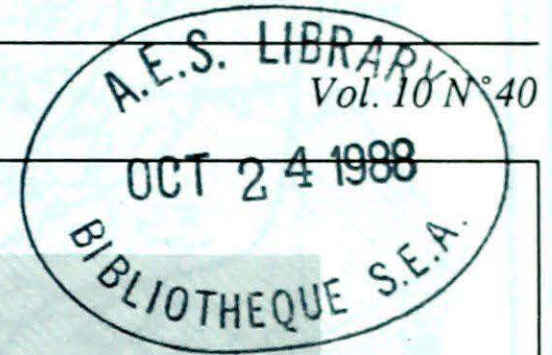




# Climatic Perspectives

Sep 27 to Oct 3 1988

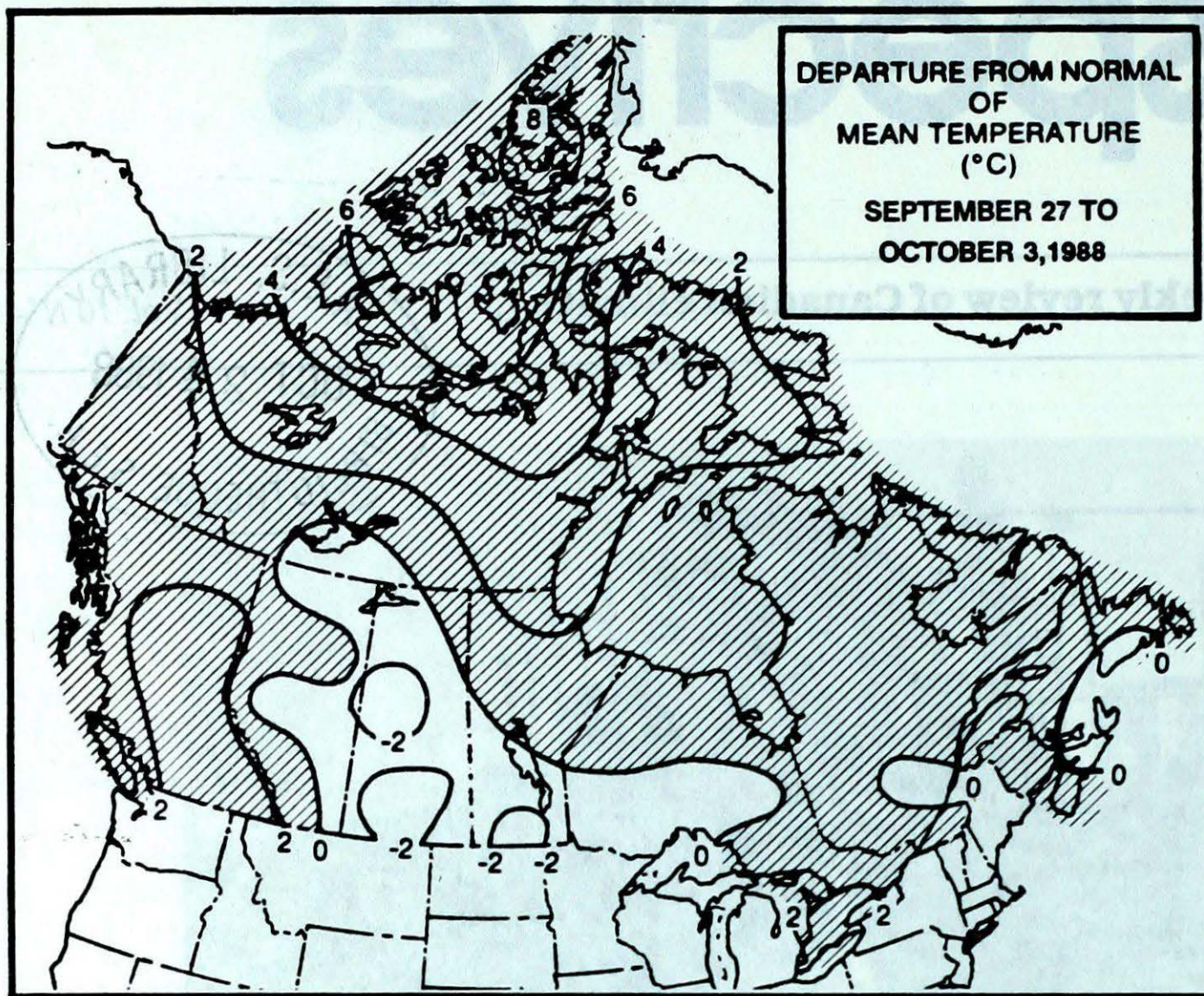
A weekly review of Canadian climate



Crisp, cool, sunny weather provided ideal fall harvest weather across southern Ontario on October 3rd. This photo shows workers at the Rupke farm in the Holland Marsh, just north of Toronto, taking advantage of the weather to get their celery harvest in before the arrival of the first major frost. Crops suffered during the early part of the growing season as the Marsh was plagued by a late frost, a severe duststorm and the prolonged warm spell. It was not a good year for lettuce. The carrot, onion and celery harvest has been generally good though thanks to irrigation during the drought and near ideal weather from mid-August through September. See page 3 for more information on the Ontario harvest.

- **First Major Fall Storm Slams North Coast of British Columbia**
- **October Starts off with Summer Weather in Eastern Canada**





**Across the country...**

**Yukon and N.W.T**

Cloudy, stormy weather dominated the Yukon this week. An intense storm crossing the southern Yukon dumped 12 mm of rain at Whitehorse, but further northwest, Beaver Creek was greeted with 15 cm of snow. Less snow was recorded further to the north at Dawson and Old Crow. By the end of the period, temperatures recovered to as high as 14.7°C at Burwash on the 2nd. Across the Northwest Territories, winter has been delayed somewhat as temperatures were well above normal along with light precipitation. The highest temperature across the NWT was 15.6°C on October 3rd at Hay River.

**British Columbia**

The first major storm of the Fall season slammed into the north coast on the 28th with heavy rain and wind. Port Hardy and Terrace had the greatest 24-hour precipitation totals for the month of September with 99.0 mm and 106.6 mm respectively. At Kitimat, 196.0 mm was recorded in a 27-hour period causing flooding and washing out bridges. On the 29th, the storm moved inland with very high winds knocked down trees and flattened crops, especially in the Peace River region. Offshore islands recorded squalls to 108 km/h with gusts to 117 km/h. Elsewhere, the week generally began and ended cool and wet. The weekend though was sunny and warm with temperatures as high as 27.2°C at Hope.

**Prairie Provinces**

In Alberta, the week began cool with light precipitation but improved through the latter part with sunny skies and warmer temperatures. The harvesting has been hampered by wet weather which is lowering the quality in the area from Red Deer north. Over southern and south-central regions of the province, harvesting is nearly complete. Although yields are down due to the drought in the south, the quality is considered good. Saskatchewan and Manitoba, experienced typical fall-like weather. Temperatures were cool with scattered precipitation through the week. Snow

**Weekly Temperature extremes (°C)**

	Maximum temperature	Minimum temperature
British Columbia . . . . . Hope	27	Fort Nelson -4
Yukon Territory . . . . . Burwash	15	Old Crow -15
Northwest Territories . . . . . Hay River	16	Alert -18
Alberta . . . . . Lethbridge	27	Cold Lake -6
Saskatchewan . . . . . Swift Current	26	Meadow Lake -10
Manitoba . . . . . Gretna	26	Grand Rapids -7
Ontario . . . . . Toronto Int'l	27	Geraldton -5
Quebec . . . . . Sherbrooke	25	Chibougamau -4
New Brunswick . . . . . St Stephen	26	Chatham -1
Nova Scotia . . . . . Greenwood	25	Truro 1
Prince Edward Island . . . . . Charlottetown	21	Charlottetown 3
Newfoundland . . . . . St John's	22	Churchill Falls -3

**Across The Country...**

Warmest Mean Temperature . . . . .	Lytton (BC) 17
Coollest Mean Temperature . . . . .	Alert (NWT) -9



fell in some northern localities. Only southeastern Manitoba had not yet experienced a killing frost.

**Ontario**

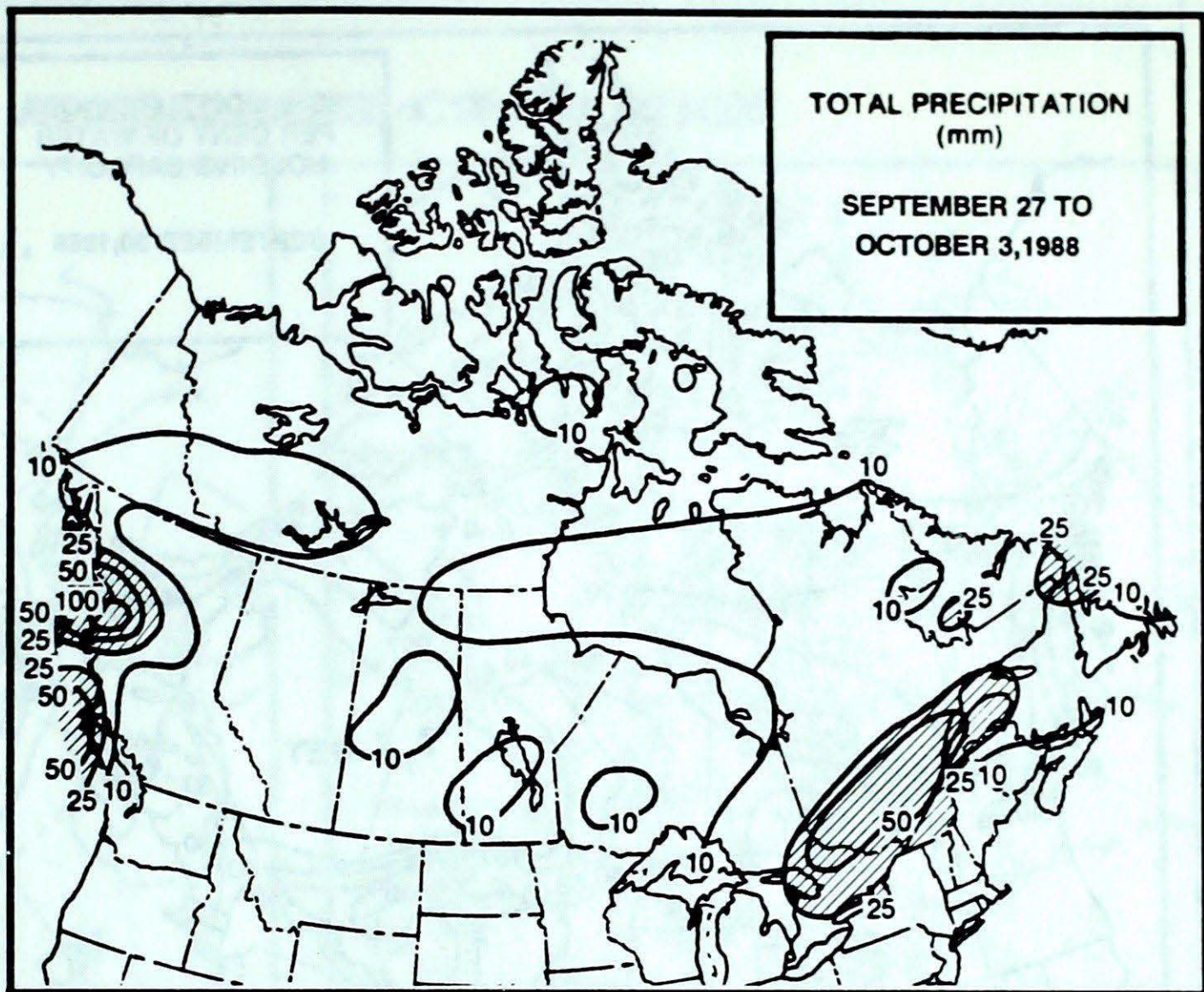
Southern Ontario enjoyed one last gasp of summer as temperatures climbed well above normal on September 30 and October 1st. Toronto International and St. Catharines set new daily records of 26.9°C and 27.0°C respectively. A strong cold front on October 2 swept across the province with cold, fall-like weather. Rain was plentiful in all regions with heaviest falls recorded with the passing of the Arctic fronts on the 2nd. On the 3rd, the coldest air of the season gripped Northern Ontario with snow across northwestern regions.

**Quebec**

Temperatures fluctuated from minimums below freezing at some locations early in the week to maximums in the low 20s later in the week. Several daily temperature records were set on the first day of October when a warm, humid tropical maximum air mass moved into the southwestern parts of the province. Maximum temperatures approached the 25°C mark. Heavy rains fell the next day as colder air from the northwest displaced the unseasonably warm air.

**Atlantic Provinces**

Variable amounts of cloud and sun were reported throughout the maritimes. Most areas though enjoyed summer-like weather on the weekend with sunny skies and temperatures as high as 25°C at Greenwood on the 1st. Precipitation varied with the largest falls in northern N.B. and P.E.I. Charlo N.B. recorded 26.8 mm while Greenwood received a mere 0.6 mm for the entire week. Newfoundland was generally unsettled with precipitation on most days. A major system crossing the island on the 28-29th dumped 25 to 50 mm of rain on many areas. On Sept 29th, St. John's recorded 47.8 mm of rain, a new daily record. Labrador was also unsettled with showers or flurries most days.



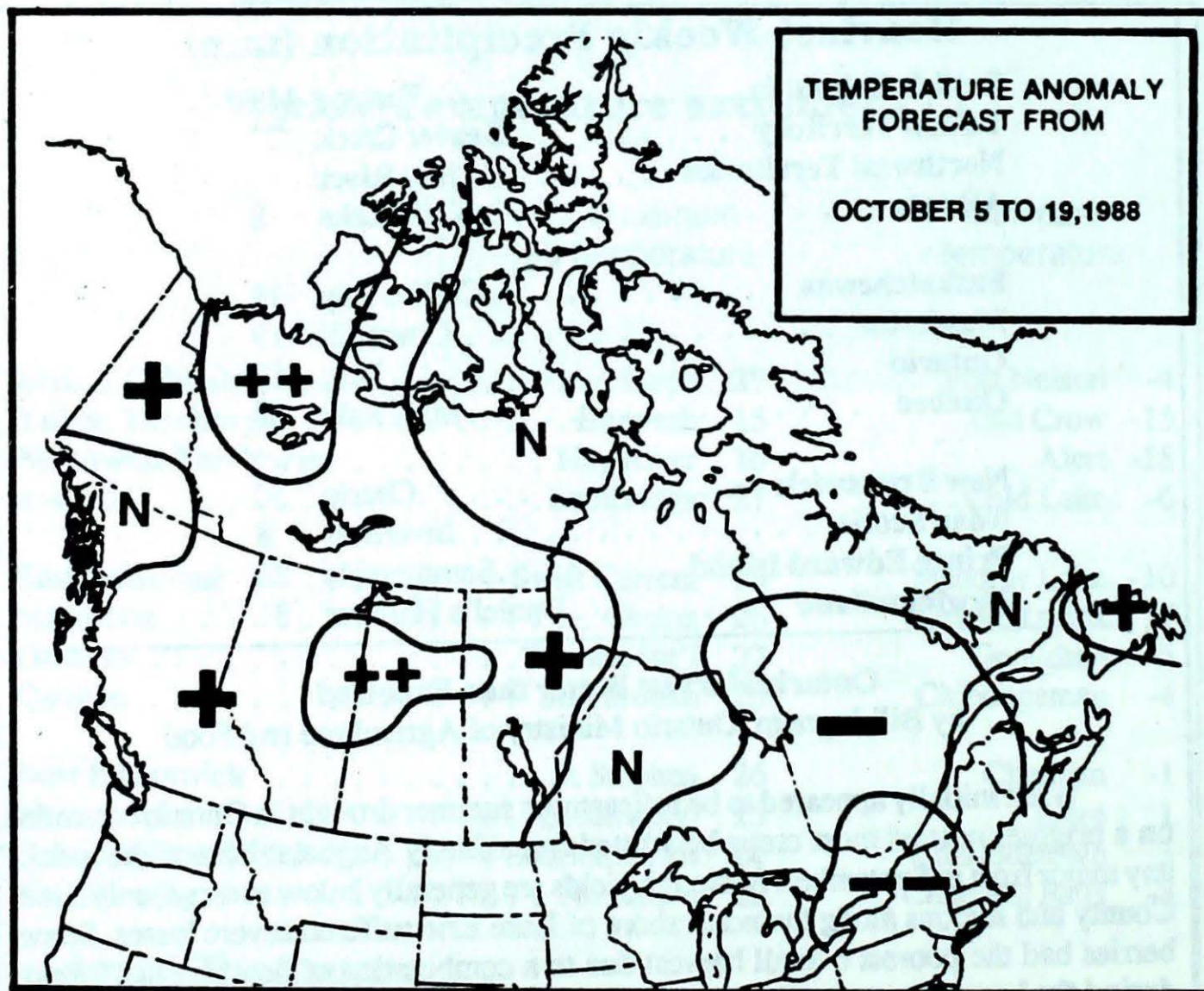
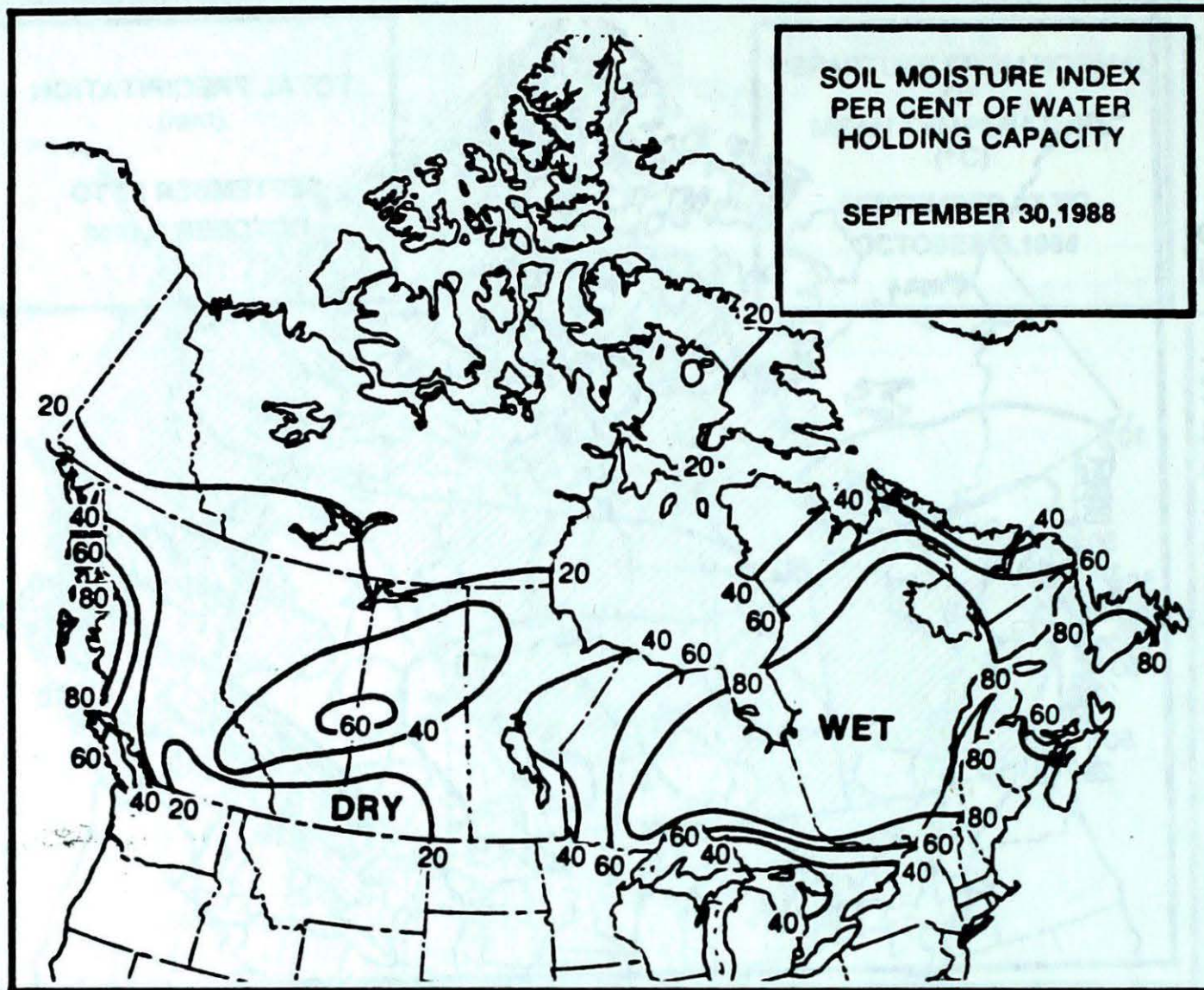
**Heaviest Weekly Precipitation (mm)**

British Columbia	..... Terrace	119
Yukon Territory	..... Beaver Creek	21
Northwest Territories	..... Hay River	19
Alberta	..... Cold Lake	8
Saskatchewan	..... Collins Bay	18
Manitoba	..... Churchill	19
Ontario	..... Britt	53
Quebec	..... Maniwaki	58
New Brunswick	..... Charlo	30
Nova Scotia	..... Inverness	8
Prince Edward Island	..... Summerside	20
Newfoundland	..... Daniel's Harbour	31

**Ontario Harvest Better than Expected**  
by Bill Ingratta, Ontario Ministry of Agriculture and Food

What initially appeared to be a disastrous summer drought in Ontario has ended on a brighter note as most crops benefitted from timely August rains and the lack of any major frost in September. Although yields are generally below average, only Essex County and regions along the north shore of Lake Erie suffered severe losses. Strawberries had the poorest overall harvest due to a combination of heat and lack of rain during the harvest season. There has been a good harvest of grapes and peaches with high quality yields. The summer heat stress caused apples to drop off, reducing yields in some areas. On the other hand, apple orchards east of Toronto benefitted from timely rainfalls which raised yields. Unseasonable light frosts at the end of June and in mid September created few problems for farmers.





++ much above normal  
 + above normal  
 N normal  
 - below normal  
 -- much below normal

**Temperature Anomaly Forecast**  
 This forecast is prepared by searching historical weather maps to find cases similar to the present. the historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

**CLIMATIC PERSPECTIVES  
 VOLUME 10**

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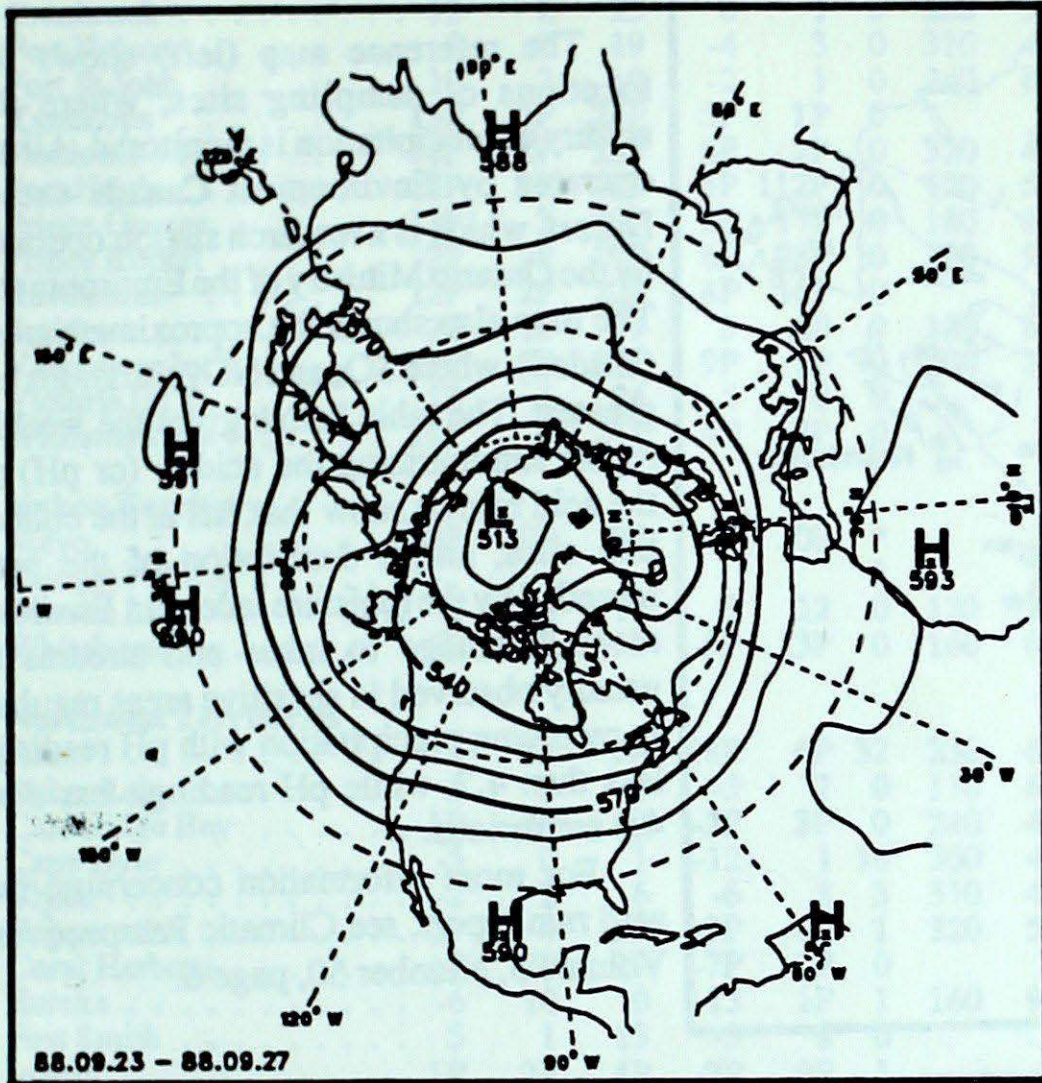
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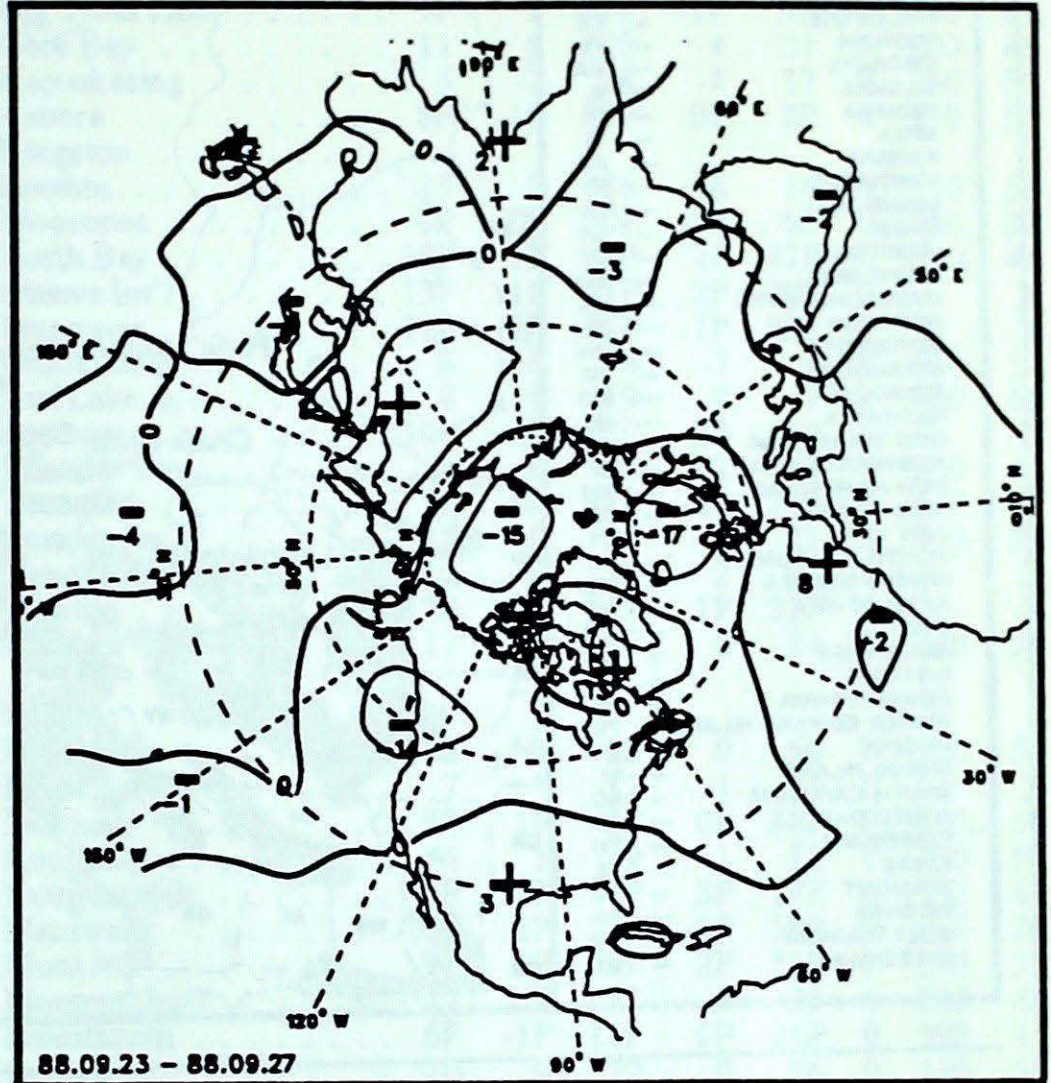
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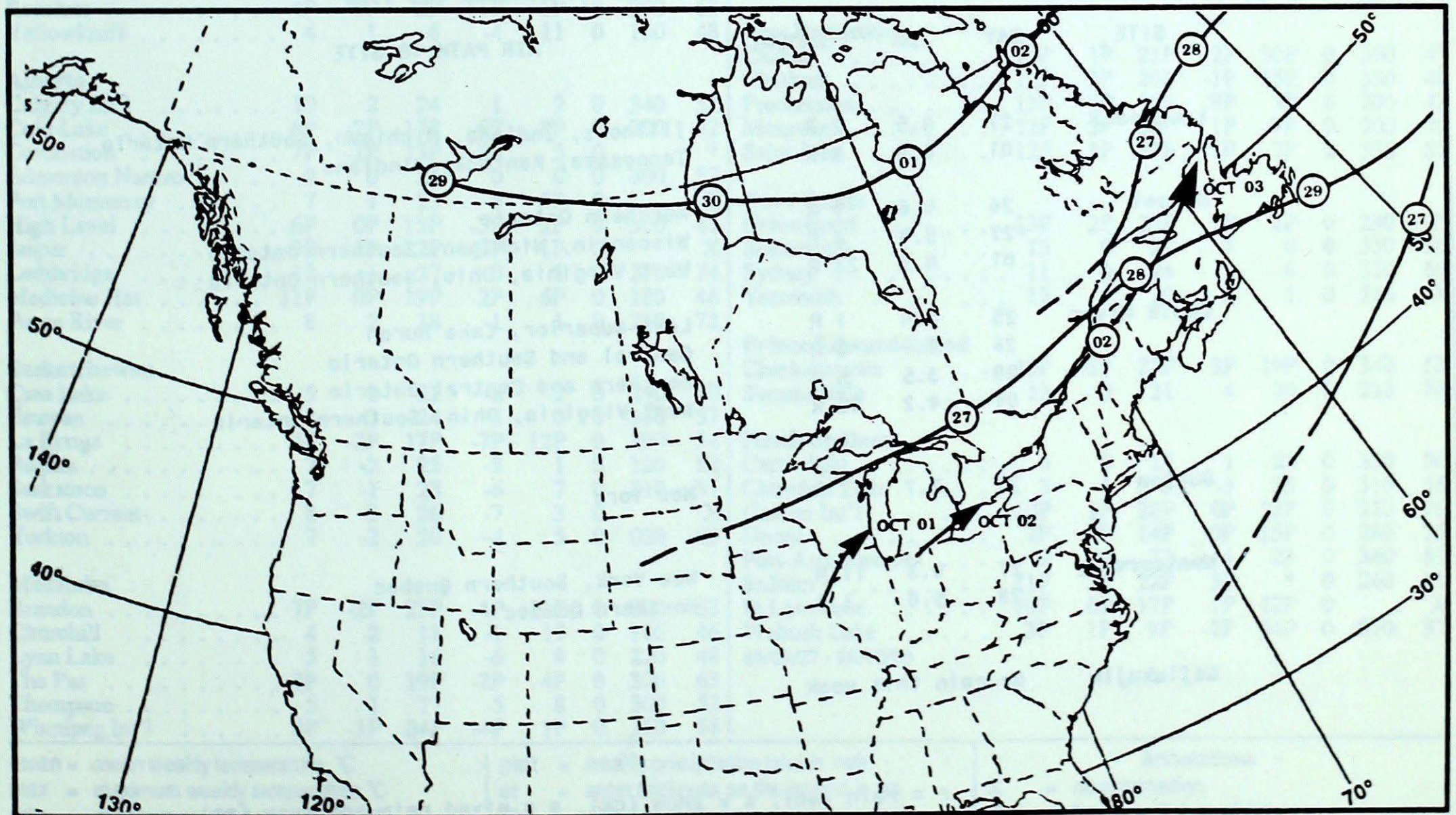
### 50 kPa ATMOSPHERIC CIRCULATION



Mean geopotential height  
50 kPa level (5 decameter intervals)

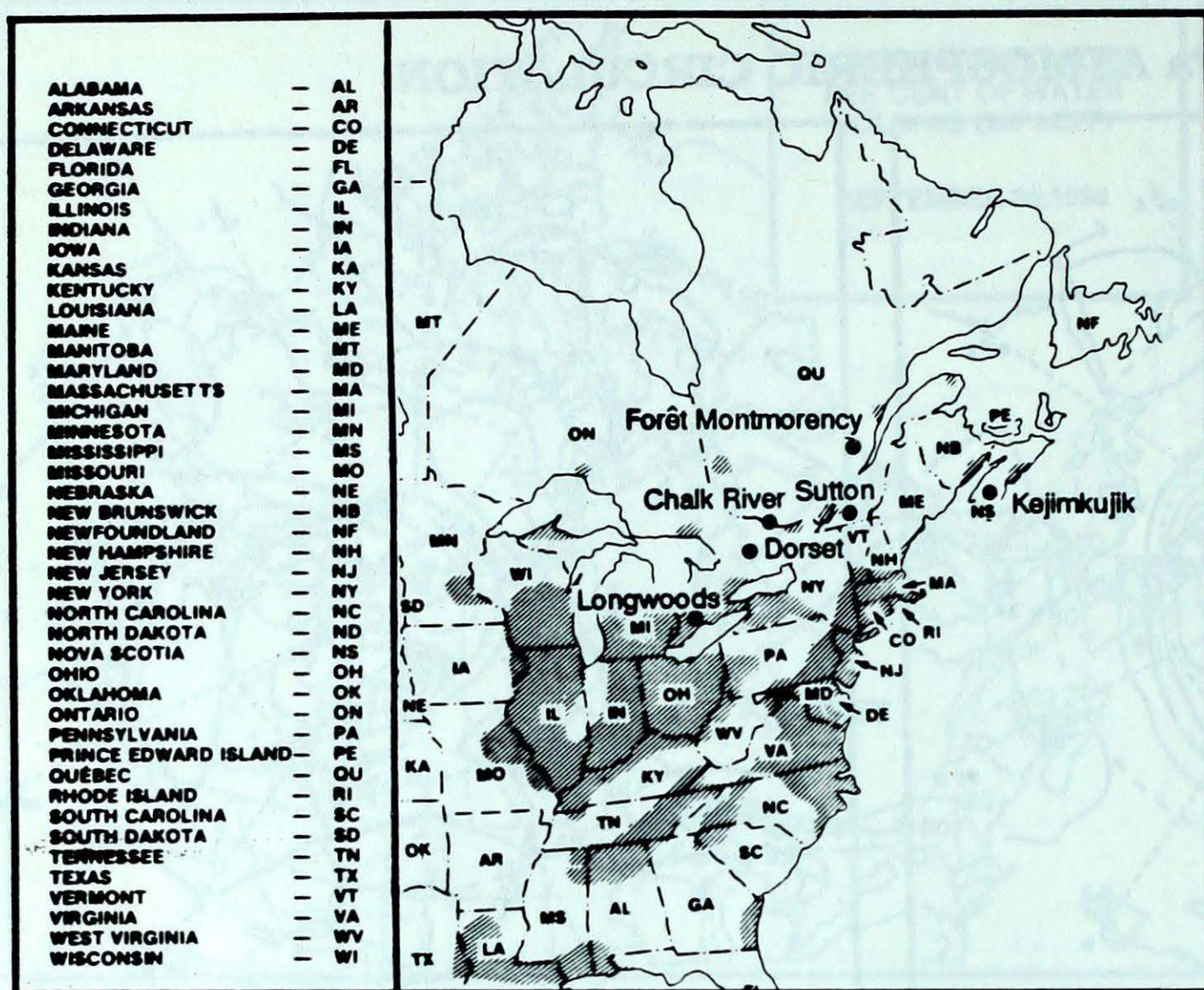


Mean geopotential height anomaly  
50 kPa level (5 decameter intervals)



Storm track - Position of storm at 12 GMT each day during the period.





ACID RAIN REPORT

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<sub>2</sub> and NO<sub>x</sub> 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.

For more information concerning the acid rain report, see Climatic Perspectives, Volume 5, Number 50, page 6.

SEPTEMBER 25 TO OCTOBER 01, 1988

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	27	4.5	2 R	Illinois, Indiana, Michigan, Southern Ontario
	01	4.4	9 R	Tennessee, Kentucky, Indiana
Dorset	26	4.6	1 R	Northern Ontario
	27	5.4	8 R	Wisconsin, Michigan, Southern Ontario
	01	4.5	23 R	West Virginia, Ohio, Southern Ontario
Chalk River	25	4.4	1 R	Lake Superior, Lake Huron
	26	3.9	8 R	Central and Southern Ontario
	29	3.5	3 R	Southern and Central Ontario
	01	4.2	32 R	West Virginia, Ohio, Southern Ontario
Sutton	27	3.7	2 R	New York
Montmorency	27	4.3	11 M	New York, Southern Quebec
	28	5.0	1 R	Northern Quebec
Kejimikujik	No rain this week			

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



Station	temperature				precip. ptot	st	wind max		Station	temperature				precip. ptot	st	wind max		
	mean	anom	max	min			dir	vit		mean	anom	max	min			dir	vit	
<b>British Columbia</b>									<b>Ontario</b>									
Cape St. James	12P	1P	16P	10P	17P	0	180	98	Atikokan									0
Cranbrook	12	2	23	0	1	0	280	39	Big Trout Lake	5P	1	16P	-1P	5P	1	340	61	
Fort Nelson	7	2	19	-4	3	0	310	43	Gore Bay	11	0	20	4	21	0	300	46	
Fort St. John	10	2	19	-2	1	0	240	89	Kapuskwasing	6	-1	18	-4	17	0	230	56	
Kamloops	13P	2P	24P	5P	1P	0	*	*	Kenora	8P	-1P	19P	0P	2P	0	310	52	
Penticton	14P	2P	23P	5P	2P	0	320	46	Kingston									
Port Hardy	12P	1P	22P	5P	112P	0	120	52	London	15	2	26	6	16	0	210	56	
Prince George	11P	3	20P	1P	17P	0	180	87	Moosonee	6P	0P	20P	-3P	6P	0	260	37	
Prince Rupert	12P	2P	19P	6P	98P	0	190	96	North Bay	10P	1P	19P	2P	47P	0	340	44	
Revelstoke	12P	2P	22P	4P	16P	0	*	*	Ottawa Int'l	13P	1P	23P	2P	29P	0		X	
Smithers	10	3	19	3	60	0	180	81	Petawawa	12P	2P	25P	-1P	52P	0		X	
Vancouver Int'l	14P	2P	23P	9P	1P	0	280	31	Pickle Lake	6	0	16	-2	9	0	010	52	
Victoria Int'l	13	1	24	5	0	0	*	*	Red Lake	8	0	19	0	7	1	020	65	
Williams Lake	12P	4	24P	4P	7P	0		X	Sudbury	10P	1P	22P	2P	44P	0		X	
<b>Yukon Territory</b>									<b>Quebec</b>									
Mayo	3P	0P	9P	-7P	0P	*		X	Bagotville	7	-1	23	0	50	0	240	50	
Shingle Point A							1		Blanc Sablon	7	*	12	-1	31	0		X	
Watson Lake	5	0	11	-3	12	0	120	37	Inukjuak	3P	1P	8P	0P	34P	0	140	57	
Whitehorse	6P	2P	15P	-5P	13P	0	160	67	Kuujuuaq	4	1	9	-1	11	0	190	50	
<b>Northwest Territories</b>									<b>New Brunswick</b>									
Alert	-9P	8P	0P	-18P	6P	32	230	65	Charlo	10P	1P	21P	2P	30P	0	300	43	
Baker Lake	1	3	6	-5	7	0	110	61	Chatham	12P	2P	26P	-1P	15P	0	330	46	
Cambridge Bay	1P	7P	4P	-2P	3P	0	240	48	Fredericton	13P	2P	26P	3P	5P	0	200	43	
Cape Dyer	-5	0	1	-12	1	16	300	46	Moncton	12P	2P	24P	1P	7P	0	200	70	
Clyde	-2	2	6	-6	8	3	310	41	Saint John	12P	1P	19P	1P	7P	0	310	52	
Coppermine	2P	4	8P	-9P	6P	1	320	56	<b>Nova Scotia</b>									
Coral Harbour	-1P	2P	3P	-7P	1P	0		X	Greenwood	13P	2P	25P	2P	2P	0	230	63	
Eureka	-6	10	0	-15	1P	1	160	96	Shearwater	13	0	21	5	0	0	350	50	
Fort Smith	5	1	13	-3	8	0		X	Sydney	11	0	24	2	6	0	330	69	
Iqaluit	1P	2P	4P	-2P	9P	1		*	Yarmouth	12	1	20	5	1	0	210	48	
Hall Beach	-2	3	1	-5	*	1	340	39	<b>Prince Edward Island</b>									
Inuvik	1	2	9	-8	3	0		X	Charlottetown	10P	-1P	21P	3P	19P	0	340	52	
Mould Bay	-6	7	0	-14	3	5		X	Summerside	12	0	21	4	20	0	210	74	
Norman Wells	4P	2P	15P	-4P	0P	0		X	<b>Newfoundland</b>									
Resolute	-4P	6P	0P	-11P	1P	17	200	63	Cartwright	6	0	15	1	22	0	330	50	
Yellowknife	4	1	8	-4	11	0	150	48	Churchill Falls	3	1	8	-3	25	0	310	56	
<b>Alberta</b>									<b>88/09/27 - 88/10/03</b>									
Calgary Int'l	10	2	24	1	2	0	340	52	Gander Int'l	10P	1P	20P	0P	22P	0	210	76	
Cold Lake	6P	-2P	17P	-6P	8P	0	300	52	Goose	7P	1P	14P	0P	15P	0	280	35	
Coronation	7P	-1P	15P	-2P	3	0	*	*	Port-Aux-Basques	9	0	17	4	23	0	340	61	
Edmonton Namao	9	0	24	0	0	0	300	57	St John's	11P	2P	22P	3P	*	0	260	81	
Fort McMurray	7	1	23	-5	5P	0		X	St Lawrence	10P	0P	17P	1P	12P	0		X	
High Level	6P	0P	15P	-3P	1P	0	300	41	Wabush Lake	3P	1P	9P	-2P	24P	0	010	37	
Jasper	9P	1P	22P	-2P	1P	0		X										
Lethbridge	12	1	27	0	1	0	270	74										
Medicine Hat	11P	0P	19P	2P	6P	0	180	46										
Peace River	8	2	18	-1	1	0	250	72										
<b>Saskatchewan</b>																		
Cree Lake	5	0	21	-8	2	0	290	80										
Estevan	8	-2	24	-5	0	0	360	57										
La Ronge	4P	-2P	17P	-7P	12P	0	290	54										
Regina	7	-2	25	-8	1	0	120	52										
Saskatoon	7	-1	23	-6	7	0	310	57										
Swift Current	8	-2	26	-7	3	0		X										
Yorkton	7	-2	20	-4	5	0	020	65										
<b>Manitoba</b>																		
Brandon	7P	-2P	23P	-4P	11P	0	300	63										
Churchill	4	2	11	-1	19	0	160	46										
Lynn Lake	5	1	16	-6	8	0	220	48										
The Pas	7P	0	19P	-2P	4P	0	320	63										
Thompson	5	1	17	-5	8	0	300	52										
Winnipeg Int'l	8P	-1P	24P	-4P	1P	0	360	56										

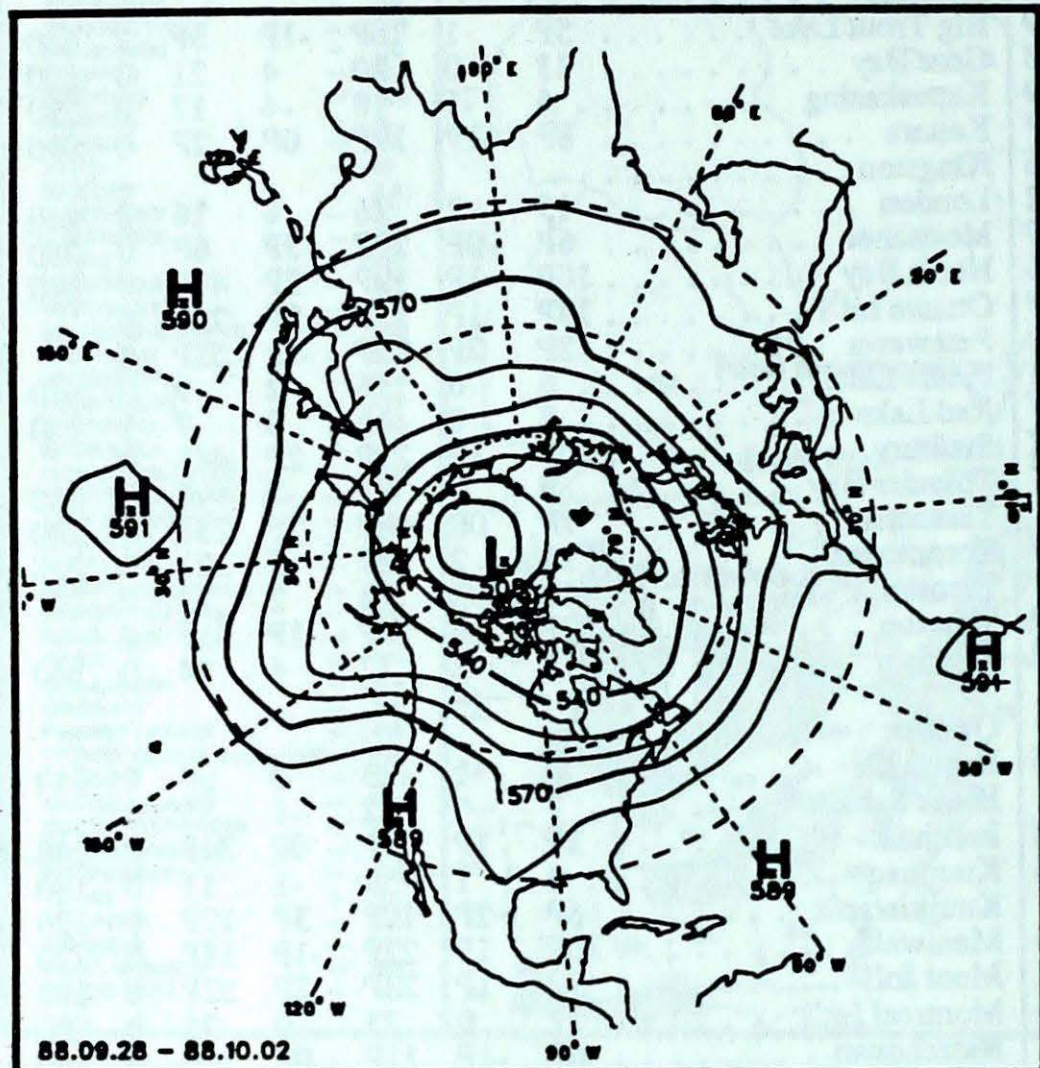
mean = mean weekly temperature. °C  
 max = maximum weekly temperature. °C  
 min = minimum weekly temperature. °C  
 anom = mean temperature anomalie °C

ptot = weekly precipitation total in mm  
 st = snow thickness on the ground in cm  
 dir = direction of wind max w/r to geo.north.  
 vit = wind speed in km/h

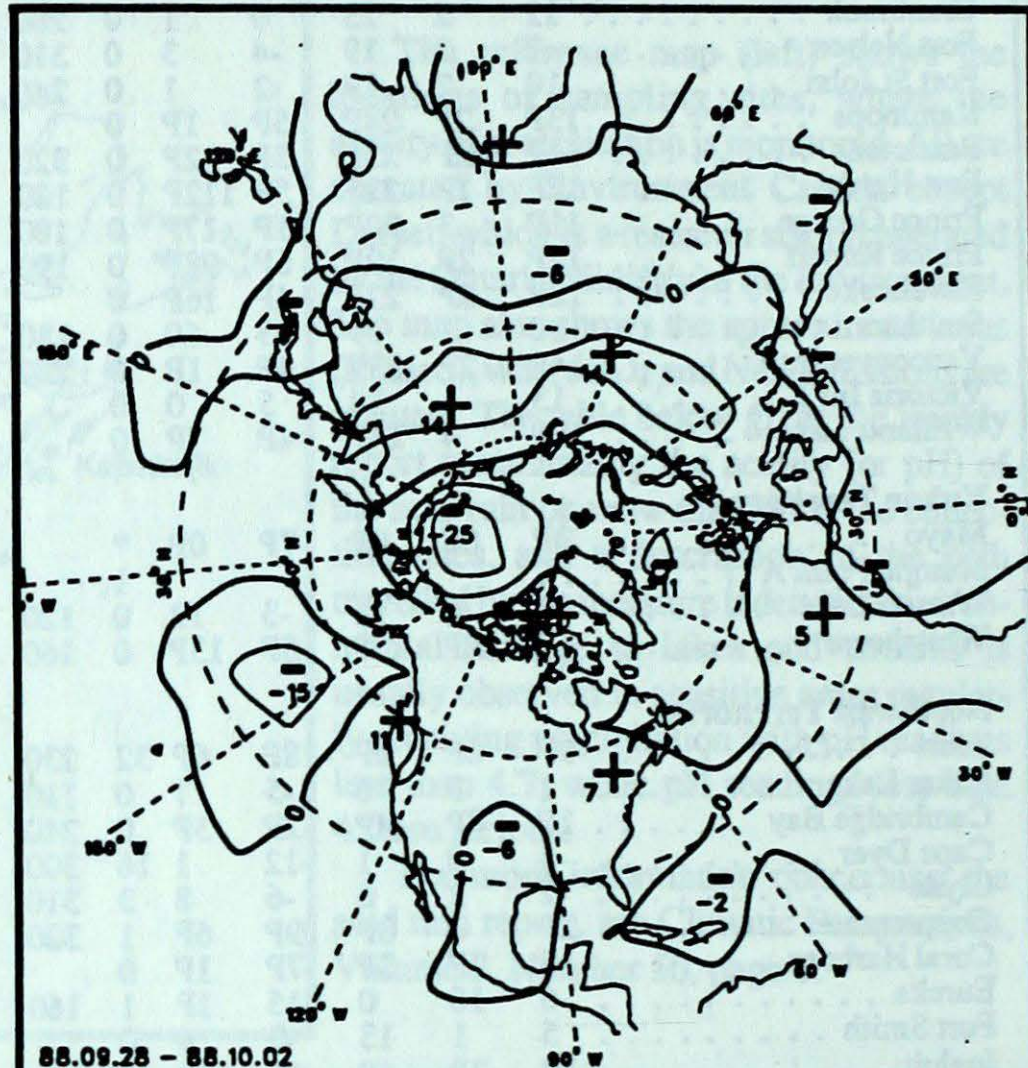
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 X = no observation  
 P = less than 7 days of data.  
 \* = missing data when going to printing.N



### 50 kPa ATMOSPHERIC CIRCULATION



Mean geopotential height  
50 kPa level (5 decameter intervals)



Mean geopotential height anomaly  
50 kPa level (5 decameter intervals)



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

### MONTHLY TEMPERATURE FORECAST

*Normal temperatures for the month of October, °C*

Whitehorse	1	Toronto	9
Yellowknife	-2	Ottawa	8
Iqaluit	-5	Montreal	9
Vancouver	10	Quebec	7
Victoria	10	Fredericton	8
Calgary	6	Halifax	10
Edmonton	5	Charlottetown	8
Regina	5	Goose Bay	3
Winnipeg	6	St. John's	7

Canada

