James	8P	2P	11P	5P	55P***	130	107	Kapuskasing A	2P	-1P	14P	-14P	8P	16	240	50	
Cranbrook A	8	3	18	0	24 ***	150	37	Kenora A	3	0	13	-7	32	1	040	46	
Fort Nelson A	2	0	14	-11	2 ***	350	37	London A	4	-3	18	-6	39 ***		080	52	
Fort St John A	7P	5P	19P	-2P	7P***	080	41	Moosonee	-2	-1	16	-17	26	15		X	
Kamloops A	13	4	21	2	1 ***	110	41	North Bay A	2	-3	14	-14	0	5	120	41	
Penticton A	12	3	19	2	*** ***	180	57	Ottawa Int'l A	3	-4	16	-8	8	1	080	35	
Port Hardy A	11	4	16	4	41 ***	121	43	Petawawa A	1	-5	12	-13	1	5		X	
Prince George A	9	5	19	-2	20 ***	230	50	Pickle Lake	1	0	12	-13	31	15	040	44	
Prince Rupert A	10	5	14	5	62 ***	140	56	Red Lake A	2	-1	13	-8	38	1	050	52	
Smithers A	8	4	15	0	13 ***	140	48	Sudbury A	2	-2	12	-12	0	1		X	
Vancouver Int'l A	12	4	18	5	30 ***	270	52	Thunder Bay A	2	-2	13	-13	16 ***		080	37	
Victoria Int'l A	11	3	17	3	13 ***	230	56	Timmins A	2	-1	15	-17	6	14	240	37	
Williams Lake A	8P	5P	16P	-3P	3P***	150	57	Toronto(Pearson Int'l A)	3	-4	13	-6	40 ***		100	39	
Yukon Territory								Quebec									
Komakuk Beach A	-15	3	-3	-27	0	27	X	Bagotville A	-1	-4	14	-15	0	35	280	67	
Teslin (aut)	4P	*	13P	-6P	0P***		X	Blanc Sablon A	-5	*	3	-13	17	1	260	87	
Watson Lake A	2	3	14	-16	4	48	X	Inukjuak A	-17	-7	-12	-26	3	19	270	44	
Whitehorse A	3	3	12	-9	3 ***	140	37	Kuujuuaq A	-12	-3	-6	-24	12	30	300	48	
Northwest Territories								New Brunswick									
Alert	-27	-3	-21	-33	0 ***	360	32	Fredericton A	2	-3	17	-9	0	1	300	76	
Baker Lake A	-24	-8	-16	-32	2	50	330	56	Miscou Island (aut)	-1	-1	10	-10	0 ***			
Cambridge Bay A	-25	-4	-18	-33	3	41	130	50	Moncton A	0	-3	14	-10	1	1	270	67
Cape Dyer A	-14	3	-5	-22	6	105	290	95	Saint John A	0	-3	11	-9	0 ***		300	67
Clyde A	-18	1	-11	-30	2	45	330	69	Nova Scotia								
Coppermine A	-23	-6	-11	-31	0 ***	230	52	Greenwood A	2	-3	14	-6	2 ***		290	67	
Coral Harbour A	-18P	-2P	-9P	-26P	2P	35	320	59	Shearwater A	1	-3	9	-6	1	1	210	52
Eureka	-30	-3	-21	-38	1	20		X	Sydney A	-2	-4	12	-9	0 ***		290	78
Fort Smith A	-2P	0P	18P	-10P	1P	37	030	35	Yarmouth A	1	-4	6	-6	8	1	310	63
Hall Beach A	-21	1	-12	-30	2	37	060	39	Prince Edward Island								
Inuvik A	-12	3	3	-32	1	47	200	43	Charlottetown A	0	-3	12	-10	0 ***		250	65
Iqaluit A	-17	-2	-9	-26	1	8	310	57	East Point (auto)	-2	*	3	-9	0 ***			
Mould Bay A	-26	-2	-19	-34	0	14		X	Newfoundland								
Norman Wells A	-10	-2	2	-23	2	7	140	39	Cartwright	-4	-1	10	-14	18	275	340	69
Resolute A	-24	-2	-16	-30	0	12	010	67	Churchill Falls A	-7	0	10	-20	16	104	290	76
Yellowknife A	-10	-3	4	-19	1	60	060	52	Gander Int'l A	-1	-2	13	-8	4	2	240	98
Alberta								92/04/13-92/04/19									
Calgary Int'l A	9	5	20	-2	1 ***	320	78	Goose A	-3	-2	12	-16	17	33	280	82	
Cold Lake A	7	4	18	-7	32 ***	140	56	St John's A	-2	-3	10	-7	6	1	260	82	
Edmonton Namao A	8	4	20	-4	3 ***	150	44	St Lawrence	-2P	-3P	13P	-8P	6P	1		X	
Fort McMurray A	5	3	21	-8	7	1	170	44	Wabush Lake A	-7	-2	9	-22	3	55	310	52
High Level A	2	0	20	-9	0	2	350	56									
Jasper	7	4	18	-4	1 ***		X										
Lethbridge A	11	6	23	1	9 ***	350	82										
Medicine Hat A	10	4	23	-2	7 ***	330	74										
Peace River A	8	6	21	-6	19 ***	290	50										
Saskatchewan																	
Cree Lake	-1P	-1P	13P	-14P	1P	10	040	48									
Estevan A	6	1	22	-4	34 ***	360	63										
La Ronge A	4	2	17	-8	20	1	120	43									
Regina A	6	2	18	-6	18	1	360	63									
Saskatoon A	4	0	16	-6	4	1	010	52									
Swift Current A	6	2	20	-5	9	1	330	61									
Yorkton A	4	0	16	-7	18	1	360	61									
Manitoba																	
Brandon A	4	0	14	-6	22 ***	140	67										
Churchill A	-18	-9	-9	-30	8	39	050	43									
Lynn Lake A	0	-1	13	-20	0	12	210	43									
The Pas A	1	0	11	-8	0	2	030	50									
Thompson A	-2	-2	13	-19	0	5	050	48									
Winnipeg Int'l A	5	0	14	-3	24 ***	020	78										

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

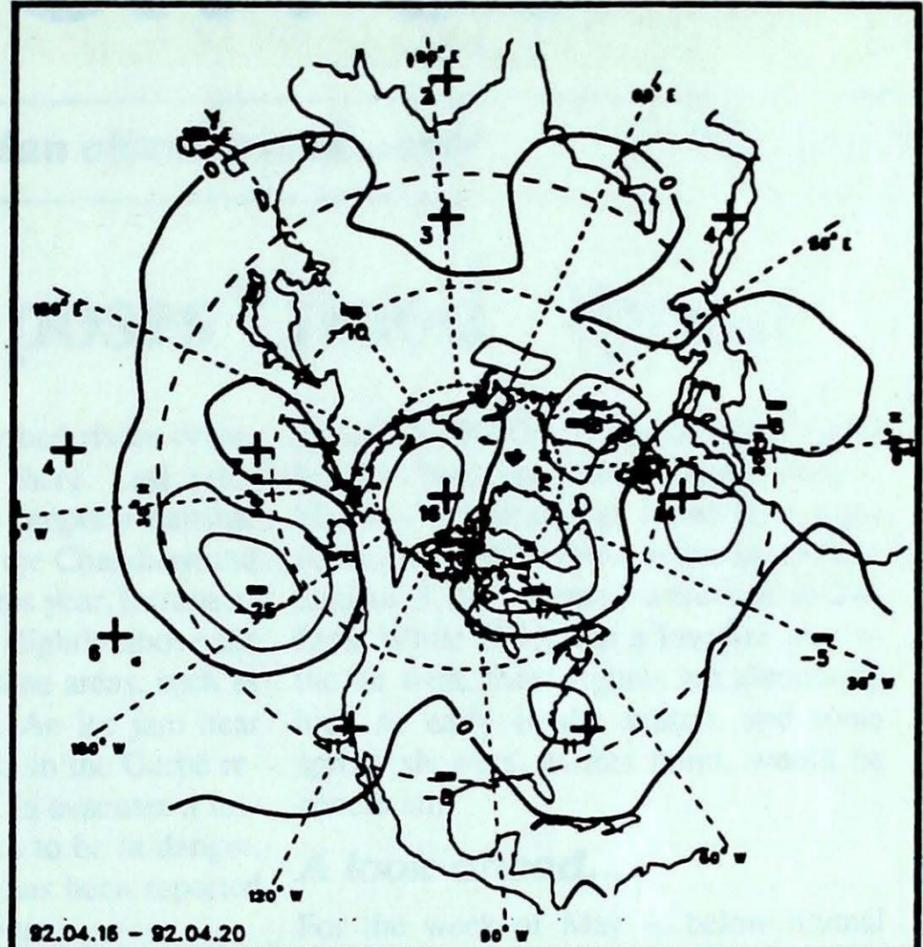
ptot = weekly precipitation total in mm
 st = snow thickness on the ground in cm
 dir = direction of max wind, deg. from north.
 vel = wind speed in km/h

— 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)



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

MONTHLY TEMPERATURE FORECAST

Normal temperatures for
mid-April to mid-May, °C

Whitehorse	4	Toronto	9
Yellowknife	-1	Ottawa	9
Iqaluit	-9	Montréal	9
Vancouver	11	Québec	7
Victoria	10	Fredericton	7
Calgary	6	Halifax	6
Edmonton	7	Charlottetown	5
Regina	7	Goose Bay	2
Winnipeg	7	St. John's	3

Canada

