atic ctives

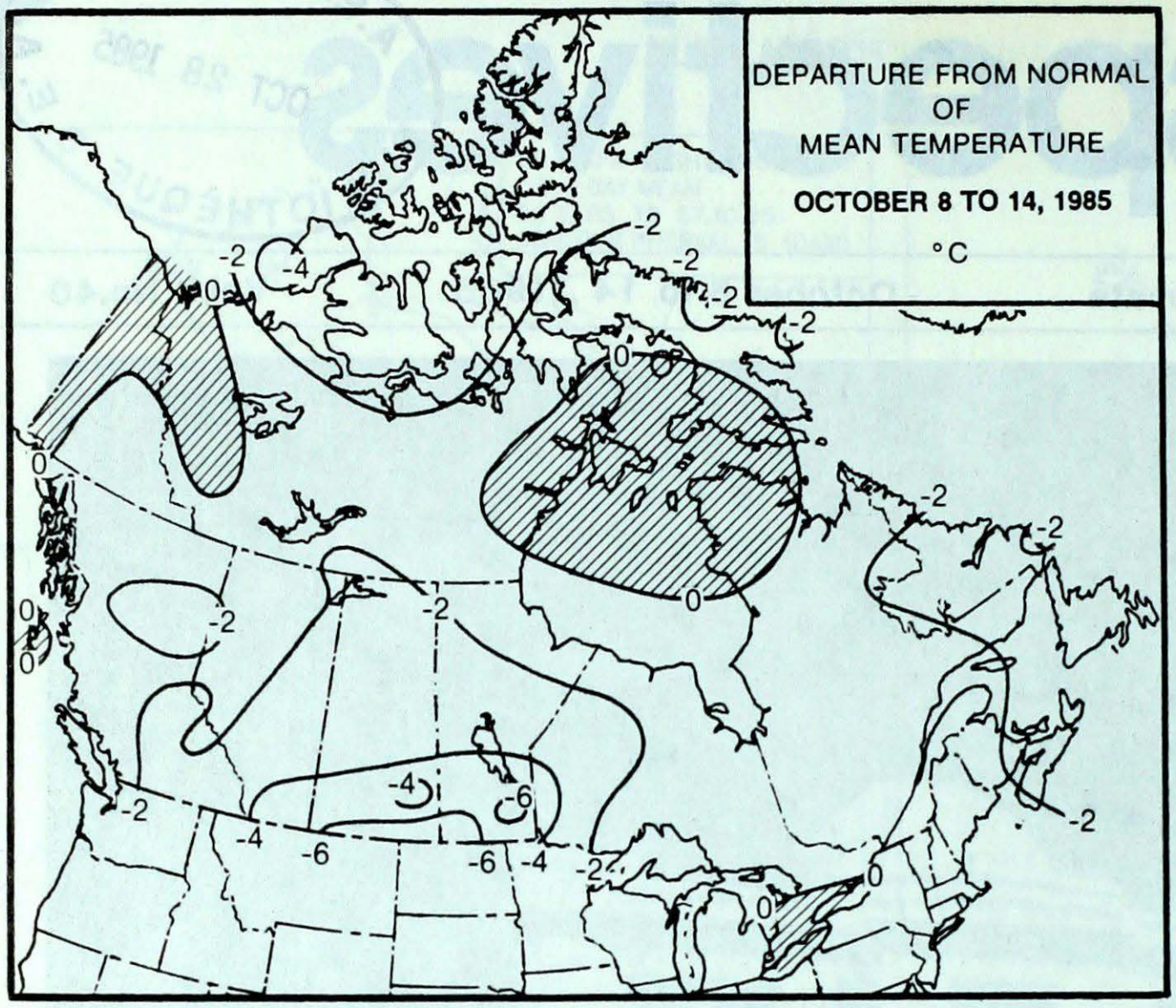
A weekly review of Canadian climate | October 8 to 14 , 1985 | Vol.7 No.40

Daily meteorological observations have been made from the Victoria Gonzales Observatory since it opened on April 23, 1914. For more information see page 3. Photograph courtesy of Scott Somerville

- ***First snow of the season in Atlantic Canada***
- ***Frost colours Annapolis Valley apples***
  - harvest in full swing
- ***Tail end of Prairie snowstorm hits Northwestern Ontario***

Canada

TEMPERATURE



WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	12.4	Burwash	-19.0	Klondike
NORTHWEST TERRITORIES	10.7	Fort Simpson	-31.2	Eureka
BRITISH COLUMBIA	20.6	Victoria	-14.5	Puntzi Mountain
ALBERTA	17.3	Coronation	-12.7	Pincher Creek
SASKATCHEWAN	17.9	Saskatoon	-14.7	Rockglen
MANITOBA	16.3	Dauphin	-15.0	Brandon
ONTARIO	20.8	Toronto Windsor	-5.6	Kenora
QUÉBEC	19.1	Roberval	-10.0	Schefferville
NEW BRUNSWICK	17.3	Charlo	-6.3	Chatham
NOVA SCOTIA	21.3	Shelburne	-4.8	Shelburne
PRINCE EDWARD ISLAND	15.5	Summerside	-1.0	Charlottetown
NEWFOUNDLAND	16.2	St. Johns	-6.0	Churchill Falls

ACROSS THE NATION

Warmest mean temperature	13.8	Windsor, ONT
Coolest mean temperature	-23.5	Eureka, N.W.T.

ACROSS THE COUNTRY...

Yukon and Northwest Territories

The weather was blustery in the Territories and the eastern Arctic. Numerous wind and storm warnings were issued. Precipitation amounts were variable, with rain and snow reported. Significant amounts of snow fell in the central and northern Yukon. Most of the snow melted south of the Ogilvie Mountains. Snow depths in the high Arctic and northern Baffin Island ranged between 20 and 30 cm. Maximum temperatures at Eureka and Alert failed to rise above -21°C for several days. Minimum dropped to the minus thirties at night.

British Columbia

An onshore flow allowed several weather systems to approach the coast and move inland. Sunny skies gave way to a cool unsettled week. Significant rains, in excess of 100 mm, fell along the north coast. Snow fell at higher elevations in the interior. Wet conditions have delayed late season haying and slash burning. The apple and grape harvest continues in the Okanagan. Frost occurred in most areas of the province. At Castlegar on October 8, a minimum temperature of -6.3°C was the coldest reading this early in the year.

Prairies

A major snowstorm let up on the evening of October 8. Snowfalls in southern agricultural districts ranged between 10 and 30 centimetres. In the storm's wake, southwestern Manitoba was left with up to 25 cm of wet snow on the ground. The already late harvest was brought to a virtual stand still in most farming districts. Many new daily low temperature records were established the first few days of the week. In the south, minimums plunged to the -10°C to -15°C range, while daytime values failed to even reach the freezing mark. By the weekend warmer temperatures moved in from the west. Temperatures climbed into the teens, but weather conditions remained variable.

PRECIPITATION

Ontario

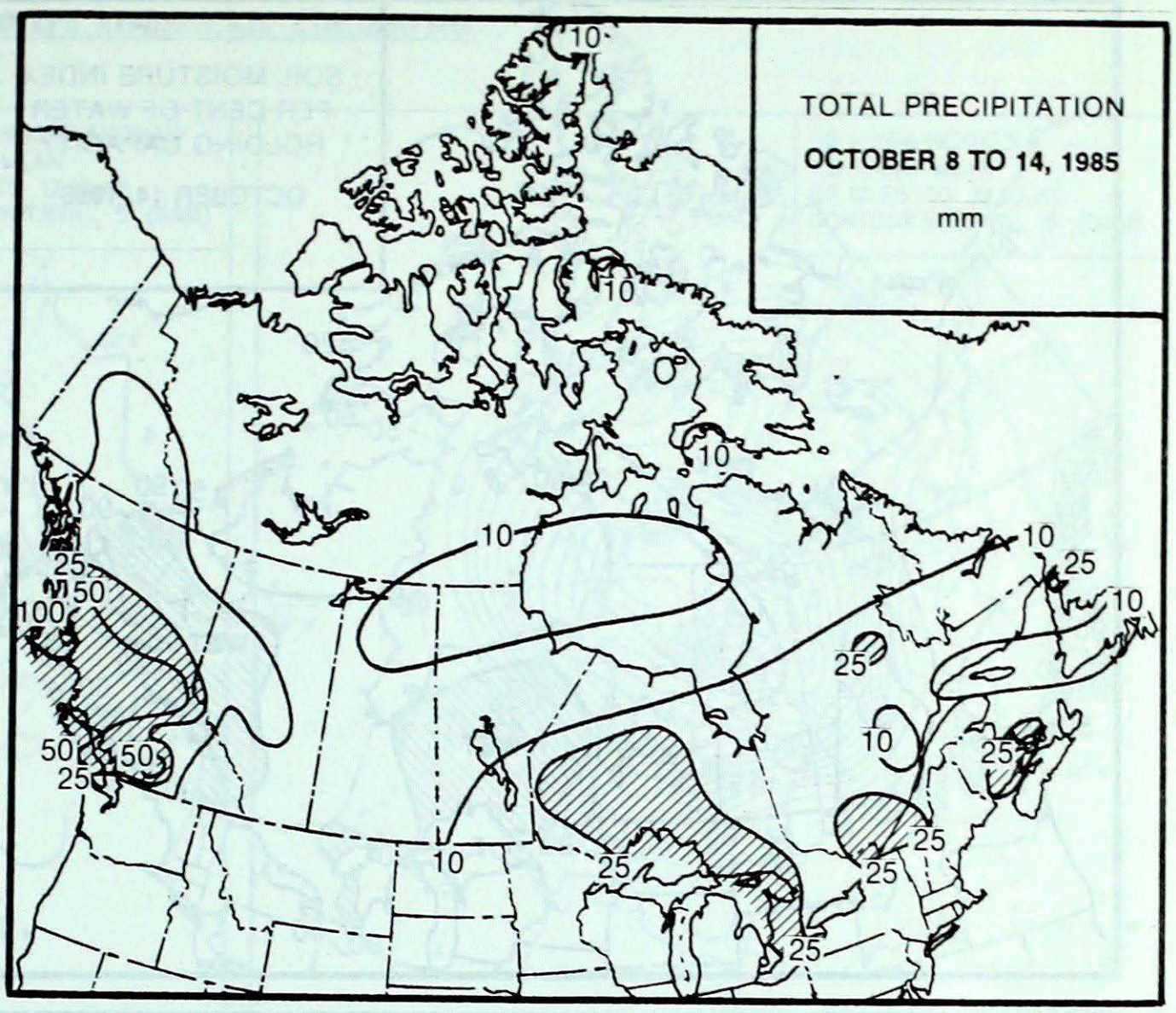
Weather systems continued to track across the province, as contrasting airmasses vied for supremacy. Temperatures fluctuated widely, but overall it was a cool week in the north. Temperatures in southern Ontario briefly reached the twenties early in the week. A 10 to 25 centimetre snowfall blanketed northwestern Ontario on October 8. Significant amounts of rain fell in southern Ontario over the weekend; many localities received more than 20 mm. Ottawa broke two 24-hour precipitation records. The apple harvest continued in the south. Most late vegetable crops have been picked. Fall field work is well underway.

Quebec

It was a typical autumn week, with varying amounts of cloud. Temperatures were not unusually cool, ranging from the upper teens in the south to near freezing in the north. Precipitation was variable. Heaviest amounts, between 30 and 40 millimetres, fell along the St. Lawrence Valley. Several centimetres of snow fell in central and northern Quebec.

Atlantic

The weather was frequently cloudy, with periods of rain and snow flurries. Parts of Newfoundland received a heavier dusting of snow. Gander received 3 cm of snow over the weekend. Numerous locations established new daily low temperature records around the middle of the week, as readings dropped to well below normal values. The apple harvest in Annapolis Valley is in full swing. The cool temperatures over the weekend served to give the apples more colour. Any moisture received this week was beneficial to fall cereal grains, such as winter wheat and rye.



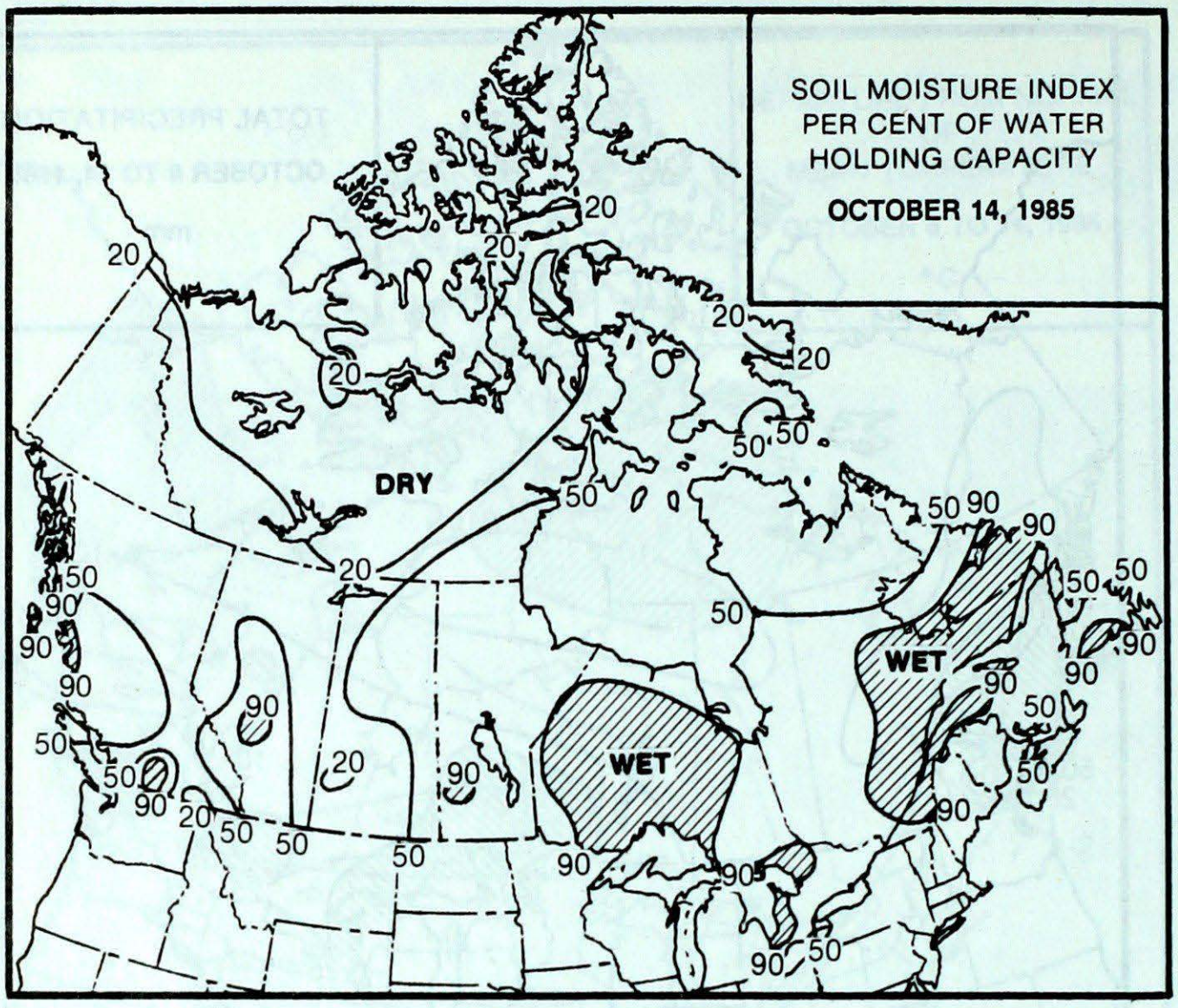
HEAVIEST WEEKLY PRECIPITATION (mm)

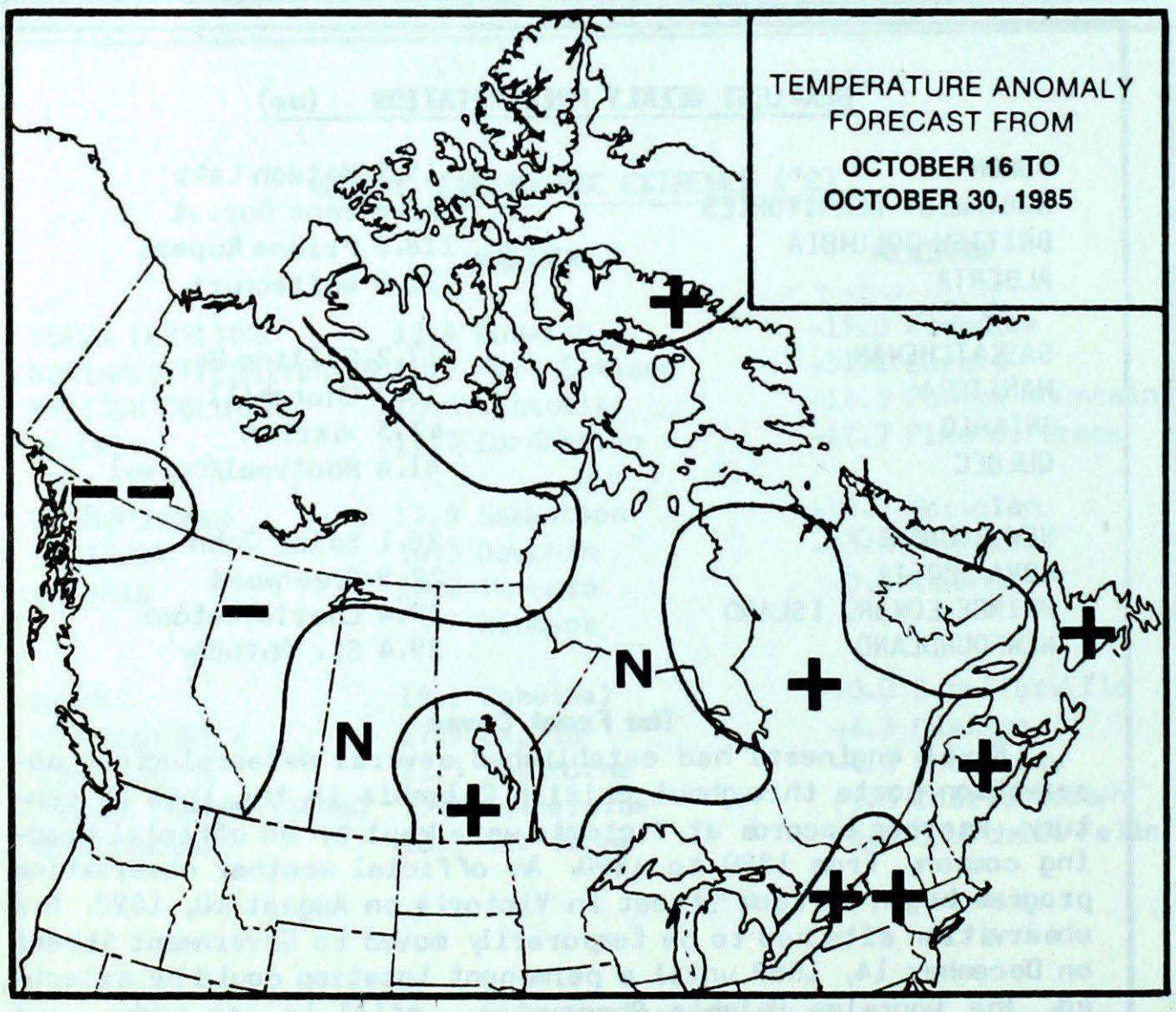
YUKON	15.5	Watson Lake
NORTHWEST TERRITORIES	15.4	Cape Dorset
BRITISH COLUMBIA	118.0	Prince Rupert
ALBERTA	22.0	Whitecourt
SASKATCHEWAN	17.2	Collins Bay
MANITOBA	18.7	Churchill
ONTARIO	47.3	Wiarton
QUEBEC	41.4	Montreal/Dorval
NEW BRUNSWICK	26.1	Saint John
NOVA SCOTIA	22.9	Greenwood
PRINCE EDWARD ISLAND	39.4	Charlottetown
NEWFOUNDLAND	29.4	St. Anthony

The Front Cover

Royal engineers had established several meteorological observation posts throughout British Columbia in the late 19 century. Weather records at Victoria were kept by an official trading company from 1880 to 1890. An official weather observation program began at Cook Street in Victoria on August 10, 1898. The observation site had to be temporarily moved to Government Street on December 14, 1899 until a permanent location could be selected. The Gonzales Heights Observatory, still in use today, was completed in 1914. Built on solid rock overlooking the city of Victoria and the Straits of Juan de Fuca it was considered to be an ideal location for taking weather observations. From 1898 until World War II weather forecasts were issued from the Victoria weather office mainly for the benefit of mariners. The first weather forecasts appeared in a Victoria newspaper "Daily Colonist" in November 1898.

FORECAST





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.

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

CLIMATIC PERSPECTIVES VOLUME 7

Managing Editor	M.J. Newark
Editor (English)	A. Radomski
Editor (French)	A.A. Caillet
Staff Writer	M. Skarpathiotakis
Art Layout	K. Czaja
Cartography	J. Strecansky
	G. Young/T. Chivers
	B. Taylor
Word Processing	U. Ellis
	N. Khaja/P. Hare

Regional Correspondents
Atl.: F.Amirault; Que.: J.Miron
Central: F.Luciow; Ont.: W.Christian
Western: W.Prusak; Pac.: N.Penny
Yukon Weather Centre; Yellowknife Weather Office; Ice Central Ottawa
AES Satellite Data Lab

ISSN 0225-5707 UDC 551.506.1(71)

Climatic Perspectives is a weekly bilingual publication of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ont. Canada M3H 5T4. **Phone (416)667-4906/4711.**

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

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

The data shown 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.

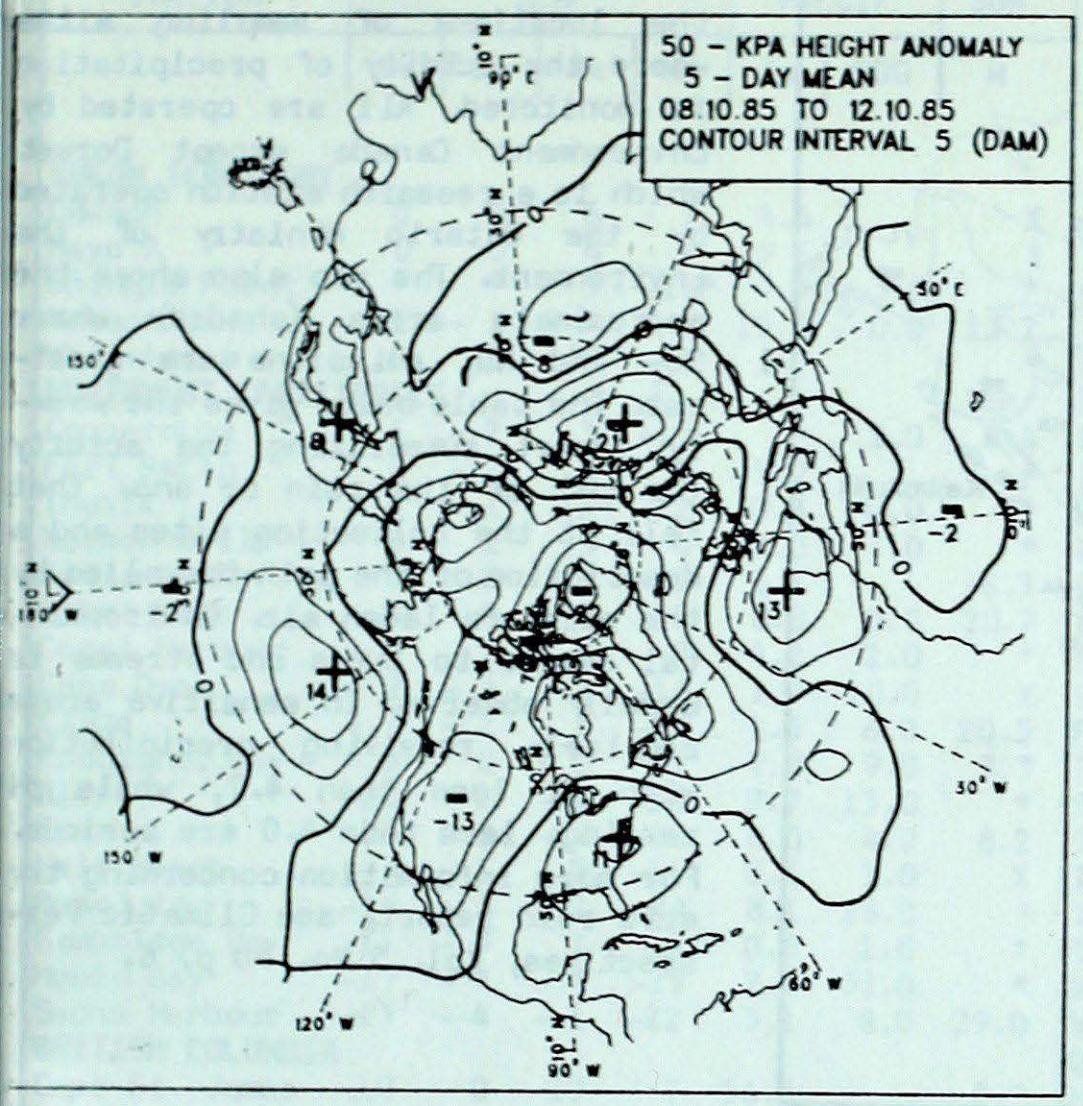
Annual Subscriptions

Weekly issue including monthly supplement:	$35.00
Monthly issue only:	$10.00

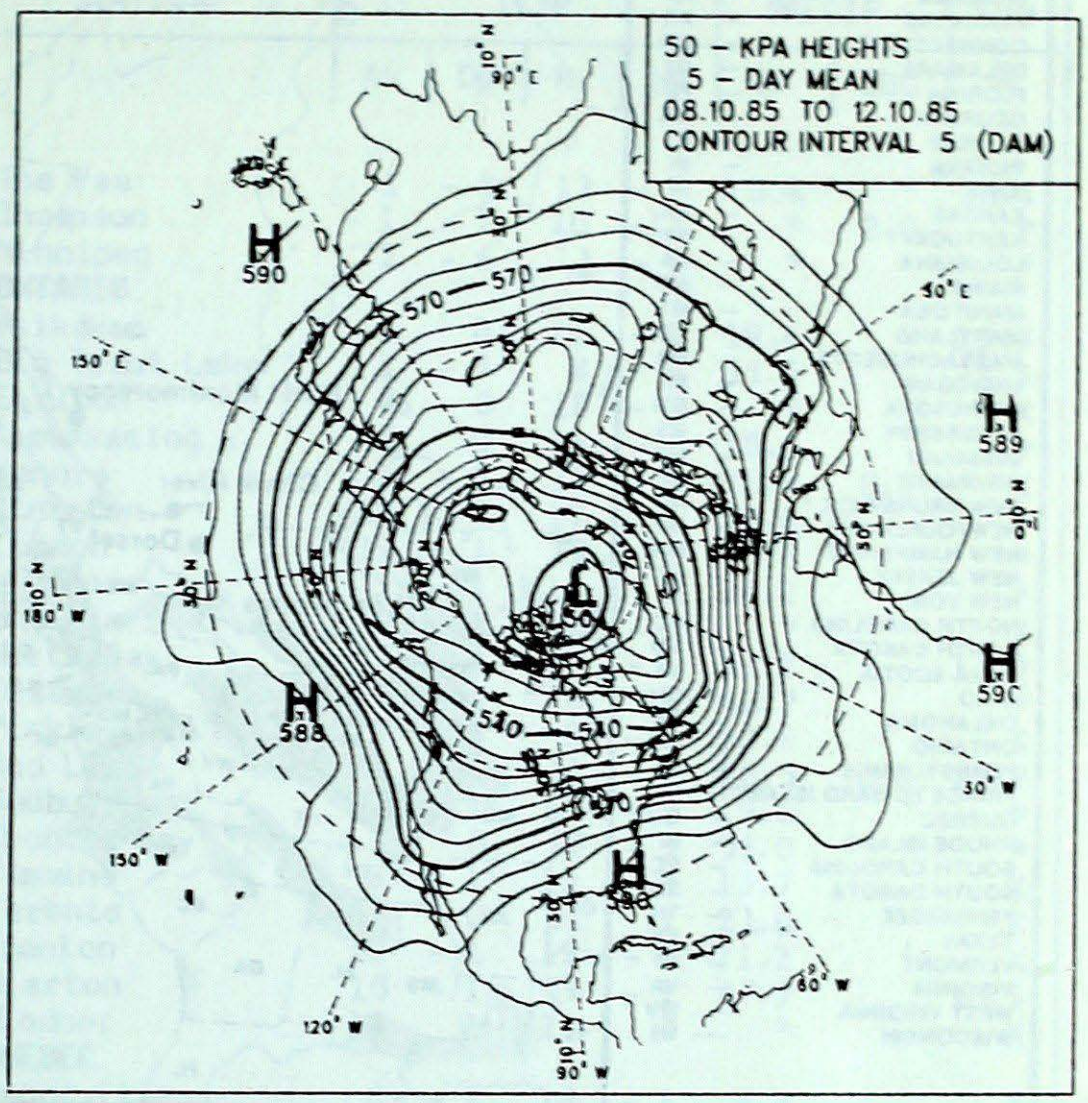
Subscription enquiries: Supply and Services Canada, Publishing Centre, Ottawa, Ontario, Canada, K1A 0S9.
Phone (613)994-1495

CIRCULATION

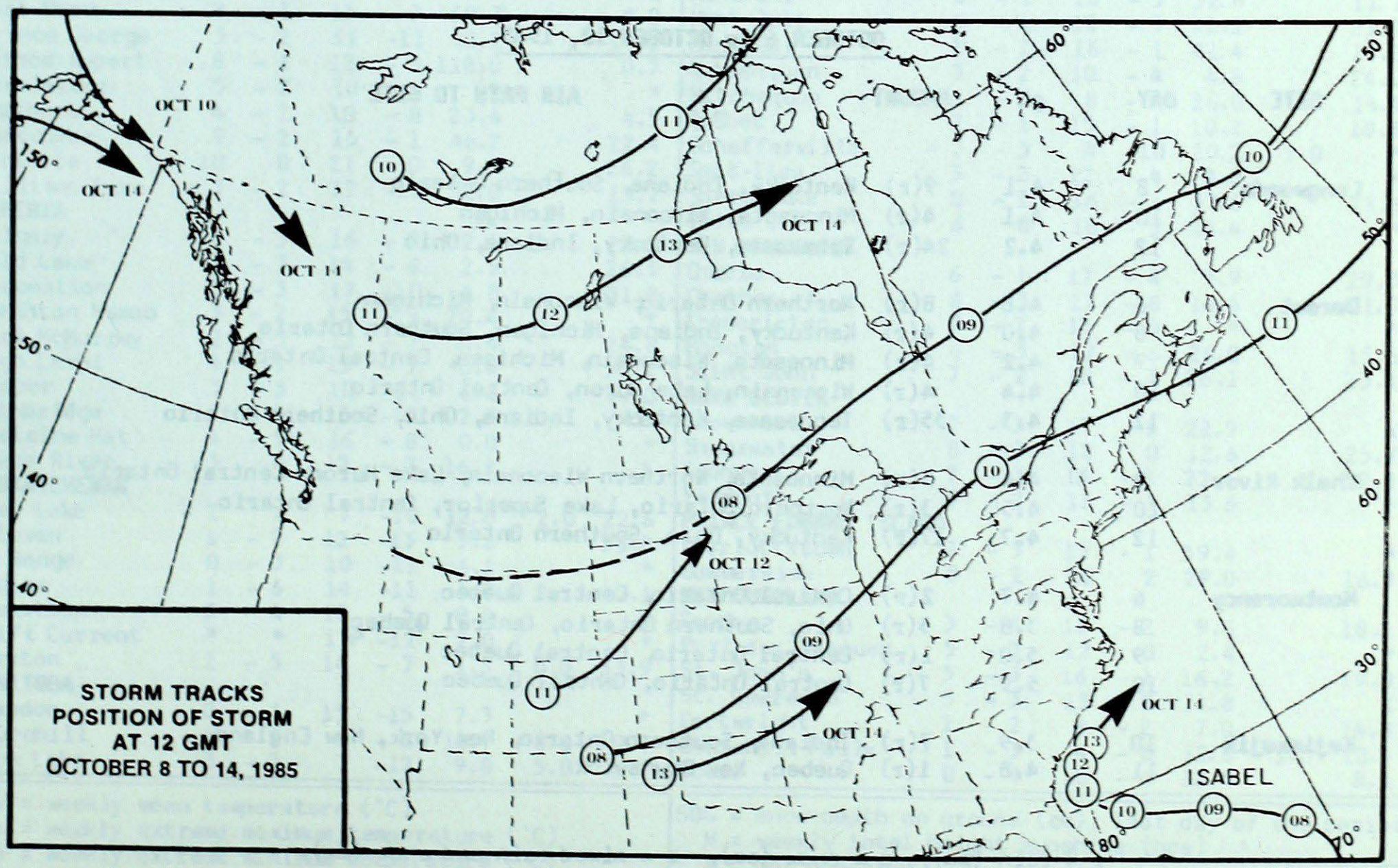
50 KPa ATMOSPHERIC CIRCULATION



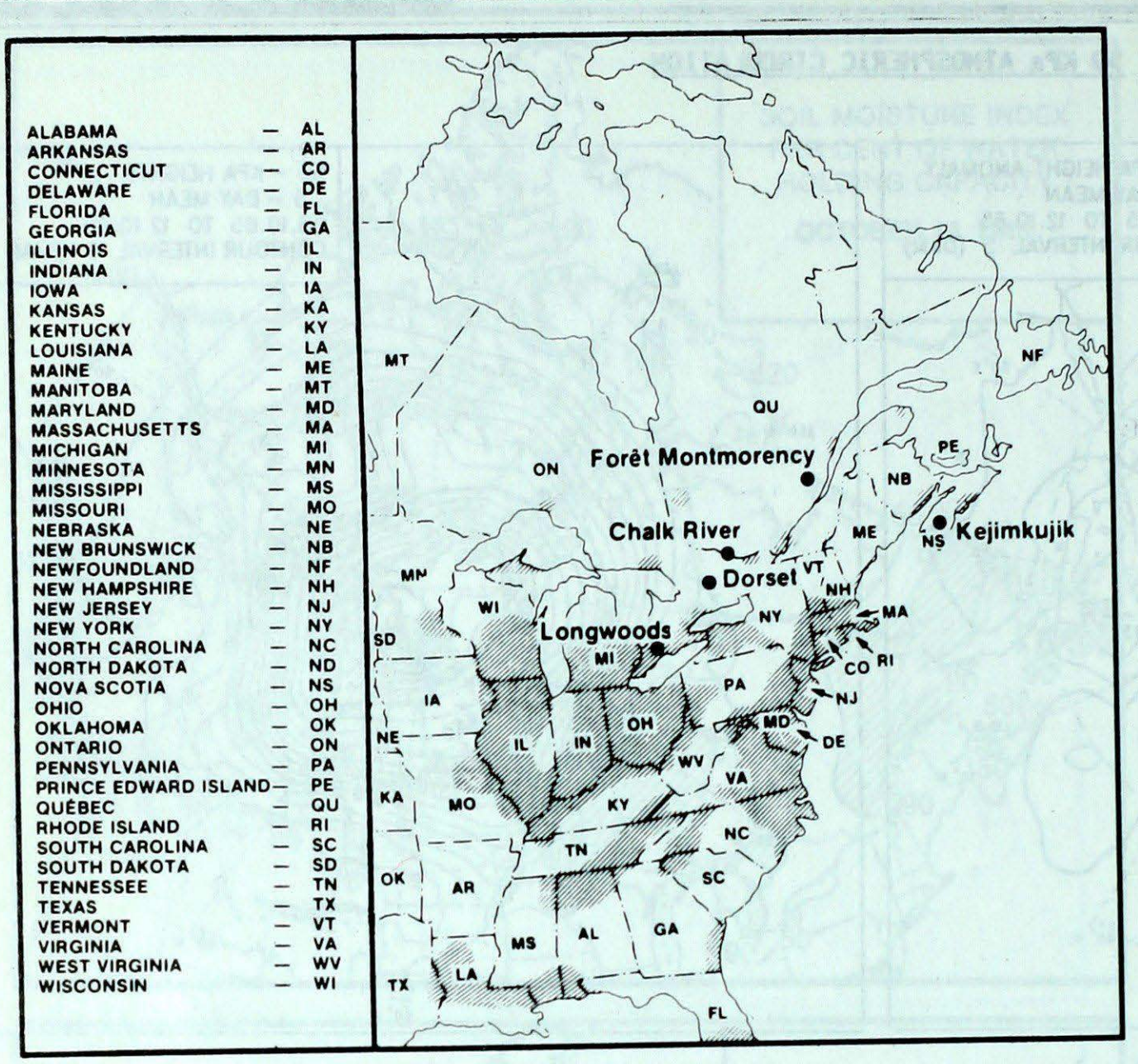
MEAN 50 KPa HEIGHT ANOMALY (dam)
October 8 to October 12, 1985



MEAN 50 KPa HEIGHTS (dam)
October 8 to October 12, 1985



ACID RAIN



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_2 and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the 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 less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

OCTOBER 6 to OCTOBER 12, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	8	4.1	9(r)	Kentucky, Indiana, Southern Ontario
	10	4.1	4(r)	Minnesota, Wisconsin, Michigan
	12	4.2	24(r)	Tennessee, Kentucky, Indiana, Ohio
Dorset	6	4.8	8(r)	Northern Ontario, Wisconsin, Michigan
	8	4.0	4(r)	Kentucky, Indiana, Michigan, Southern Ontario
	9	4.2	4(r)	Minnesota, Wisconsin, Michigan, Central Ontario
	10	4.4	4(r)	Wisconsin, Lake Huron, Central Ontario
	12	4.3	35(r)	Tennessee, Kentucky, Indiana, Ohio, Southern Ontario
Chalk River	9	4.4	5(r)	Minnesota, Northern Wisconsin, Lake Huron, Central Ontario
	10	4.5	3(r)	Northern Ontario, Lake Superior, Central Ontario
	12	4.7	17(r)	Kentucky, Ohio, Southern Ontario
Montmorency	6	4.7	2(r)	Central Ontario, Central Quebec
	8	3.8	3(r)	Ohio, Southern Ontario, Central Quebec
	9	5.0	1(r)	Central Ontario, Central Quebec
	10	5.9	7(r)	Central Ontario, Central Quebec
Kejimkujik	10	3.9	7(r)	Indiana, Southern Ontario, New York, New England
	11	4.8	1(r)	Quebec, New Brunswick

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

STATISTICS

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT OCTOBER 15, 1985

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	0	2	6	- 7	4.6		X
Mayo A	0	0	4	- 7	9 6		X
Shingle Point	*	*	3	-10P	*	3 0	*
Watson Lake	2	- 1	9	- 6	15.5	0.0	13.2
Whitehorse	2	0	10	- 4	1.2		*
NORTHWEST TERRITORIES							
Coppermine	- 6	- 2	3	-15	*	2.0	8.4
Fort Smith	0	- 2	8	- 9	5.7		*
Inuvik	- 4	1	5	-12	0.8	0.0	*
Norman Wells	0	2	5	- 4	8.0	1.0	*
Yellowknife	0	0	6	- 5	1.1		16.3
Baker Lake	- 4	0	2	-11	0.8	0.0	20.7
Coral Harbour	- 4	2	1	- 9	4.2	2.0	*
Cape Dyer	- 9	- 3	- 2	-14	1.7	10.0	X
Clyde	- 7	- 2	1	-15	1.6	6.0	20.5
Frobisher Bay	- 3	0	0	- 7	7.8	9.0	3.3
Alert	-20	- 2	-13	-30	9.7	13.0	*
Eureka	-23	- 3	-16	-31	0.0	4.0	8.2
Hall Beach	- 7	1	- 2	-11	0.6	1.0	X
Resolute	-16	- 3	- 2	-24	8.1	26.0	*
Cambridge Bay	-11	- 3	1	-19	0.8	1.0	*
Mould Bay	-19	- 4	- 4	-27	2.1	31.0	*
Sachs Harbour	-13	- 4	- 1	-22	3.1	8.0	29.0
BRITISH COLUMBIA							
Cape St. James	10	0	13	7	56.5		8.2
Cranbrook	3	- 3	11	- 8	5.2		24.2
Fort Nelson	3	0	15	- 5	2.4		19.7
Fort St. John	3	- 2	11	- 6	0.4		X
Kamloops	7	- 2	15	- 3	10.0		24.9
Penticton	8	- 2	15	- 3	3.2		26.1
Port Hardy	8	- 1	15	- 3	69.7		8.0
Prince George	3	- 2	11	-11	62.2		12.2
Prince Rupert	8	- 1	12	- 1	118.0		0.7
Revelstoke	5	- 2	10	- 4	*		*
Smithers	4	- 2	10	- 8	23.4		4.5
Vancouver	9	- 2	15	- 1	46.2		22.4
Victoria	10	0	21	0	9.6		26.2
Williams Lake	3	- 2	12	-10	52.0		13.7
ALBERTA							
Calgary	4	- 3	16	- 9	2.4		23.5
Cold Lake	2	- 3	14	- 6	2.5		26.3
Coronation	3	- 3	17	-10	4 8		31.8
Edmonton Namao	3	- 2	15	- 9	20.4		*
Fort McMurray	2	- 3	12	- 7	4.4		24.8
High Level	4	1	13	- 7	0.8		30.2
Jasper	3	- 3	10	-11	6.8		18.0
Lethbridge	4	- 5	13	-10	2.3		*
Medicine Hat	4	- 5	16	- 8	0.0		*
Peace River	3	0	12	- 7	16.2		X
SASKATCHEWAN							
Cree Lake	- 1	X	7	-10	12.0	2.0	22.6
Estevan	1	- 7	12	-13	3.8		56.8
La Ronge	0	- 3	10	-11	6.1		*
Regina	1	- 6	14	-11	5.0		47.1
Saskatoon	3	- 4	18	- 5	0.8		*
Swift Current	*	*	13P	-12	2.0		*
Yorkton	2	- 5	14	- 7	1.5	0.0	33.9
MANITOBA							
Brandon	0	- 7	15	-15	7.3		*
Churchill	- 1	- 2	5	- 8	18.7	0.0	9.7
Lynn Lake	- 3	- 3	7	-12	9.8	5.0	*
The Pas	1	- 4	12	- 7	0.4		10.4
Thompson	- 1	- 1	10	-11	*	2.0	*
Winnipeg	2	- 6	13	- 8	*		*
ONTARIO							
Atikokan	5	0	15	- 2	19.6		29.3
Big Trout Lake	1	- 3	8	- 4	11.5		11.5
Earlton	7	0	18	- 2	*		X
Kapuskasing	6	0	15	- 1	18.6		*
Kenora	3	- 5	11	- 6	18.8	0.0	X
Kingston	12	1	17	1	20.0		*
London	12	1	19	2	43.8		*
Mbosonee	5	- 1	16	- 2	24.2		*
Muskoka	9	- 1	16	- 3	*		X
North Bay	7	- 1	17	- 1	31.2		14.9
Ottawa	9	- 1	18	0	40.7		*
Pickle Lake	2	- 3	9	- 3	30.8		X
Red Lake	2	- 4	11	- 5	28.5	0.0	22.9
Sudbury	7	- 1	16	- 1	19.6		*
Thunder Bay	7	0	17	- 5	31.0		*
Timmins	6	- 1	15	- 2	13.7		X
Toronto	11	0	21	1	21.0		X
Trenton	10	- 1	19	- 2	21.2		X
Wiarton	10	- 1	19	- 1	47.3		10.5
Windsor	14	1	21	7	*		X
QUEBEC							
Bagotville	6	- 1	18	- 2	8.8		X
Blanc-Sablon	2	- 3	8	- 6	16.4		*
Inukjuak	2	1	5	0	14.4		*
Kuujjuaq	0	- 1	8	- 3	3.6		*
Kuujjuarapik	3	- 1	7	- 1	6.7		*
Maniwaki	8	- 1	18	- 3	32.6		11.7
Mont-Joli	6	- 1	18	- 3	11.2		23.7
Montréal	9	- 1	16	- 1	41.4		17.0
Natashquan	3	- 2	10	- 4	4.8		24.9
Nitchequon	1	- 1	8	- 4	26.0		14.4
Québec	7	- 1	15	- 1	10.2		18.8
Schefferville	- 2	- 3	4	-10	10.2	2.0	*
Sept-Iles	3	- 2	12	- 4	8.8		*
Sherbrooke	8	- 1	16	- 1	37.6		18.6
Val-d'Or	6	0	18	- 3	14.4		*
NEW BRUNSWICK							
Charlo	6	- 1	17	- 4	9.9		29.3
Chatham	6	- 3	17	- 6	14.4		21.7
Fredericton	7	- 2	17	- 5	*		*
Moncton	6	- 3	17	- 6	26.0		15.6
Saint John	7	- 2	16	- 3	26.1		23.1
NOVA SCOTIA							
Greenwood	7	- 3	19	- 5	22.9		X
Shearwater	8	- 3	18	0	12.6		25.7
Sydney	7	- 3	16	- 1	22.6		19.6
Yarmouth	9	- 2	16	- 1	13.6		*
PRINCE EDWARD ISLAND							
Charlottetown	7	- 3	15	- 1	39.4		*
Summerside	8	- 2	16	2	29.0		16.3
NEWFOUNDLAND							
Gander	3	- 4	13	- 2	9.6		18.1
Port aux Basques	5	- 3	12	0	2.4		*
St. John's	5	- 3	16	- 1	16.2		19.0
St. Lawrence	5	- 3	15	- 2	11.8		X
Cartwright	2	- 2	9	- 2	7.0		14.8
Churchill Falls	- 1	- 3	4	- 6	12.8	1.0	10.5
Goose	0	- 4	10	- 6	12.4		8.1

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

X = not observed
P = extreme value based on less than 7 days
* = missing