Environment Canada Environnement Canada

Climatic Perspectives

October 30 to November 5, 1989 ***A weekly review of Canadian climate*** *Vol. 11 No 45*

Winter halts Prairie harvest

As winter-like temperatures and snowfalls spread southwards, harvesting is virtually complete in all parts of Saskatchewan and Manitoba. In Saskatchewan, the 1989 production of major grains, oil seeds and specialty crops is estimated at 18.3 million tonnes. This is up 56% from last year's drought-reduced production of 11.7 million tonnes, but down 3% from the 1979-88 average.

In Manitoba, this year's grain harvest was a little better than last year in both quality and quantity, and comparable to the ten-year average.

Some crops remain unharvested

In Alberta, there are still two districts where the harvest has been delayed and is not yet complete. Spirit River, Rycroft and Valley View in the Peace River district of northwestern Alberta and northeastern B.C. still have 121,000 hectares remaining to be harvested, or approximately 40% of this area's total. Heavy rainfalls since August have left fields muddy, soft and incapable of supporting heavy farm machinery. Climatological station reports from Wanham and Woking, Alberta, show that rainfall in recent months has been nearly double the normal. As a result, the harvest is at a standstill. The best farmers can hope for now, in order to be able to salvage their crops, is for the ground to freeze over before there is a general snow cover.

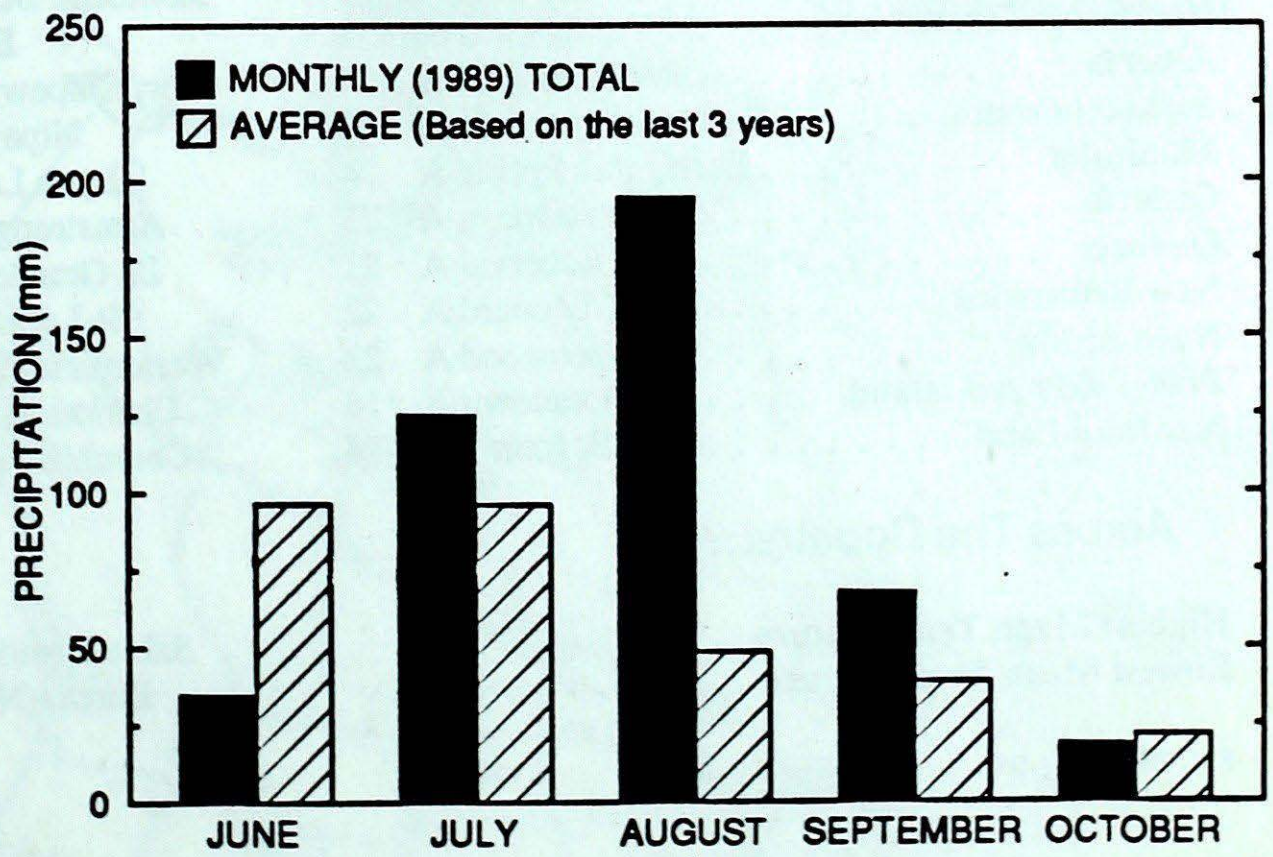
To a lesser degree, crops in the Edson, Evansburg and Sangudo area, west of Edmonton, have also been affected by wet weather conditions, but although the harvest is delayed, it is expected to be completed soon.

By mid-October, 96% of the harvest was completed in Alberta. In general, the quality of the Alberta cereal crop has dropped below expectation, mainly due to a period of wet weather that began shortly after harvesting operations commenced. The oilseed crop fared better and is considered of average quality. This year's yields are estimated at 15.7 million tonnes, one million tonnes better than the 10-year average, and 500,000 tonnes more than in 1988.

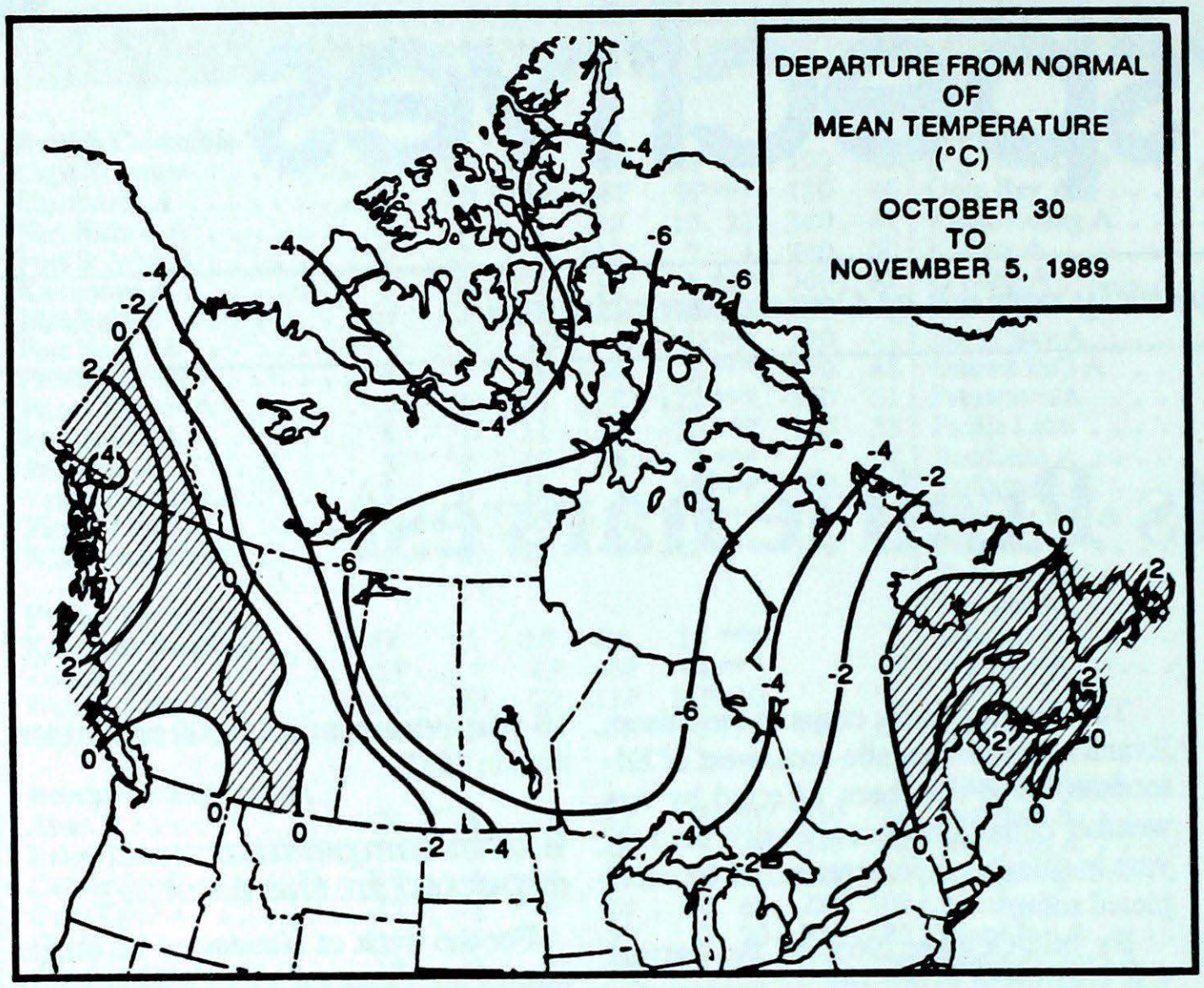
Warm temperatures expected in the west...

For the week of November 12, temperatures are expected to be above normal across British Columbia, Alberta and the Mackenzie District of the Northwest Territories. Below-normal temperatures are expected across northern Manitoba, extreme northern Ontario, the northern parts of Québec and Labrador, and the southern half of Baffin Island. Elsewhere near-normal temperatures are likely.

WOKING, ALBERTA CLIMATOLOGICAL STATION



Canada



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	-0.6	-7.7
Iqaluit A	-5.5	-12.8
Yellowknife A	-4.3	-11.2
Vancouver Int'l A	11.2	4.3
Victoria Int'l A	11.4	3.7
Calgary Int'l A	8.2	-4.6
Edmonton Int'l A	6.1	-5.7
Regina A	5.9	-5.9
Saskatoon A	5.1	-5.4
Winnipeg Int'l A	5.6	-3.4
Ottawa Int'l A	9.4	0.7
Toronto Int'l A	10.9	1.9
Montréal Int'l A	9.6	1.5
Québec A	7.2	-0.6
Fredericton A	9.8	-0.3
Saint John A	9.6	1.1
Halifax (Shearwater)	10.9	3.6
Charlottetown A	9.5	2.0
Goose A	3.6	-3.5
St John's A	8.6	1.8

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Victoria Int'l A	15	Fort Nelson A	-13	Prince Rupert A	137
Yukon Territory	Whitehorse A	7	Komakuk Beach A	-28	Watson Lake A	7
Northwest Territories	Yellowknife A	-2	Eureka	-42	Broughton Island	27
Alberta	Medicine Hat A	14	Fort Chipewyan A	-22	Fort Chipewyan A	16
Saskatchewan	Eastend Cypress (aut)	11	Nipawin A	-28	Prince Albert A	25
Manitoba	Portage La Prairie A	4	Lynn Lake A	-30	The Pas A	11
Ontario	Petawawa A	23	Armstrong (aut)	-25	Kapuskasing A	54
Québec	Roberval A	21	La Grande Iv A	-21	Schefferville A	44
New Brunswick	St-Léonard A	22	St-Léonard A	-10	Miscou Island (aut)	49
Nova Scotia	Greenwood A	22	Western Head (aut)	-6	Sydney A	38
Prince Edward Island	Charlottetown A	18	Charlottetown A	-5	Summerside A	26
Newfoundland	St John's A	18	Churchill Falls A	-14	Nain A	85

Across The Country...

Highest Mean Temperature	Sable Island(NS)	11
Lowest Mean Temperature	Eureka(NWT)	-34

89/10/30-89/11/05

CLIMATIC PERSPECTIVES
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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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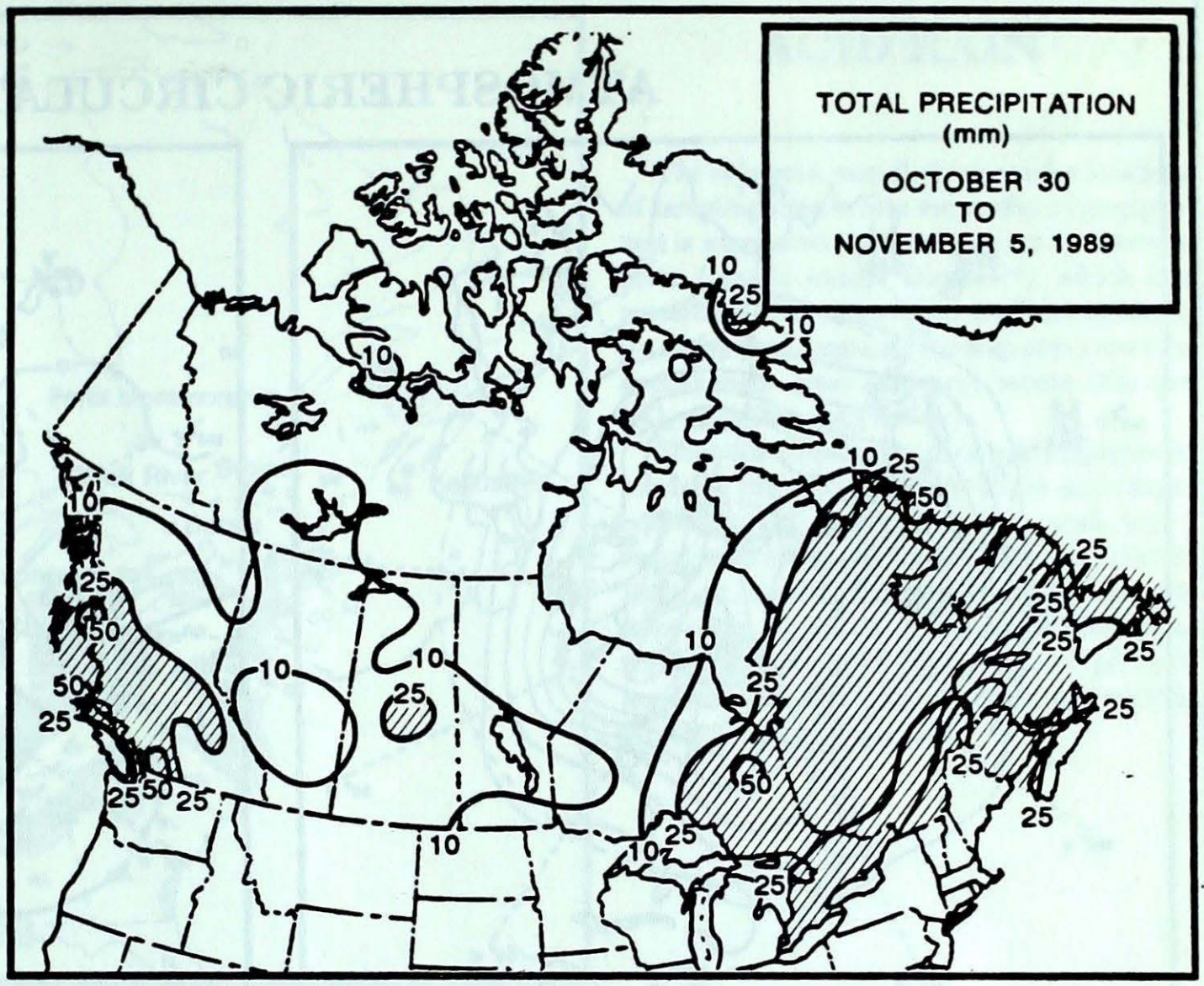

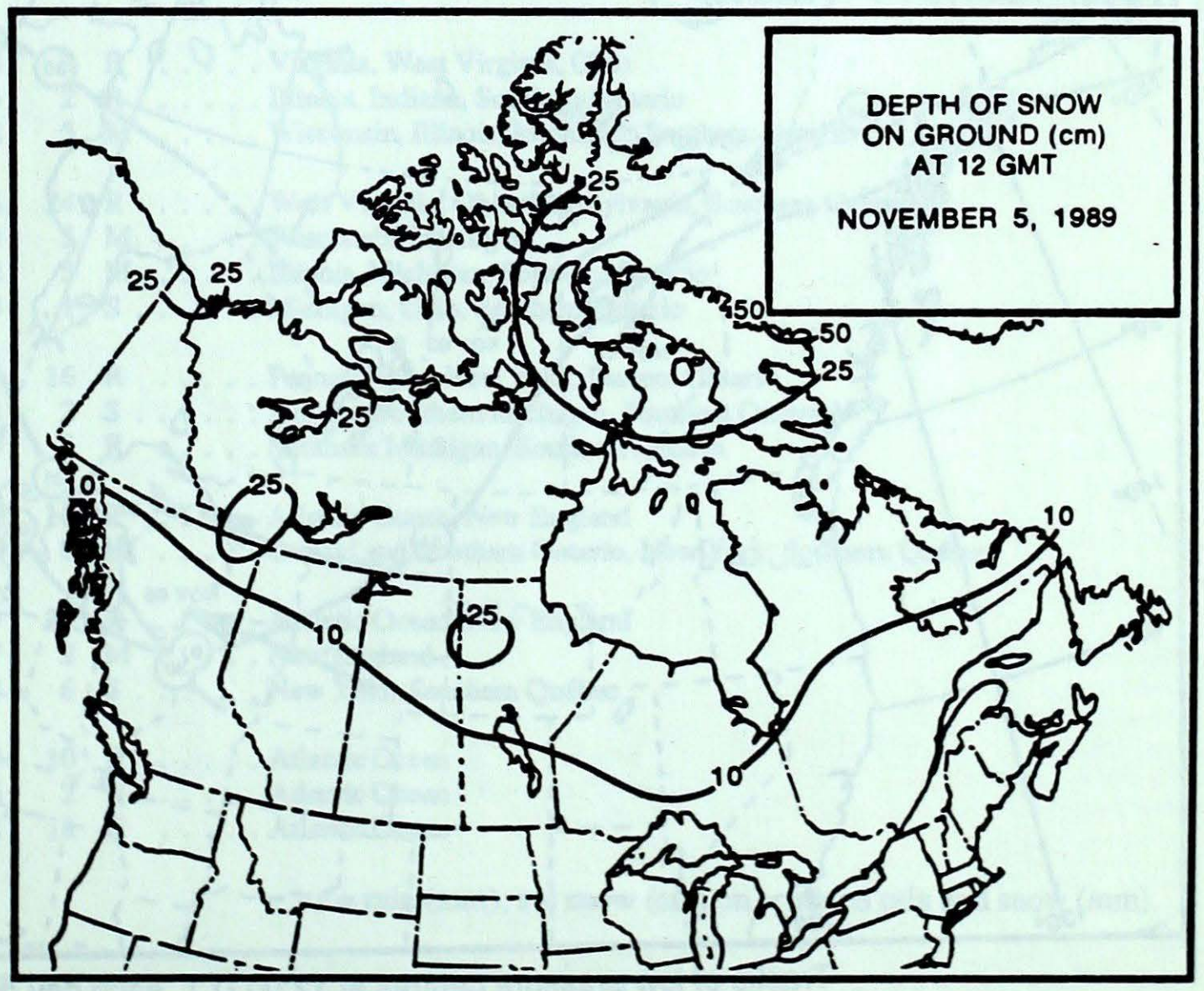

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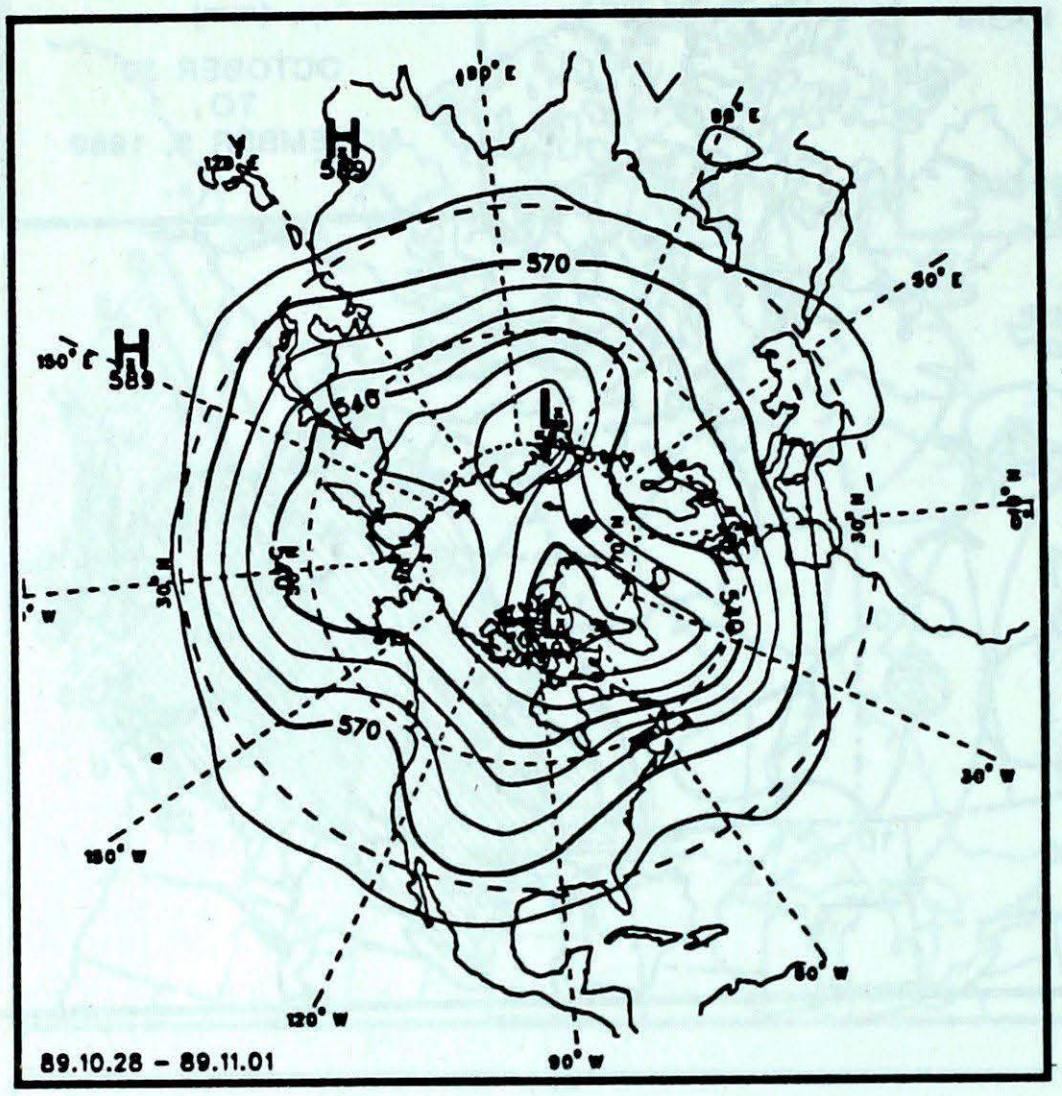
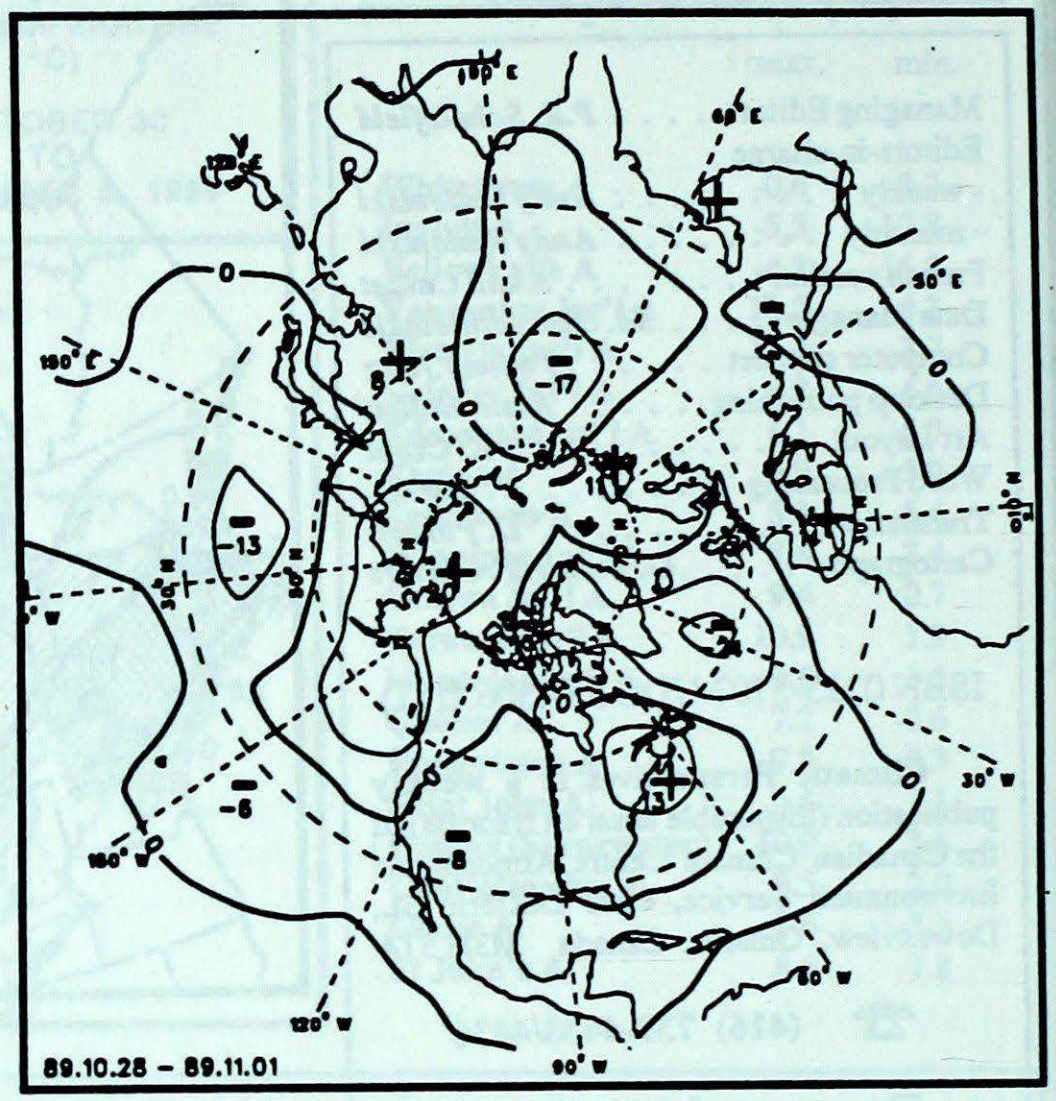
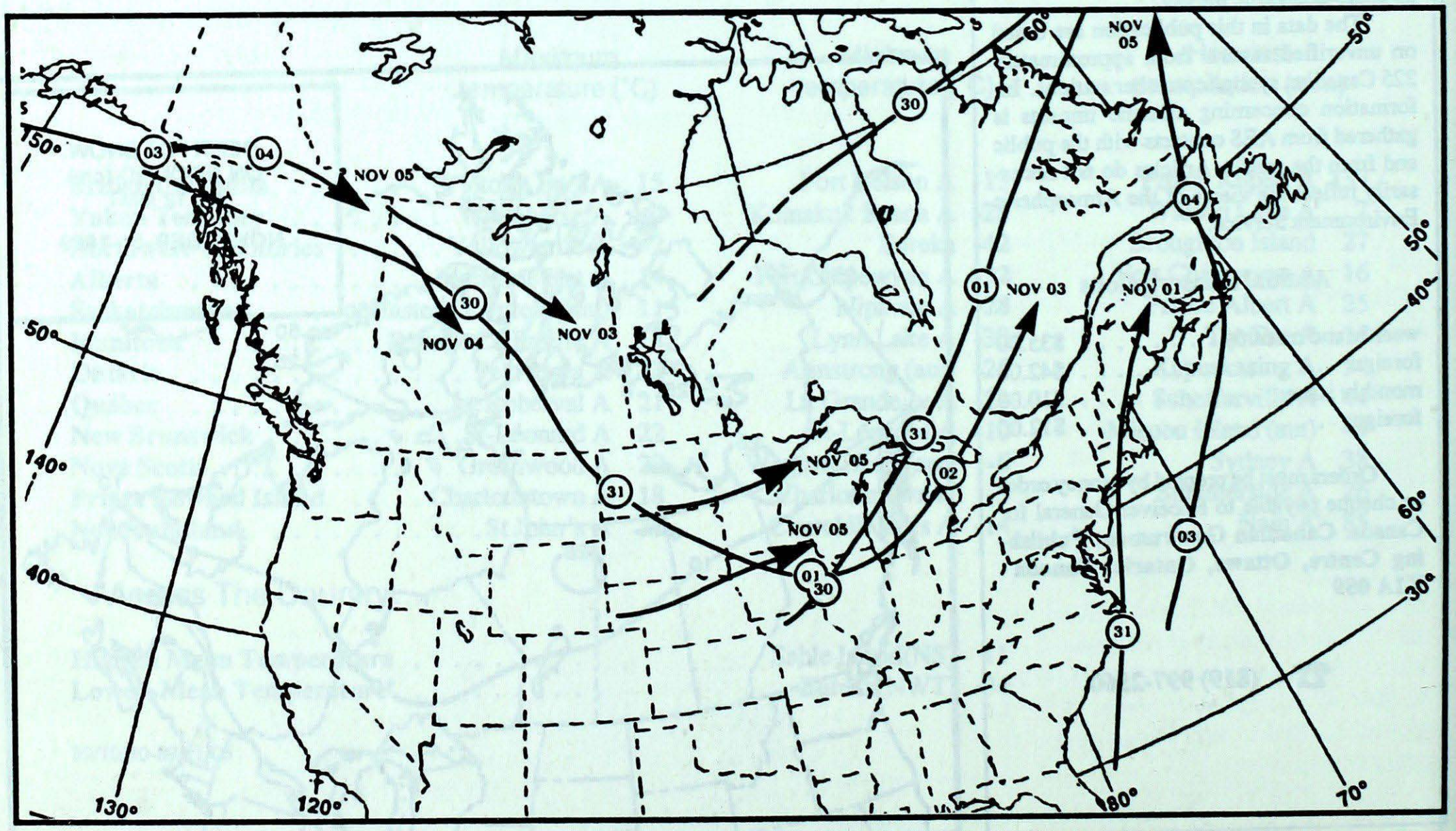


Mean geopotential height
50-kPa level (10-decametre intervals)

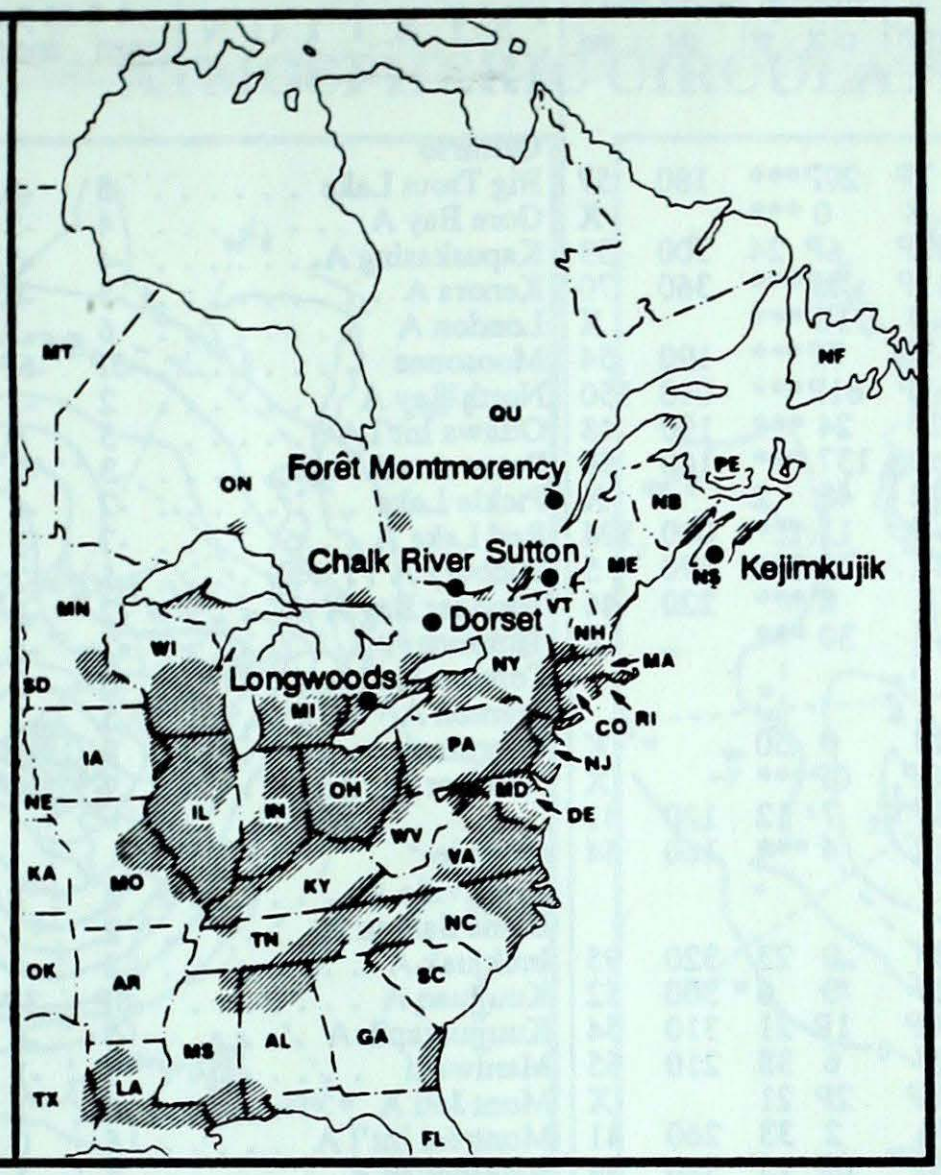


Mean geopotential height anomaly
50-kPa level (10-decametre intervals)



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.

SITE day pH amount AIR PATH TO SITE

October 29 to November 4, 1989

SITE	day	pH	amount		AIR PATH TO SITE
Longwoods	31	3.8	3	R	. . . . . Virginia, West Virginia, Ohio
	1	3.3	2	R	. . . . . Illinois, Indiana, Southern Ontario
	2	4.2	5	M	. . . . . Wisconsin, Illinois, Michigan, Southern Ontario
Dorset *	31	4.4	24	R	. . . . . West Virginia, Ohio, Pennsylvania, Southern Ontario
	1	4.4	5	M	. . . . . Wisconsin, Michigan
	2	4.2	5	M	. . . . . Illinois, Michigan, Southern Ontario
	4	4.4	1	S	. . . . . Michigan, Ohio, Southern Ontario
Chalk River	31	4.3	16	R	. . . . . Pennsylvania, New York, Eastern Ontario
	1	4.2	2	S	. . . . . Indiana, Southern Michigan, Southern Ontario
	2	4.0	5	R	. . . . . Southern Michigan, Southern Ontario
Sutton	31	4.6	16	R	. . . . . Atlantic Ocean, New England
	3	4.0	8	M	. . . . . Central and Southern Ontario, New York, Southern Québec
Montmorency	31	4.9	27	R	. . . . . Atlantic Ocean, New England
	1	4.7	2	M	. . . . . New England
	3	5.2	6	S	. . . . . New York, Southern Québec
Kejimkujik	31	4.8	10	R	. . . . . Atlantic Ocean
	1	4.6	2	R	. . . . . Atlantic Ocean
	3	4.1	12	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	10P	1P	11P	7P	20P***		180	57
Cranbrook A	2	0	9	-8	0 ***			X
Fort Nelson A	-9P	-3P	-2P	-13P	6P	24	300	33
Fort St John A	1P	1P	11P	-11P	8P***		360	70
Kamloops A	4	-1	12	-4	16 ***			X
Penticton A	5P	-1P	11P	-3P	7P***		190	54
Port Hardy A	7P	0P	12P	-1P	61P***		010	150
Prince George A	2	1	7	-10	24 ***		190	48
Prince Rupert A	8	1	12	0	137 ***		160	59
Revelstoke A	2	-1	7	-2	48	2		X
Smithers A	4	2	11	-4	11 ***		080	124
Vancouver Int'l A	7	-1	12	-1	75 ***		090	5
Victoria Int'l A	7	-1	15	-1	8 ***		220	46
Williams Lake A	2	0	8	-5	30 ***			X
Yukon Territory								
Komakuk Beach A	-20	-5	-13	-28	0	50		X
Teslin (aut)	-1P	*	6P	-9P	0P***			X
Watson Lake A	-5	2	4	-17	7	12	120	41
Whitehorse A	0	4	7	-12	4 ***		160	54
Northwest Territories								
Alert	-27	-3	-17	-33	0	23	320	95
Baker Lake A	-19	-5	-11	-27	0	6	300	52
Cambridge Bay A	-21P	-2P	-14P	-30P	1P	21	310	54
Cape Dyer A	-17	-5	-10	-27	6	38	210	65
Clyde A	-21P	-8P	-13P	-28P	2P	21		X
Coppermine A	-23	-7	-13	-31	2	33	260	41
Coral Harbour A	-21P	-7P	-5P	-29P	0P	15	320	39
Eureka	-34	-5	-23	-42	1	11	270	59
Fort Smith A	-11P	-6P	-3P	-25P	5P	10		X
Hall Beach A	-22P	-5P	-9P	-32P	1P	34	020	59
Inuvik A	-21	-6	-13	-33	4	22	050	37
Iqaluit A	-17	-8	-7	-26	1	12	340	57
Mould Bay A	-23P	0P	-12P	-34P	4P	18	300	69
Norman Wells A	-16	-4	-8	-24	5	4	120	70
Resolute A	-24	-4	-20	-29	1	25	340	85
Yellowknife A	-12	-4	-2	-23	12	15	100	37
Alberta								
Calgary Int'l A	2	1	14	-11	6 ***		360	57
Cold Lake A	-2	-2	5	-11	13	1	360	50
Edmonton Namao A	1	0	8	-8	9 ***		350	48
Fort McMurray A	-5	-3	3	-12	11	6	340	44
High Level A	-8	-3	-2	-14	14	23	360	41
Jasper	2	2	8	-7	5 ***			X
Lethbridge A	3	-1	12	-12	11 ***		270	83
Medicine Hat A	2	-1	14	-11	8 ***		360	63
Peace River A	-1P	0P	8P	-9P	8P***			X
Saskatchewan								
Cree Lake	-10	-6	-2	-23	13	14	150	48
Estevan A	-2	-4	7	-16	14	1	010	33
La Ronge A	-9P	-7P	0P	-20P	12P	23	160	46
Regina A	-2	-2	7	-12	21	1	360	50
Saskatoon A	-2	-2	6	-12	17	1	010	61
Swift Current A	0	-1	10	-10	12	1	320	50
Yorkton A	-5	-5	4	-18	10	1	170	43
Manitoba								
Brandon A	-5P	-6P	3P	-19P	5P	1	300	41
Churchill A	-13	-7	-2	-24	4	15	280	46
Lynn Lake A	-16	-11	-4	-30	7	32		X
The Pas A	-8	-7	-1	-20	11	11	150	43
Thompson A	-14	-10	-3	-29	1	13	130	32
Winnipeg Int'l A	-6	-7	3	-20	8	4	170	52

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Big Trout Lake	-8	-5	-1	-17	6 ***		130	52
Gore Bay A	4	-2	17	-7	47 ***		160	65
Kapuskasing A	-4	-5	14	-19	54	11	120	41
Kenora A	-5	-6	1	-15	11	9	180	44
London A	6	-1	21	-5	13 ***		290	61
Moosonee	-5P	-6P	5P	-20P	23P	6	060	32
North Bay A	2	-1	19	-11	35	2	250	63
Ottawa Int'l A	5	0	21	-9	14 ***		240	57
Petawawa A	3	-2	23	-13	23	1	140	69
Pickle Lake	-7	-6	2	-20	8	6	010	39
Red Lake A	-7	-7	-1	-17	14	13	150	48
Sudbury A	1	-2	18	-11	31	4	300	52
Thunder Bay A	-2	-4	6	-16	9	1	360	37
Timmins A	-2	-4	14	-16	34	6	161	41
Toronto Int'l A	6	-1	20	-7	14 ***		260	65
Trenton A	5	-2	20	-9	16 ***		250	59
Wiarton A	5	-1	22	-9	22 ***		270	74
Windsor A	7	-1	21	-1	10 ***		190	52
Québec								
Bagotville A	3	1	20	-11	18	9	220	56
Blanc Sablon A	2	*	11	-6	19 ***		250	83
Inukjuak A	-8	-4	1	-18	13	20	300	69
Kuujjuaq A	-8P	-3P	1P	-17P	27P	17	300	76
Kuujjuarapik A	-5	-4	2	-15	16	5	020	67
Maniwaki	3	-1	21	-11	36	1	130	39
Mont Joli A	4	1	18	-7	13	1	240	39
Montréal Int'l A	6	0	21	-7	19 ***		240	
Natashquan A	3	1	11	-5	44 ***		270	82
Québec A	4	0	18	-7	26 ***		240	76
Schefferville A	-6	-2	3	-20	44	23	300	67
Sept-Îles A	1	0	9	-6	27 ***		100	70
Sherbrooke A	4	0	21	-10	22	2	260	61
Val-d'Or A	0	-1	18	-18	38	7	250	57
New Brunswick								
Charlo A	4P	1P	20P	-6P	24P***		290	69
Chatham A	7	2	21	-8	20 ***		200	67
Fredericton A	6	1	21	-8	27 ***		290	70
Moncton A	7P	1P	21P	-7P	9P***		150	85
Saint John A	6	1	17	-6	28 ***		190	87
Nova Scotia								
Greenwood A	7	1	22	-5	22 ***		160	82
Shearwater A	7	0	17	-3	19 ***		220	70
Sydney A	9	3	21	-3	38 ***		210	54
Yarmouth A	7	0	17	-3	17 ***		150	93
Prince Edward Island								
Charlottetown A	7	1	18	-5	25 ***		160	69
Summerside A	7	1	18	-4	26 ***		170	70
Newfoundland								
Cartwright	1	0	12	-6	35	12	300	74
Churchill Falls A	-3	1	7	-14	39	21	270	7
Gander Int'l A	6	2	18	-1	9 ***		250	74
Goose A	0	0	12	-12	27	14	280	74
Port Aux Basques	5	0	12	0	45 ***		270	91
St John's A	7	2	18	0	13 ***		260	82
St Lawrence	7	2	15	1	23 ***			X
Wabush Lake A	-4	0	9	-14	29	8	220	61

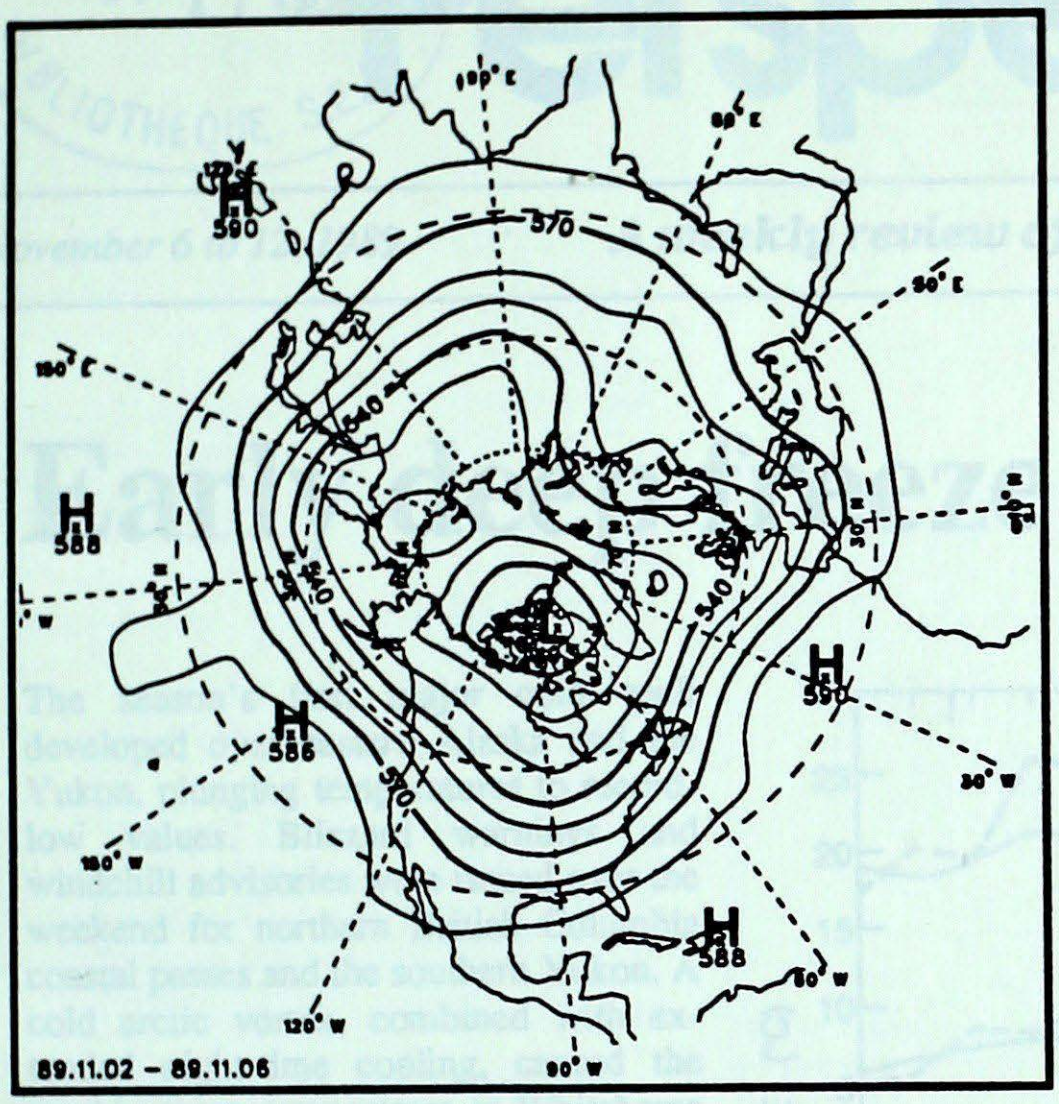
89/10/30-89/11/05

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

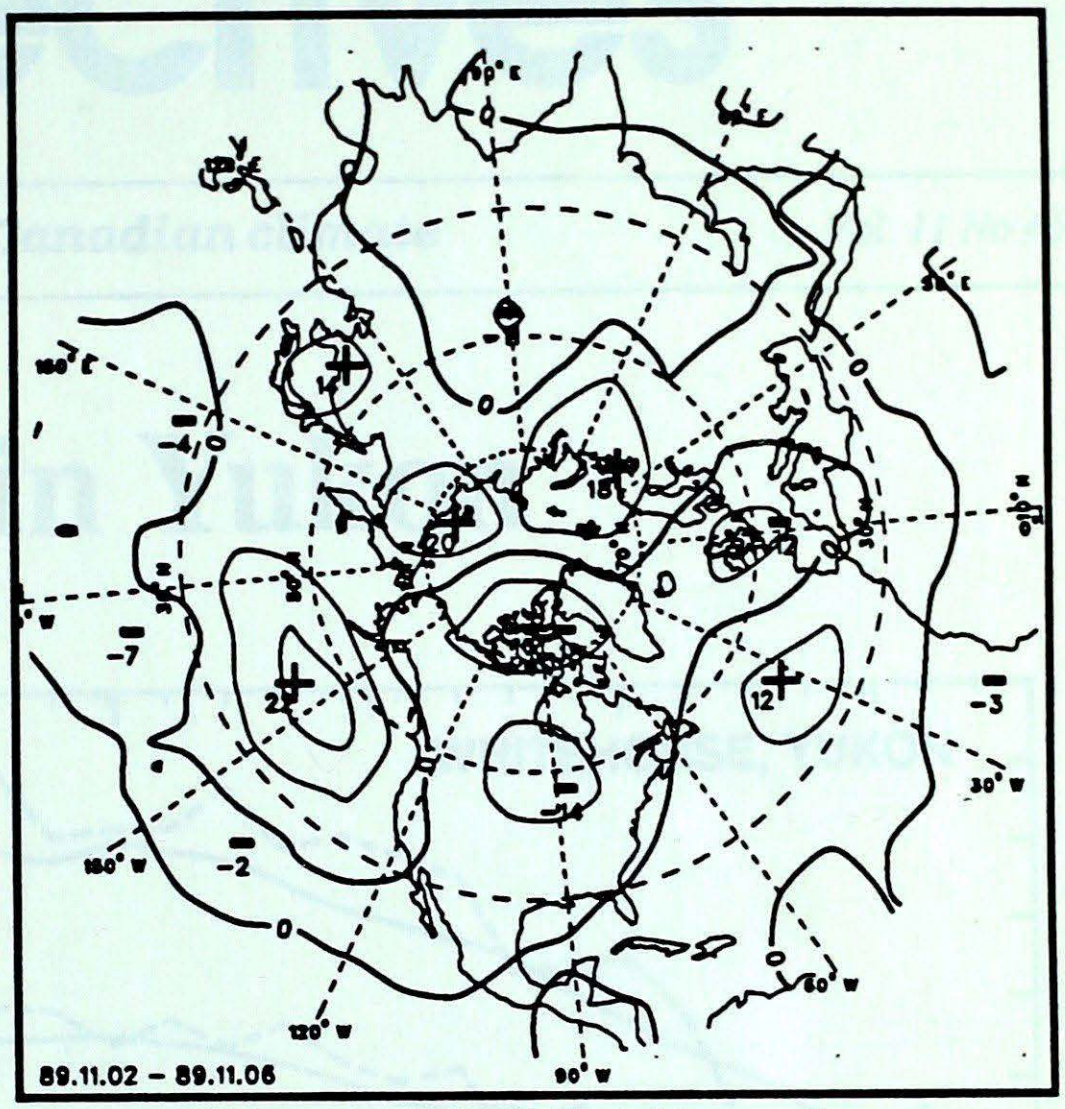
ptot = weekly precipitation total in mm
st = snow thickness on the ground in cm
dir = direction of max wind, deg. from north.
vel = wind speed in km/h

— 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)



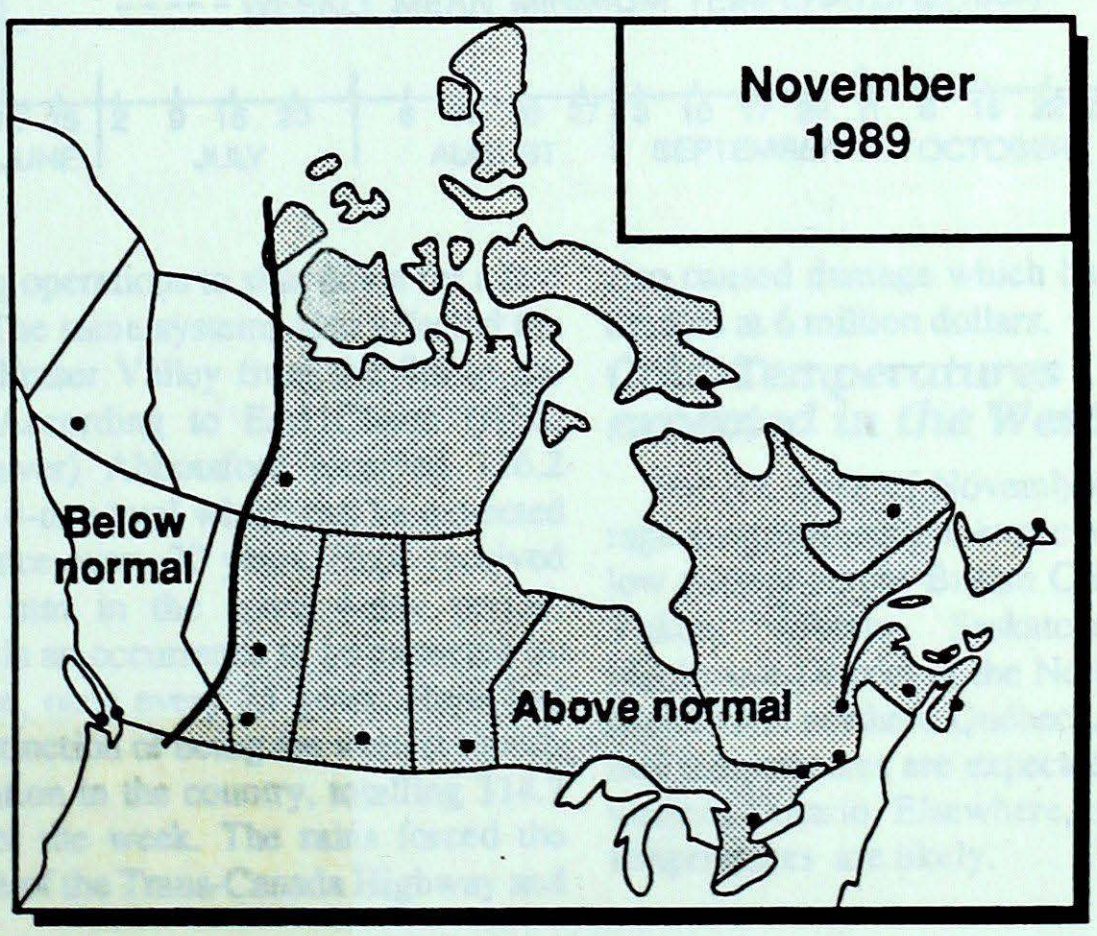
Mean geopotential height anomaly
50-kPa level (10-decametre intervals)

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

MONTHLY TEMPERATURE FORECAST

Normal temperatures for the month of November, °C

Whitehorse	-9	Toronto	3
Yellowknife	-14	Ottawa	1
Iqaluit	-13	Montréal	2
Vancouver	6	Québec	0
Victoria	6	Fredericton	1
Calgary	-3	Halifax	3
Edmonton	-5	Charlottetown	3
Regina	-5	Goose Bay	-4
Winnipeg	-5	St. John's	3



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