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Climatic Perspectives

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June 3 to 9, 1991 **A weekly review of Canadian climate and water** *Vol.13 No.23*

Most agricultural areas off to a good start

In the Maritimes, relatively sunny, mild weather has advanced crop growth. On the other hand, May frost has caused some damage, mainly to fruits. Moisture is now needed.

In Quebec it has been a relatively good spring agriculture-wise, and crop development is ahead of normal. Although there was a substantial amount of moisture earlier in the season, it is getting a little dry. In May, frost caused some damage to corn.

After a very wet April, Ontario has enjoyed sunny and warm weather, but there have been locally heavy downpours. Good drying weather was evident this week just in time for the first hay cut. Crops are advanced one to two weeks.

Most of the Prairies have received ample moisture this spring. Heavy rainfalls occurred in the Peace River district this week. Crops will continue to require timely rainfalls to maintain the very good soil moisture conditions. Seeding has advanced to near 91 percent complete in Alberta and 95 percent complete in Saskatchewan and Manitoba.

In British Columbia spring has been dull and unsettled. This has not affected vegetable and grain crops to any extent, but because of poor weather conditions during the bloom period and the earlier harsh winter, fruit set is down. Farmers need dry weather for haying.

Rocky Mountain snowpack update

A considerable amount of middle elevation snow has melted in the last few weeks, but at high elevations the snowpack still remains above normal in the upper Fraser, south Thompson, upper Columbia, Kootenay, Okanagan and Similkameen basins. Many of the province's rivers have been running high. There has been some flooding, but nothing serious. If a prolonged hot spell were to occur in the next few weeks rivers could reach flood stage, but the threat is gradually diminishing.

Forest fire situation

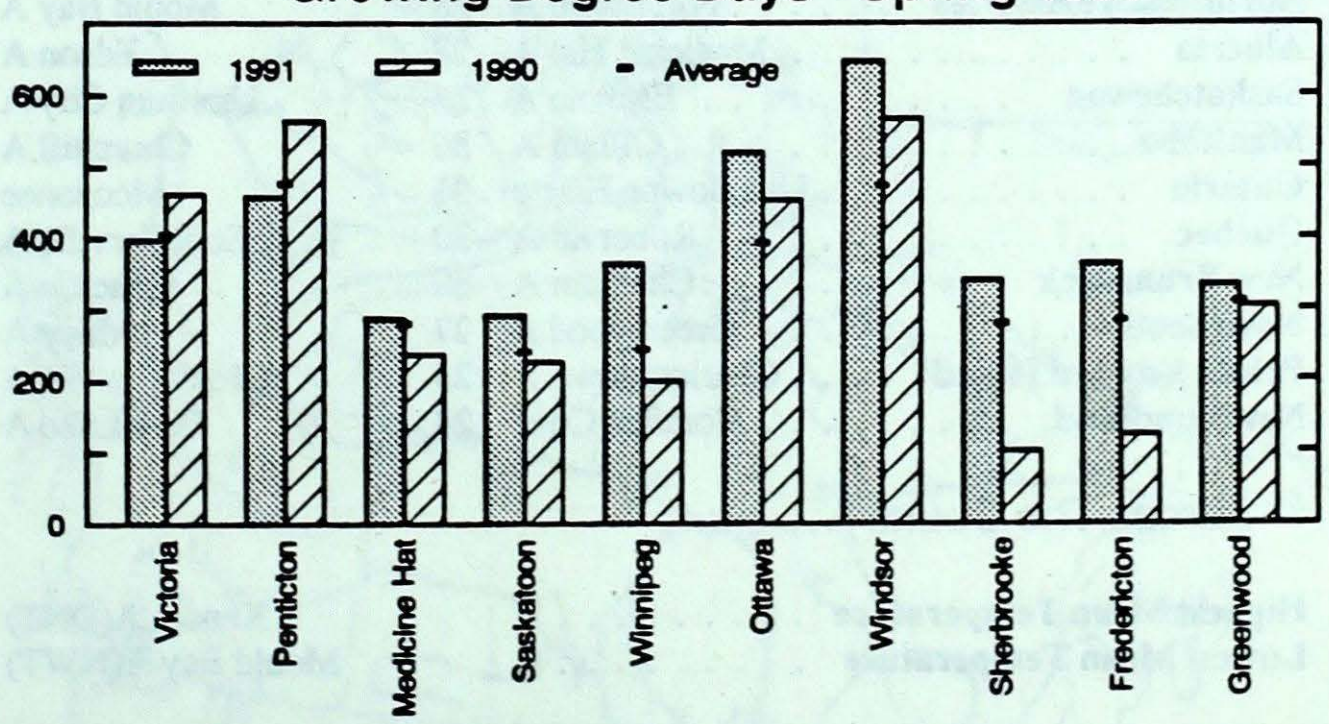
The forest fire hazard index is high to extreme both in northwestern Ontario and the Maritimes, due to the lack of moisture. It has also been unusually warm in Ontario. In New Brunswick, two forest fires are burning out of control. A fire near Newcastle has already burned 2,530 hectares. There are 13 planes and 9 helicopters being used to fight the fires.

In Ontario 31 new forest fires were reported over the weekend. Currently there are 58,774 hectares of prime timber burning. The largest fire, near Sioux Lookout, presently covers 16,500 hectares.

A look ahead ...

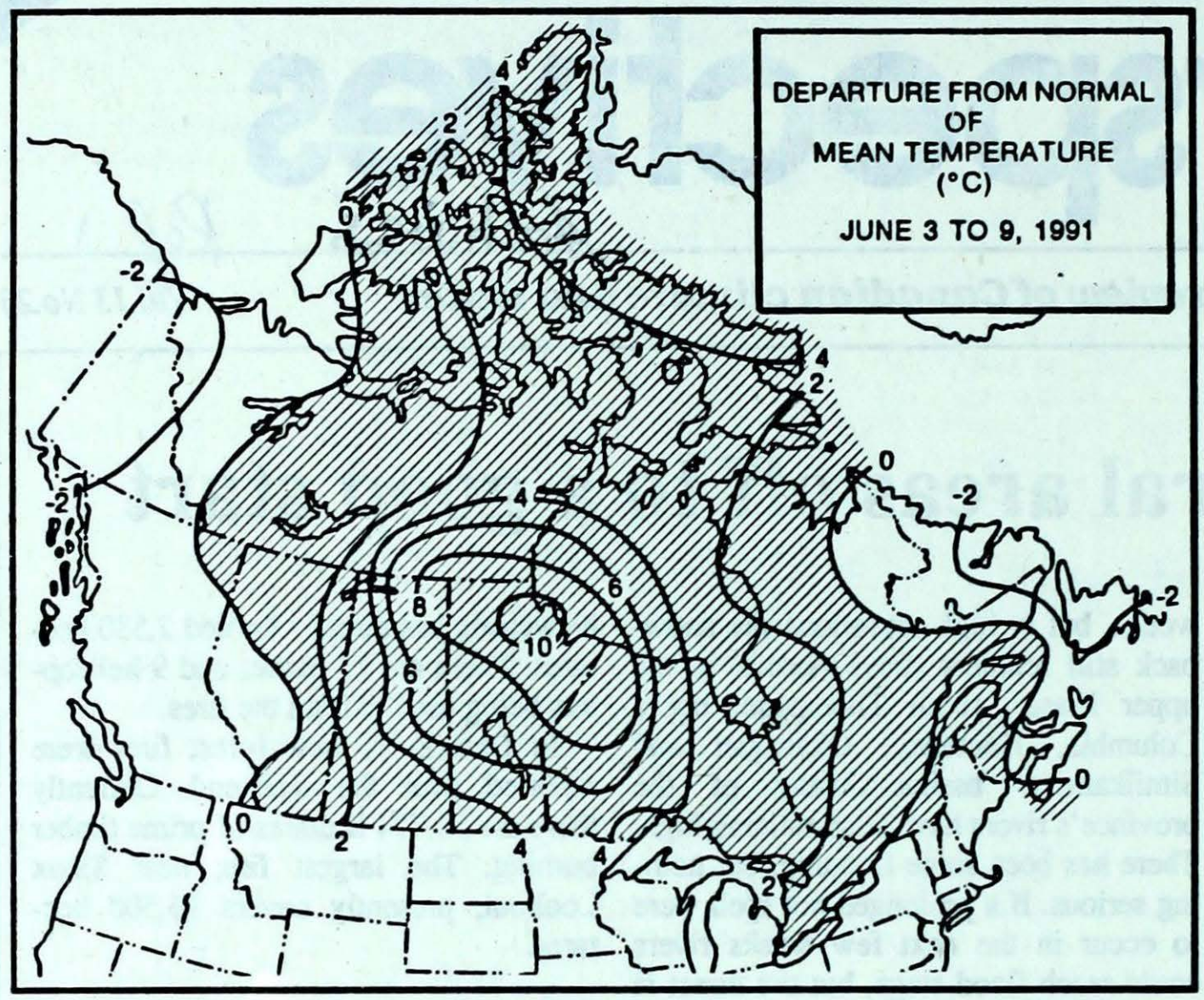
The week of June 16, will see a high pressure system rebuild over central Canada. This should generally give a southwesterly flow, with warmer than normal temperatures to regions west of Ontario, but a more normal to progressively cooler than normal regime to eastern regions.

Growing Degree-Days - Spring 1991



For the most part, spring 1991, has been warmer than last year, and as a result, crop development is further ahead.

Canada



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	17.9	4.4
Iqaluit A	4.1	-1.4
Yellowknife A	15.9	5.9
Vancouver Int'l A	18.7	10.4
Victoria Int'l A	18.7	8.9
Calgary Int'l A	19.3	6.4
Edmonton Int'l A	20.7	6.8
Regina A	22.0	8.4
Saskatoon A	21.5	8.3
Winnipeg Int'l A	22.3	9.7
Ottawa Int'l A	22.9	10.8
Toronto (Pearson Int'l A)	23.1	10.3
Montréal Int'l A	22.4	10.9
Québec A	20.6	8.6
Fredericton A	20.7	8.0
Saint John A	17.4	7.2
Halifax (Shearwater)	16.8	8.0
Charlottetown A	16.9	7.6
Goose A	15.0	3.9
St John's A	13.5	4.1

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Fort Nelson A	28	Dease Lake	-4	Prince Rupert A	78
Yukon Territory	Watson Lake A	20	Komakuk Beach A	-4	Whitehorse A	16
Northwest Territories	Fort Smith A	28	Mould Bay A	-7	Fort Smith A	62
Alberta	Medicine Hat A	28	Edson A	-2	Fort McMurray A	57
Saskatchewan	Estevan A	28	Uranium City A	4	Moose Jaw A	68
Manitoba	Gillam A	30	Churchill A	0	Churchill A	39
Ontario	Lansdowne House	31	Moosonee	-2	Britt (aut)	15
Québec	Roberval A	30	Schefferville A	-3	Kuujjuarapik A	23
New Brunswick	Chatham A	30	Moncton A	1	Fredericton A	16
Nova Scotia	Greenwood A	27	Sydney A	2	Sydney A	17
Prince Edward Island	Charlottetown A	25	Charlottetown A	1	East Point (aut)	2
Newfoundland	Comfort Cove	24	Deer Lake A	-3	Cartwright	32

Across The Country...

Highest Mean Temperature	Kenora A(ONT)	21
Lowest Mean Temperature	Mould Bay A(NWT)	-2

91/06/03-91/06/09

CLIMATIC PERSPECTIVES
VOLUME 13

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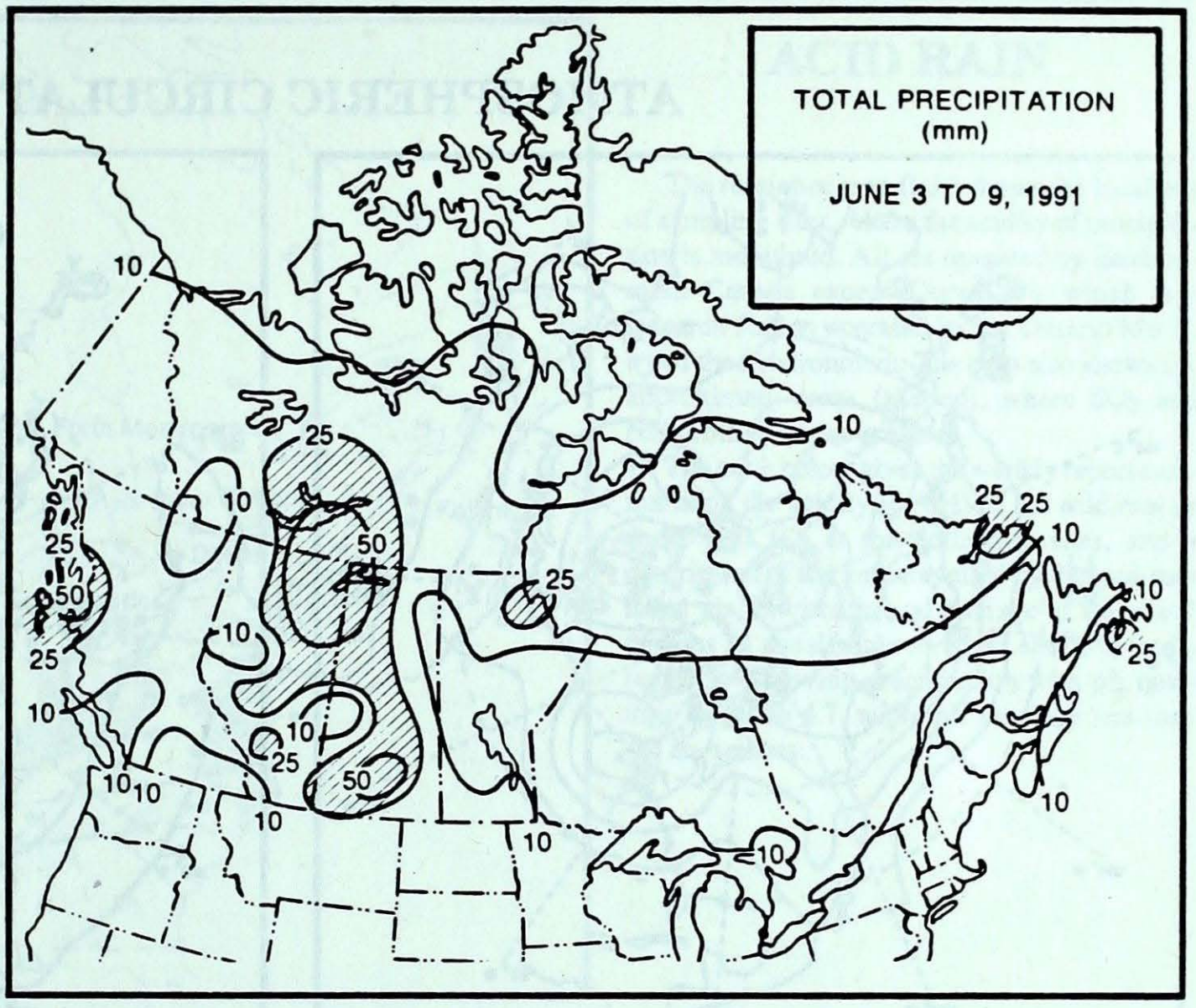

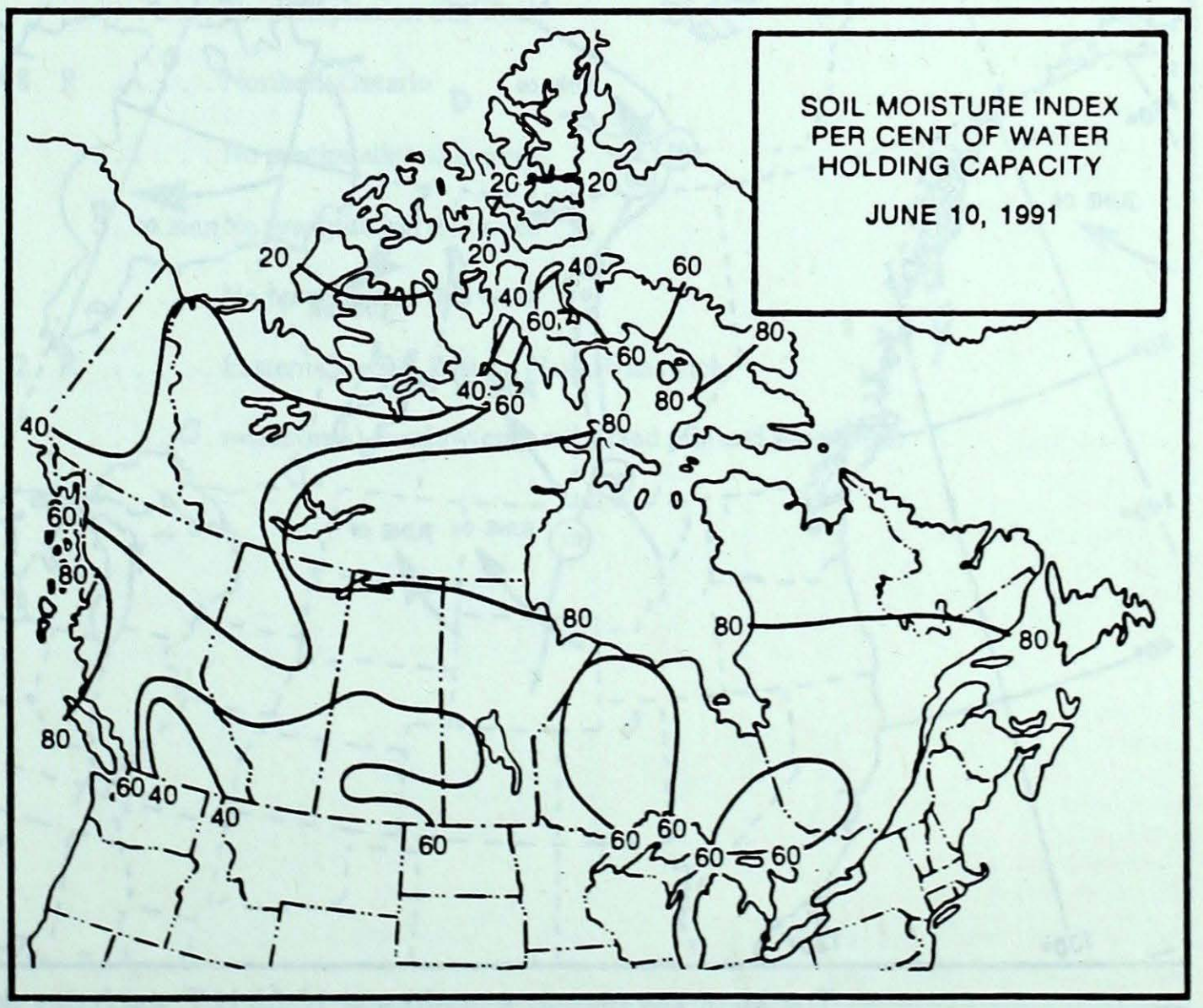

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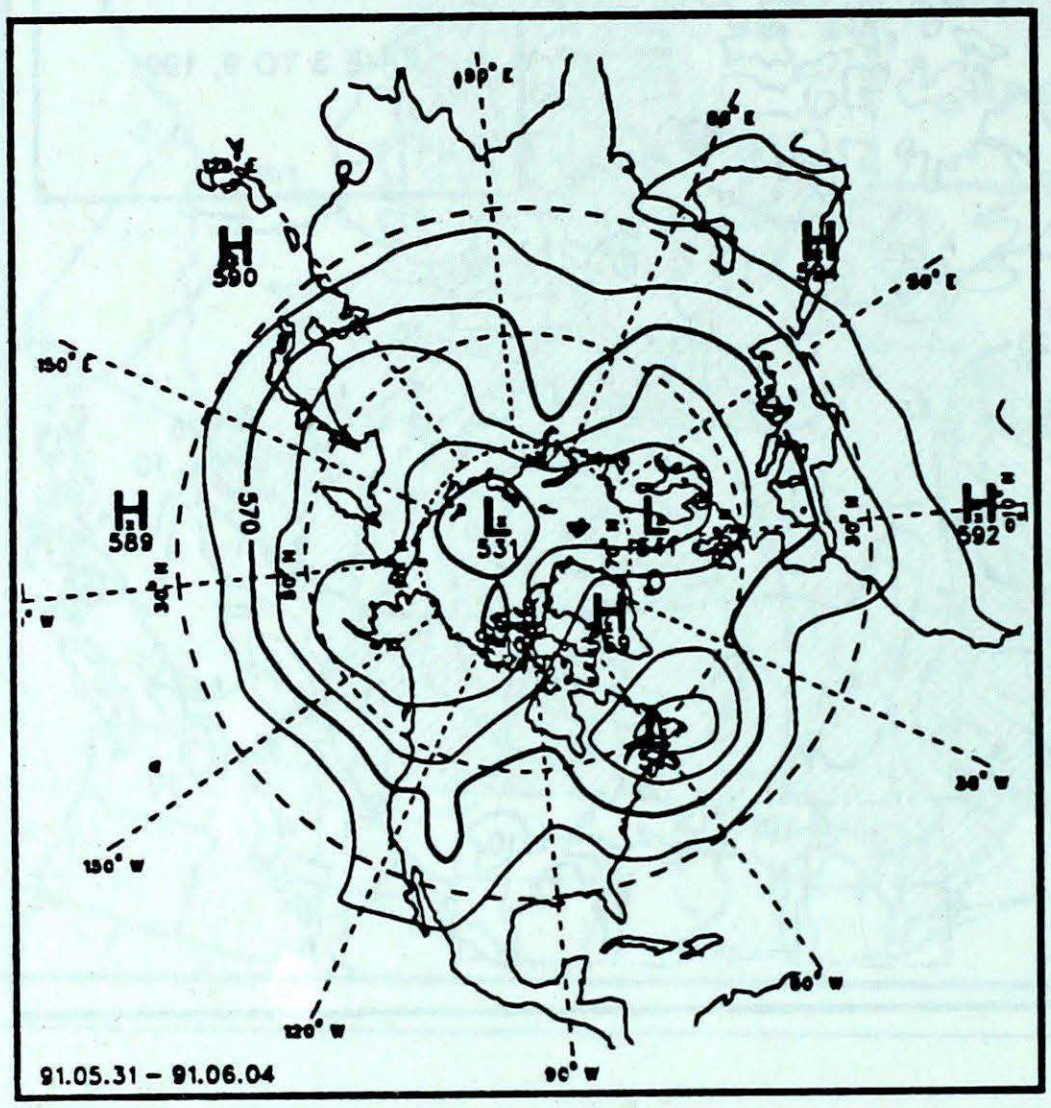
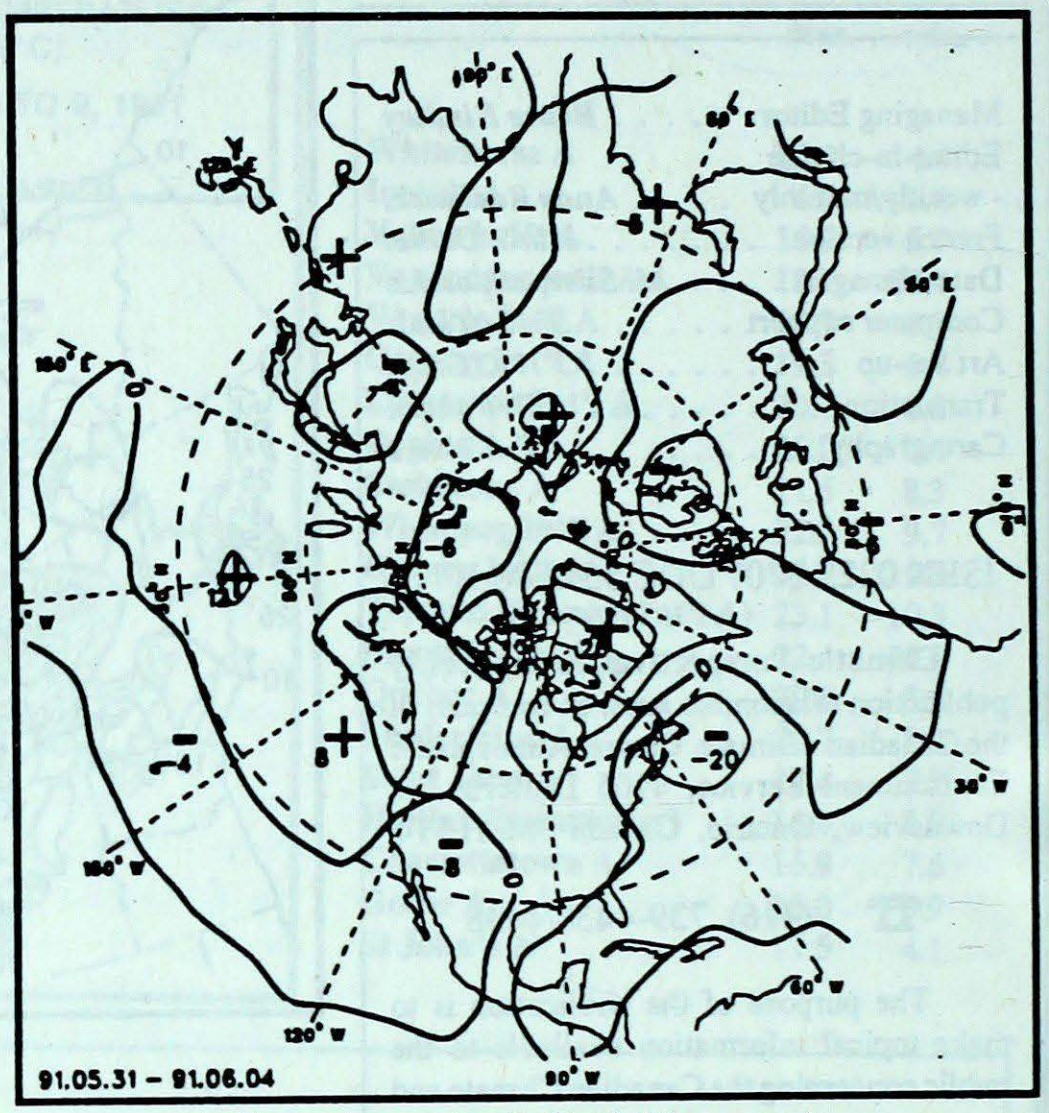
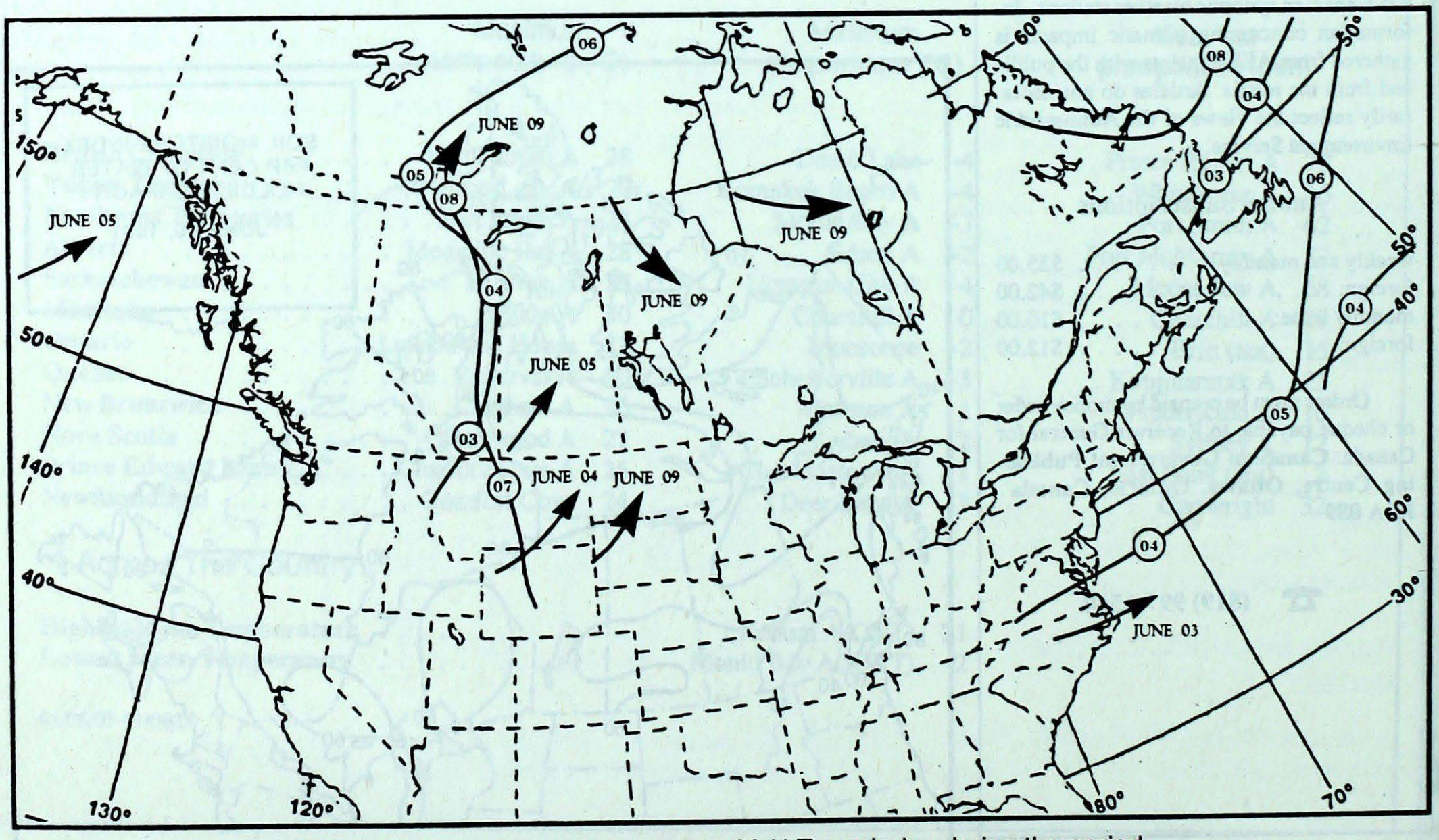


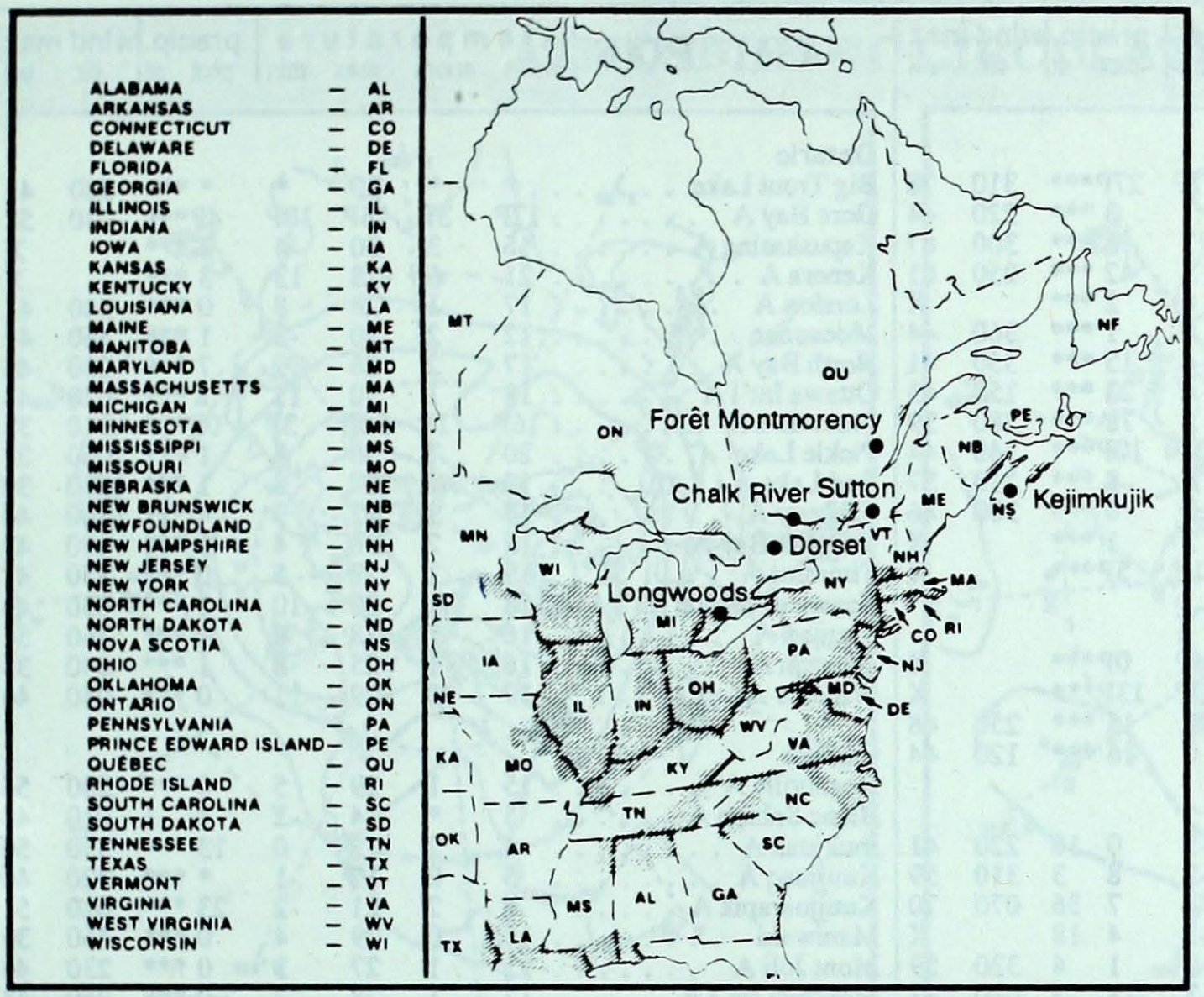
Mean geopotential height
50-kPa level (10-decametre intervals)



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 SO_2 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
					June 2 to 8, 1991
Longwoods					. . . . . No precipitation this week
Dorset*	3	4.4	8	R	. . . . . Northern Ontario
Chalk River					. . . . . No precipitation this week
Sutton					. . . . . No precipitation this week
Montmorency					. . . . . No precipitation this week
Kejimkujik	5	4.2	2	R	. . . . . Eastern Quebec, Eastern New-Brunswick

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

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
British Columbia								
Cape St James	10P	0P	14P	7P	27P***		310	78
Cranbrook A	14	-1	22	1	3 ***		220	44
Fort Nelson A	14	1	28	7	5 ***		300	67
Fort St John A	12	-1	24	3	42 ***		250	61
Kamloops A	16	-1	28	6	2 ***			X
Penticton A	14	-2	27	0	1 ***		360	44
Port Hardy A	11	-1	17	4	15 ***		350	41
Prince George A	12	-1	23	4	23 ***		150	43
Prince Rupert A	10	0	18	3	78 ***		280	39
Revelstoke A	13P	-2P	24P	3P	10P***		340	44
Smithers A	13	1	27	4	8 ***		210	37
Vancouver Int'l A	14	-1	20	7	6 ***		300	46
Victoria Int'l A	12	-2	23	2	1 ***			X
Williams Lake A	10P	-3P	22P	1P	5P***			X
Yukon Territory								
Komakuk Beach A	1P	0P	9P	-4P	0P***			X
Teslin (aut)	9P	*	19P	0P	13P***			X
Watson Lake A	11	-1	20	2	15 ***		250	48
Whitehorse A	9	-2	19	0	16 ***		120	44
Northwest Territories								
Alert	-1	3	8	-5	0	10	220	41
Baker Lake A	3	2	10	-2	8	3	310	59
Cambridge Bay A	-1	1	2	-4	7	36	070	70
Cape Dyer A	3	5	12	-3	4	18		X
Clyde A	3	5	11	-2	1	4	330	59
Coppermine A	1	3	7	-3	13	5	080	43
Coral Harbour A	1	2	5	-3	6	22	330	57
Eureka	4	5	10	1	1	***	290	46
Fort Smith A	14	2	28	2	62 ***		280	61
Hall Beach A	0	3	5	-3	1	12	320	57
Inuvik A	6	-2	21	-4	10	3	360	44
Iqaluit A	3	2	10	-1	2	4	320	50
Mould Bay A	-2	1	2	-7	2	19	340	44
Norman Wells A	11	-2	24	0	12 ***		280	41
Resolute A	0	4	6	-4	0	2	100	80
Yellowknife A	11	0	23	3	47 ***		040	50
Alberta								
Calgary Int'l A	14	1	23	5	11 ***		290	74
Cold Lake A	15	1	26	4	31 ***		180	57
Edmonton Namao A	13	-1	22	4	18 ***		290	59
Fort McMurray A	15	2	27	6	57 ***		100	44
High Level A	14	1	27	6	*** ***		300	43
Jasper	11	-1	24	0	4 ***			X
Lethbridge A	15	0	25	6	4 ***		220	70
Medicine Hat A	17	1	28	9	26 ***		280	56
Peace River A	13	0	25	4	17 ***		260	54
Saskatchewan								
Cree Lake	16	4	26	7	29 ***		190	70
Estevan A	19	3	28	10	16 ***		160	48
La Ronge A	17	4	26	6	41 ***		200	56
Regina A	19	3	27	11	16 ***		260	69
Saskatoon A	18	3	27	9	41 ***		220	44
Swift Current A	16	2	26	10	49 ***		240	65
Yorkton A	19	5	27	10	26 ***		210	56
Manitoba								
Brandon A	20	4	28	10	9 ***		110	50
Churchill A	14	10	30	0	39 ***		260	54
Lynn Lake A	19	8	28	8	3 ***		150	46
The Pas A	20	7	29	12	0 ***		160	52
Thompson A	18	8	28	7	13 ***		180	56
Winnipeg Int'l A	20	4	28	12	20 ***		200	59

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Big Trout Lake	*	*	30	*	* ***		280	41
Gore Bay A	17P	3P	26P	10P	4P***		030	52
Kapuskasing A	16	3	30	4	4 ***			X
Kenora A	21	6	28	13	3 ***			X
London A	17	1	28	8	0 ***		340	41
Moosonee	12	2	30	-2	1 ***		360	41
North Bay A	17	2	26	9	7 ***		030	46
Ottawa Int'l A	18	1	30	11	1 ***		020	43
Petawawa A	16P	1P	30P	3P	0P***		310	33
Pickle Lake	20	7	30	8	1 ***		060	37
Red Lake A	19	6	27	8	1 ***		180	39
Sudbury A	17	2	27	9	4 ***		360	44
Thunder Bay A	15	2	30	4	5 ***		130	43
Timmins A	15	2	29	5	0 ***		350	41
Toronto(Pearson Int'l A)	18	1	29	10	3 ***		030	43
Trenton A	16	-1	28	8	9 ***		360	54
Wiarton A	16	1	25	8	1 ***		040	33
Windsor A	19	0	29	11	0 ***		040	46
Québec								
Bagotville A	15	1	29	5	0 ***		280	56
Blanc Sablon A	5	*	14	-2	4	1	010	48
Inukjuak A	4	2	12	0	13 ***		350	50
Kuujjuaq A	5	0	17	-1	* ***		320	46
Kuujjuarapik A	6	2	21	-2	23 ***		020	54
Maniwaki	15	0	29	4	0 ***		360	39
Mont Joli A	13	1	27	3	0 ***		230	46
Montréal Int'l A	17	1	28	7	0 ***		260	43
Natashquan A	10	2	19	3	1 ***		270	50
Québec A	16	2	28	8	0 ***		240	44
Schefferville A	5	-1	16	-3	14 ***		330	89
Sept-Îles A	12	3	25	3	1 ***		330	56
Sherbrooke A	13	-1	26	3	1 ***		310	37
Val-d'Or A	15	2	29	4	0 ***		010	43
New Brunswick								
Charlo A	11P	-2P	29P	6P	2P***			X
Chatham A	14	0	30	4	1 ***		040	41
Fredericton A	14	0	30	3	16 ***		240	56
Moncton A	12	-1	28	1	3 ***		030	59
Saint John A	13	1	27	5	1 ***		040	54
Nova Scotia								
Greenwood A	14	-1	27	4	1 ***		040	56
Shearwater A	13	1	24	6	10 ***		030	46
Sydney A	10	-1	27	2	17 ***		250	48
Yarmouth A	13P	1P	22P	6P	2P***		230	41
Prince Edward Island								
Charlottetown A	11	-1	25	1	1 ***		030	48
East Point	9	*	21	4	2 ***			X
Newfoundland								
Cartwright	3	-4	14	-2	32	5	330	46
Churchill Falls A	6	-2	19	0	14	1	280	76
Gander Int'l A	6	-4	23	-1	12 ***		270	52
Goose A	6	-3	18	0	22 ***		340	52
Port Aux Basques	8	1	17	2	4 ***		300	46
St John's A	7	-2	20	0	10 ***		250	56
St Lawrence	7	0	14	1	26 ***			X
Wabush Lake A	7	-1	19	-1	18 ***		310	57

91/06/03-91/06/09

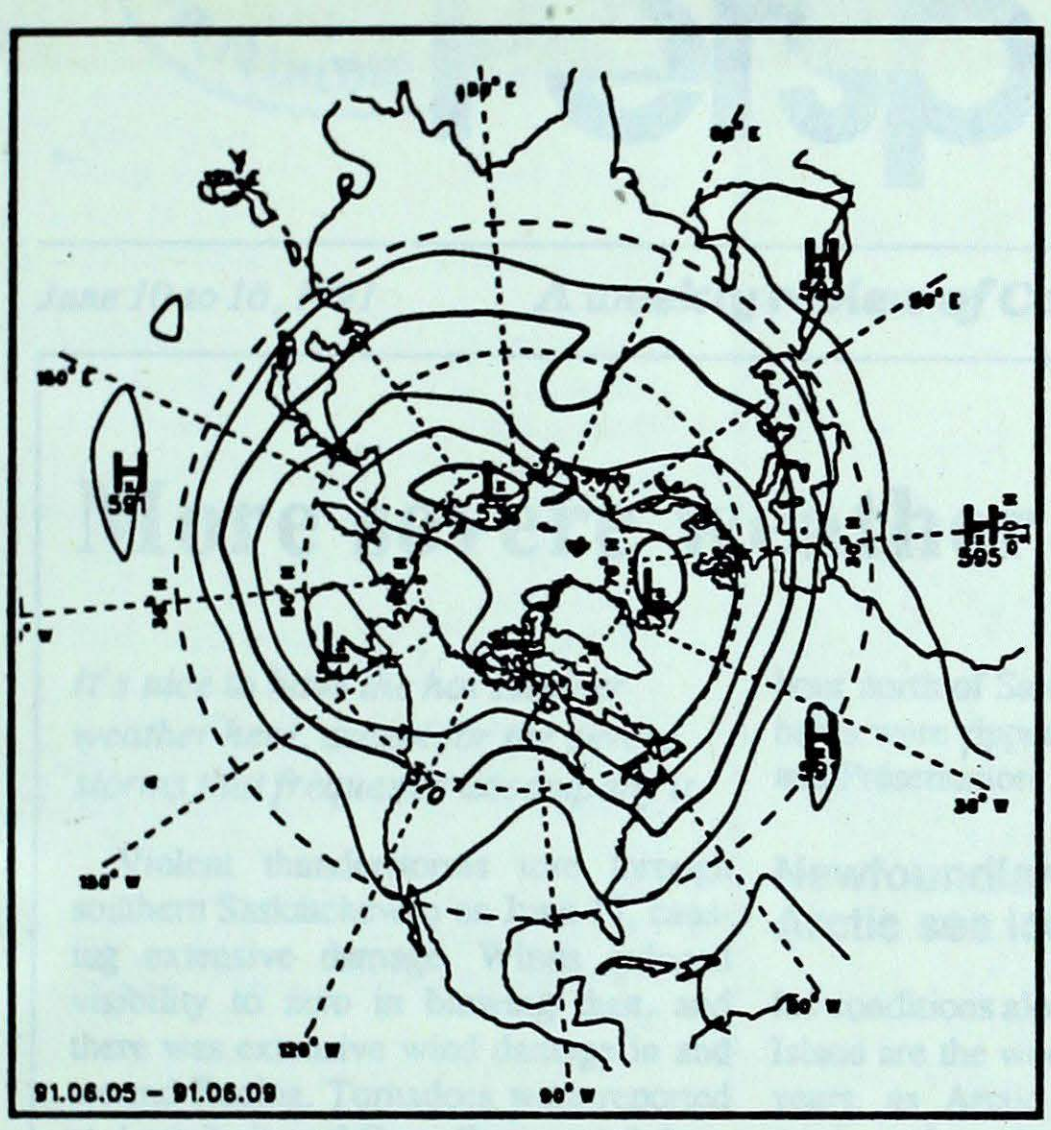
mean = mean weekly temperature, °C
max = maximum weekly temperature, °C
min = minimum weekly temperature, °C
anom = mean temperature anomaly, °C

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
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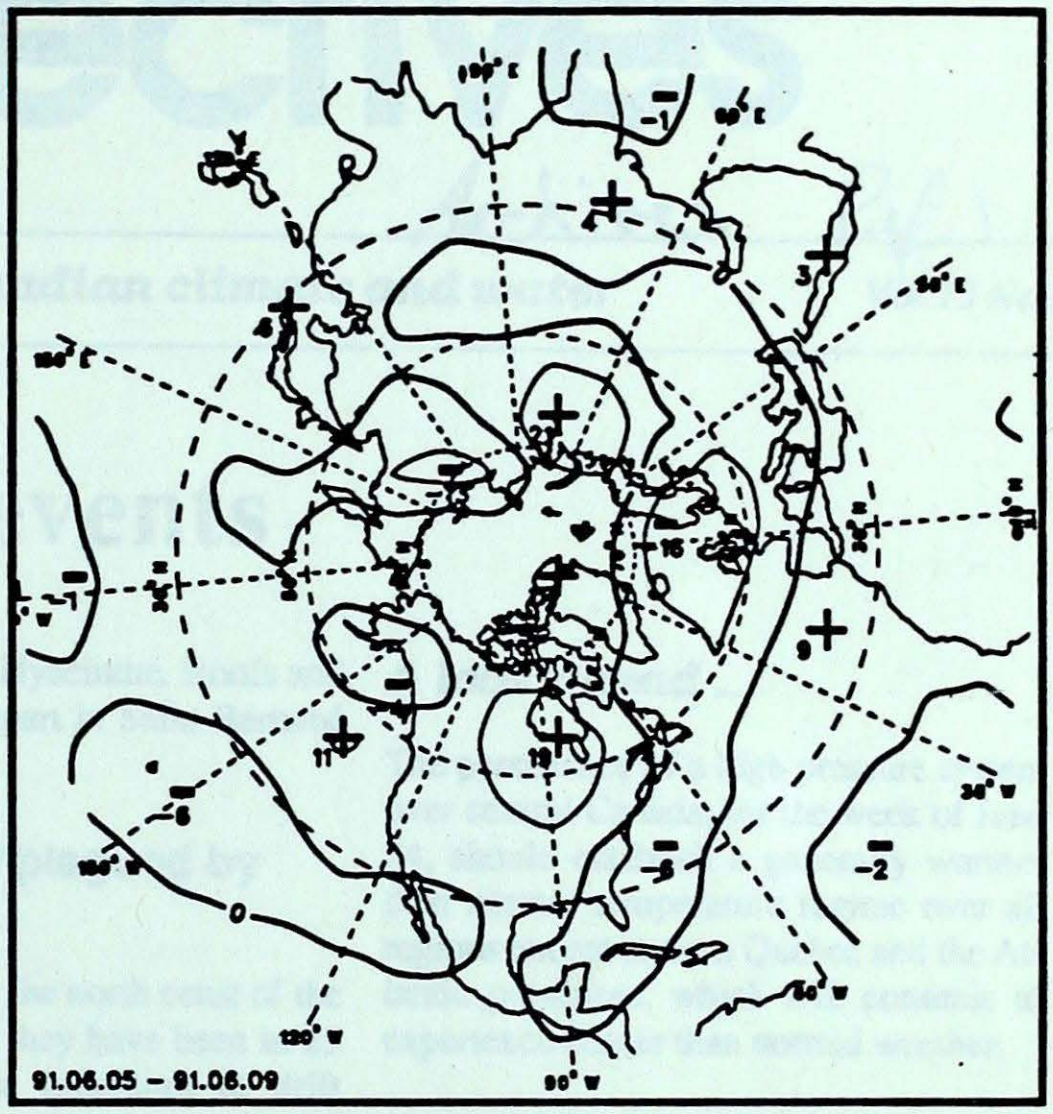

Mean geopotential height anomaly
50-kPa level (10-decametre intervals)

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