Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

September 10 to 16, 1990 ***A weekly review of Canadian climate and water*** *Vol.12 No.37*

Cold temperatures promote new ice growth in the Canadian Arctic

After a relatively trouble free summer season, the resupply of Arctic communities by ocean-going vessels is coming to an end for another year.

Although shipping is continuing in Lancaster Sound, an abnormal amount of old ice is drifting towards its approaches in Baffin Bay. This will cause a potential navigation hazard towards the end of this season and next year. Ice conditions in Lancaster Sound are considered normal, although below normal temperatures have spurred new ice growth in coastal areas. The powerful ice-strengthened ship the M.V. Arctic is scheduled to make two more trips to Cameron Island and to Nanisivik at the end of September and the middle of October.

In the eastern Arctic, northerly winds have pushed the Arctic ice pack to within 150 km off the coast. Temperatures have been averaging slightly below normal and new ice has already begun to form along the ice edge and should be forming along the coast by month's end. The Canadian ice breaker deployed in the Beaufort Sea will be departing Arctic waters at the end of the month.

Several ice breakers are in the process or are still scheduled to traverse the ice covered northwest passage; ice conditions are considered normal and not unusually difficult.

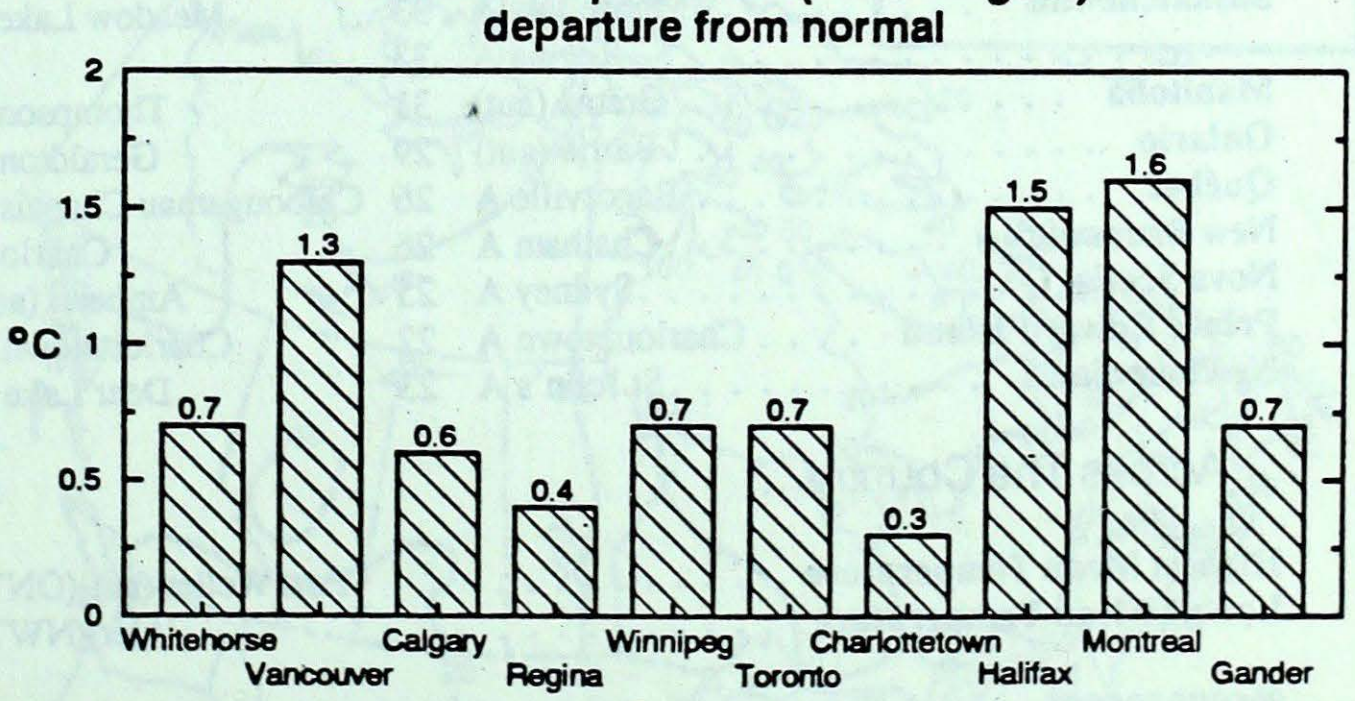
Niagara fruit harvest

An excellent showing of fruit tree blossoms this spring was attributed to a favourable winter, but cool and wet weather during spring pollination caused the cherry and plum crop to be lighter than normal. Over all, the summer months of July and August produced a good balance of sunshine and moisture, but untimely showers caused some of the ripe cherry crop to split. The peach harvest, which is now complete, was excellent. The grape harvest is just beginning and all indications are that it will also be excellent, in fact there might be even a surplus in some varieties. Apple picking has started. The quality is good, but due to uneven pollination, not as abundant as it should be.

Cool weather expected in the Arctic...

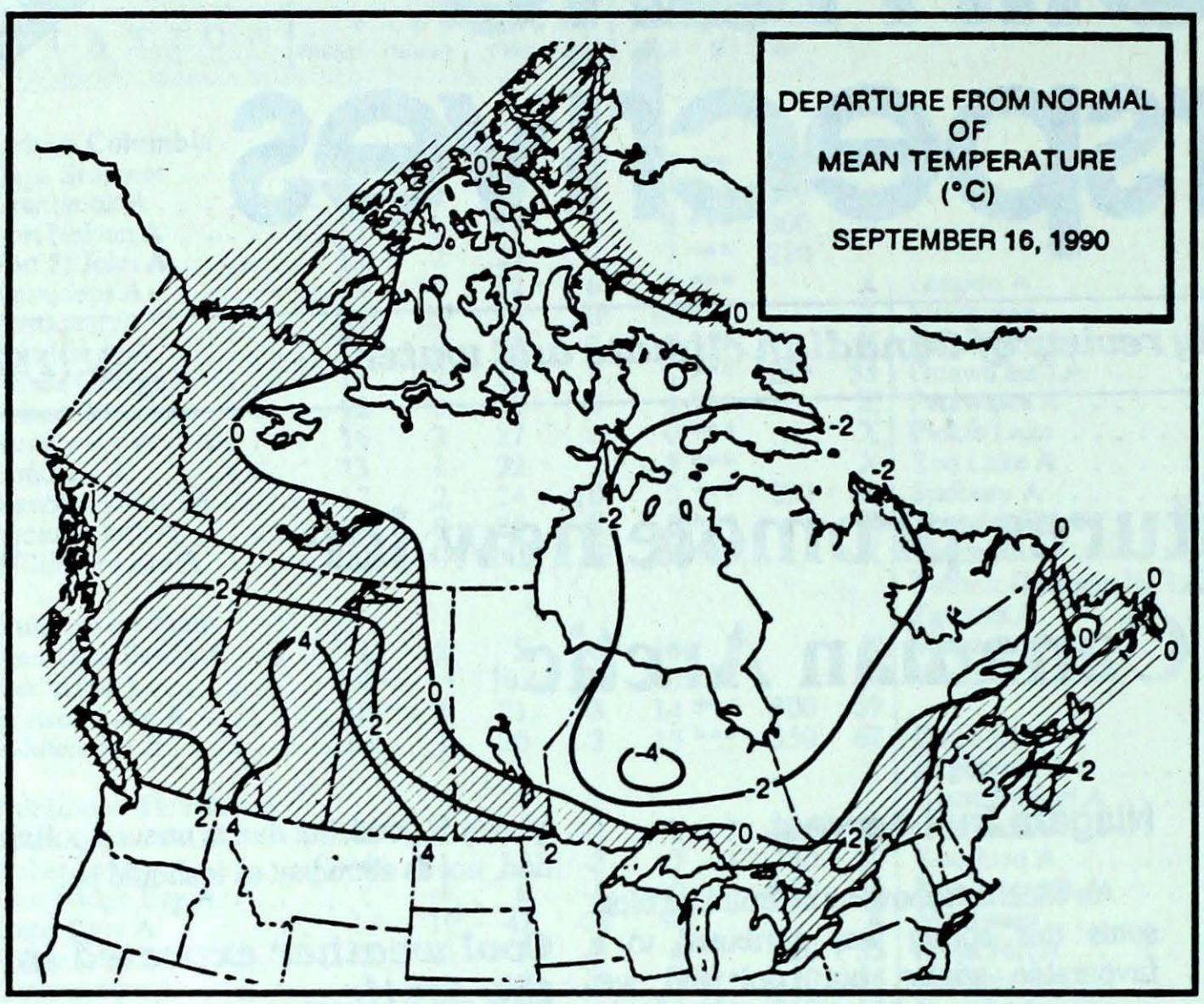
For the week of September 24, below-normal temperatures are expected across the northern half of the Yukon, the extreme northern parts of the Mackenzie District of the Northwest Territories and the Arctic Islands west of the Boothia Peninsula. Above normal temperatures will occur across the extreme southern parts of Saskatchewan, Manitoba and northwestern Ontario. Elsewhere, temperatures will be near normal.

Summer temperatures (June-August)
departure from normal



Temperatures this summer have been averaging above normal across most of the country.

Canada



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	13.8	3.7
Iqaluit A	5.5	0.3
Yellowknife A	10.9	4.2
Vancouver Int'l A	18.9	10.4
Victoria Int'l A	19.7	9.0
Calgary Int'l A	17.6	4.2
Edmonton Int'l A	16.4	3.3
Regina A	19.3	5.2
Saskatoon A	18.4	5.2
Winnipeg Int'l A	18.8	6.6
Ottawa Int'l A	19.8	9.2
Toronto (Pearson Int'l A)	21.8	9.8
Montréal Int'l A	19.9	9.8
Québec A	18.1	7.1
Fredericton A	19.5	6.6
Saint John A	17.5	7.4
Halifax (Shearwater)	18.9	10.1
Charlottetown A	18.1	9.0
Goose A	13.6	4.8
St John's A	15.8	7.9

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Hope A	31	Dease Lake	-2	Vancouver Int'l A	43
Yukon Territory	Watson Lake A	20	Komakuk Beach A	-7	Faro (aut)	10
Northwest Territories	Hay River A	26	Mould Bay A	-12	Norman Wells A	37
Alberta	Medicine Hat A	31	Edson A	-1	Edson A	36
Saskatchewan	Moose Jaw A	33	Meadow Lake A	-1	Cree Lake	17
	Regina A	33				
Manitoba	Gretna (aut)	31	Thompson A	-5	Island Lake	21
Ontario	Barrie (aut)	29	Geraldton A	-3	North Bay A	76
Québec	Bagotville A	26	Chibougamau Chapais A	-2	Schefferville A	104
New Brunswick	Chatham A	26	Charlo A	1	St Stephen (aut)	55
Nova Scotia	Sydney A	25	Amherst (aut)	3	Sydney A	27
Prince Edward Island	Charlottetown A	22	Charlottetown A	2	Summerside A	5
Newfoundland	St John's A	23	Deer Lake A	-3	Wabush Lake A	95

Across The Country...

Highest Mean Temperature	Port Weller (aut)(ONT)	19
Lowest Mean Temperature	Alert(NWT)	-8

90/09/10-90/09/16

CLIMATIC PERSPECTIVES
VOLUME 12

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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.

The data 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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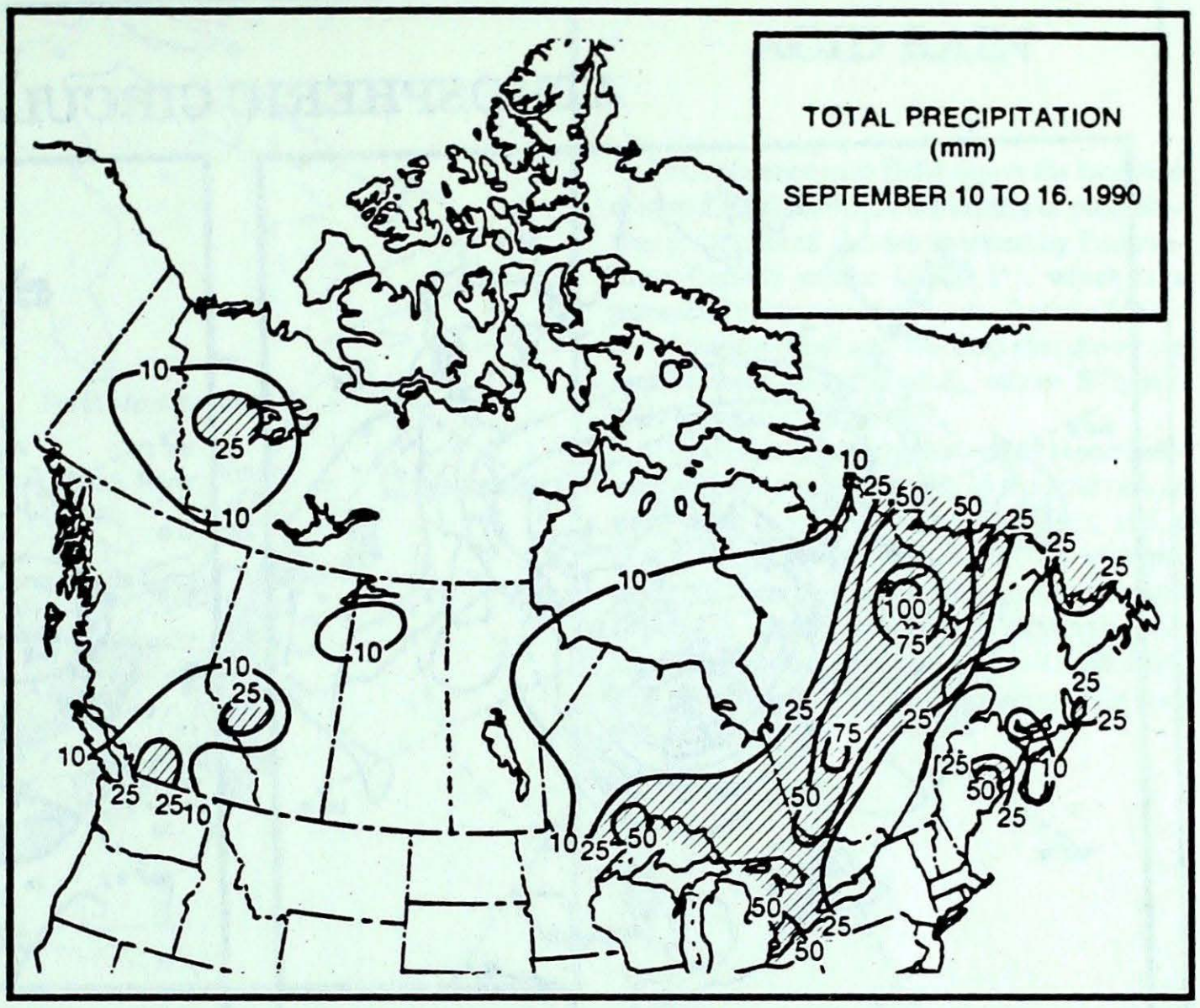

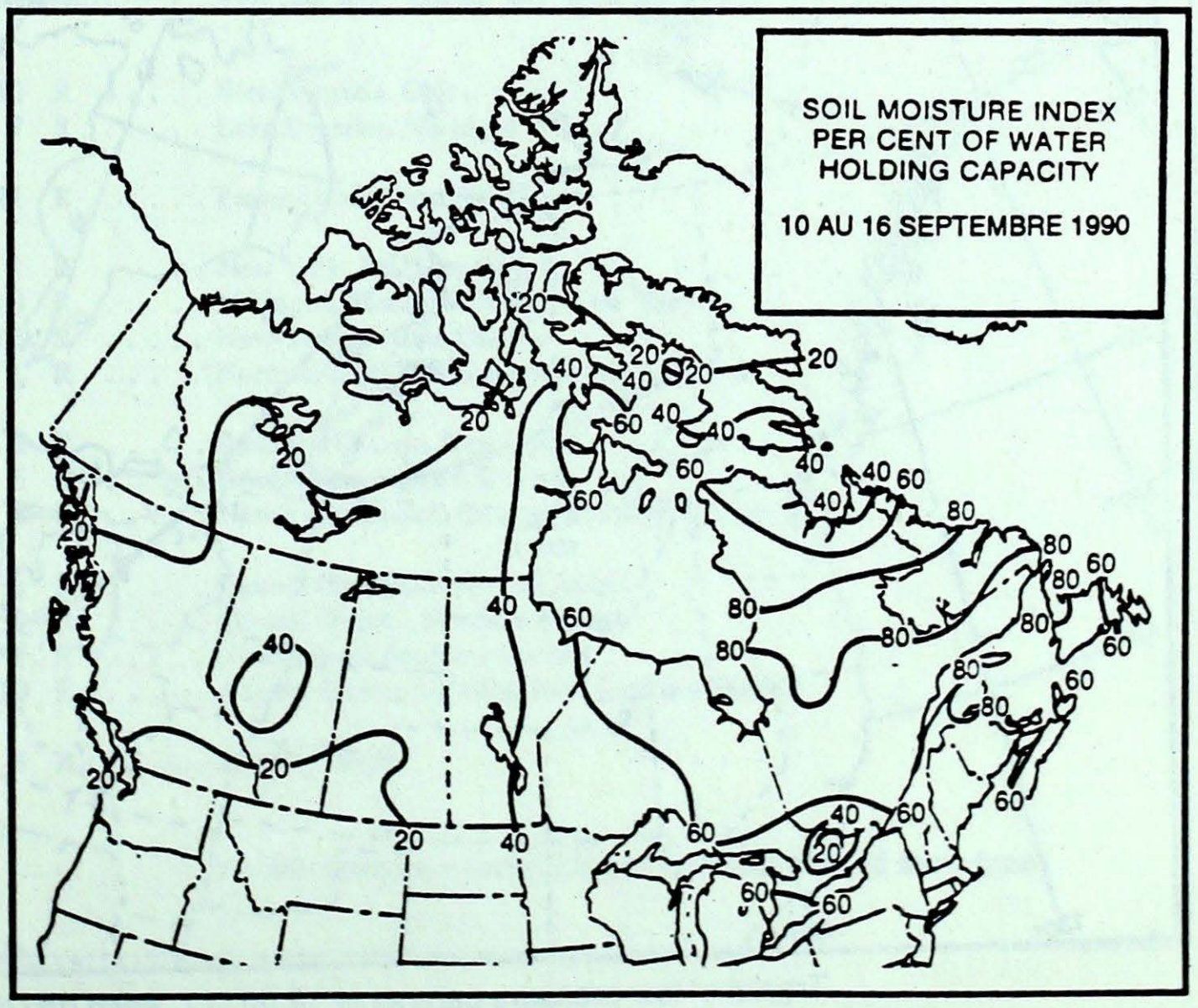

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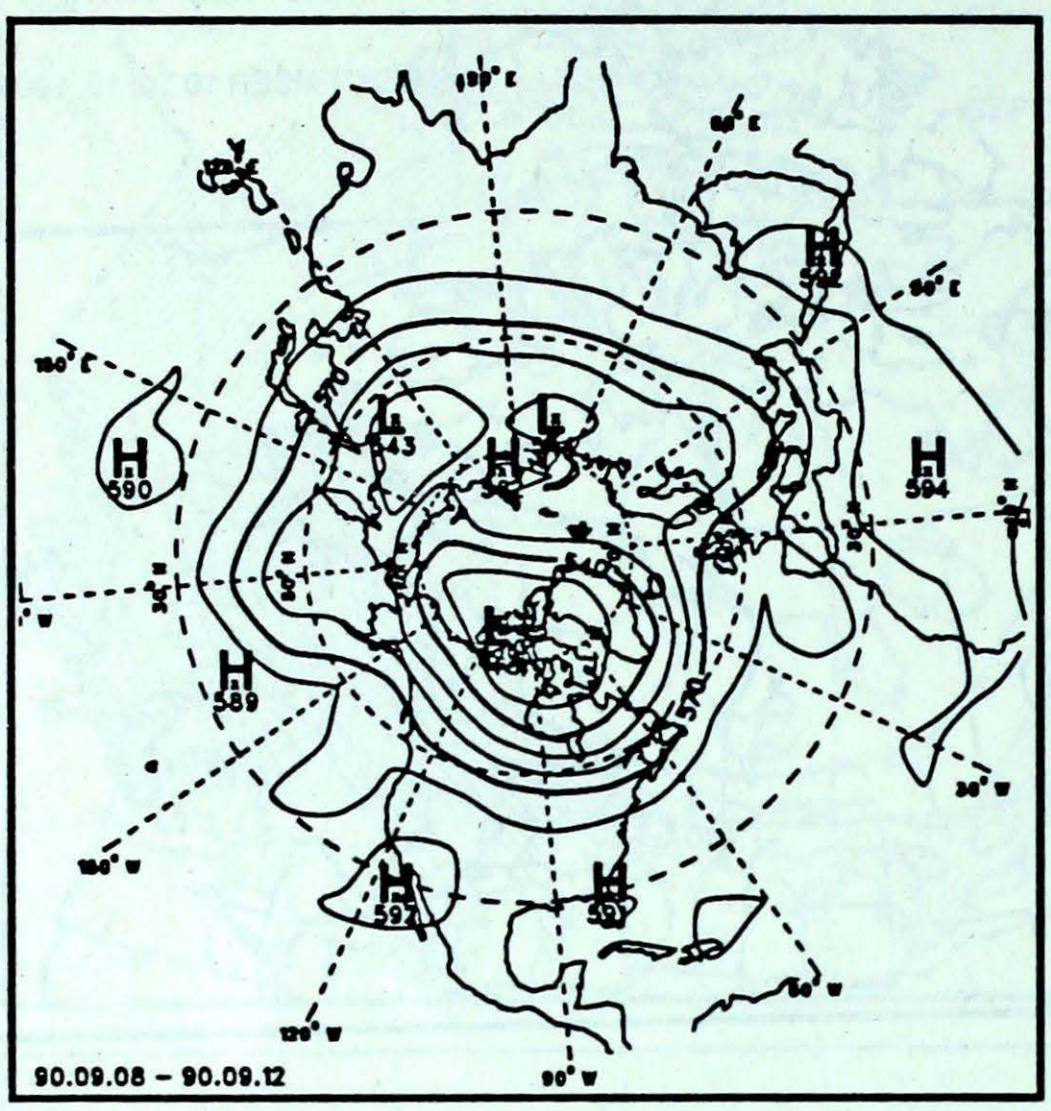
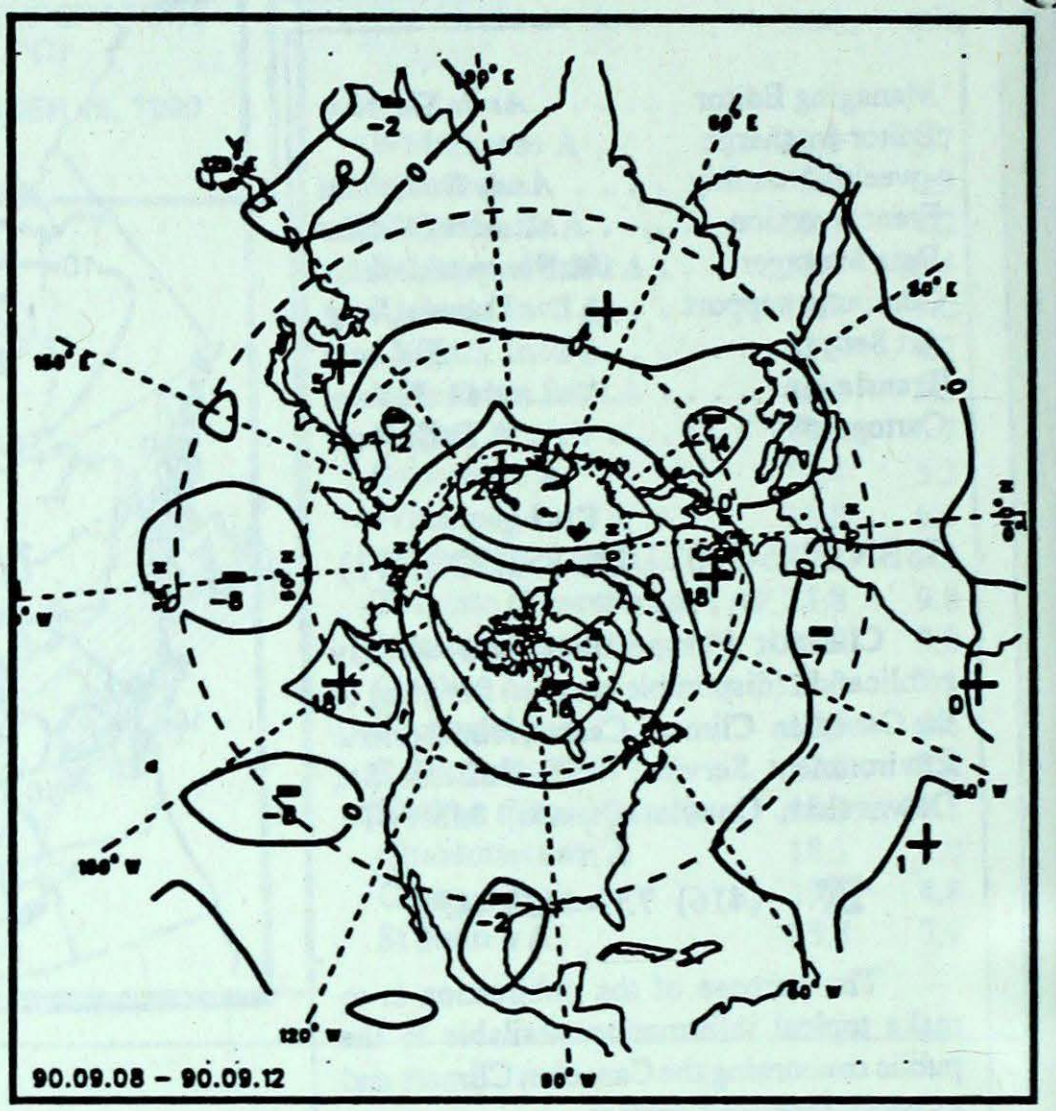
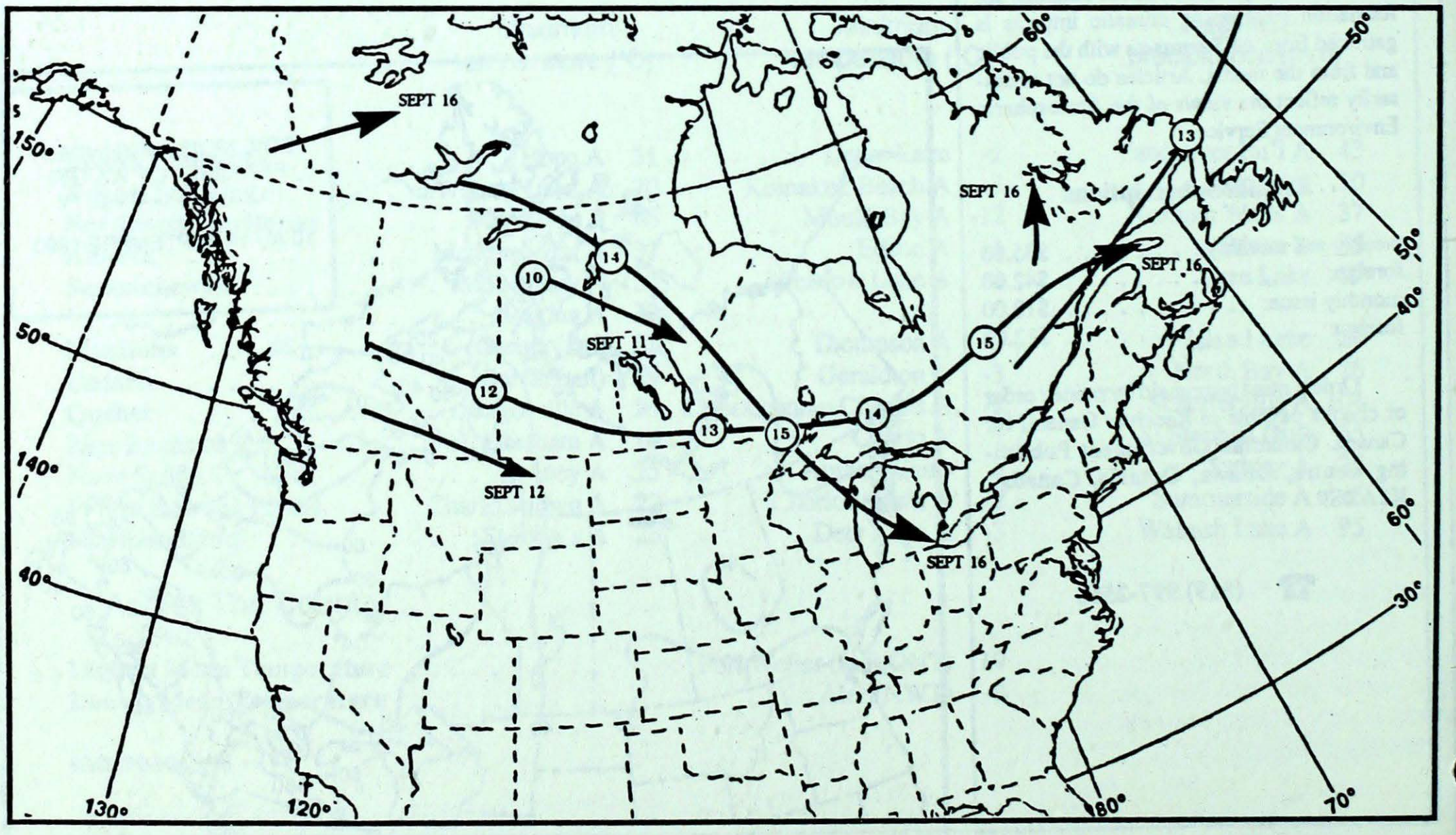


Mean geopotential height
50-kPa level (10-decametre intervals)

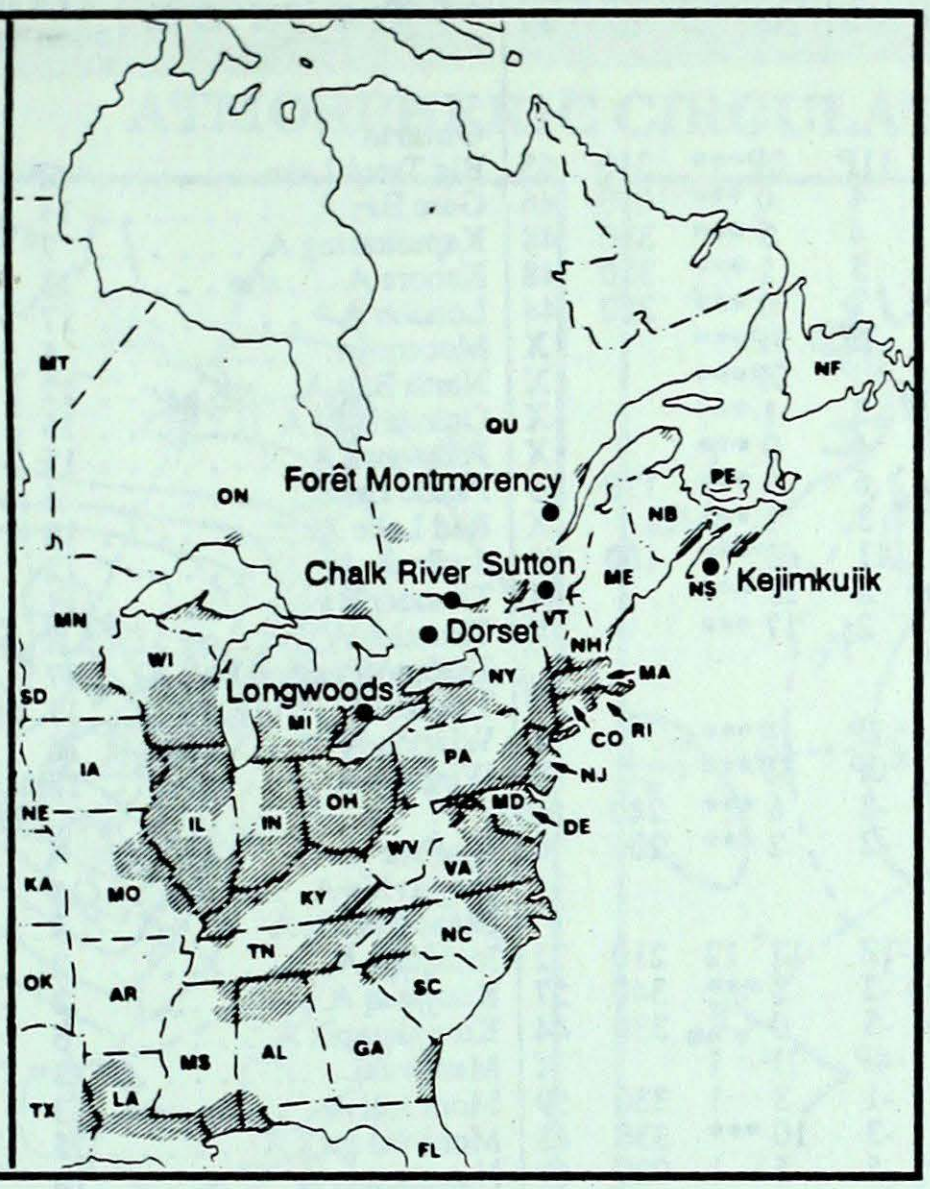


Mean geopotential height anomaly
50-kPa level (10-decametre intervals)



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

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
MASSACHUSETTS	—	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

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.

September 9 to 15, 1990

Site	day	pH	amount		air path to site
Longwoods	14	4.3	30	R	. . . . . West Virginia, Ohio
	15	5.4	7	R	. . . . . Lake Superior, Michigan
Dorset *	14	4.3	21	R	. . . . . Pennsylvania, New York
Chalk River	9	4.2	1	R	. . . . . New York, Southern Ontario
	10	4.2	10	R	. . . . . Michigan, Southern Ontatio, New York
	14	3.7	16	R	. . . . . New York, Eastern Ontario
	15	4.6	1	R	. . . . . Northeastern Ontario, Northwestern Quebec
Sutton	10	4.4	2	R	. . . . . Southern Ontario, New York
	14	4.7	6	R	. . . . . Atlantic Ocean, New England
	15	4.7	5	R	. . . . . New York, Eastern Ontario, Southern Quebec
Montmorency	12	4.6	1	R	. . . . . Eastern Ontario, Southern Quebec
	13	4.0	8	R	. . . . . Central Ontario, Southern Quebec
	14	3.6	1	R	. . . . . New Enland, Southern Quebec
	15	4.4	10	R	. . . . . Atlantic Ocean, New England, Southern Quebec
Kejimkujik	15	4.1	8	R	. . . . . Atlantic Ocean

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	14P	0P	20P	11P	0P***		310	65
Cranbrook A	17	4	30	4	0 ***		010	46
Fort Nelson A	12	2	24	4	5 ***		330	48
Fort St John A	14	4	25	5	1 ***		350	48
Kamloops A	18	2	29	7	0 ***		280	44
Penticton A	16P	1P	27P	7P	7P***			X
Port Hardy A	12P	0P	18P	7P	0P***			X
Prince George A	14	3	25	3	1 ***			X
Prince Rupert A	11	0	19	4	9 ***			X
Revelstoke A	15	2	24	6	9 ***		170	59
Smithers A	12	1	24	3	1 ***			X
Vancouver Int'l A	16	2	22	11	43 ***		100	33
Victoria Int'l A	15	0	24	8	15 ***			X
Williams Lake A	14	3	25	2	17 ***			X
Yukon Territory								
Komakuk Beach A	2P	0P	10P	-7P	1P***			X
Teslin (aut)	11P	*	18P	0P	8P***			X
Watson Lake A	10	2	20	-2	6 ***		240	56
Whitehorse A	10	2	19	-2	2 ***		200	70
Northwest Territories								
Alert	-8	2	-1	-12	17	12	210	72
Baker Lake A	2	-1	10	-2	3 ***		340	57
Cambridge Bay A	-1	-1	5	-5	0	1	330	44
Cape Dyer A	-2P	-1P	3P	-4P	1P	1		X
Clyde A	2	1	8	-1	3	1	330	59
Coppermine A	5	1	19	-3	10 ***		330	48
Coral Harbour A	0	-2	5	-5	5	1	020	69
Eureka	-5	2	-1	-10	4	1	300	46
Fort Smith A	10	1	24	-2	6 ***			X
Hall Beach A	-1P	-1P	3P	-4P	1P	1	360	54
Inuvik A	5	0	18	-8	0 ***			X
Iqaluit A	1	-2	5	-4	9 ***		340	57
Mould Bay A	-4	1	0	-12	3	3	190	44
Norman Wells A	7	0	21	-1	37 ***		260	39
Resolute A	-6P	-2P	-3P	-11P	1P	13	040	41
Yellowknife A	8	0	18	1	3 ***			X
Alberta								
Calgary Int'l A	15	4	26	4	6 ***		010	76
Cold Lake A	14	3	25	4	14 ***		260	46
Edmonton Namao A	15	4	25	4	2 ***		210	57
Fort McMurray A	13	3	24	3	10 ***		170	33
High Level A	10	1	22	1	5 ***			X
Jasper	13	2	27	0	25 ***			X
Lethbridge A	17	4	30	4	5 ***		330	80
Medicine Hat A	18	4	31	6	1 ***		360	67
Peace River A	13	3	24	0	7 ***		280	39
Saskatchewan								
Cree Lake	10	2	21	3	17 ***		130	41
Estevan A	16	3	32	1	1 ***		140	69
La Ronge A	11	1	21	0	9 ***			X
Regina A	16	4	33	3	0 ***		150	76
Saskatoon A	15	3	26	4	0 ***		130	54
Swift Current A	16	4	29	3	3 ***		300	37
Yorkton A	13	2	27	0	0 ***		140	54
Manitoba								
Brandon A	12	0	29	-1	0 ***		330	44
Churchill A	5	-1	18	-1	3 ***		310	61
Lynn Lake A	7	0	19	-3	9 ***			X
The Pas A	10	0	20	2	6 ***		130	50
Thompson A	5	-2	17	-5	8 ***		020	48
Winnipeg Int'l A	14	1	30	-2	1 ***		360	56

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Big Trout Lake	5P	-3P	14P	0P	16P***		310	[illegible]
Gore Bay A	14	1	24	5	32 ***		180	46
Kapuskasing A	7	-2	21	-2	33 ***		200	56
Kenora A	13	1	24	5	3 ***		340	43
London A	17	1	27	5	50 ***		190	74
Moosonee	6	-3	18	-3	14 ***		340	43
North Bay A	12	0	22	1	76 ***		160	72
Ottawa Int'l A	15	0	26	5	14 ***		280	56
Petawawa A	15	2	26	3	8 ***		280	48
Pickle Lake	6	-4	18	-2	26 ***		140	52
Red Lake A	10	-1	24	2	6 ***		130	50
Sudbury A	12	0	24	1	20 ***		340	52
Thunder Bay A	11	0	22	1	33 ***		110	37
Timmins A	8	-2	20	0	19 ***		190	41
Toronto(Pearson Int'l A)	17	2	29	4	14 ***		250	56
Trenton A	17	1	27	5	3 ***		160	57
Wiarton A	16	1	27	8	32 ***		200	56
Windsor A	18	1	27	7	56 ***		310	59
Québec								
Bagotville A	11	0	26	0	21 ***		220	46
Blanc Sablon A	9	*	16	0	18 ***		020	52
Inukjuak A	2	-3	6	-2	11 ***		270	67
Kuujjuaq A	3	-3	11	-2	2 ***		250	83
Kuujjuarapik A	5	-2	11	-1	14 ***		210	61
Maniwaki	13	1	23	4	8 ***		160	46
Mont Joli A	13	1	24	2	18 ***		170	80
Montréal Int'l A	15	0	26	5	6 ***		250	63
Natashquan A	10	0	15	2	15 ***		360	46
Québec A	14	1	26	3	9 ***		260	48
Schefferville A	2	-3	9	-2	104	1	220	59
Sept-Îles A	9	0	17	2	54 ***		100	70
Sherbrooke A	15	3	25	5	19 ***			X
Val-d'Or A	9	-2	21	0	66 ***		180	4[illegible]
New Brunswick								
Charlo A	11	0	22	1	19 ***			X
Chatham A	13	1	26	3	6 ***		150	52
Fredericton A	15	2	23	6	31 ***		180	39
Moncton A	14	1	22	4	3 ***		160	65
Saint John A	15	3	22	9	15 ***		200	41
Nova Scotia								
Greenwood A	16	2	24	5	2 ***		120	63
Shearwater A	16	2	23	8	12 ***		140	69
Sydney A	14	1	25	4	27 ***		010	44
Yarmouth A	17	3	23	9	5 ***		150	52
Prince Edward Island								
Charlottetown A	13	0	22	2	5 ***		150	56
Summerside A	15	0	22	6	5 ***		140	61
Newfoundland								
Cartwright	8	0	20	1	24 ***		350	56
Churchill Falls A	5	-2	13	-2	66 ***		230	67
Gander Int'l A	12	0	21	1	21 ***		210	56
Goose A	8	-1	18	1	35 ***		210	69
Port Aux Basques	12	0	18	3	18 ***		120	67
St John's A	12	0	23	3	14 ***		180	52
St Lawrence	13	1	20	4	3 ***			X
Wabush Lake A	4	-2	13	-1	95 ***		240	37

90/09/10-90/09/16

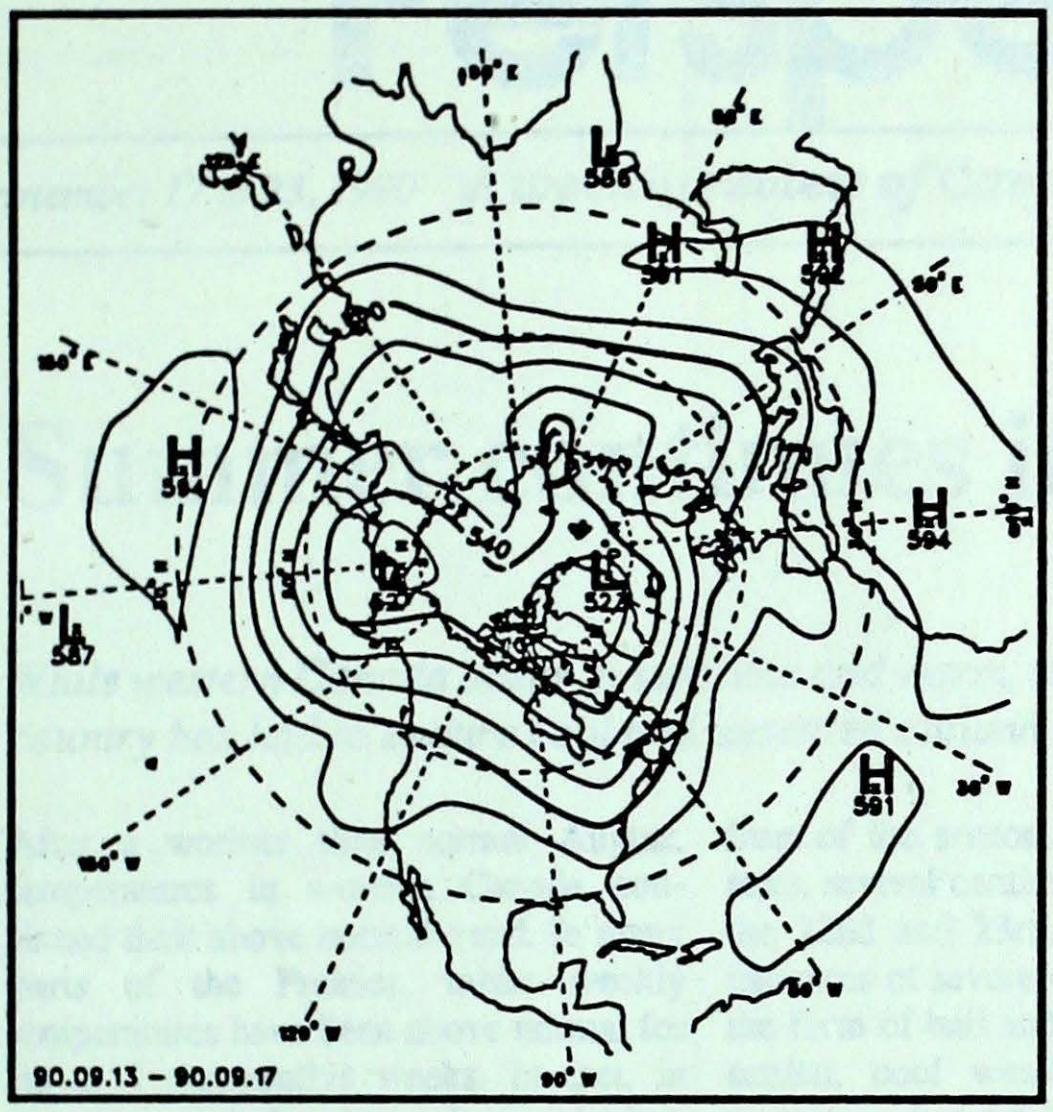
mean = mean weekly temperature, °C
max = maximum weekly temperature, °C
min = minimum weekly temperature, °C
anom = mean temperature anomaly, °C

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

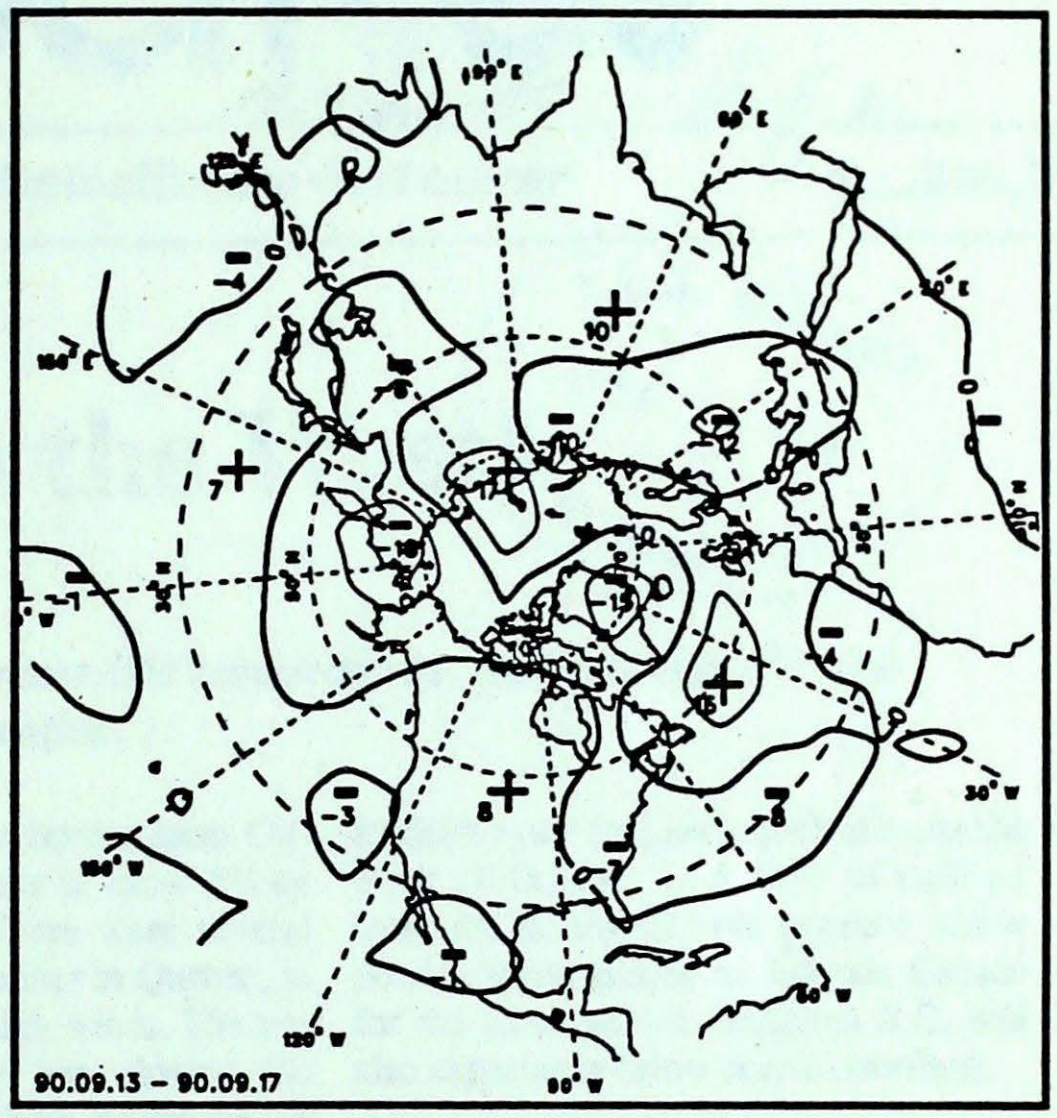
— Annotations —

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)



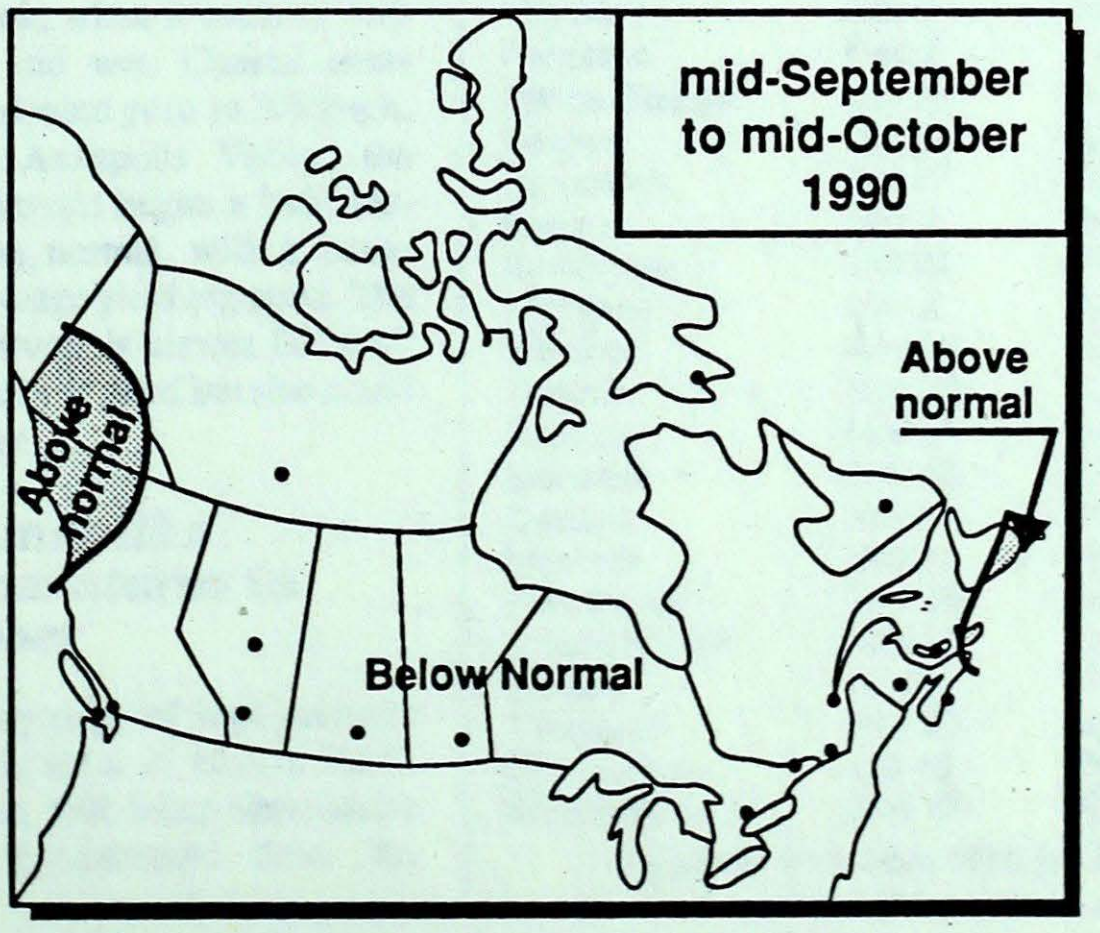
Mean geopotential height anomaly
50-kPa level (10-decametre intervals)

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

MONTHLY TEMPERATURE FORECAST

Normal temperatures from mid-September to mid-October, °C

Whitehorse	4	Toronto	12
Yellowknife	3	Ottawa	11
Iqaluit	-1	Montréal	12
Vancouver	12	Québec	10
Victoria	12	Fredericton	10
Calgary	8	Halifax	12
Edmonton	8	Charlottetown	11
Regina	8	Goose Bay	6
Winnipeg	9	St. John's	9



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