

Climatic Perspectives

Monthly Supplement

Vol.7 July, 1985

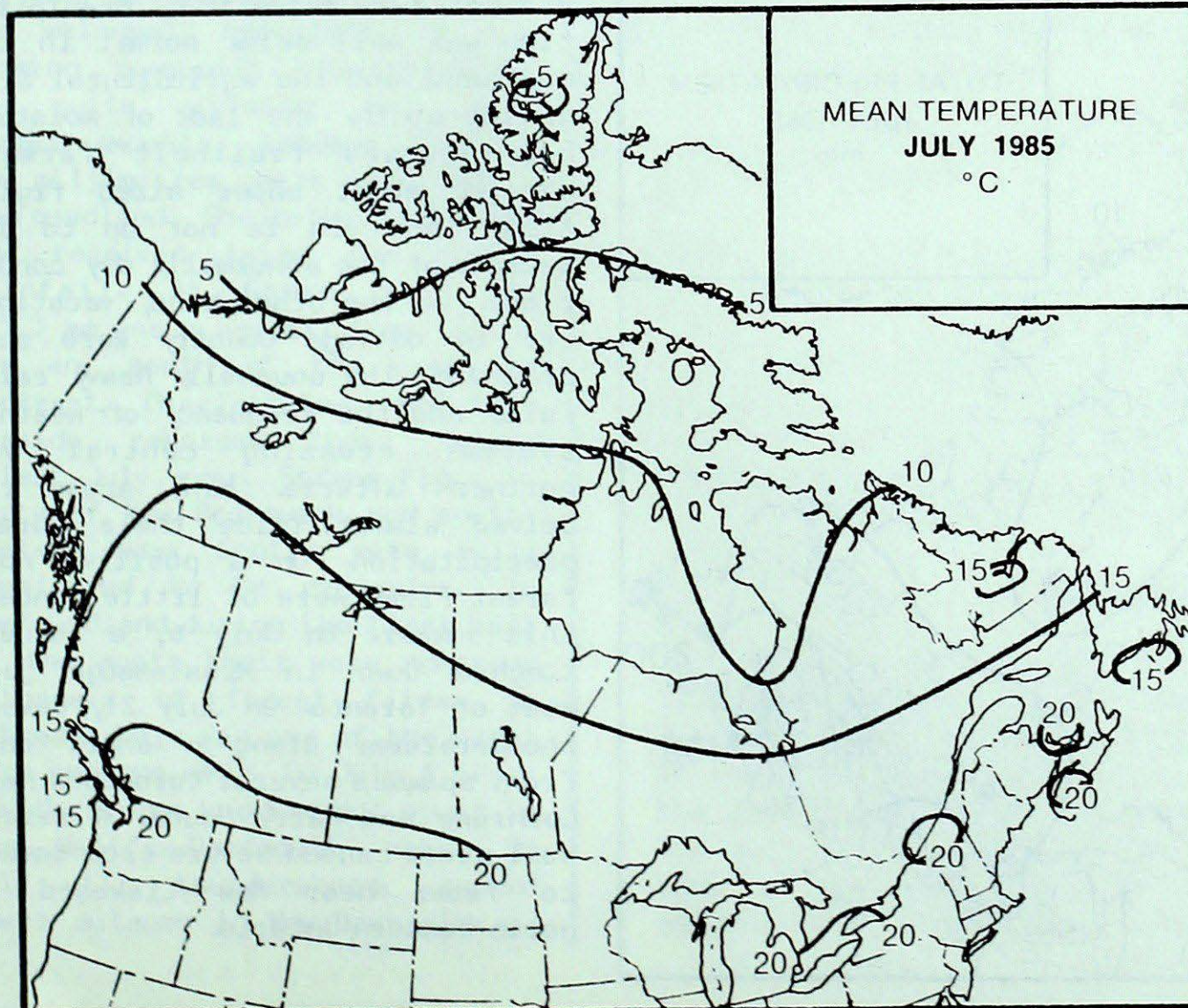
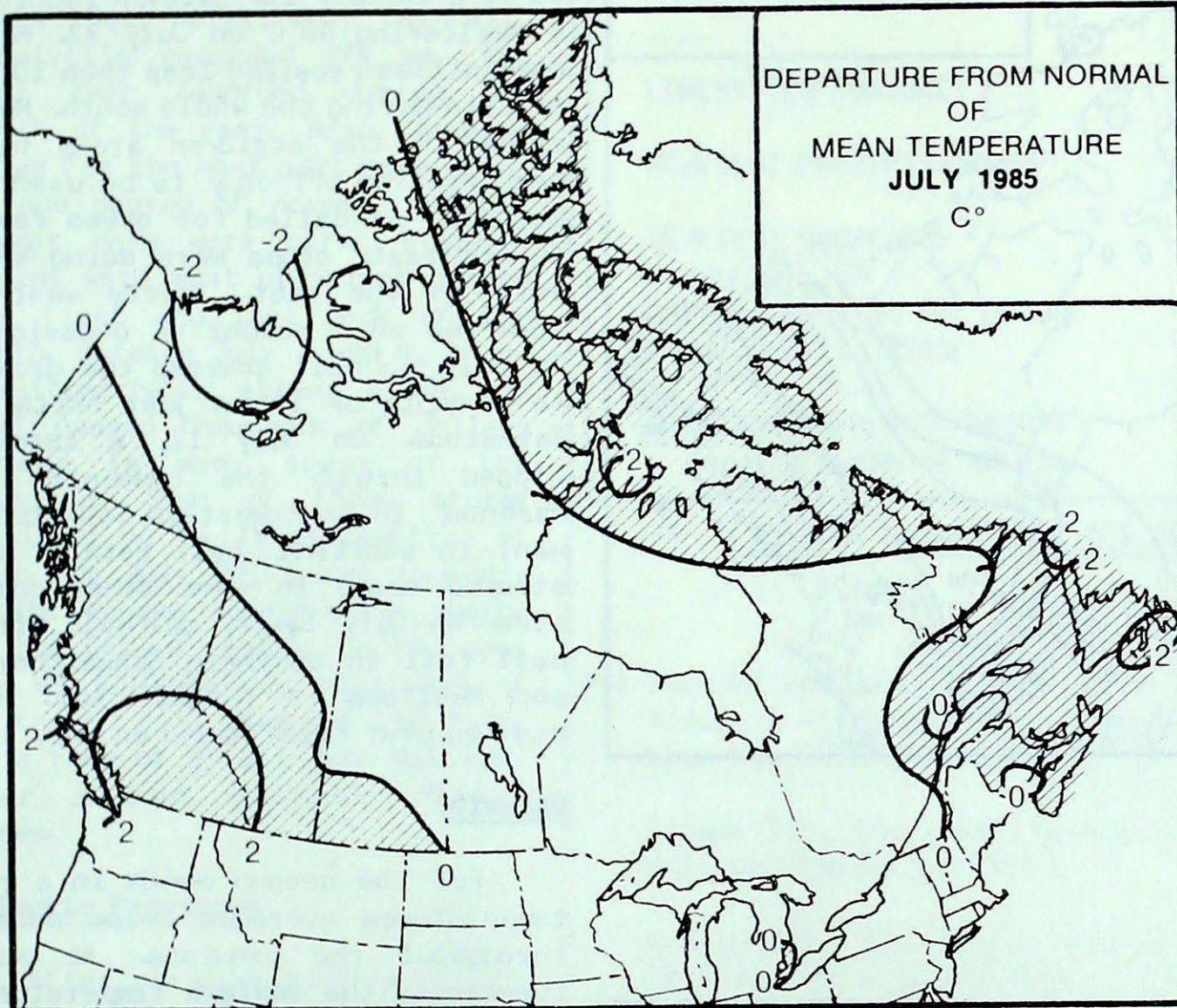
ACROSS THE COUNTRY

Yukon and Northwest Territories

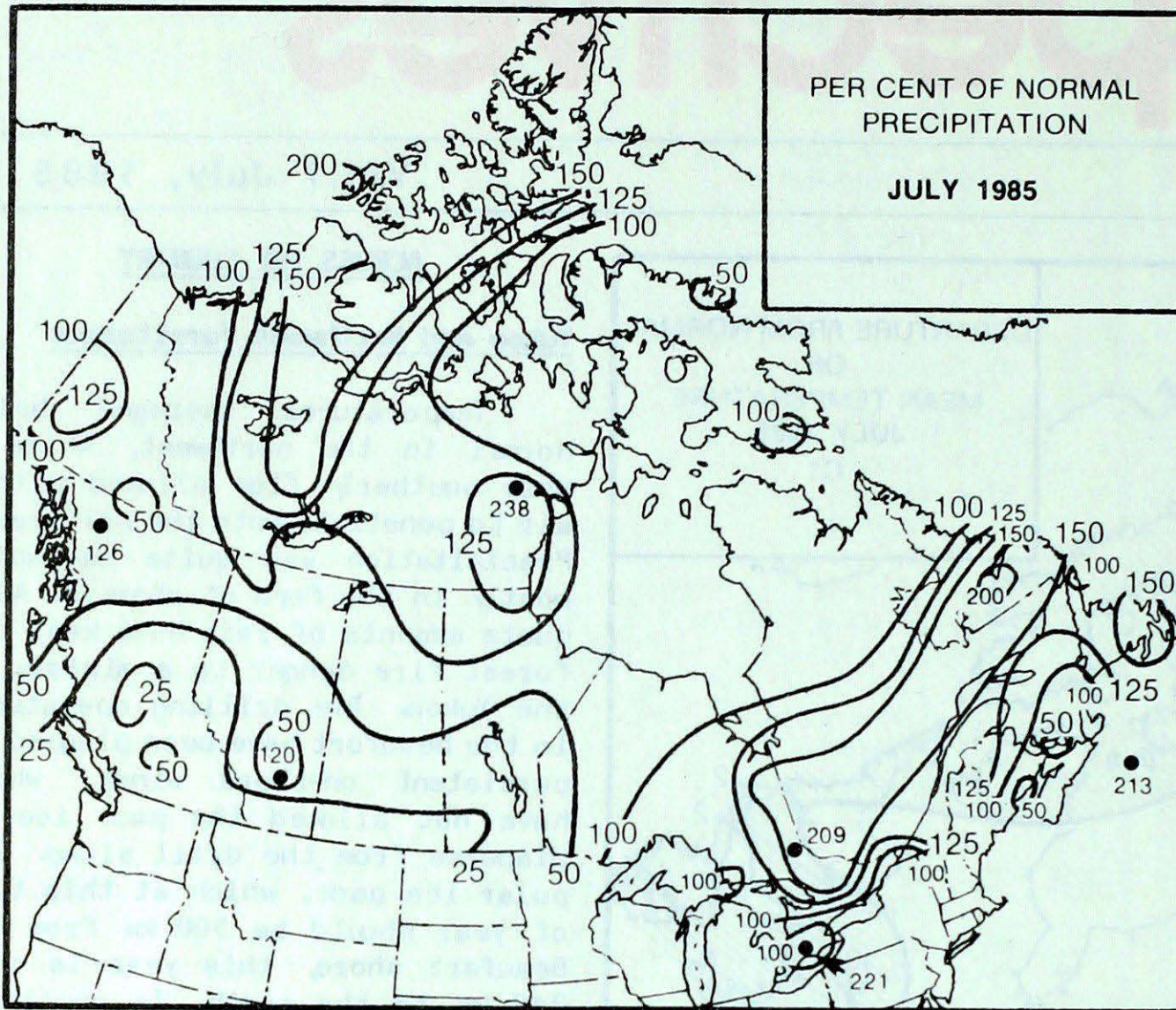
Temperatures averaged below normal in the northwest, while a more southerly flow allowed milder air to penetrate into the northeast. Precipitation was quite variable, mostly in the form of showers. Adequate amounts of rain have kept the forest fire danger to a minimum in the Yukon. The drilling operations in the Beaufort have been plagued by persistent on-shore winds, which have not allowed the pack ice to disperse from the drill sites. The polar ice pack, which at this time of year should be 500 km from the Beaufort shore, this year is only 240 km to the north. In contrast, above normal temperatures in the eastern Arctic allowed the ice to break up several weeks earlier than normal. By mid-month an open water route existed through Lancaster Sound to Resolute.

British Columbia

Superb weather conditions were enjoyed by vacationers, with warm temperatures and plenty of sunshine. The lack of precipitation caused drought conditions in the Peace River District and contributed to one of the worst fire seasons on record. Some locations received no measurable precipitation for more than a month. Ten locations established new minimum July precipitation records. Numerous forest fires raged out of control in all areas of the province. The cost of fighting these fires surpassed \$100 million. Many localities recorded their warmest July ever. Although not a record, the maximum temperature at Lytton soared to 41°C on July 30. Sunshine was abundant, with most reporting stations establishing new records for the month. Victoria, Cranbrook and Williams Lake each received more than 400 hours of sunshine. Victoria's record dates back to 1914.



PRECIPITATION

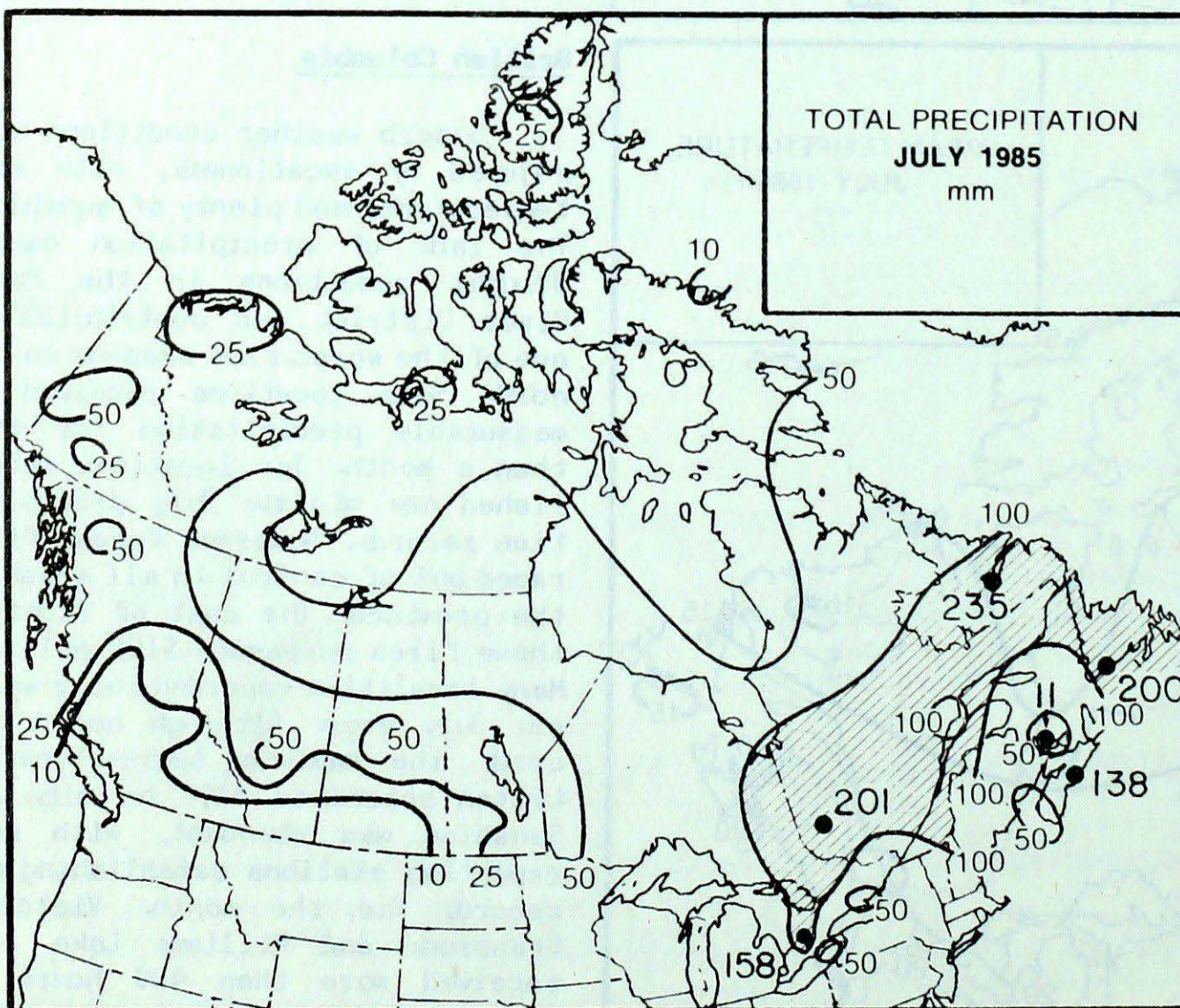


The Prairies

Sunny dry weather prevailed everywhere, worsening the drought situation in southern Alberta and southwestern Saskatchewan. Daytime temperatures in the southwest frequently climbed into the thirties. At Medicine Hat the mercury soared to 38°C on July 10. Estevan recorded a sweltering 40°C on July 22. Many communities received less than 10 mm of rain during the whole month. Most crops in the stricken areas have been written off only to be used as pasture, or bailed for green feed. In contrast, crops were doing very well in the east. Severe weather occurred on a number of occasions. On July 6, hail covered the ground to a depth of 15 cm just north of Saskatoon. On July 12, a tornado ripped through the community of Mazenod, in southwestern Saskatchewan; in addition, hail totally destroyed crops in some other counties. On July 13-14, golfball sized hail fell in southern Saskatchewan and Manitoba. A funnel cloud was sighted near Pilot Mound on July 16.

Ontario

For the second month in a row temperatures averaged below normal throughout the province. At most locations, the maximum temperatures did not even reach 30°C. Precipitation was well below normal in the northwest and the agricultural area of the south. The lack of moisture has Niagara fruitbelt farmers worried about under sized fruit. Also, the corn is not up to par because of the abnormally dry conditions. On the other hand, vacationers in cottage country were surprised by the unusually heavy rainfalls and the frequency of weather systems crossing central and northern Ontario. Many areas received almost twice their normal precipitation. On a positive note forest fires were of little concern this summer. On July 6, a tornado touched down in Mississauga just west of Toronto. On July 21, severe thunderstorms along a sharp cold front spawned several tornadoes near Cochrane and Parry Sound. A severe hail storm caused severe crop damage to farms near New Liskeard in north-eastern Ontario.



Quebec

Across the southern half of the province it was predominantly unsettled and wet. At many locations, total precipitation exceeded 150 mm. Two monthly precipitation records were broken. Val d'Or, received 201 mm, almost twice their normal July rainfall. Bagotville recorded 194 mm, the most ever recorded during any month of the year. Mean temperatures for the most part were within one degree of normal, but hot summer days were rare. Thunderstorms were most prevalent during the first and last week of the month. Between July 3 and 8, thunderstorms with strong winds and hail caused thousands of dollars damage in many areas of the province. Some of these storms produced up to 75 millimetres of rain. On July 29, heavy thunderstorms caused considerable damage in the Ottawa region. On the same day at St-Grégoire, southeast of Montreal, hail damaged 150 farms to a tune of \$3 million. Wet weather helped suppress forest fires.

Atlantic Provinces

After an abnormally wet June, dry and pleasantly sunny weather was welcomed, especially by the farming community. Precipitation was quite variable, but above normal amounts, between 100 and 200 millimetres, were recorded in Newfoundland. Shelburne and Goose Bay received twice the normal rainfall. At Goose Bay, the 235.3 mm was a new all time record for any month of the year. In contrast, Charlottetown and Summerside recorded their second driest July ever. Stream flows in parts of New Brunswick and southwestern Nova Scotia were still considered to be excessive. In Newfoundland during the first half of the month there were numerous outbreaks of forest fires. In Labrador this was one of the worst fire seasons ever. On July 6 heavy thunderstorms knocked out power in the Halifax-Dartmouth area. On July 11, thunderstorms caused power outages in New Brunswick.

CLIMATIC EXTREMES IN CANADA - JULY 1985

MEAN TEMPERATURE:		
WARMEST	Lytton, BC	24.9°C
COLDEST	Mould Bay, NWT Sachs Harbour, NWT	3.1°C
HIGHEST TEMPERATURE:	Lytton, BC	41.0°C
LOWEST TEMPERATURE:	Alert, NWT	- 4.2°C
HEAVIEST PRECIPITATION:	Goose, NFLD	235.3 mm
HEAVIEST SNOWFALL:	Alert, NWT	23.4 cm
DEEPEST SNOW ON THE GROUND ON JULY 31, 1985:	Mould Bay, NWT Resolute, NWT	Trace
GREATEST NUMBER OF BRIGHT SUNSHINE HOURS:	Kuujuarapik, QUE	448 hrs

ADDITIONAL AES CLIMATE PUBLICATIONSRECREATION AND TOURISM

- The Tourist and Outdoor Recreation Climate of Ontario
Volume I - Objectives and Definitions of Seasons. 1973.
Cat. No. EN57-13/1973-1-1 \$ 5.00 a copy
- Volume II - The Summer Season. 1977.
Cat. No. EN57-13/1973-1-2 \$ 7.50 a copy
- Volume III - The Winter Season. 1977.
Cat. No. EN57-13/1973-1-3 \$ 5.00 a copy
- The Tourism and Outdoor Recreation Climate of the Maritime Provinces.
Cat. No. EN57-13/1973-3 \$ 5.00 a copy
- The Tourist and Outdoor Recreation Climate of the Prairie Provinces.
Cat. No. EN56-46/1976 \$ 7.75 a copy
- A Recreational Climatology of the National Capital Region
Cat. No. EN56-59/1982 \$ 8.95 a copy

Cheque or Money Order made payable to: The Receiver General for Canada,
Atmospheric Environment Service, 4905 Dufferin St., Downsview M3H 5T4

Note: Corn Heat Units Table will appear when data becomes available.

ARCTIC ICE CONDITIONS

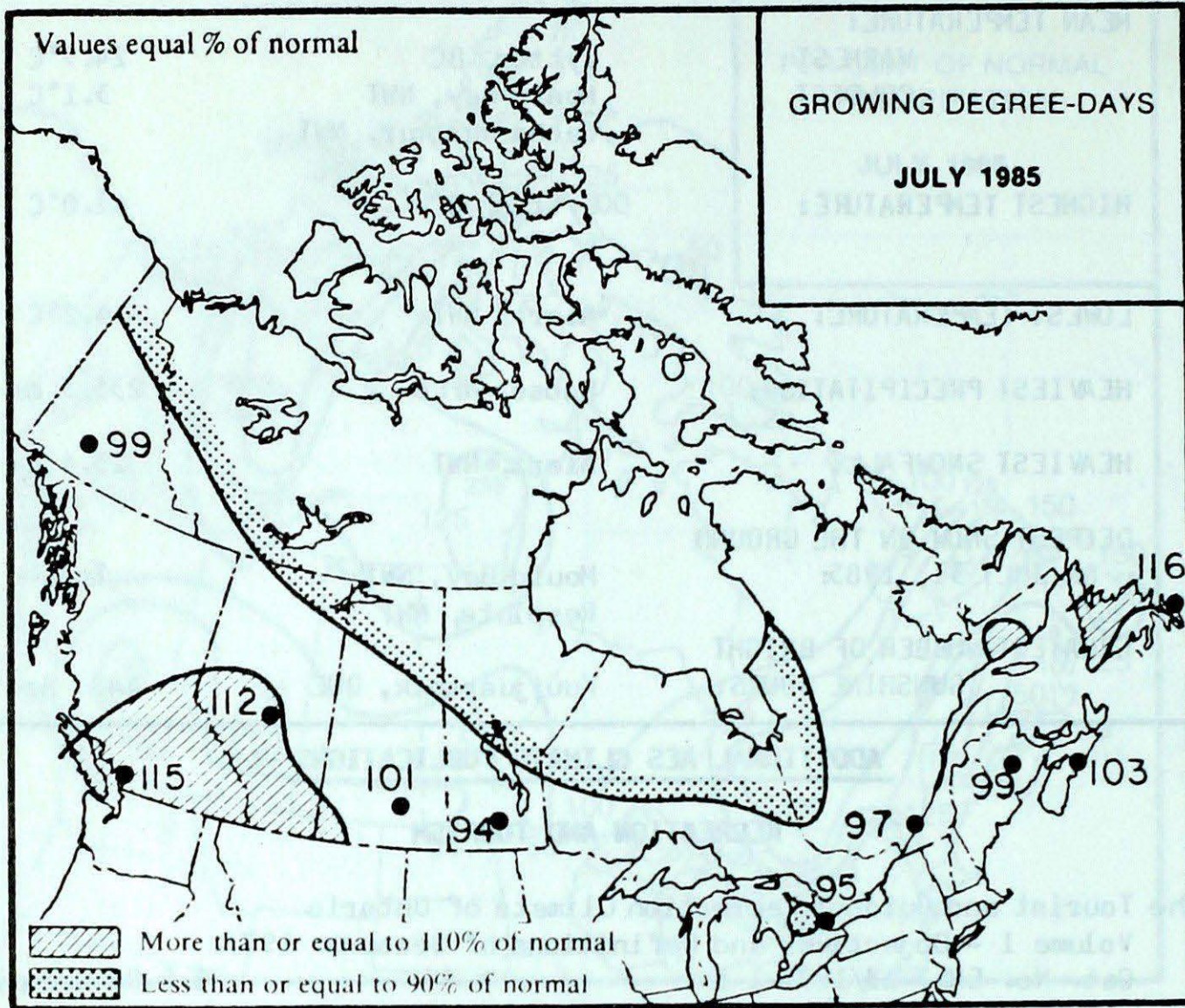
Above normal temperatures and favourable weather conditions lead to an early ice break-up in the eastern Arctic. By late June, Lancaster Sound was navigable several weeks ahead of normal. In contrast, the worst ice conditions in more than a decade plagued the drilling operations in the Beaufort. In fact, ice still congests the drill sites at this late date. All summer the Arctic ice pack remained perilously close to the Beaufort shoreline and is already showing signs of creeping southwards once again.

GROWING DEGREES

GROWING DEGREE DAYS

SEASONAL TOTAL OF GROWING

DEGREE-DAYS TO END OF JULY



BRITISH COLUMBIA

	1985	1984	NORMAL
Abbotsford	1142	1102	1072
Kamloops	1472	1361	1408
Penticton	1412	1237	1318
Prince George	832	686	771
Vancouver	1152	1177	1140
Victoria	1025	1069	1034

ALBERTA

Calgary	948	846	830
Edmonton Mun.	1026	1049	880
Grande Prairie	902	768	849
Lethbridge	1161	1028	1034
Peace River	874	795	845

SASKATCHEWAN

Estevan	1237	1217	1118
Prince Albert	944	975	926
Regina	1102	1103	1031
Saskatoon	1075	1080	1034
Swift Current	1082	1015	1012

MANITOBA

Brandon	1078	1042	1008
Churchill	328	400	328
The Pas	868	934	892
Winnipeg	1164	1092	1101

ONTARIO

London	1351	1246	1272
Muskoka	1061	1072	1052
North Bay	1023	1013	1038
Ottawa	1284	1298	1264
Thunder Bay	885	931	863
Toronto	1264	1199	1286
Trenton	1232	1199	1263
Windsor	1627	1461	1484

QUÉBEC

Baie Comeau	662	643	1095
Maniwaki	1043	1013	1010
Montréal	1270	1313	1300
Quebec	1070	1107	1068
Sept-Îles	658	620	600
Sherbrooke	1056	995	1143

NEW BRUNSWICK

Charlo	890	905	888
Fredericton	1118	1101	1085
Moncton	969	1004	960

NOVA SCOTIA

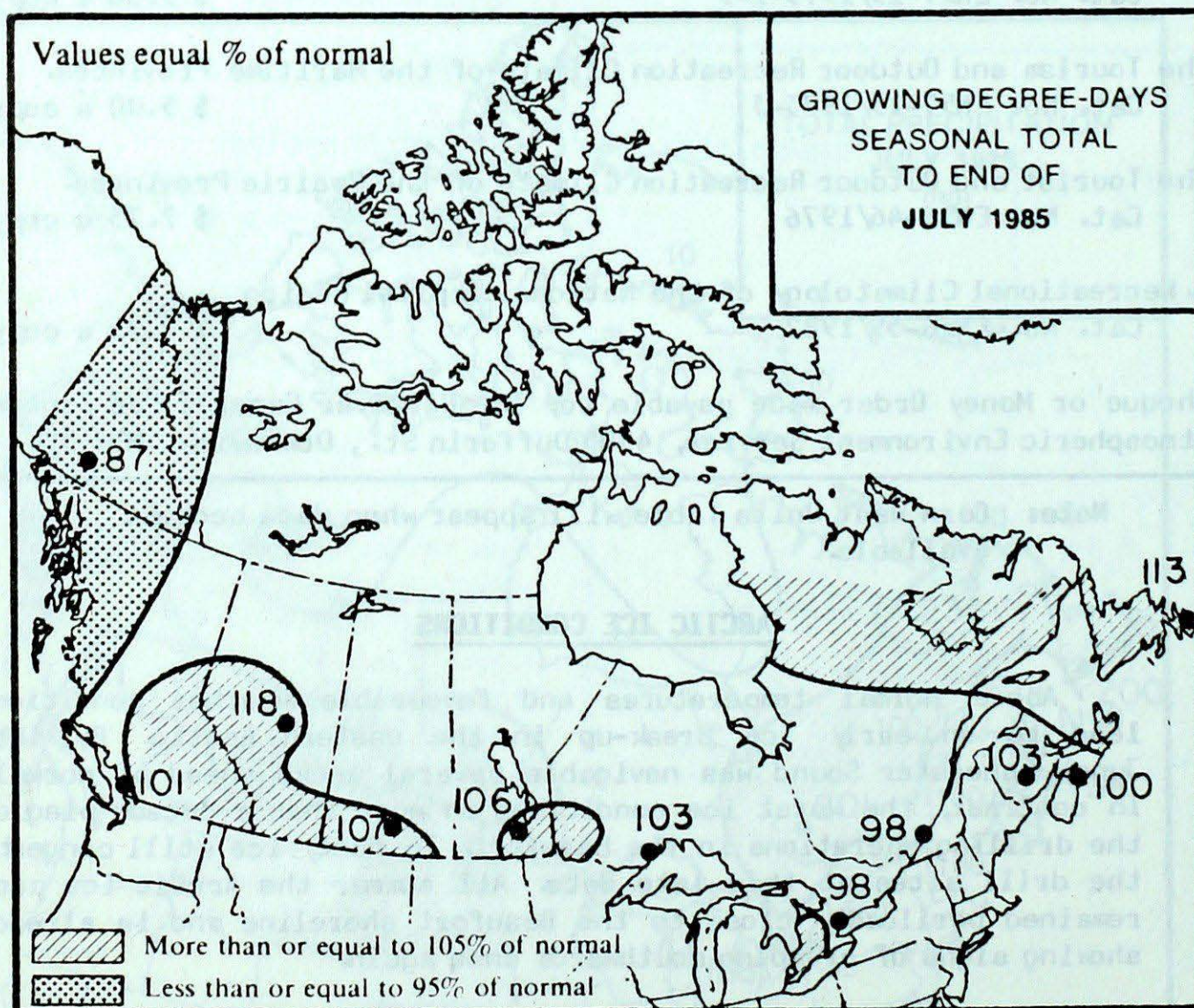
Halifax	963	946	960
Sydney	837	910	798
Yarmouth	851	858	839

PRINCE EDWARD ISLAND

Charlottetown	928	992	884
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NEWFOUNDLAND

Gander	727	799	686
St. John's	653	776	583
Stephenville	729	849	690



Based On Incomplete Data

SIGNIFICANT CLIMATIC IMPACTS - SUMMER 1985

by
A.K. Radomski

FOREST FIRES**British Columbia**

Hot, sunny and dry weather conditions during the month of July created a very explosive forest fire situation. Most of the province received less than half their normal rainfall during July. In the central interior, this was the second month in a row that precipitation has been less than fifty per cent of normal. Some localities in southern B.C. did not receive any measurable rain for more than a month toppling many long standing precipitation records. This has been compounded by the fact that day time temperatures have frequently been soaring into the thirties, with low humidities and record amounts of sunshine. All these factors combined have resulted in one of the worst forest fire seasons ever. To-date a total of 3165 fires have burned 239,229 hectares of prime forest. This compares to 19,500 hectares destroyed last year and a 5-year average of 118,000 hectares. In early August, during the height of this year's fire season, there were more than 6,300 fire fighters battling the blazes, supported by 917 mobile units, 40 aircraft and 172 helicopters. The total fire fighting cost so far this summer is almost \$107 million. Timber losses alone are estimated at around \$200 million. In early August cooler more unsettled weather arrived, somewhat helping the situation. Currently 408 fires were still

burning in the province, all under control.

Eastern Canada

In Ontario the forest fire season was exceptionally quiet, thanks to the frequency and quantity of precipitation. For the second month in a row rainfall has been above normal in some areas of northern Ontario. In June northwestern Ontario, and in July some northern and central districts received almost twice their normal precipitation. Temperatures this summer have been on the cool side, rarely climbing above 30°C. The soil moisture index in the north exceeded 150 per cent of normal, with values as high as 300 per cent near the Great Lakes. This year 775 fires have burned only 900 hectares, compared to last years 250,000 hectares, and a five year average of 287,552 hectares.

Changeable weather conditions in Quebec have also resulted in a relatively uneventful fire season. This year to-date there have been only 670 individual forest fires with a burnt area of 2454 hectares. This compares favorable to a five-year average of 880 fires and 52,795 hectares for the same period.

In Labrador crews were battling several major forest fires during the early summer. At one point 40 forest fires were burning in Newfoundland; four on the Island. Officials say this was one of the worst forest fire seasons on record. After mid-July wet weather

helped bring most of the fires under control.

PRAIRIE DROUGHT

After a good start to the growing season, a drought hit the southwestern prairies for the second year in a row. Southern Alberta and southwestern Saskatchewan were hardest hit. Some areas received less than one quarter of their normal precipitation during the months of June and July or in other words less than 15 mm of rain. To compound the problem hot and sunny weather continued unabated. In the parched areas the soil moisture index of holding capacity was less than 20 per cent. In some districts of southern Alberta it hasn't been this dry since around the turn of the century. A grasshopper infestation was making the situation even worse for the farmers. Any showers, which have occurred since the beginning of August have been too little and too late. Many crops are beyond recovery and are being ploughed under or used for cattle feed. Only good soil management has prevented a repeat of the so called "dust bowl" years that were so prevalent in the 1930s. Because of favourable conditions in eastern regions, prairie grain production is forecast to be up by 5 million tonnes from last year.

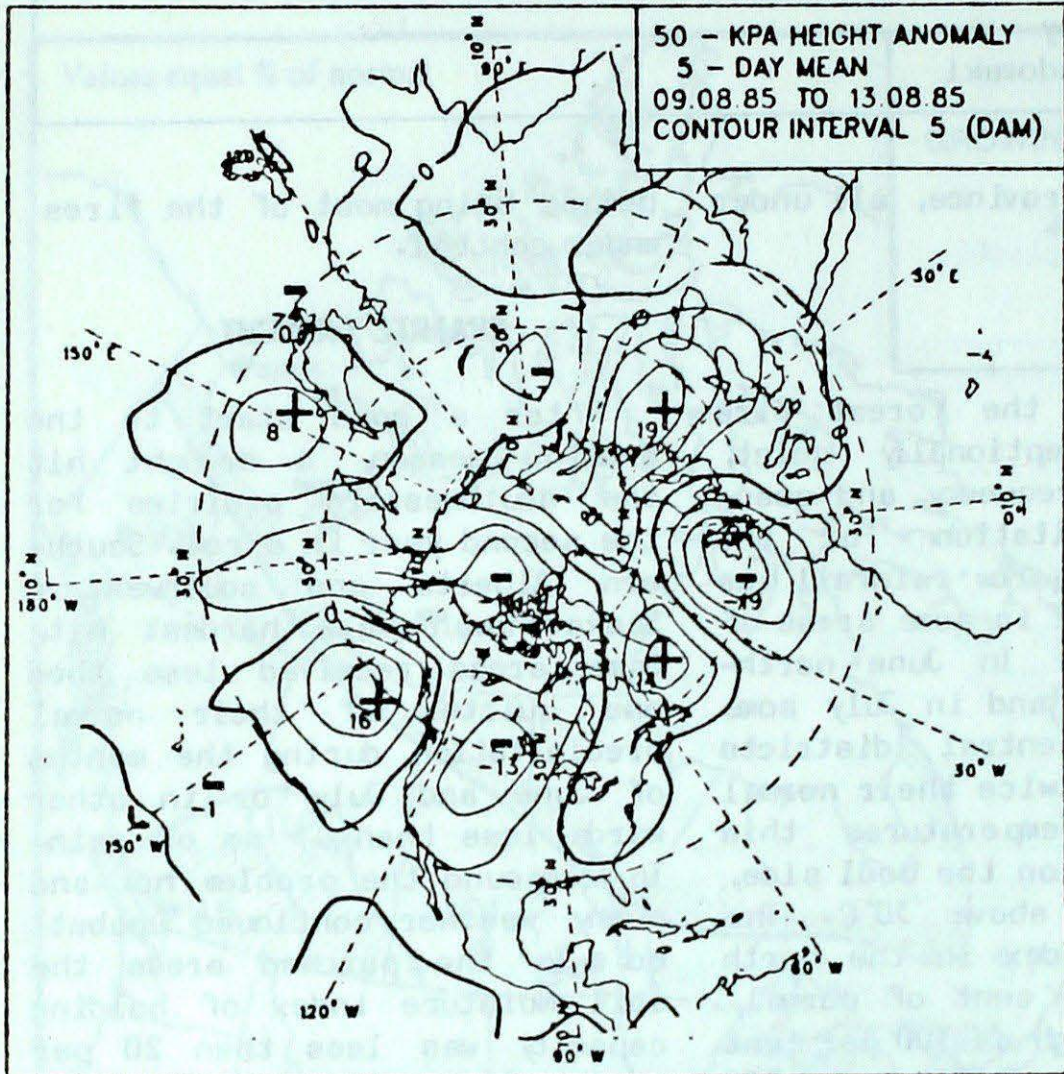
MEAN JULY 50 kPa CIRCULATION (see page 7B)

During July 1985 the mean 50 kPa circulation continued to weaken at mid-latitudes as the Arctic air mass was heating up, and the meridional gradients of temperature and geopotential height were reaching a minimum. The mean circulation pattern differed little from the long-term climatological mean for July. The Arctic vortex,

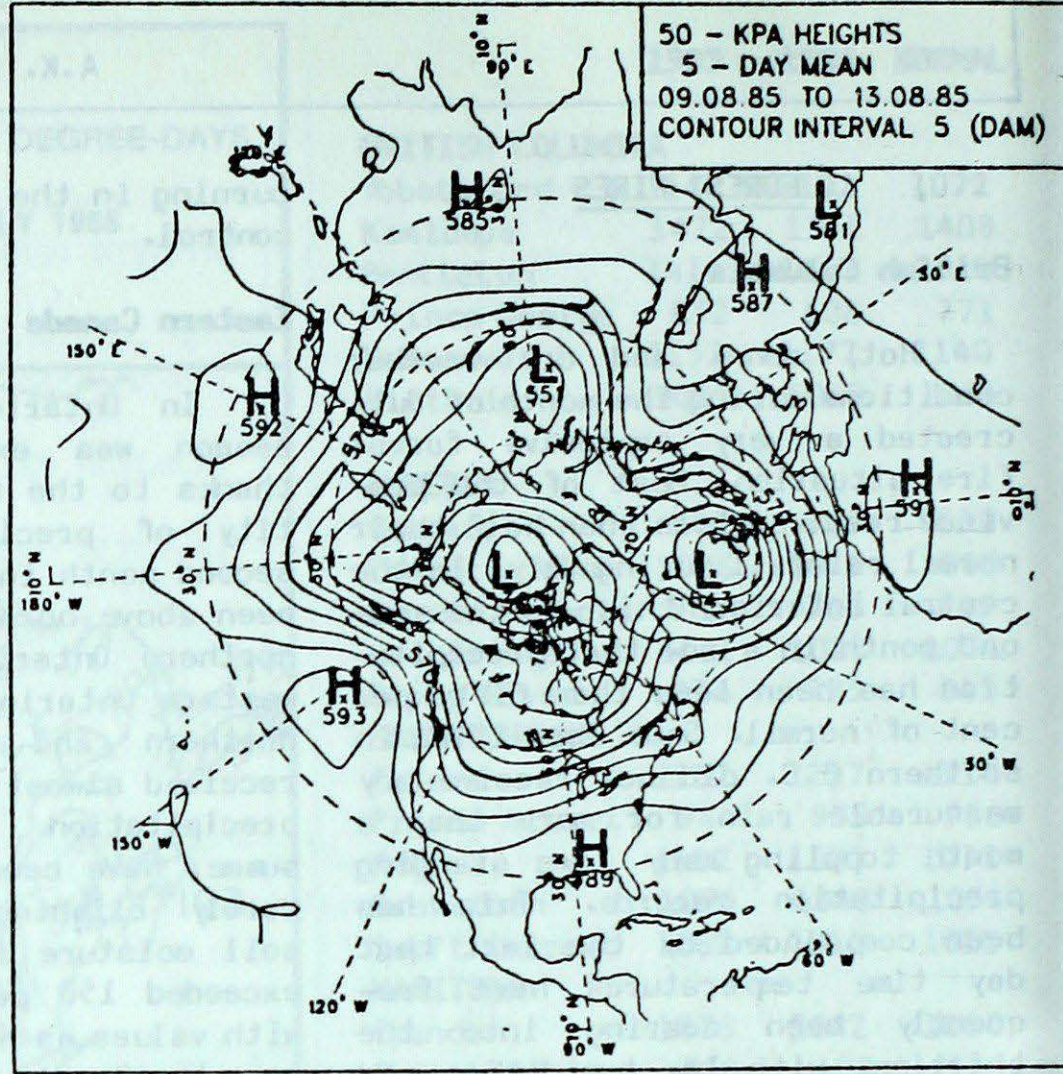
instead of being centred over the pole, was approximately 25 degrees to the south, over Lancaster Sound at 90°W. The result, as can be seen from the analysis of height anomalies, was above normal heights near the North pole and a deepening of the Canadian trough. In contrast with June, the Hovmöller time-longitude diagrams for 45° and 65°

reflect a stagnant situation with weak displacement, especially in regards to the Canadian trough at 80°W. The immobility and deepening of the Canadian trough explains why mean monthly temperatures were below normal in the centre of the country. The weak stationary ridge at 120°W gave dry weather to western Canada.

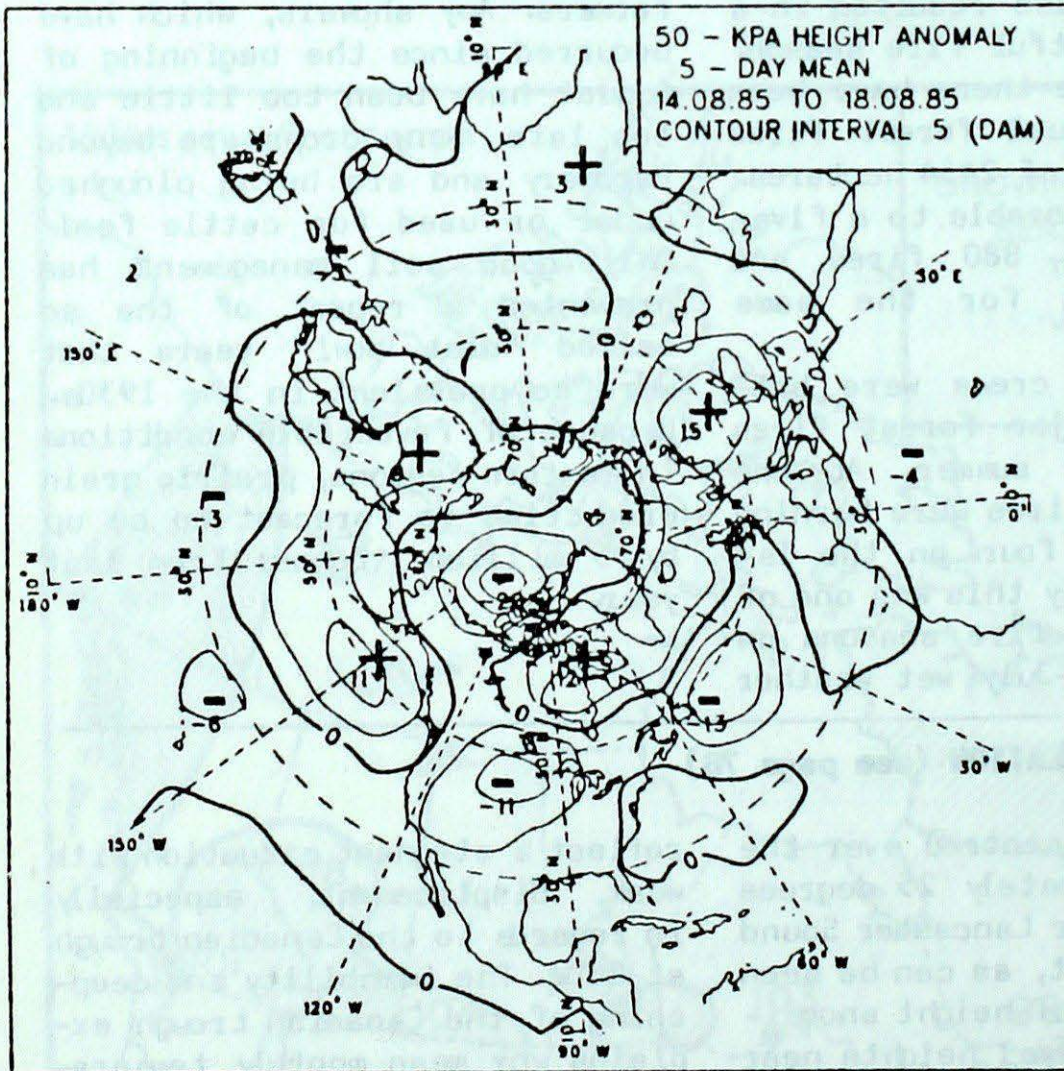
ATMOSPHERIC CIRCULATION



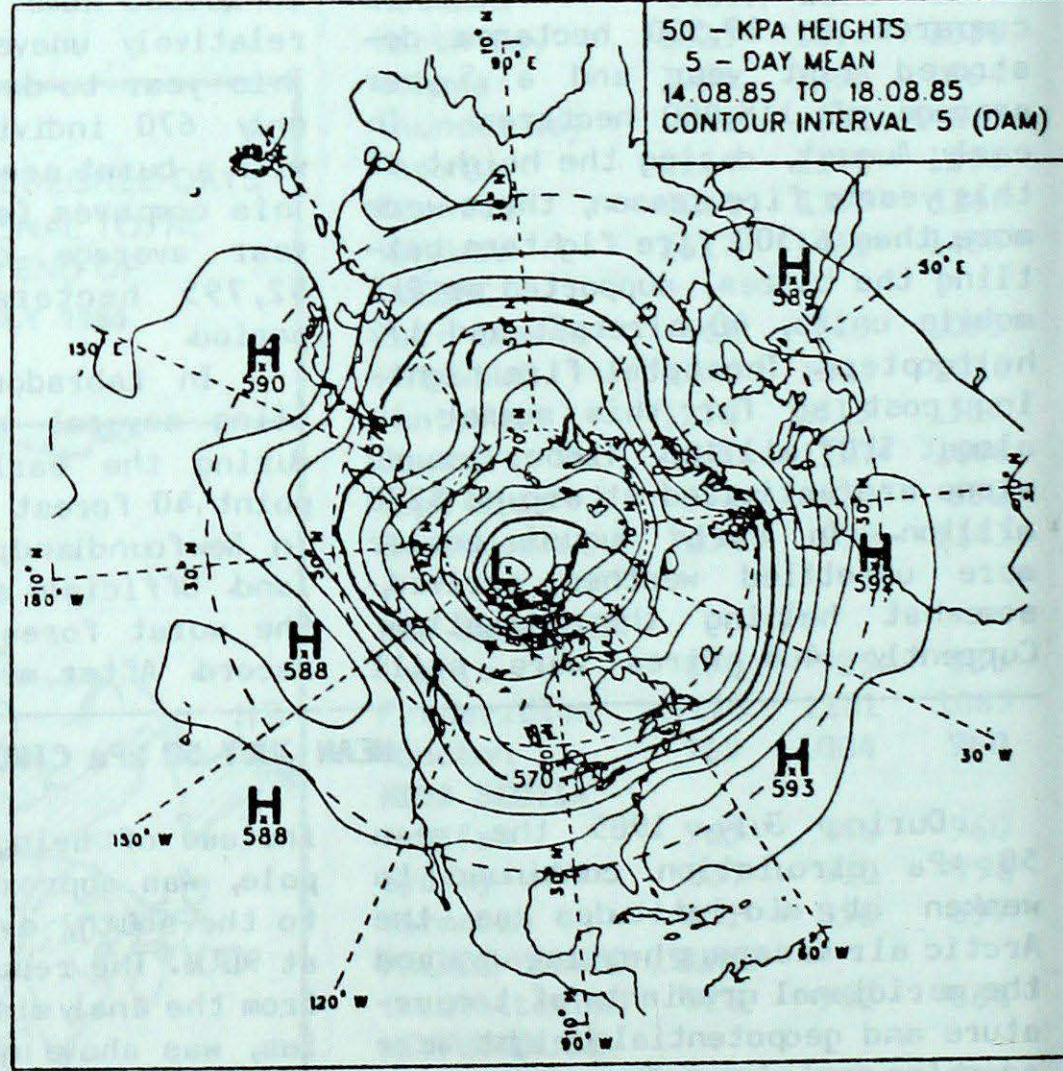
Mean 50 kPa height anomaly (dam)
August 9 to August 13, 1985



Mean 50 kPa heights (dam)
August 9 to August 13, 1985

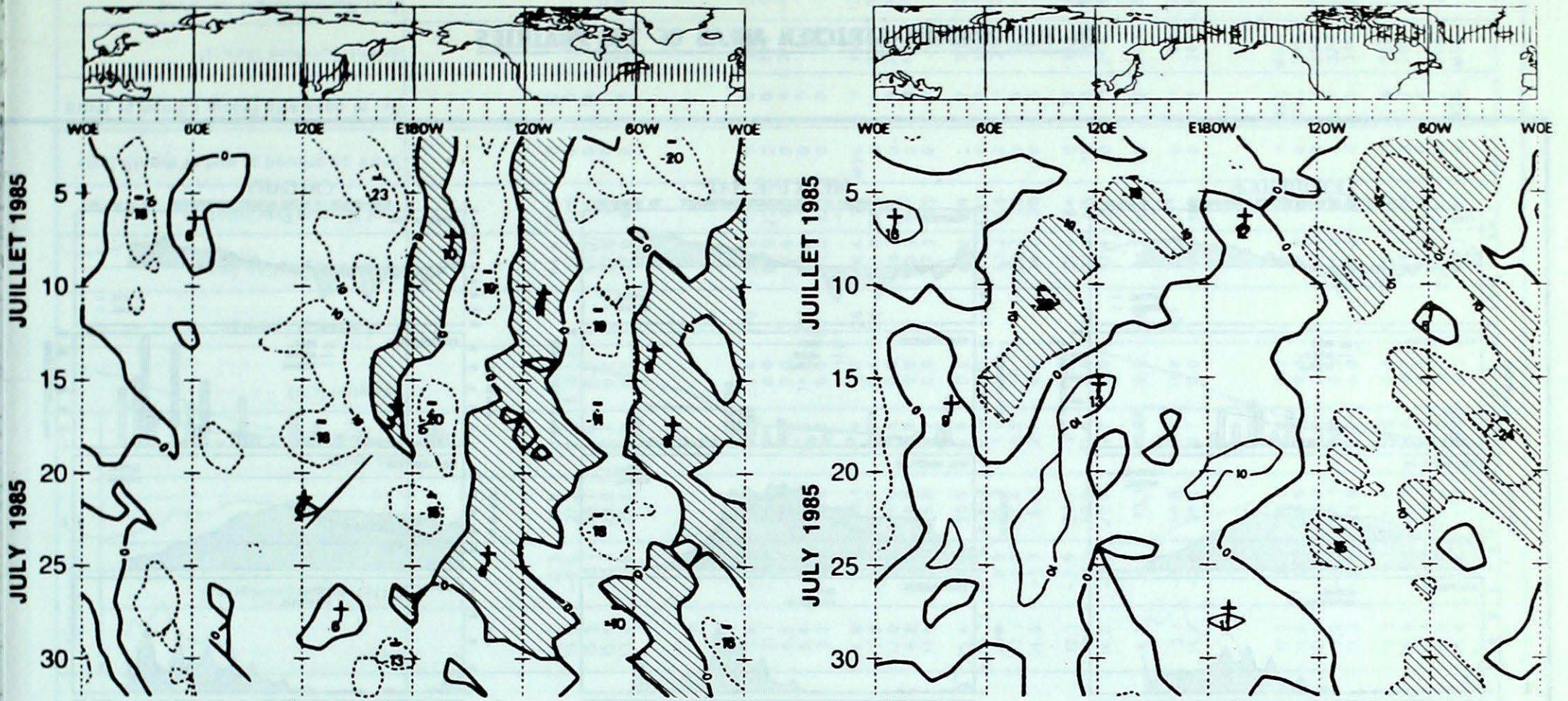


Mean 50 kPa height anomaly (dam)
August 14 to August 18, 1985

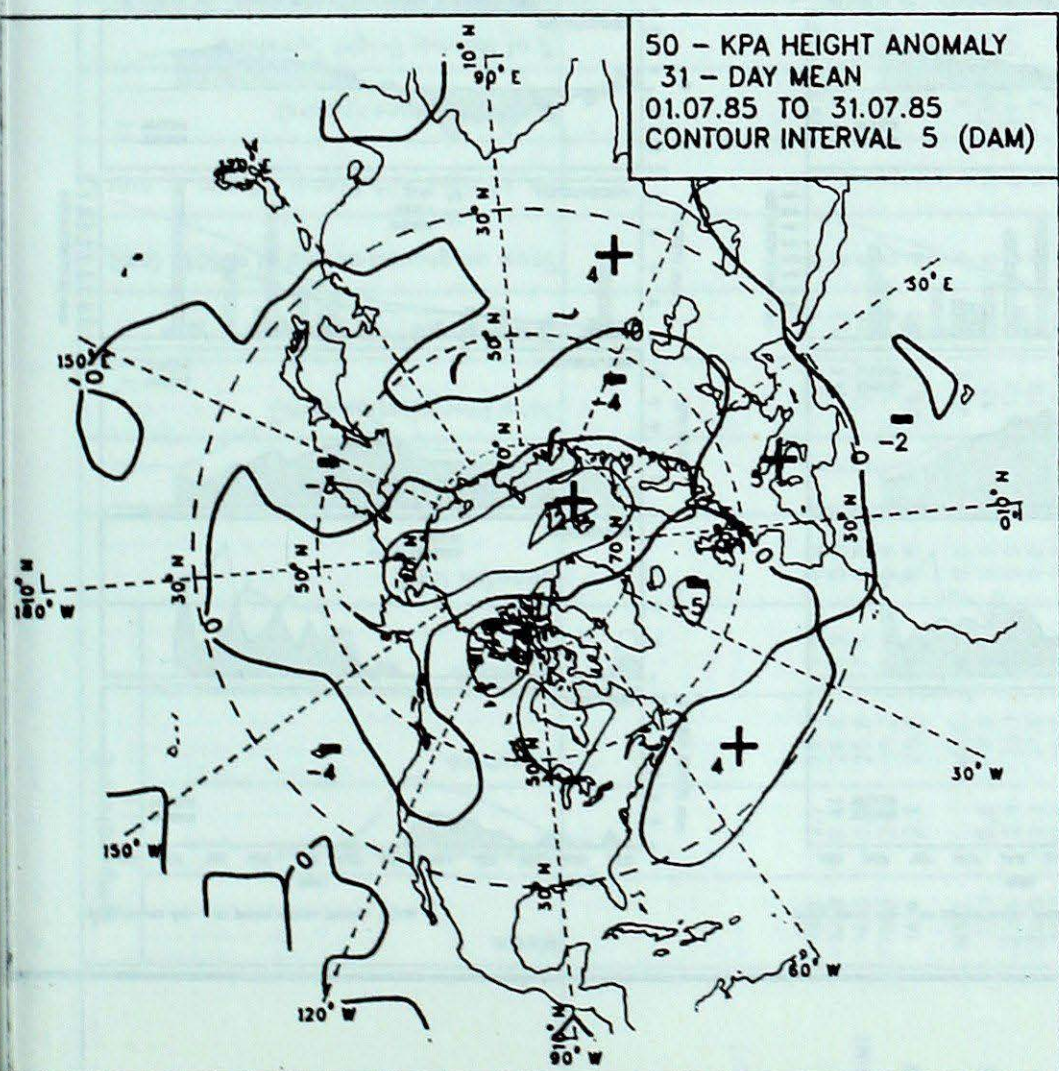


Mean 50 kPa heights (dam)
August 14, to August 18, 1985

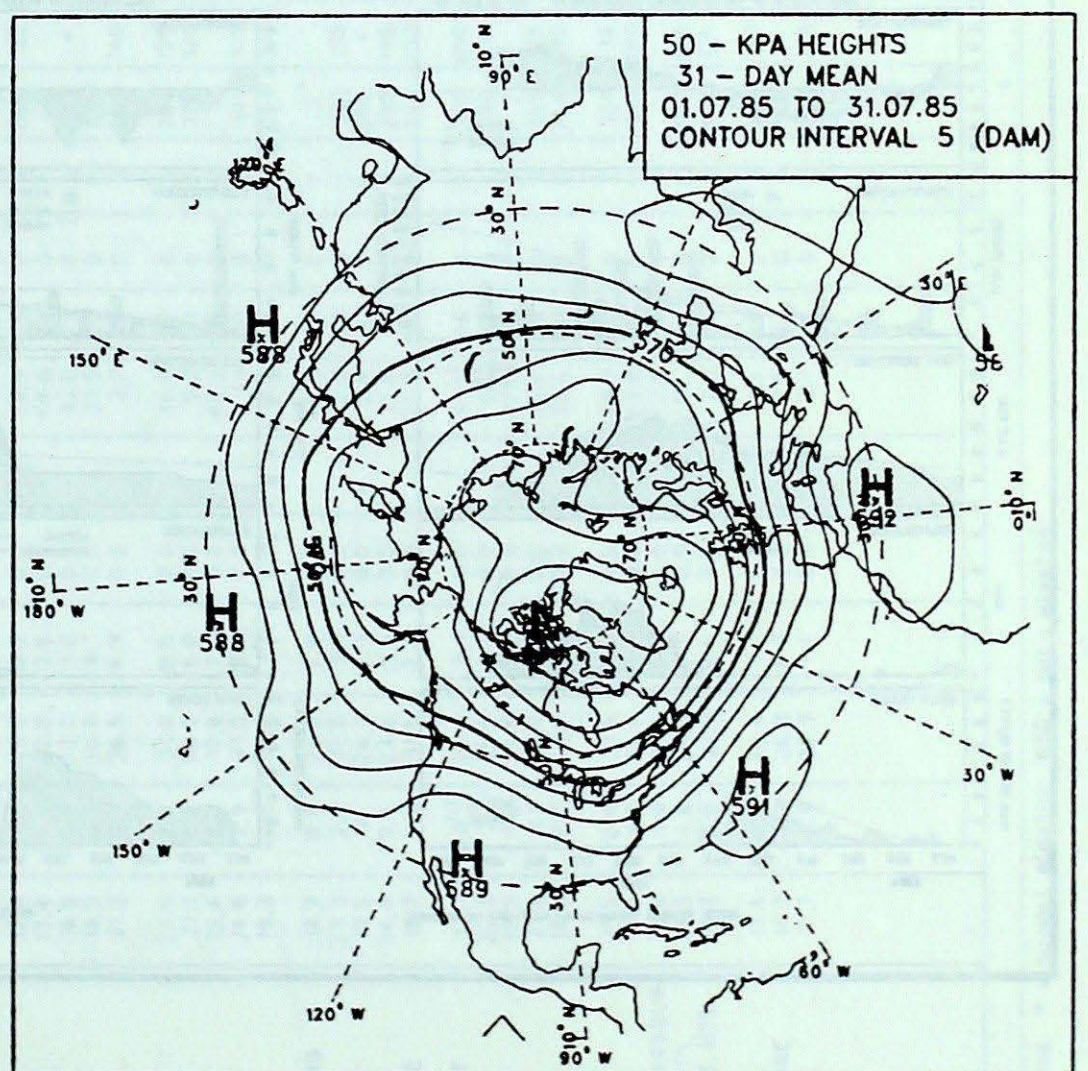
ATMOSPHERIC CIRCULATION



Time-longitude Hovmöller diagrams of 50 kPa heights at latitudes 45°N and 65°N



Mean 50 kPa height anomaly (dam)
July 1985

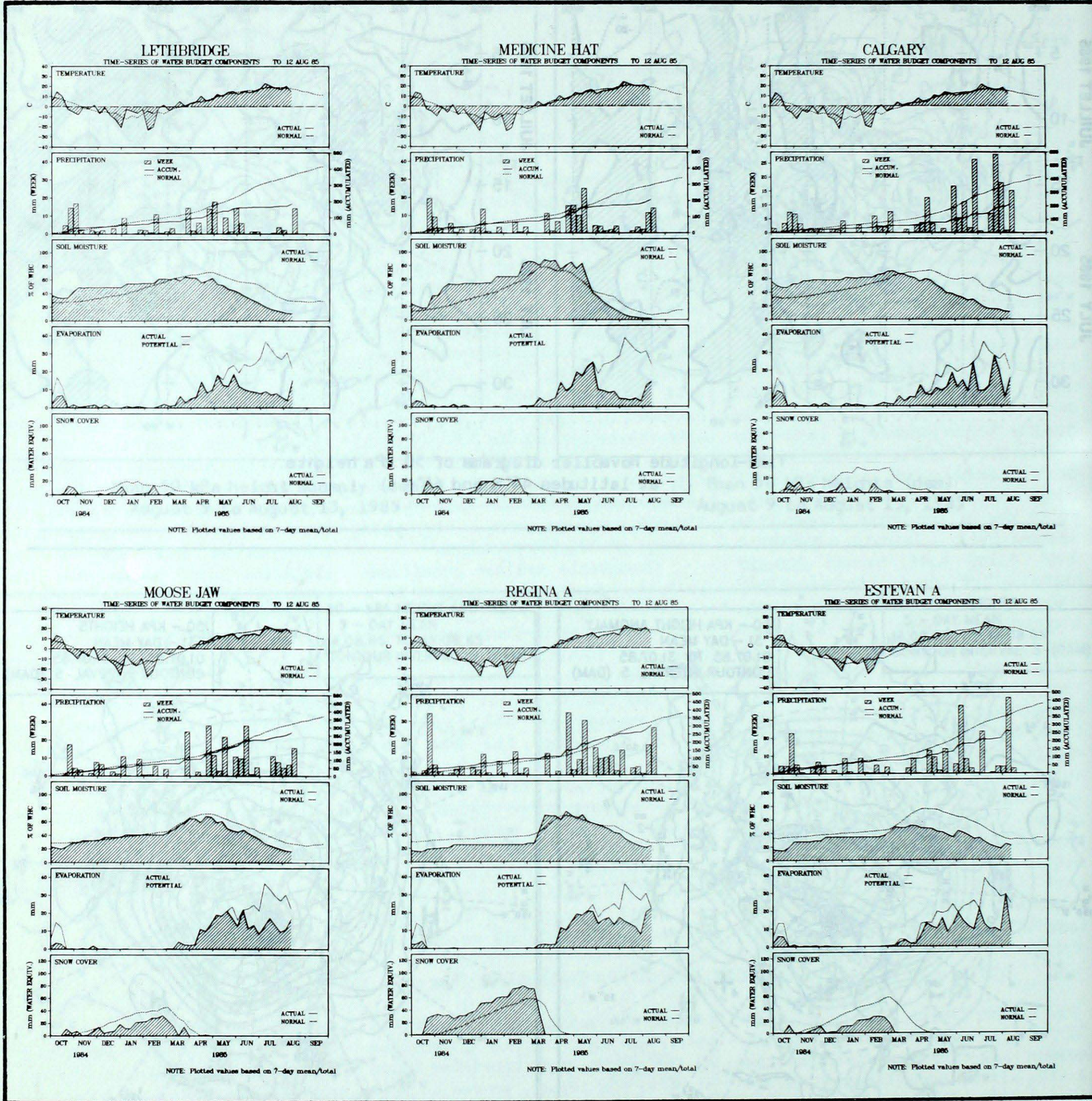


Mean 50 kPa heights (dam)
July 1985

FEATURE

TEMPERATURE, PRECIPITATION AND SOIL MOISTURE PROFILE

IN THE DROUGHT-STRICKEN AREAS OF THE PRAIRIES



STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
BRITISH COLUMBIA													
ABBOTSFORD	19.6	2.2	33.8	5.9	0.0	1.5	3	0	1	393	135	4.4	
ALERT BAY	14.8	0.4	26.8	5.9	0.0	7.1	13	0	2	X		100.1	
AMPHITRITE POINT	14.0	-0.3	20.8	7.6	0.0	12.0	16	0	3	X		125.8	
BLUE RIVER	18.8	2.0	35.2	2.4	0.0	5.2	6	0	3	345	140		
BULL HARBOUR	16.4	2.9	20.6	3.5	0.0	26.8	43	0	7	X		143.7	
CAPE SCOTT	MSG		MSG	9.8	0.0	42.9	51	0	7	X		MSG	
CAPE ST. JAMES	13.1	0.0	17.8	9.0	0.0	45.1	77	0	9	236	*	150.1	
CASTLEGAR	23.6	2.9	39.1	8.5	0.0	TR		0	0	397	125	0.0	
COMOX	20.0	2.2	31.6	6.6	0.0	TR		0	0	X		5.4	
CRANBROOK	22.2	3.4	36.6	7.3	0.0	6.0	27	0	3	402	*	1.4	
DEASE LAKE	12.8	-0.1	29.2	0.2	0.0	69.9	125	0	10	244	122	161.2	
ETHELDA BAY	13.4	-0.2	22.8	3.6	0.0	48.8	38	0	7	X		141.3	
FORT NELSON	16.5	-0.5	33.0	1.8	0.0	61.8	73	0	13	293	*	69.9	
FORT ST. JOHN	16.5	0.5	30.8	6.1	0.0	21.5	27	0	8	X		58.5	
HOPE	21.2	2.3	36.5	9.3	0.0	2.7	7	0	1	363	140	0.0	
KAMLOOPS	23.6	2.4	37.0	8.6	0.0	14.0	62	0	2	394	124	0.0	
KELOWNA	21.7	2.6	38.0	5.0	0.0	5.2	21	0	2	374	120	1.4	
LANGARA	12.4	-0.2	17.8	7.8	0.0	60.2	75	0	6	X		174.0	
LYTTON	24.9	2.9	41.0	8.2	0.0	1.1	10	0	0	341	115	0.0	
MACKENZIE	15.3	0.0	31.3	1.7	0.0	14.2	27	0	3	343	127	92.4	
MCINNES ISLAND	14.7	0.6	25.6	9.8	0.0	43.0	43	0	7	X		103.1	
PENTICTON	23.3	2.6	37.8	9.1	0.0	2.8	13	0	1	361	115	0.0	
PORT ALBERNI	19.5	*	36.0	2.3	0.0	0.4	*	0	0	386	*	12.8	
PORT HARDY	14.4	0.4	23.6	3.9	0.0	15.6	29	0	2	290	146	110.5	
PRINCE GEORGE	16.7	1.2	31.6	2.3	0.0	20.3	34	0	5	390	133	61.9	
PRINCE RUPERT	13.1	-0.1	20.4	6.1	0.0	47.8	46	0	9	215	150	151.7	
PRINCETON	20.3	2.1	35.6	4.3	0.0	5.4	24	0	2	398	*	0.0	
QUESNEL	18.0	1.2	34.6	2.6	0.0	17.8	33	0	3	X		32.9	
REVELSTOKE	21.9	3.1	36.7	8.9	0.0	13.4	23	0	3	348	129	0.0	
SANDSPIT	14.6	0.2	23.2	9.5	0.0	35.4	81	0	8	244	130	102.2	
SMITHERS	15.5	0.4	31.5	0.7	0.0	28.7	62	0	7	327	134	85.1	
TERRACE	17.8	1.3	33.0	5.8	0.0	23.0	40	0	4	315	180	42.0	
VANCOUVER HARBOUR	19.9	1.9	29.4	9.7	0.0	7.8	18	0	0	X		2.5	
VANCOUVER INT'L	19.3	1.6	28.8	9.3	0.0	TR		0	0	388	126	3.2	
VICTORIA GONZ. HTS	16.3	0.5	27.9	9.4	0.0	7.3	54	0	1	426	124	54.8	
VICTORIA INT'L	17.5	0.8	30.4	6.1	0.0	1.4	7	0	1	421	127	28.2	
VICTORIA MARINE	14.7	0.3	26.3	6.0	0.0	7.6	33	0	1	X		102.2	
WILLIAMS LAKE	17.7	1.9	32.0	1.4	0.0	5.7	11	0	2	403	129	40.8	

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
YUKON TERRITORY													
BURWASH	13.0	0.3	23.8	-0.5	0.0	94.4	153	0	12	X		155.6	
DAWSON	14.5	-0.6	27.2	-0.2	0.0	37.2	109	0	5	X		101.7	
MAYO	15.5	-0.1	28.7	4.6	0.0	65.2	126	0	14	X		78.7	
WATSON LAKE	15.4	0.1	29.8	2.7	0.0	27.9	47	0	11	276	105	78.2	
WHITEHORSE	13.9	-0.6	25.6	3.0	0.0	22.0	64	0	8	257	102	125.9	
NORTHWEST TERRITORIES													
ALERT	3.8	-0.2	16.2	-4.2	23.4	210	26.8	137	0	6	391	130	441.2
BAKER LAKE	11.1	-0.3	26.7	-0.4	0.0	90.8	238	0	8	249	82	344.5	
CAMBRIDGE BAY	6.5	-1.8	18.3	1.0	0.0	17.8	90	0	6	214	70	357.1	
CAPE DYER	6.4	0.9	16.4	-1.0	14.8	217	28.2	65	0	5	X	360.2	
CAPE PARRY	3.2	-2.9	14.8	-1.5	6.0	857	21.0	123	0	8	X	443.5	
CLYDE	4.8	0.3	20.1	-1.9	2.0	26	6.4	27	MSG	3	358	137	407.0
COPPERMINE	7.8	-2.3	23.7	0.8	0.4	80	73.8	286	0	14	203	63	316.8
CORAL HARBOUR	12.0	2.9	21.6	1.5	0.0	26.2	64	0	6	289	101	241.3	
EUPEKA	6.6	0.8	14.5	0.8	0.0	20.3	167	0	8	409	119	354.2	
FORT RELIANCE	11.6	-2.7	26.8	2.7	0.0	37.3	109	0	11	X		202.8	
FORT SIMPSON	15.4	-1.6	30.5	0.8	0.0	65.2	109	0	7	307	106	100.5	
FORT SMITH	15.1	-1.3	31.1	0.3	0.0	46.2	81	0	8	185	61	101.8	
FROBISHER BAY	8.9	0.9	20.3	1.9	0.0	67.2	106	0	11	212	104	282.2	
HALL BEACH	7.1	1.3	17.4	0.5	TR	26.7	77	0	6	X		338.3	
HAY RIVER	14.9	-1.3	31.1	2.5	0.0	34.0	70	0	5	X		112.4	
INUVIK	10.1	-3.5	23.7	-1.0	0.0	21.6	64	0	10	259	76	244.1	
MOULD BAY	3.1	-1.2	10.8	-1.0	8.0	242	31.9	215	TR	8	150	54	461.2
NORMAN WELLS	14.0	-2.7	29.4	2.7	0.0	47.4	84	0	11	244	84	134.9	
POND INLET													
RESOLUTE	4.6	0.1	13.1	-1.3	9.8	296	41.2	183	TR	12	243	88	414.4
SACHS HARBOUR	3.1	-3.2	10.8	-1.3	11.8	621	42.2	277	0	11	69	20	473.0
YELLOWKNIFE	14.7	-2.0	29.2	3.7	0.0	57.2	169	0	6	367	96	112.6	
ALBERTA													
BANFF	17.2	2.0	31.0	3.0	0.0	15.0	35	0	MSG	MSG		MSG	
BROOKS	19.6	0.7	35.5	6.0	0.0	38.8	97	0	MSG	348	*	MSG	
CALGARY INT'L	18.4	1.6	34.0	5.4	0.0	53.2	81	0	7	359	111	39.2	
COLD LAKE	17.2	-0.1	31.3	5.7	0.0	40.6	47	0	7	323	103	44.0	
CORONATION	17.3	-0.4	33.6	5.0	0.0	17.8	28	0	5	370	109	53.3	
EDMONTON INT'L	17.3	1.1	31.6	5.0	0.0	31.1	33	0	6	368	117	47.9	
EDMONTON MUNI.	18.9	1.1	32.6	8.8	0.0	38.2	43	0	7	385	125	24.5	
EDMONTON NAMAO	17.3	0.0	30.1	7.0	0.0	62.5	81	0	6	X		45.2	
EDSON	15.8	1.0	31.4	2.6	0.0	37.1	41	0	7	344	122	78.5	
FORT CHIPEWYAN	15.0	-1.4	31.5	0.0	0.0	39.2	51	0	MSG	MSG		MSG	

X = Not observed * = normal missing MSG = data missing

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
FORT MCMURRAY	16.1	-0.7	29.4	2.2	0.0	57.2	75	0	8	321	112	74.1	
GRANDE PRAIRIE	16.8	0.5	30.5	4.0	0.0	9.3	14	0	2	372	*	52.9	
HIGH LEVEL	14.9	-1.2	28.4	-0.2	0.0	63.3	91	0	9	307	104	114.0	
JASPER	17.3	1.8	32.0	3.0	0.0	7.4	14	0	2	378	*	44.2	
LETHBRIDGE	20.0	1.0	35.4	6.2	0.0	6.6	15	0	3	386	111	22.5	
MEDICINE HAT	21.4	1.1	38.0	6.5	0.0	7.7	19	0	4	395	113	14.1	
PEACE RIVER	16.7	0.6	30.5	5.0	0.0	56.3	93	0	9	X		39.6	
RED DEER	16.6	0.1	32.8	2.6	0.0	43.6	56	0	8	X		59.5	
ROCKY MTN HOUSE	16.0	0.3	32.1	2.0	0.0	45.8	49	0	9	X		74.0	
SLAVE LAKE	15.9	-0.1	27.5	4.1	0.0	42.5	54	0	7	355	121	70.2	
SUFFIELD	20.8	1.0	36.0	6.1	0.0	40.6	124	0	8	353	100	9.1	
WHITECOURT	16.5	1.0	29.7	5.7	0.0	44.0	43	0	11	X		62.4	
SASKATCHEWAN													
BROADVIEW	17.5	-0.6	36.7	2.0	0.0	14.4	28	0	4	375	112	42.2	
COLLINS BAY	13.5	-1.0	28.3	1.8	0.0	64.8	75	0	10	306	*	152.4	
CREE LAKE	14.8	-1.2	28.9	2.2	0.0	61.6	77	0	13	349	124	111.5	
ESTEVA	20.8	0.5	39.6	7.5	0.0	8.6	15	0	2	369	103	9.4	
HUDSON BAY	16.5	-1.2	29.8	4.1	0.0	93.0	116	0	8	345	*	61.6	
KINDERSLEY	18.5	-0.2	34.7	5.4	0.0	18.6	38	0	5	X		34.0	
LA RONGE	16.2	-0.9	29.6	4.2	0.0	45.8	50	0	9	X		73.3	
MEADOW LAKE	16.0	-1.6	28.7	3.9	0.0	34.5	41	0	8	323	*	69.2	
MOOSE JAW	20.0	-0.1	38.4	6.3	0.0	23.8	44	0	5	395	114	14.1	
NIPAWIN	16.6	*	28.9	5.1	0.0	75.3	*	0	15	349	105	59.7	
NORTH BATTLEFORD	18.0	-0.5	33.8	6.8	0.0	38.9	59	0	5	X		31.4	
PRINCE ALBERT	17.1	-0.7	30.4	4.6	0.0	51.3	78	0	6	338	114	48.3	
REGINA	19.3	0.0	36.8	6.5	0.0	10.0	18	0	4	388	113	22.2	
SASKATOON	19.0	0.1	37.0	6.4	0.0	59.0	108	0	5	X		23.3	
SWIFT CURRENT	19.4	0.7	36.8	6.2	0.0	18.2	38	0	6	372	108	28.2	
URANIUM CITY	14.9	-1.7	29.2	3.7	0.0	36.8	77	0	7	X		103.0	
WYNARD	17.3	-1.1	33.1	5.8	0.0	48.2	85	0	7	375	115	47.0	
YORKTON	17.3	-1.4	33.8	4.8	0.0	20.5	36	0	8	MSG		43.7	
MANITOBA													
BRANDON	17.8	-1.4	32.5	3.0	0.0	11.4	17	0	3	X		33.2	
CHURCHILL	11.5	-0.7	28.8	1.0	0.0	59.4	130	0	9	283	99	202.9	
DAUPHIN	17.5	-1.4	30.0	4.1	0.0	26.2	40	0	7	346	107	38.8	
GILLAM	13.7	-1.7	29.6	4.5	0.0	63.8	68	0	10	MSG		138.2	
GIMLI	17.6	-1.4	30.8	6.7	0.0	40.9	70	0	9	335	102	36.7	
ISLAND LAKE	15.8	-1.7	20.8	2.7	0.0	37.8	36	0	8	X		79.8	
LYNN LAKE	14.4	-1.8	28.1	2.5	0.0	92.8	112	0	14	298	106	MSG	
NORWAY HOUSE	16.2	*	30.2	3.9	0.0	38.5	*	0	8	0		69.5	
PILOT MOUND	17.9	-1.1	30.9	4.4	0.0	32.0	44	0	6	X		32.7	

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
PORTAGE LA PRAIRIE	19.0	-1.1	32.3	7.7	0.0								
THE PAS	16.5	-1.6	28.9	4.2	0.0	11.1	14	0	14	X		19.5	
THOMPSON	14.1	-1.9	30.0	1.0	0.0	36.8	52	0	10	343	112	65.6	
WINNIPEG INT'L	18.8	-1.2	32.3	7.5	0.0	66.4	71	0	12	306	120	127.0	
ONTARIO													
ATIKOKAN	16.3	-1.3	28.6	2.2	0.0	54.6	51	0	10	306	107	66.2	
BIG TROUT LAKE	14.7	-1.7	27.6	4.9	0.0	78.0	82	0	14	258	*	106.5	
EARLTON	16.7	-1.4	29.3	6.0	0.0	168.5	208	0	18	X		57.6	
GERALDTON	15.2	-1.5	27.0	3.7	0.0	130.2	159	0	18	X		88.8	
GORE BAY	18.4	-0.8	27.7	8.9	0.0	64.1	105	0	6	X		20.4	
HAMILTON RBG	21.0	-1.1	32.6	9.5	0.0	58.6	87	0	6	303	*		
HAMILTON	19.9	-1.0	30.0	8.1	0.0	77.2	109	0	9	X			
KAPUSKASING	15.5	-1.7	28.1	0.7	0.0	157.4	163	0	17	X		85.4	
KENORA	18.7	-0.9	29.3	9.3	0.0	28.8	31	0	7	X		20.1	
KINGSTON	19.1	-1.4	28.8	9.7	0.0	67.4	126	0	5	301	107	13.4	
LANSDOWNE HOUSE	15.7	-1.7	25.8	8.1	0.0	79.2	82	0	16	X		79.1	
LONDON	19.7	-1.0	30.1	7.8	0.0	68.5	94	0	10	281	102	9.9	
MOOSONEE	13.5	-2.2	30.5	-0.1	0.0	138.3	144	0	18	214	90	142.4	
MOUNT FOREST	17.6	-1.0	29.2	4.0	0.0	47.4	62	0	9	X		40.3	
MUSKOKA	17.6	-1.1	30.0	6.3	0.0	155.1	200	0	15	X			
NORTH BAY	17.1	-1.6	27.1	5.3	0.0	167.4	163	0	13	276	100	49.4	
OTTAWA INT'L	20.3	-0.7	31.2	9.0	0.0	67.2	78	0	8	X		6.3	
PETAWAWA	17.9	-1.2	30.8	5.3	0.0	89.8	106	0	10	X		39.2	
PETERBOROUGH	18.0	-1.6	29.5	5.7	0.0	71.8	92	0	5	X			
PICKLE LAKE	16.0	-1.5	27.5	5.3	0.0	91.4	82	0	17	X		MSG	
RED LAKE	16.8	-1.8	28.7	5.2	0.0	40.7	46	0	10	301	*	53.3	
ST. CATHARINES	21.1	-1.0	32.7	10.0	0.0	41.6	60	0	9	X			
SARNIA	20.5	-0.8	30.9	9.0	0.0	61.3	101	0	13	306	104		
SAULT STE. MARIE	16.0	-1.7	29.4	3.2	0.0	58.3	104	0	9	275	95	70.1	
SIMCOE	19.7	-1.3	31.0	7.3	0.0	48.6	70	0	8	X			
SIOUX LOOKOUT	17.0	-1.7	26.4	6.2	0.0	59.5	63	0	10	X		51.8	
SUDBURY	17.6	-1.5	28.0	4.4	0.0	148.3	178	0	9	307	106	39.3	
THUNDER BAY	16.7	-1.3	28.0	5.5	0.0	84.3	111	0	13	296	97	54.9	
TIMMINS	15.7	-1.9	29.7	3.2	0.0	133.2	147	0	16	X		112.9	
TORONTO	21.0	-1.4	29.4	12.9	0.0	47.2	63	0	7	X			
TORONTO INT'L	19.6	-1.4	31.7	8.5	0.0	91.5	128	0	9	X		9.6	
TORONTO ISLAND	19.6	-1.1	29.2	12.2	0.0	50.0	70	0	7	X		4.3	
TRENTON	19.4	-1.6	30.3	8.0	0.0	49.0	80	0	7	X		13.0	
WATERLOO-WELL	18.7	-1.5	29.0	7.2	0.0	157.8	209	0	8	X			
WAWA	12.3	*	23.3	0.5	0.0	183.3	*	0	15	X	*	179.8	
WIARTON	18.0	-0.9	30.6	7.9	0.0	77.5	103	0	10	286	96	33.9	
WINDSOR	22.3	-0.3	34.2	10.6	0.0	88.9	106	0	9	X		1.1	

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STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
QUEBEC													
BAGOTVILLE	18.2	-0.1	32.9	6.9	0.0	194.0	161	0	18	X			28.1
BAIE COMEAU	15.6	-0.6	27.3	5.9	0.0	95.3	117	0	13	220	*		77.3
BLANC SABLON	12.0	0.5	25.2	3.0	0.0	140.0	144	0	16	135	*		185.4
CHIBOUGAMAU	15.0	-1.2	30.2	4.0	0.0	162.0	140	0	20	200	80		104.7
GASPE	17.4	-0.2	31.9	5.3	0.0	105.4	127	0	13	264	*		44.2
INUKJUAK	9.3	-0.4	18.5	3.3	0.0	35.6	65	0	10	231	112		270.3
KUUJJUAQ	12.3	0.5	25.1	2.3	0.0	57.4	99	0	13	205	103		178.4
KUUJJUARAPIK	6.6	-4.3	18.1	0.6	TR	30.2	36	0	6	448	264		352.3
LA GRANDE RIVIERE	12.2	*	26.2	0.8	0.0	80.7	*	0	13	239	*		186.2
MANIWAKI	17.7	-1.0	29.9	6.5	0.0	154.2	167	0	14	253	93		38.0
MATAGAMI	13.8	-2.2	30.5	1.8	0.0	123.1	117	0	19	234	93		129.3
MONT JOLI	18.2	0.5	30.3	8.4	0.0	114.7	152	0	15	249	98		29.2
MONTREAL INT'L	20.3	-1.0	32.3	10.1	0.0	67.2	74	0	10	282	102		3.8
MONTREAL M INT'L	18.4	*	30.2	6.1	0.0	111.0	*	0	11	271	*		25.8
NATASHQUAN	15.1	0.5	25.0	5.6	0.0	83.6	88	0	7	250	102		91.8
NITCHEQUON	13.6	-0.4	25.7	5.4	0.0	96.4	90	0	18	205	101		139.5
QUEBEC	18.9	-0.6	30.8	7.5	0.0	149.0	127	0	15	240	96		21.4
ROBERVAL	18.4	0.1	31.0	7.7	0.0	159.1	133	0	14	245	*		27.9
SCHIEFFERVILLE	12.3	-0.7	24.6	4.0	0.0	73.4	75	0	15	194	*		175.4
SEPT-ILES	15.6	-0.7	30.9	7.3	0.0	153.1	157	0	14	233	95		80.7
SHERBROOKE	18.1	-0.1	29.2	5.5	0.0	178.8	152	0	14	267	*		29.2
STE AGATHE DES MONTS	17.0	-0.6	27.5	4.4	0.0	128.8	121	0	12	246	89		48.2
ST-HUBERT	19.8	-1.3	30.5	8.3	0.0	73.9	76	0	9	MSG			9.0
VAL D'OR	16.0	-1.5	28.5	5.4	0.0	201.4	198	0	17	251	96		77.1
NEW BRUNSWICK													
CHARLO	18.2	-0.4	31.8	8.3	0.0	151.6	174	0	12	274	107		31.8
CHATHAM	19.4	-0.2	32.7	7.3	0.0	56.4	61	0	8	288	113		14.2
FREDERICTON	19.3	-0.4	31.7	7.2	0.0	54.5	61	0	8	308	*		10.7
MONCTON	19.1	0.2	30.3	8.6	0.0	58.6	61	0	8	294	120		10.2
SAINT JOHN	16.8	-0.5	27.4	8.7	0.0	42.0	40	0	7	232	106		44.5

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
NOVA SCOTIA													
GREENWOOD	19.6	0.1	30.1	7.2	0.0	63.6	81	0	7		X		6.4
HALIFAX INT'L	19.0	0.4	29.2	9.9	0.0	67.0	71	0	8		0		2.3
SABLE ISLAND	15.5	-0.4	21.4	7.1	0.0	195.5	212	0	11	189	115		78.0
SHEARWATER	18.0	0.2	28.2	9.3	0.0	137.8	141	0	9	237	108		182.0
SYDNEY	18.9	0.8	29.2	6.9	0.0	79.0	97	0	9	273	112		8.7
TRURO	18.4	0.2	28.5	7.6	0.0	53.2	58	0	9	246	109		15.5
YARMOUTH	16.4	-0.3	23.6	7.7	0.0	45.0	57	0	8	221	106		50.5
PRINCE EDWARD ISLAND													
CHARLOTTETOWN	19.7	-1.0	29.2	11.3	0.0	21.9	25	0	6	MSG			2.8
SUMMERSIDE	19.7	0.4	29.3	11.0	0.0	10.7	13	0	6	280	105		3.6
NEWFOUNDLAND													
ARGENTIA	13.8	-0.6	20.2	7.2	0.0	196.8	270	0	15	X			131.6
BATTLE HARBOUR	14.4	3.4	29.6	2.8	0.0	106.5	151	0	14	X			112.5
BONAVISTA	16.4	1.3	26.9	7.6	0.0	106.4	174	0	9	X			59.0
BURGED	13.6	-0.3	24.0	8.2	0.0	199.7	147	0	16	147	93		136.9
CARTWRIGHT	13.2	0.1	27.2	4.9	0.0	144.1	173	0	19	198	99		151.6
CHURCHILL FALLS	13.4	-0.7	27.3	4.4	0.0	164.8	137	0	19	199	98		142.5
COMFORT COVE	18.0	1.0	30.4	8.6	0.0	119.0	151	0	13	X			38.9
DANIEL'S HARBOUR	14.7	-0.1	25.8	7.2	0.0	125.1	140	0	10	198	96		109.6
DEER LAKE	18.0	1.7	31.5	6.3	0.0	83.2	107	0	8	X			26.5
GANDER INT'L	17.7	0.8	29.7	8.5	0.0	107.8	156	0	12	229	106		33.8
GOOSE	15.5	-0.7	30.2	7.3	0.0	235.3	223	0	19	189	96		85.5
PORT-AUX-BASQUES	17.5	3.9	20.7	7.8	0.0	74.0	68	0	9	197	*		
ST ANTHONY	13.5	0.1	24.3	3.5	0.0	98.1	98	0					
ST JOHN'S	17.5	1.6	30.8	7.4	0.0	108.8	144	0	11	243	110		38.3
ST LAWRENCE	14.1	1.6	23.3	6.8	0.0	172.9	171	0	15	X			
STEPHENVILLE	17.2	0.8	27.5	8.7	0.0	69.3	72	0	8	209	101		43.6
WABUSH LAKE	13.5	-0.4	MSG	8.5	0.0	143.1	135	0	18	207	104		141.1

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AGROCLIMATOLOGICAL STATIONS

JULY 1985

STATION	Temperature C				Snowfall (cm)	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	Degree days above 5 C	
	Mean	Difference from Normal	Maximum	Minimum							This month	Since jan. 1st
BRITISH COLUMBIA												
AGASSIZ	20.2	2.3	33.0	8.0	0.0	2.6	6	0	1	368	470.0	1225.4
KAMLOOPS												
SIDNEY												
SUMMERLAND	24.1	3.2	36.5	11.0	0.0	0.8	4	0	0	391	604.0	1393.5
ALBERTA												
BEAVERLODGE	17.0	1.8	32.0	5.0	0.0	14.7	23	0	4	353	362.8	796.5
ELLERSLIE	16.7	0.7	30.5	4.5	0.0	40.1	47	0	6	371	360.7	842.3
FORT VERMILLION												
LACOMBE	16.6	0.5	33.0	5.0	0.0	62.1	86	0	8	332	354.3	816.1
LETHBRIDGE	19.5	1.5	34.5	5.5	0.0	21.8	55	0	6	386	449.7	1117.7
VAUXHALL	19.5	0.9	36.5	5.5	0.0	17.8	57	0	5	382	451.3	1092.3
VEGREVILLE	16.5	0.2	32.0	2.5	0.0	27.6	37	0	4		356.1	808.6
SASKATCHEWAN												
INDIAN HEAD	18.8	0.2	37.0	4.0	0.0	16.4	31	0	2		432.5	1005.5
MELFORT	16.8	-0.6	30.0	3.5	0.0	53.2	83	0	7	335	366.0	826.0
REGINA	18.8	0.2	37.0	3.0	0.0	11.0	21	0	2		416.0	912.5
SASKATOON	17.8	-0.6	37.0	5.5	0.0	59.5	106	0	6	379	402.0	940.0
SCOTT	17.9	0.7	32.0	4.5	0.0	38.2	64	0	6	359	399.6	870.5
SWIFT CURRENT SOUTH	19.7	1.2	37.0	7.5	0.0	24.8	65	0	3	360	456.9	1042.7
MANITOBA												
BRANDON	18.4	-0.8	33.0	3.0	0.0	18.3	26	0	2	360	425.4	1029.0
GLENLEA	17.9	-1.7	31.5	3.5	0.0	22.4	30	0	8	354	401.2	1123.1
MORDEN	19.3	-0.9	33.0	9.0	0.0	40.6	55	0	8	346		
ONTARIO												
DELHI	19.9	-0.8	30.0	6.0	0.0	57.4	81	0	10	290	462.4	1272.8
ELORA	18.2	-0.9	28.6	7.7	0.0	90.5	124	0	10		408.4	1057.3

STATION	Temperature C				Snowfall (cm)	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	Degree days above 5 C	
	Mean	Difference from Normal	Maximum	Minimum							This month	Since jan. 1st
QUEBEC												
LA POCATIERE	19.4	-0.7	29.5	8.0	0.0	142.2	150	0	12	266	445.0	891.9
L'ASSUMPTION	19.6	-0.6	31.5	6.0	0.0	72.6	78	0	13	263	624.7	1075.4
LENNOXVILLE												
NORMANDIN	16.9	0.0	30.0	4.5	0.0	212.8	187	0	18	224	366.8	696.3
ST. AUGUSTIN												
STE CLOTHILDE	19.9	-0.3	32.5	7.0	0.0	142.2	157	0	11	288	463.4	1137.6
NEW BRUNSWICK												
FREDERICTON												
NOVA SCOTIA												
KENTVILLE	20.0	0.8	30.0	10.0	0.0	47.9	68	0	7	258	465.3	990.8
NAPPAN	18.8	0.8	27.5	7.5	0.0	51.9	61	0	11	262	425.3	887.3
PRINCE EDWARD ISLAND												
CHARLOTTETOWN												
NEWFOUNDLAND												
ST. JOHN'S WEST	17.8	2.2	28.5	5.0	0.0	98.6	134	0	11	244	398.8	618.9