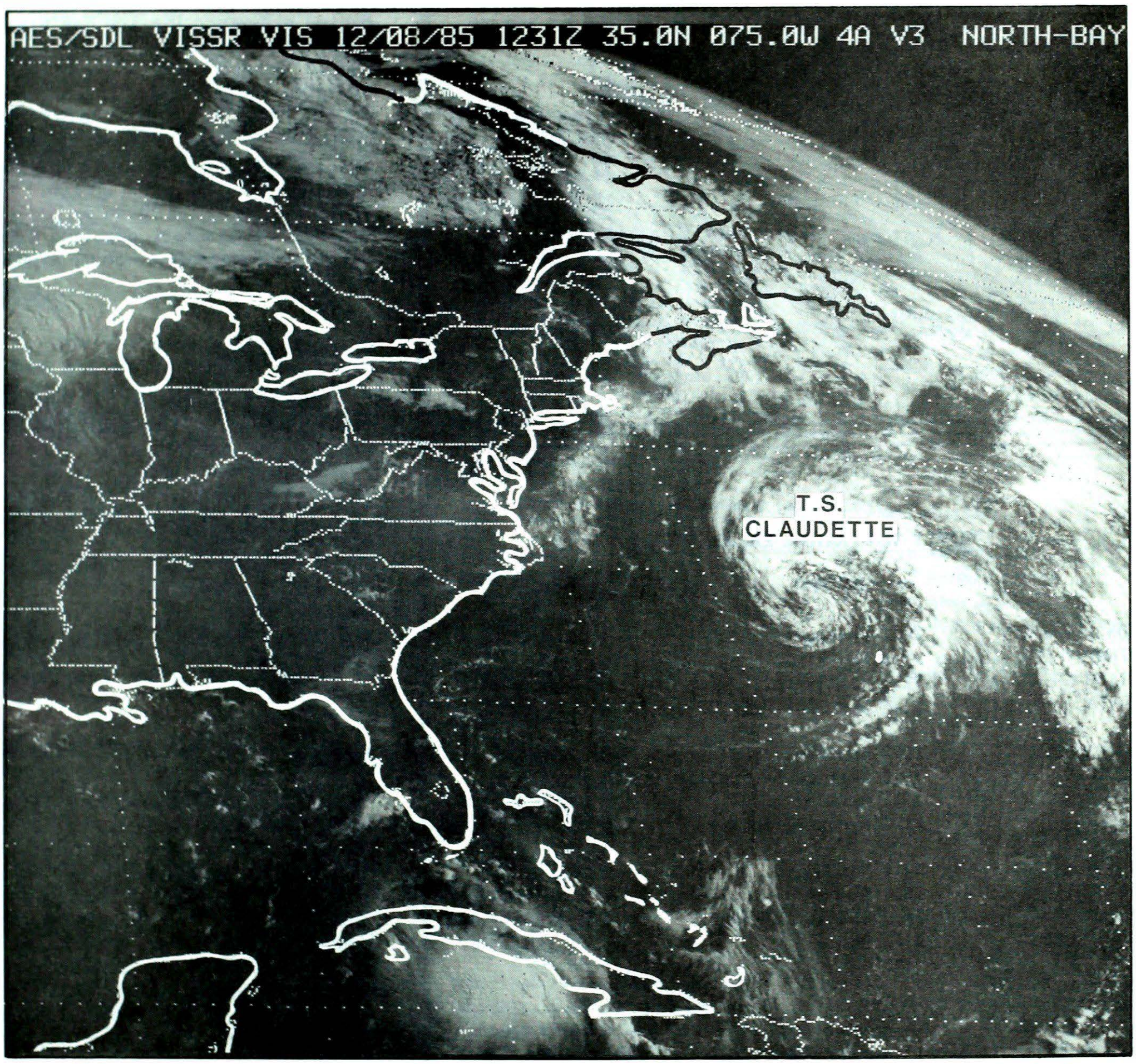
Environment Canada Environnement Canada

Climatic Perspectives

A weekly review of Canadian climate August 6 to 12, 1985 Vol.7 No.31

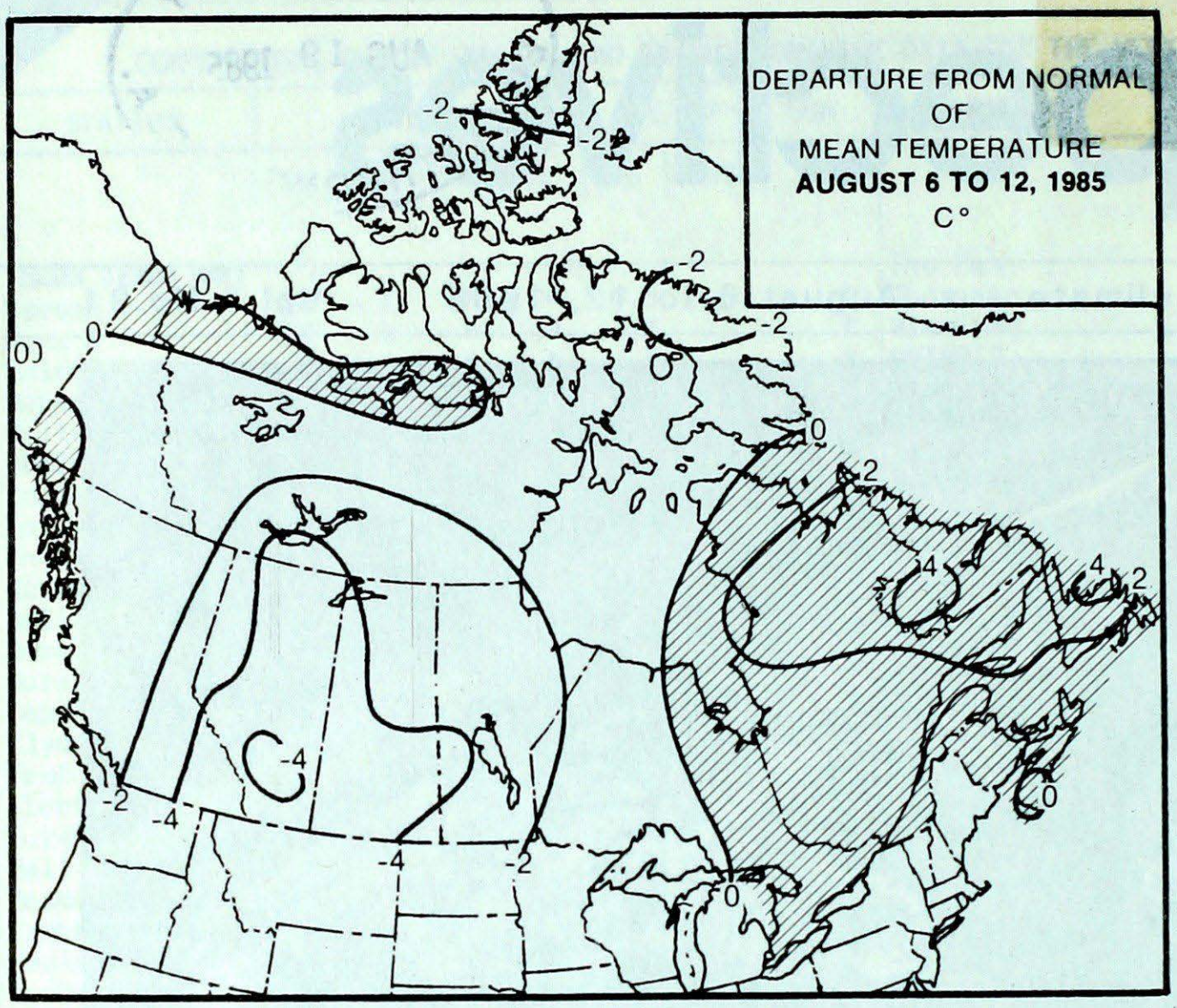


This satellite image of August 12, 1985 was taken by the GOES geostationary meteorological satellite 35,800 km above the equator at 98°W longitude. See page 3 for more detail.

- ***Severe weather strikes Eastern Prairies again***
- ***First frost in Manitoba***
- ***Unusually low number of hectares burned by fires in Ontario and Quebec***

Canada

TEMPERATURE



WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	26.2	Dawson	-3.7	Dawson
NORTHWEST TERRITORIES	25.2	Hay River	-3.8	Alert
BRITISH COLUMBIA	31.0	Penticton	0.6	Dease Lake
ALBERTA	33.6	Medicine Hat	-0.4	High Level
SASKATCHEWAN	30.7	Kindersley	0.0	Rockglen
MANITOBA	30.8	Portage la Prairie	-1.2	Thompson
ONTARIO	32.2	Ottawa	1.4	Moosonee
QUEBEC	31.6	Montreal/Dorval	1.0	Border
NEW BRUNSWICK	32.1	Chatham	4.5	Charlo
NOVA SCOTIA	30.2	Sydney	6.6	Shelburne
PRINCE EDWARD ISLAND	29.7	Charlottetown	12.7	Charlottetown
NEWFOUNDLAND	32.1	Goose	4.2	Wabush Lake

ACROSS THE NATION

Warmest mean temperature	22.5	Windsor, ONT
Coolest mean temperature	1.0	Alert, N.W.T.

ACROSS THE COUNTRY...

Yukon and Northwest Territories

A cold Arctic airmass spilled southward across the Mackenzie District. Heaviest precipitation fell in the Keewatin District early in the week, and on Baffin Island during mid-week. The ice has almost completely cleared in Hudson Bay and Hudson Strait, and an open water shipping route exists in Lancaster Sound. The U.S.C.G. Polar Sea navigated through Prince of Wales Strait, a much easier route than the ice covered McClure Strait. Ice continues to be a problem in the vicinity of Beaufort drilling sites due to unfavourable on-shore winds.

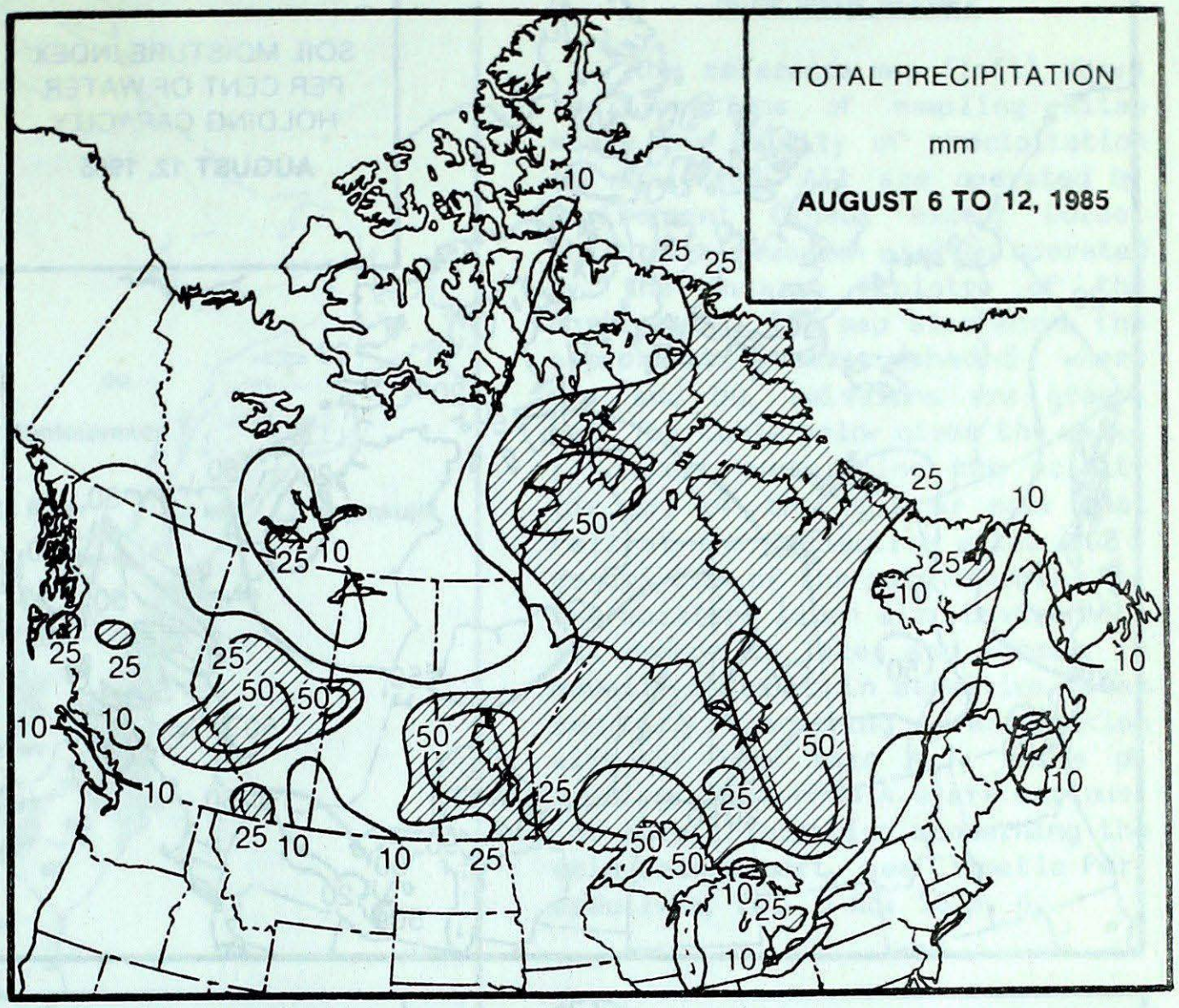
British Columbia

The fire situation has improved significantly in the province. All travel and work bans in forested areas have been lifted. The weather was cool and showery in the southern half of the province, but was fair and still relatively dry in the north. Locally heavy thunderstorms hit some communities in the south, causing some minor flooding; lightning started several minor forest fires.

Prairies

Cold and unsettled weather conditions moved in during the week. On August 8, severe thunderstorms developed in Saskatchewan and Manitoba ahead of a rapidly moving cold front. During the afternoon and evening hours funnel clouds were sighted northeast of Saskatoon and near Pelly Saskatchewan. Hail fell in many areas. The communities of Chatfield and Poplarfield, in the Interlake District, reported hail as large as tennis balls. Numerous new daily low temperature records were set during the weekend as an Arctic airmass settled in over the Prairies. Temperature readings dropped to near freezing and scattered ground frost developed in some low lying areas.

PRECIPITATION



Ontario

Several weather systems moved across northern Ontario. Heaviest precipitation fell in the northern half of the province. Because of the abundance and frequency of the precipitation in the north, only 850 hectares of forest have been destroyed by fire so far this year compared to last year's quarter-million hectares. Very warm temperatures did not help the fire situation this week. It was relatively dry in the south; fifteen new forest fires broke out in eastern Ontario.

Quebec

For the most part, it was a warm and dry period in the south. Heaviest precipitation, 40 to 60 millimetres, fell in the northern portions of the province. Maximum temperatures in the south climbed to near 30°C, breaking several daily temperature records. On August 8, heavy thunderstorms with hail crossed the Ottawa Valley and the Eastern Townships. Forest fire activity has been relatively subdued this season. To date the number of fires reported, 618, has been well below the average of 811.

Atlantic Provinces

It was sunny and warm with generally light rainfalls. Heaviest precipitation occurred on August 8 in the Maritimes, but afternoon showers and thundershowers popped up on a number of days in some parts of Newfoundland. South coastal areas of the Island were fog-bound throughout much of the week. Temperatures climbed into the low thirties at a few locations in the Maritimes during the early part of the week. At Goose Bay the temperature soared to 32°C establishing a new daily temperature record. Pleasant weather arrived just in time for the opening of the Canada Summer Games held at Saint John, New Brunswick, on Sunday. Harvesting of vegetable and winter cereal crops is underway in most areas.

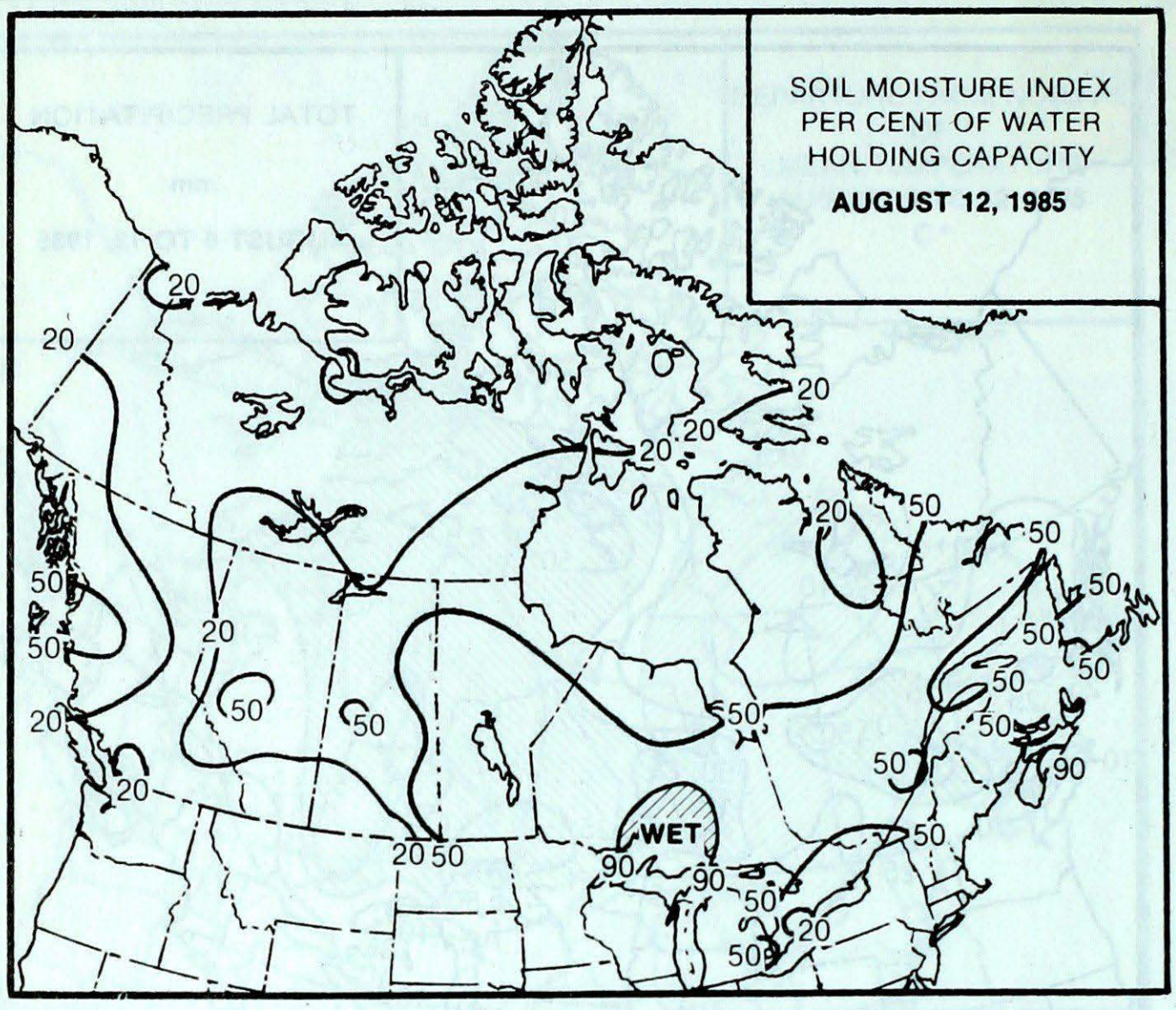
HEAVIEST WEEKLY PRECIPITATION (mm)

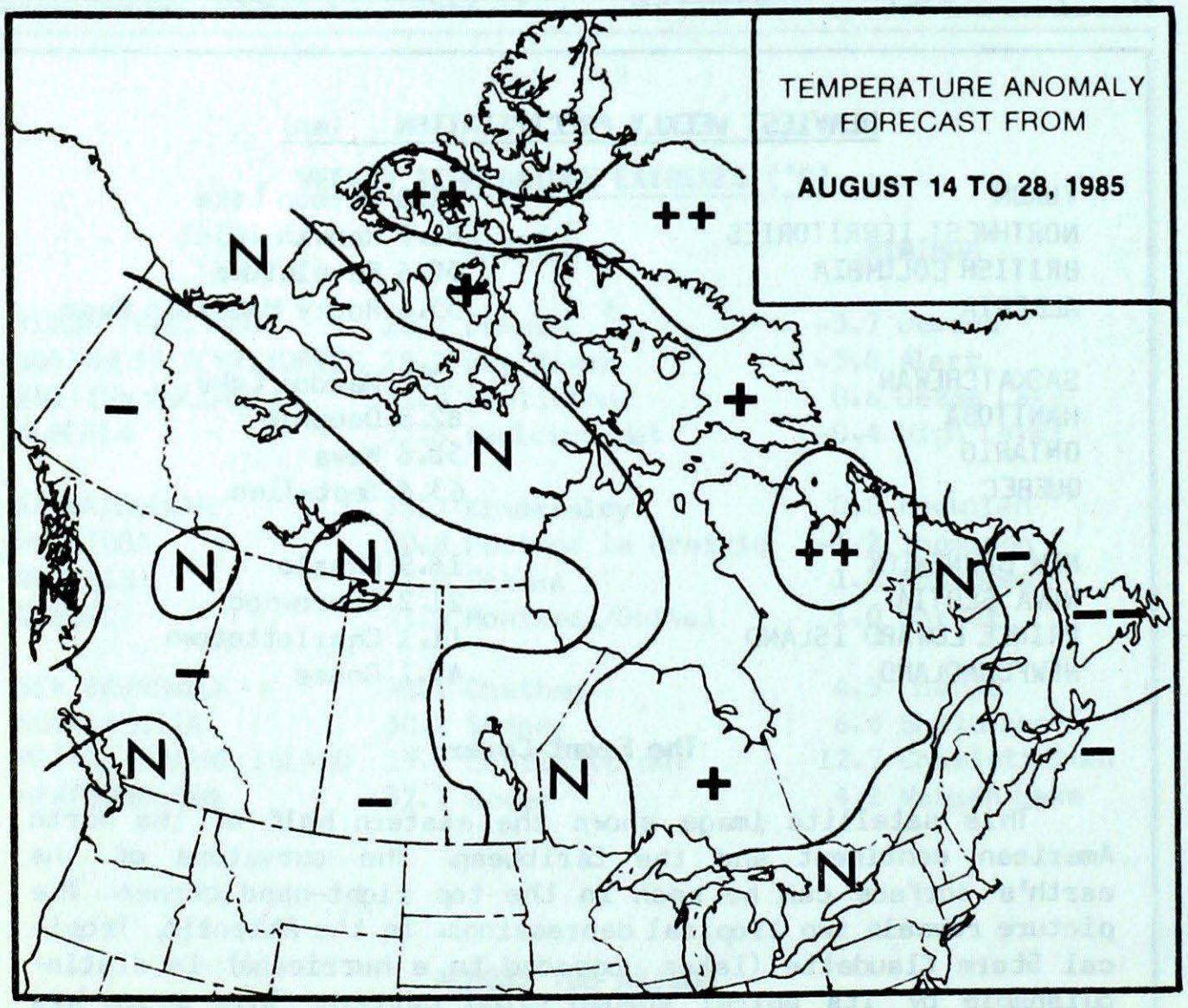
YUKON	11.8	Watson Lake
NORTHWEST TERRITORIES	81.5	Rankin Inlet
BRITISH COLUMBIA	50.6	Revelstoke
ALBERTA	55.6	Rocky Mountain Base
SASKATCHEWAN	57.2	Meadow Lake
MANITOBA	82.8	Dauphin
ONTARIO	58.6	Wawa
QUEBEC	63.6	Sept-Iles
NEW BRUNSWICK	16.9	Charlo
NOVA SCOTIA	21.2	Greenwood
PRINCE EDWARD ISLAND	11.1	Charlottetown
NEWFOUNDLAND	49.1	Goose

The Front Cover

This satellite image shows the eastern half of the North American continent and the Caribbean. The curvature of the earth's surface can be seen in the top right-hand corner. The picture reveals two tropical depressions. In the Atlantic, Tropical Storm Claudette (later upgraded to a hurricane) is distinguishable by its spiral shaped cloud pattern. This storm was approximately 380 km northwest of Bermuda moving east at 16 km/h, with maximum sustained winds near 90 km/h. The cloud in the lowest portion of the photo shows the formation of a new tropical depression. The diffuse centre was situated 305 km southwest of Havana, Cuba, and moving northwest at 15 km/h. Even though maximum sustained winds were only 48 km/h, atmospheric conditions were favourable for the system to strengthen at any time over the Gulf of Mexico and become tropical storm, Danny.

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

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It began in 1978 and in 1983 was expanded to include a monthly supplement (formerly known as the Canadian Weather Review). The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socioeconomic 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.

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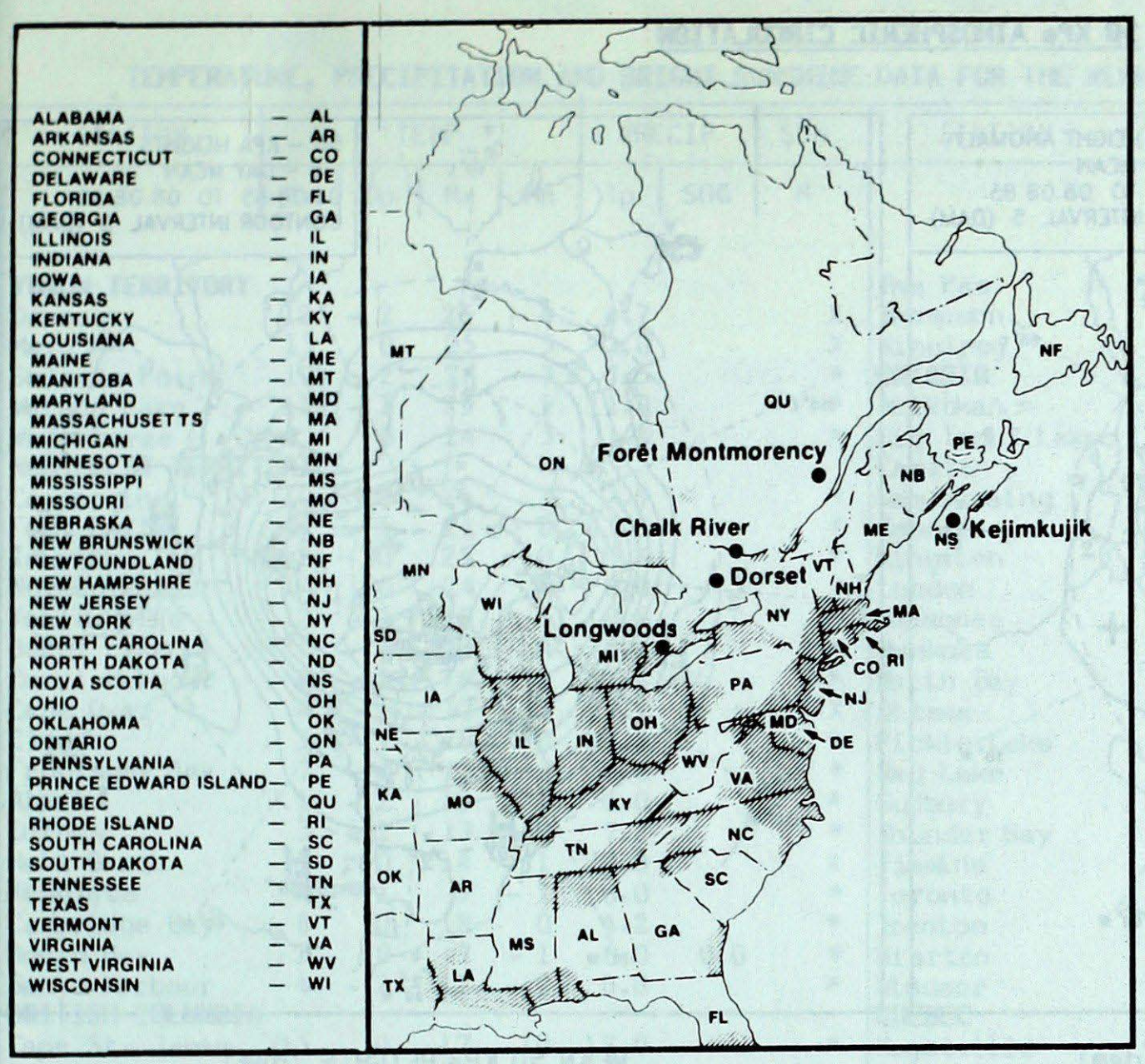


ACID RAIN REPORT

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.

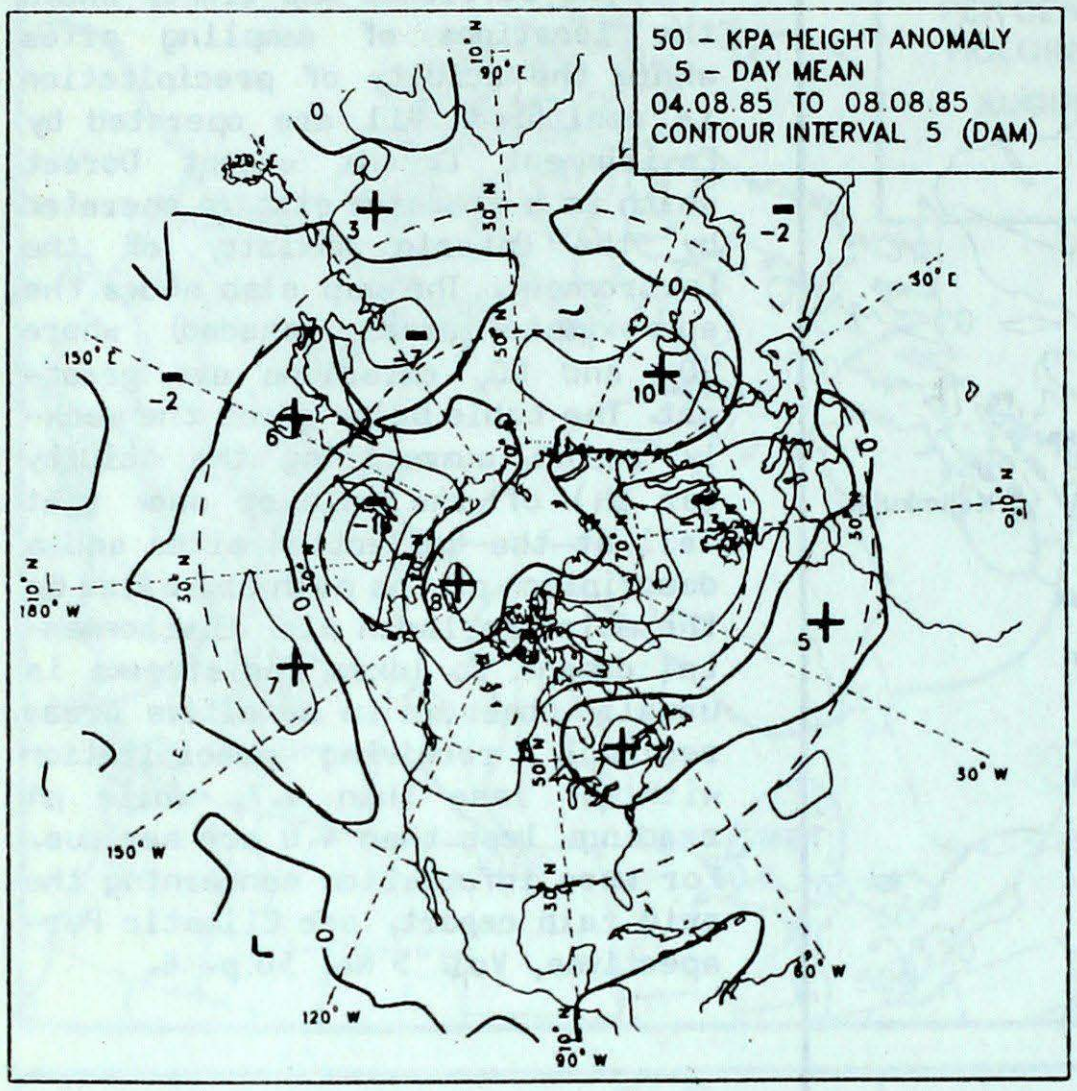
AUGUST 4 to AUGUST 10, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	5	3.2	8(r)	Virginia, Kentucky, Ohio
	7	3.6	13(r)	Illinois, Indiana, Ohio
	10	3.2	6(r)	Kentucky, Indiana, Ohio, Southern Ontario
Dorset	6	4.1	13(r)	Kentucky, Ohio, Southern Ontario
	7	4.4	19(r)	Illinois, Michigan
	10	3.7	2(r)	Ohio, Southern Ontario
Chalk River		NO PRECIPITATION THIS WEEK		
Montmorency	7	4.4	19(r)	West Virginia, Pennsylvania, New York, Southern Quebec
Kejimkujik	8	4.7	11(r)	Atlantic Ocean

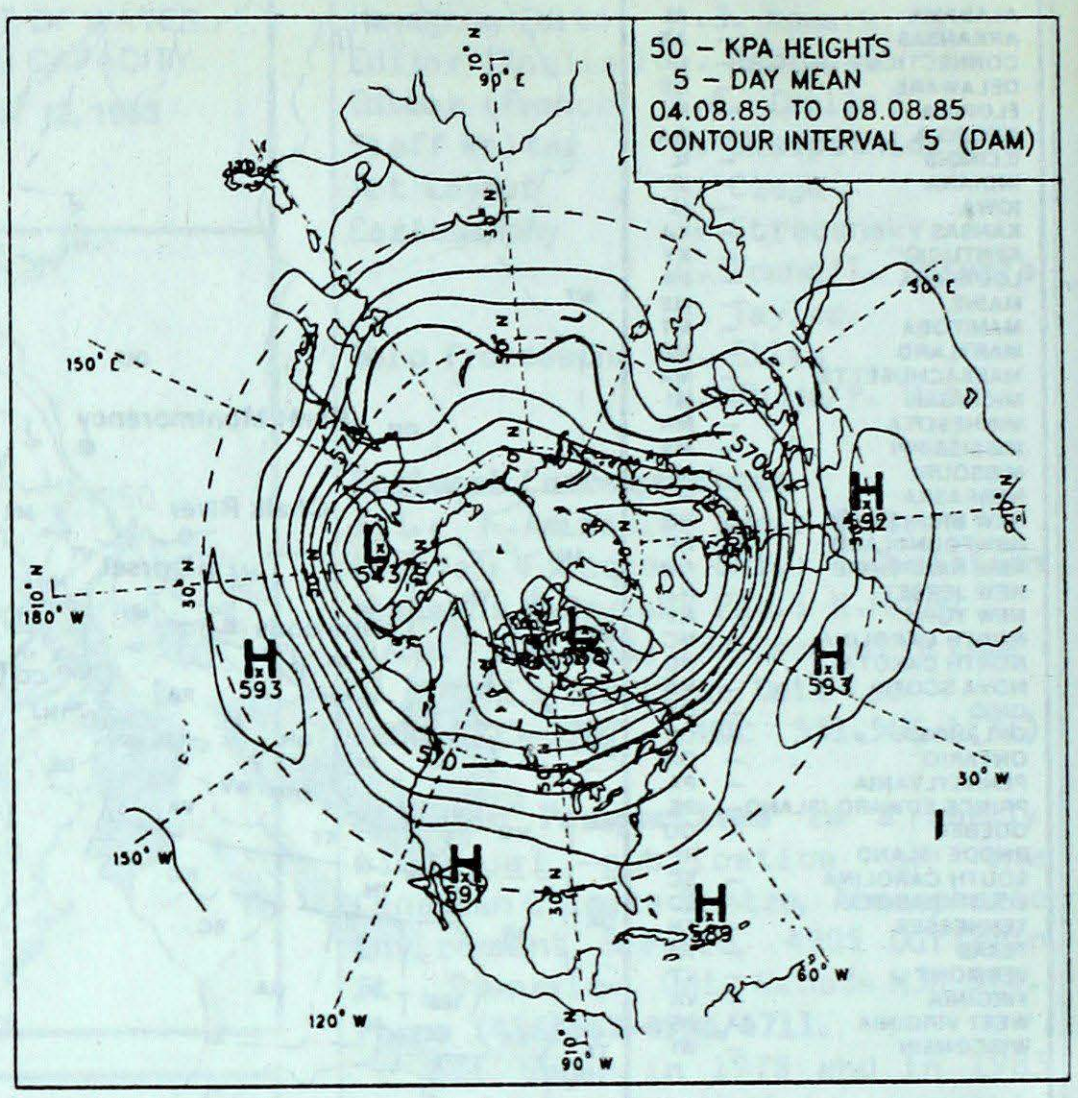
r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).

CIRCULATION

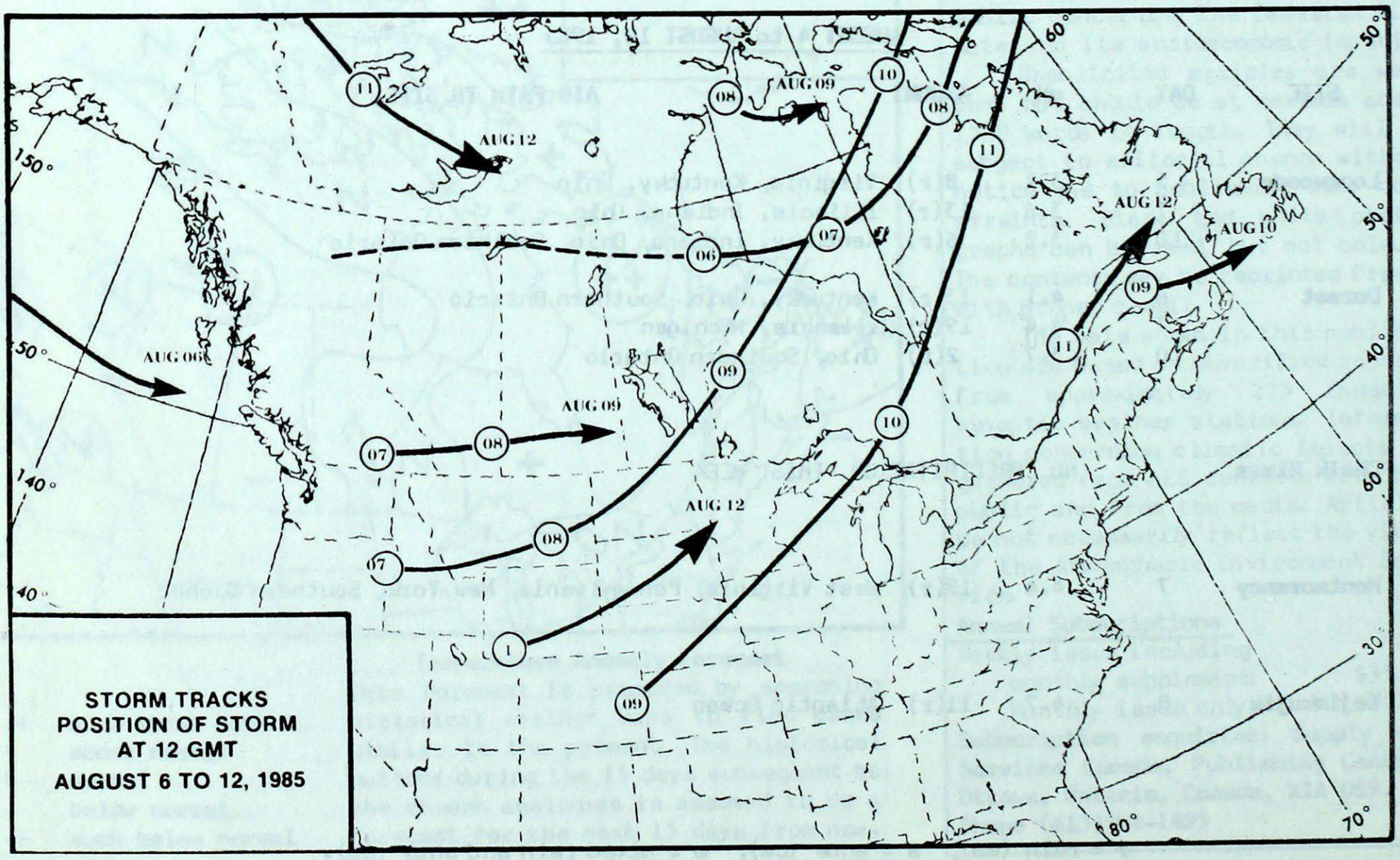
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
August 4 to August 8, 1985



MEAN 50 KPa HEIGHTS (dam)
August 4, August 8, 1985



STATISTICS

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT AUGUST 13, 1985

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	12	- 2	26	- 4	4.7		X
Mayo A	13	0	25	5	2.0		X
Shingle Point	12	2	26	3	7.5		*
Watson Lake	13	- 1	23	1	11.8		*
Whitehorse	13	0	24	3	1.4		*
NORTHWEST TERRITORIES							
Coppermine	10	0	24	1	7.9		*
Fort Smith	11	- 5	21	0	11.3		*
Inuvik	12	0	25	0	0.6		*
Norman Wells	14	0	24	4	2.0		*
Yellowknife	12	- 3	18	5	10.8		*
Baker Lake	10	- 1	21	4	28.4		*
Coral Harbour	7	- 1	16	1	69.4		*
Cape Dyer	4	- 1	12	1	27.1		X
Clyde	3	- 1	8	0	29.8		*
Frobisher Bay	7	- 1	12	3	36.6		*
Alert	1	- 2	10	- 4	0.0		*
Eureka	3	- 2	13	- 3	7.2		*
Hall Beach	5	0	14	1	20.8		X
Resolute	3	- 1	9	- 1	0.0		*
Cambridge Bay	8	0	18	0	4.2		*
Mould Bay	3	0	7	- 1	0.0	0.0	*
Sachs Harbour	4	- 2	11	- 2	0.8		*
BRITISH COLUMBIA							
Cape St. James	13	0	17	10	17.0		*
Cranbrook	14	- 5	28	3	20.2		*
Fort Nelson	15	- 1	24	6	2.7		*
Fort St. John	14	- 2	23	3	10.3		X
Kamloops	19	- 2	30	8	17.4		*
Penticton	18	- 2	31	10	14.8		*
Port Hardy	15	1	22	9	8.8		*
Prince George	14	- 1	23	5	10.8		*
Prince Rupert	13	- 1	17	7	29.3		*
Revelstoke	16	- 3	27	8	50.6		*
Smithers	13	- 1	23	5	39.8		*
Vancouver	17	- 1	23	10	16.3		*
Victoria	16	- 1	26	9	8.6		*
Williams Lake	13	- 2	23	6	13.1		*
ALBERTA							
Calgary	12	- 4	26	2	15.6		*
Cold Lake	12	- 4	21	1	5.2		*
Coronation	13	- 4	28	1	30.2		*
Edmonton Namao	12	- 5	22	4	40.9		*
Fort McMurray	12	- 4	22	1	8.0		*
High Level	12	- 2	22	0	2.1		*
Jasper	13	- 2	24	5	22.6		*
Lethbridge	14	- 4	31	4	13.6		*
Medicine Hat	16	- 4	34	3	*		*
Peace River	13	- 3	22	3	9.5		X
SASKATCHEWAN							
Cree Lake	11	X	21	2	23.0		*
Estevan	16	- 3	29	7	3.2		*
La Ronge	13	- 3	21	1	8.0		*
Regina	15	- 4	28	7	26.0		*
Saskatoon	14	- 4	26	5	12.1		*
Swift Current	14	- 4	30	1	*		*
Yorkton	13	- 5	27	2	33.6		*
MANITOBA							
Brandon	15	- 3	29	3	35.7		*
Churchill	10	- 3	21	5	1.8		*
Lynn Lake	12	- 4	21	3	1.0		*

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
The Pas	14	- 4	23	3	82.0		*
Thompson	12	- 3	25	- 1	3.2		*
Winnipeg	17	- 2	30	6	*		*
ONTARIO							
Atikokan	16	- 1	28	4	*		*
Big Trout Lake	15	- 1	22	5	*		*
Earlton	17	1	29	6	*		X
Kapuskasing	17	1	29	4	21.2		*
Kenora	18	- 1	28	8	19.0		X
Kingston	21	0	27	12	*		*
London	21	0	30	9	28.3		*
Moosonee	16	1	30	1	*		*
Muskoka	19	1	29	7	*		X
North Bay	18	0	27	9	22.0		*
Ottawa	22	2	32	10	0.8		*
Pickle Lake	16	0	26	7	41.0		X
Red Lake	16	- 2	26	5	32.0		*
Sudbury	18	0	29	8	38.4		*
Thunder Bay	18	1	29	6	41.7		*
Timmins	16	0	31	2	36.4		X
Toronto	21	1	31	10	8.7		X
Trenton	21	1	31	10	3.4		X
Wiarton	19	0	29	8	31.9		*
Windsor	22	1	31	13	8.0		X
QUEBEC							
Bagotville	18	1	29	6	5.8		X
Blanc-Sablon	17	4	23	11	4.4		*
Inukjuak	10	1	21	5	41.2		*
Kuujjuaq	14	3	28	5	28.2		*
Kuujjuarapik	12	2	28	4	51.8		*
Maniwaki	19	1	29	6	18.2		*
Mont-Joli	19	2	28	10	13.2		*
Montréal	22	1	32	8	5.6		*
Natashquan	18	4	25	11	8.6		*
Nitchequon	15	2	27	6	*		*
Québec	20	2	30	9	6.2		*
Schefferville	15	3	28	5	6.2		*
Sept-Iles	18	3	22	12	63.6		*
Sherbrooke	19	2	28	10	7.2		*
Val-d'Or	17	1	28	5	53.8		*
NEW BRUNSWICK							
Charlo	18	0	30	5	16.9		*
Chatham	20	1	32	11	9.4		*
Fredericton	19	0	30	11	7.0		*
Moncton	20	1	29	11	1.5		*
Saint John	18	1	26	11	9.4		*
NOVA SCOTIA							
Greenwood	19	0	27	9	21.2		X
Shearwater	19	0	27	14	16.4		*
Sydney	20	2	30	14	2.6		*
Yarmouth	17	0	25	10	8.0		*
PRINCE EDWARD ISLAND							
Charlottetown	20	1	30	13	11.1		*
Summerside	20	1	29	13	10.2		*
NEWFOUNDLAND							
Gander	21	4	28	14	11.6		*
Port aux Basques	17	1	23	11	*		*
St. John's	17	1	26	10	0.4		*
St. Lawrence	16	2	23	11	11.2		X
Cartwright	17	4	30	9	1.8		*
Churchill Falls	18	5	28	8	18.9		*
Goose	18	3	32	9	49.1		*

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