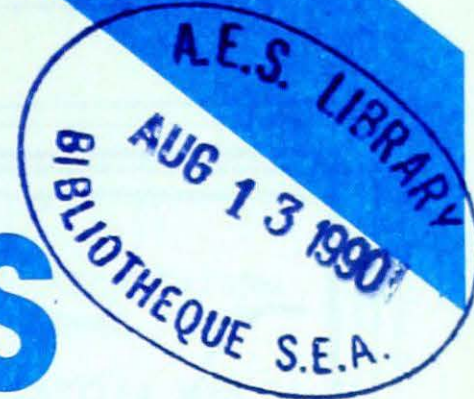




Environment  
Canada

Environnement  
Canada

# Climatic Perspectives



ARCH. C2.

July 23 to 29, 1990

A weekly review of Canadian climate and water

Vol.12 No.30

## Prairie precipitation much improved over the last few growing seasons

*The available soil moisture across the prairies has generally been higher in the 1990 growing season than during comparable periods in 1989 and 1988.*

Since the start of the 1990 growing season, many prairie communities have been regularly receiving their fair share of rain, and this past week has been no exception. In Saskatchewan, total rainfall amounts reported by the various weather stations situated throughout the province have ranged from 20 to 40 millimetres. The drier southeast corner of the province was one of the biggest benefactors of this moisture as thunderstorms moved through the area, producing heavy downpours; but the storms also produced hail and even touched off some tornadoes.

In the last few weeks significant soil moisture improvements have also been observed along the northern stretch of the border between Alberta and Saskatchewan from Cold Lake to Vegreville, Alberta and Biggar, Saskatchewan.

### Arctic shipping season off to a good start

Warmer than normal temperatures in the eastern Arctic over the past two months are the main reason that Arctic ice has been breaking up a little quicker than normal this season. There is now a "bergy" open water route stretching along the Baffin Island coastline into Lancaster Sound.

Lancaster Sound itself contains numerous strips and patches of ice, but is considered easily navigable by commercial vessels.

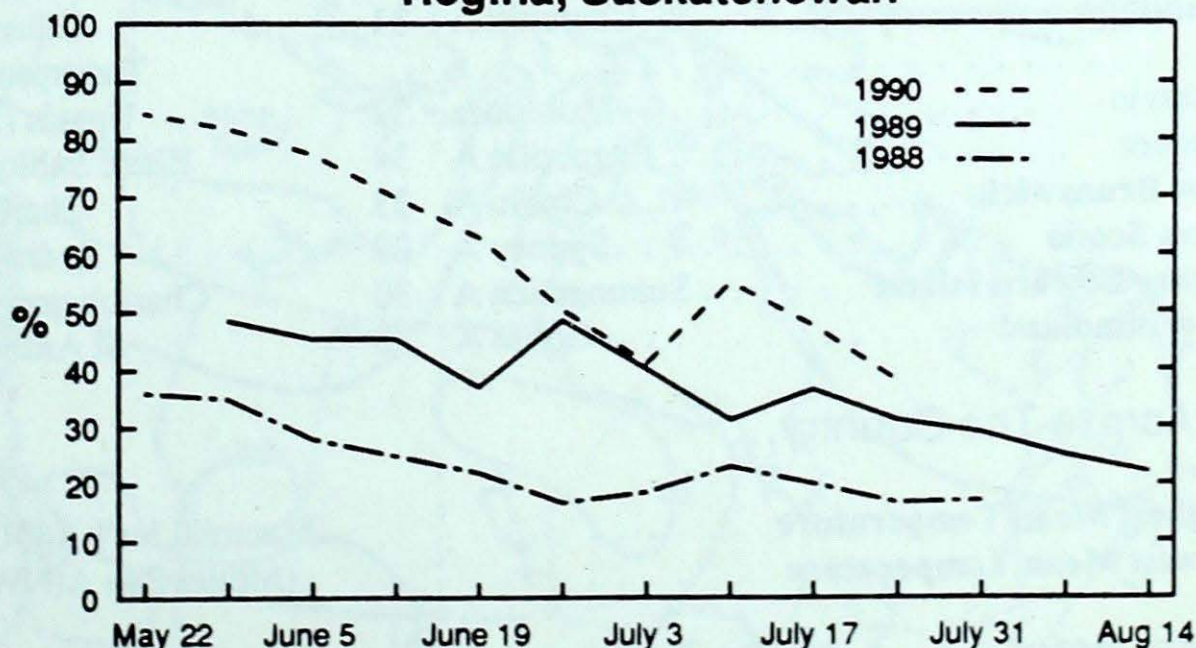
In the western Arctic there is a large area of open water around the Tuktoyaktuk Peninsula, as the main Arctic ice pack remains 150 to 200 kilometres offshore, which is normal for this time of the year.

Five Canadian ice breakers have been positioned in key areas of the Arctic. In addition to standing by and assisting ships they are also maintaining navigational aids.

### Warm weather continues across the country...

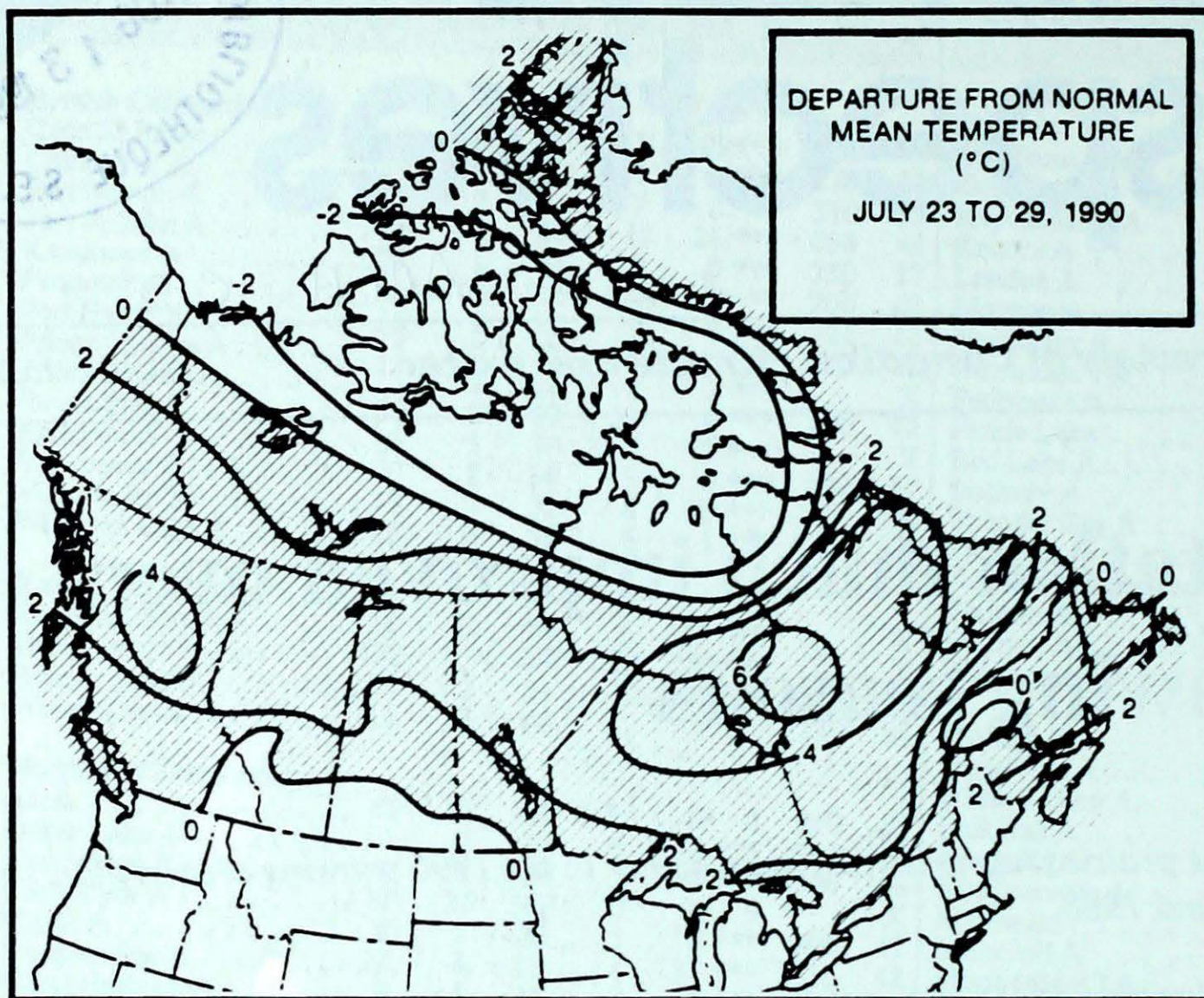
For the week of August 6, above-normal temperatures are forecast across most of the country especially the Atlantic provinces and most of Quebec, where readings will be about 5°C above normal. Temperatures will be about 2 to 3 degrees above normal across the Yukon, southern B.C., most of Alberta, the eastern half of Ontario and southwestern Quebec. Only the Keewatin District, NWT, can expect below-normal temperatures.

Regina, Saskatchewan



Soil moisture for wheat on continuously cropped fields in percent capacity. Crops planted on May 9 in 1988, on May 15 in 1989 and on May 14 in 1990





**Weekly normal temperatures (°C)**

	max.	min.
Whitehorse A	20.3	7.8
Iqaluit A	12.4	4.4
Yellowknife A	19.5	11.1
Vancouver Int'l A	22.6	13.0
Victoria Int'l A	22.6	10.9
Calgary Int'l A	23.5	9.3
Edmonton Int'l A	22.0	9.3
Regina A	26.2	11.6
Saskatoon A	25.4	11.4
Winnipeg Int'l A	25.9	13.2
Ottawa Int'l A	26.5	15.4
Toronto (Pearson Int'l A)	27.2	14.9
Montréal Int'l A	26.6	16.3
Québec A	25.4	13.9
Fredericton A	26.2	13.3
Saint John A	22.4	12.1
Halifax (Shearwater)	22.0	13.6
Charlottetown A	23.5	14.1
Goose A	22.1	11.1
St John's A	20.7	11.2

**Weekly temperature and precipitation extremes**

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Kamloops A 36	Prince George A 7	Cranbrook A 29
Yukon Territory	Whitehorse A 28	Komakuk Beach A 1	Shingle Point A 2
Northwest Territories	Fort Smith A 32	Resolute A -1	Rankin Inlet A 80
Alberta	Medicine Hat A 32	Fort McMurray A 6	Pincher Creek (aut) 61
Saskatchewan	Estevan A 32	Meadow Lake A 4	Eastend Cypress 39
Manitoba	Churchill A 31	Gillam A 4	Island Lake 33
		Thompson A 4	
Ontario	Moosonee 32	Upsala (aut) 6	Timmins A 95
Québec	Bagotville A 34	Blanc Sablon A 2	Québec A 38
New Brunswick	Charlo A 33	Charlo A 12	Saint John A 117
Nova Scotia	Sydney A 29	Sydney A 11	Yarmouth A 114
Prince Edward Island	Summerside A 30	Charlottetown A 15	Summerside A 58
Newfoundland	Goose A 30	St Anthony 1	Stephenville A 130

**Across The Country...**

Highest Mean Temperature	Montréal Int'l A(QUE)	23
Lowest Mean Temperature	Mould Bay A(NWT)	2



CLIMATIC PERSPECTIVES  
VOLUME 12

Managing Editor . . . . . *Amir Shabbar*  
Editor-in-charge  
- weekly/monthly . . . . . *Andy Radomski*  
French version . . . . . *Alain Caillet*  
Data Manager . . . . . *M. Skarpathiotakis*  
Computer support . . . . . *Tommy Jang*  
Art Set-up . . . . . *K. Czaja*  
Translation . . . . . *D. Pokorn*  
Cartography . . . . . *T. Chivers*

ISBN 0225-5707 UDC 551.506.1(71)

**Climatic Perspectives** is a weekly publication (disponible aussi en français) of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ontario, Canada M3H 5T4

☎ (416) 739-4438/4436

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

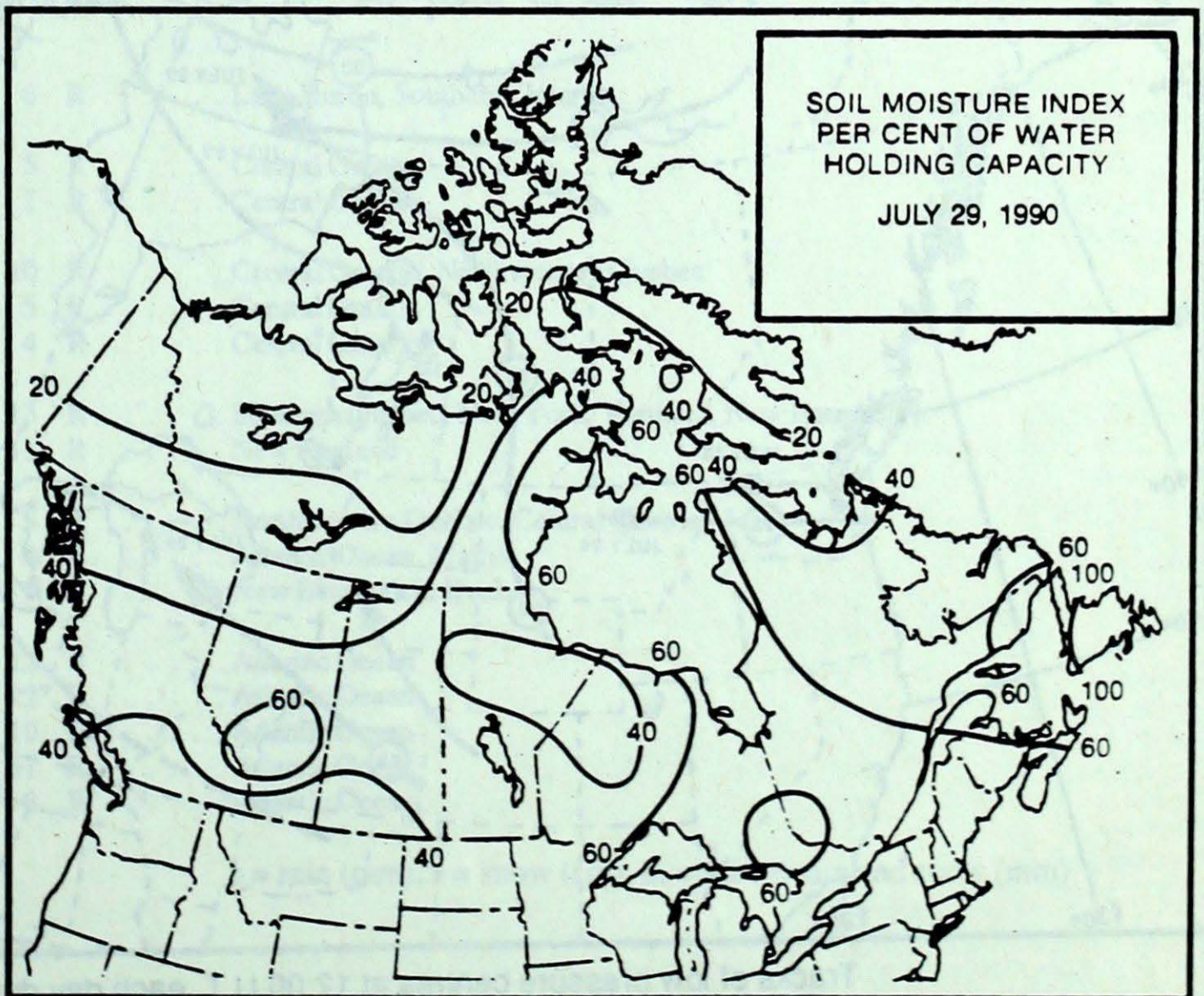
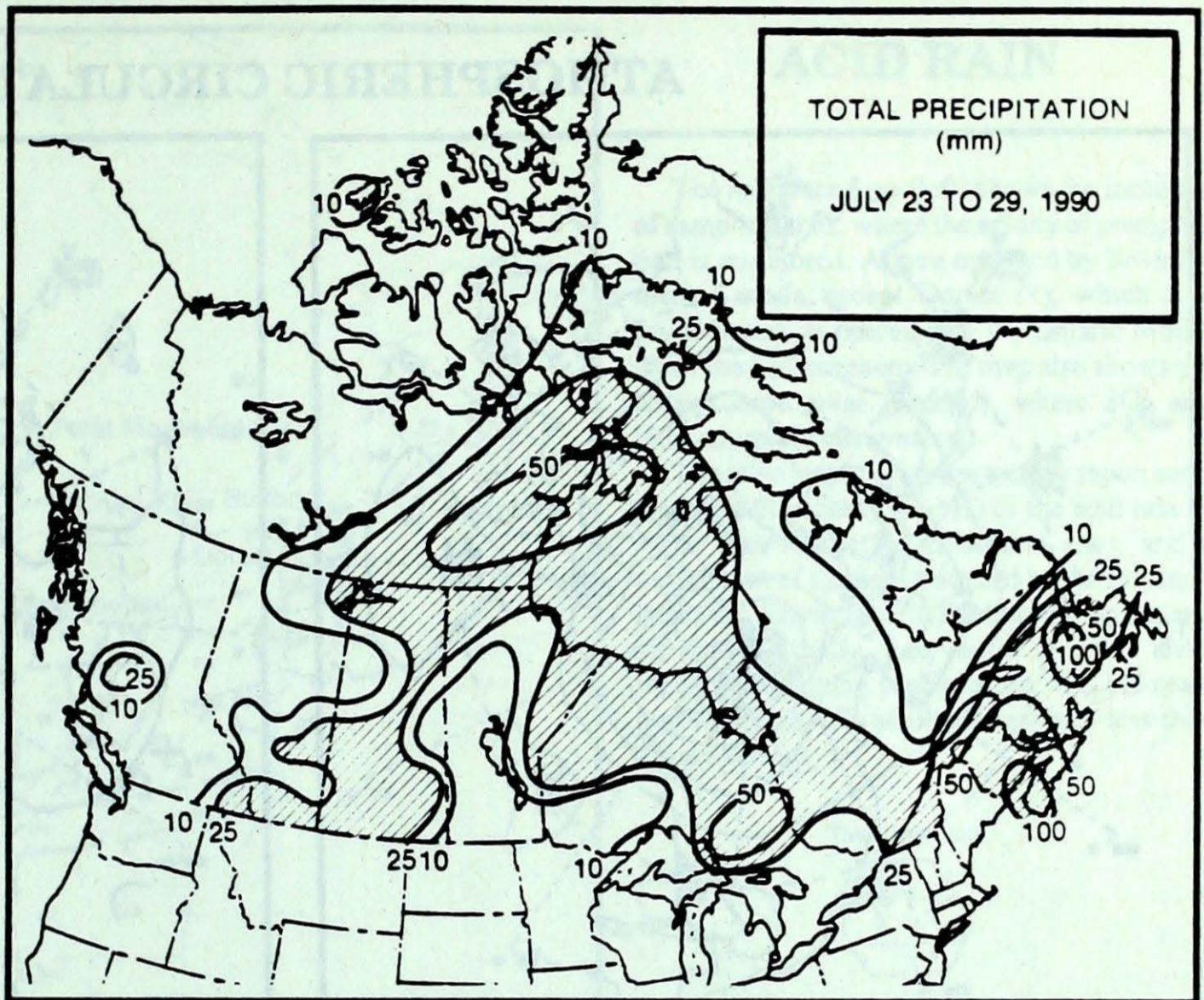
The data in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

**Annual Subscriptions**

weekly and monthly : . . . . . \$35.00  
foreign: . . . . . \$42.00  
monthly issue: . . . . . \$10.00  
foreign: . . . . . \$12.00

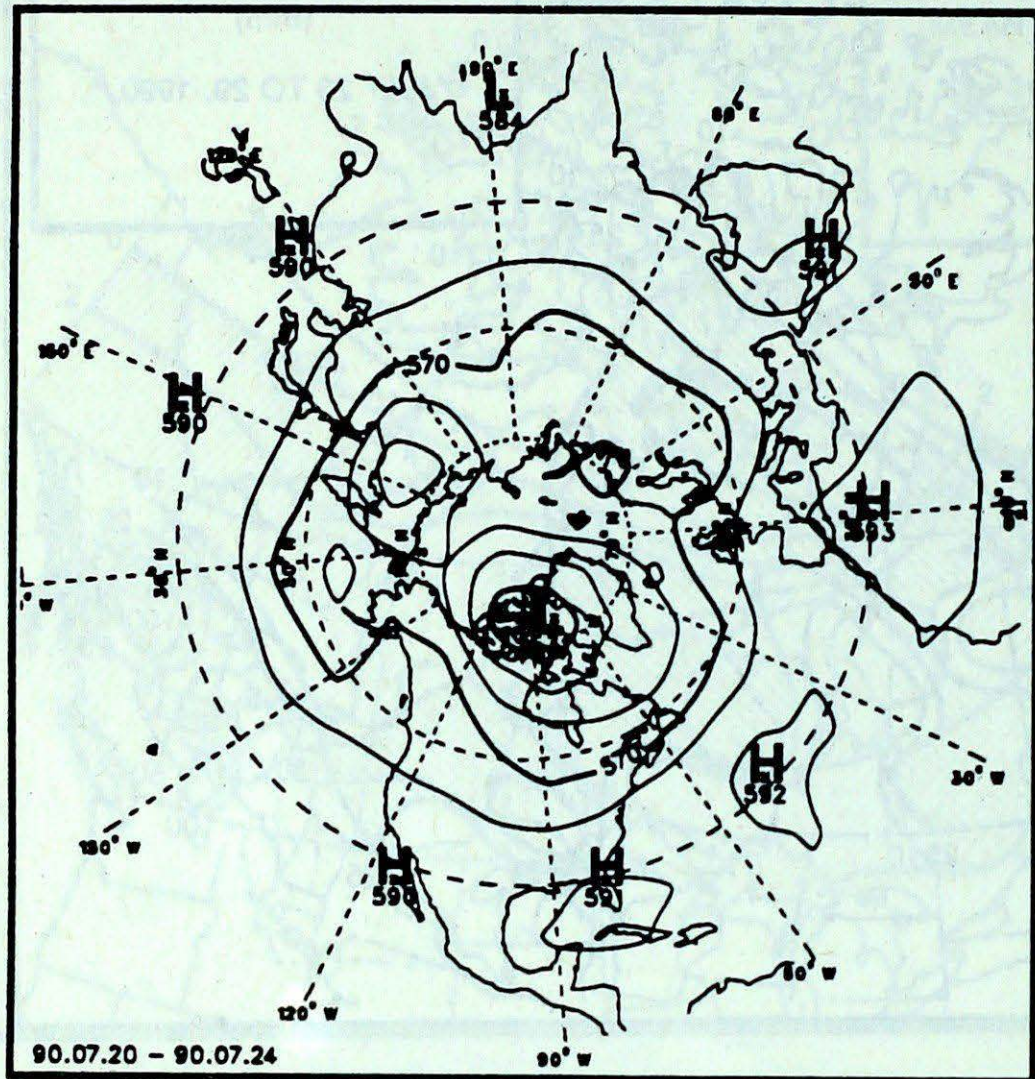
Orders must be prepaid by money order or cheque payable to Receiver General for Canada. Canadian Government Publishing Centre, Ottawa, Ontario, Canada K1A 0S9

☎ (819) 997-2560

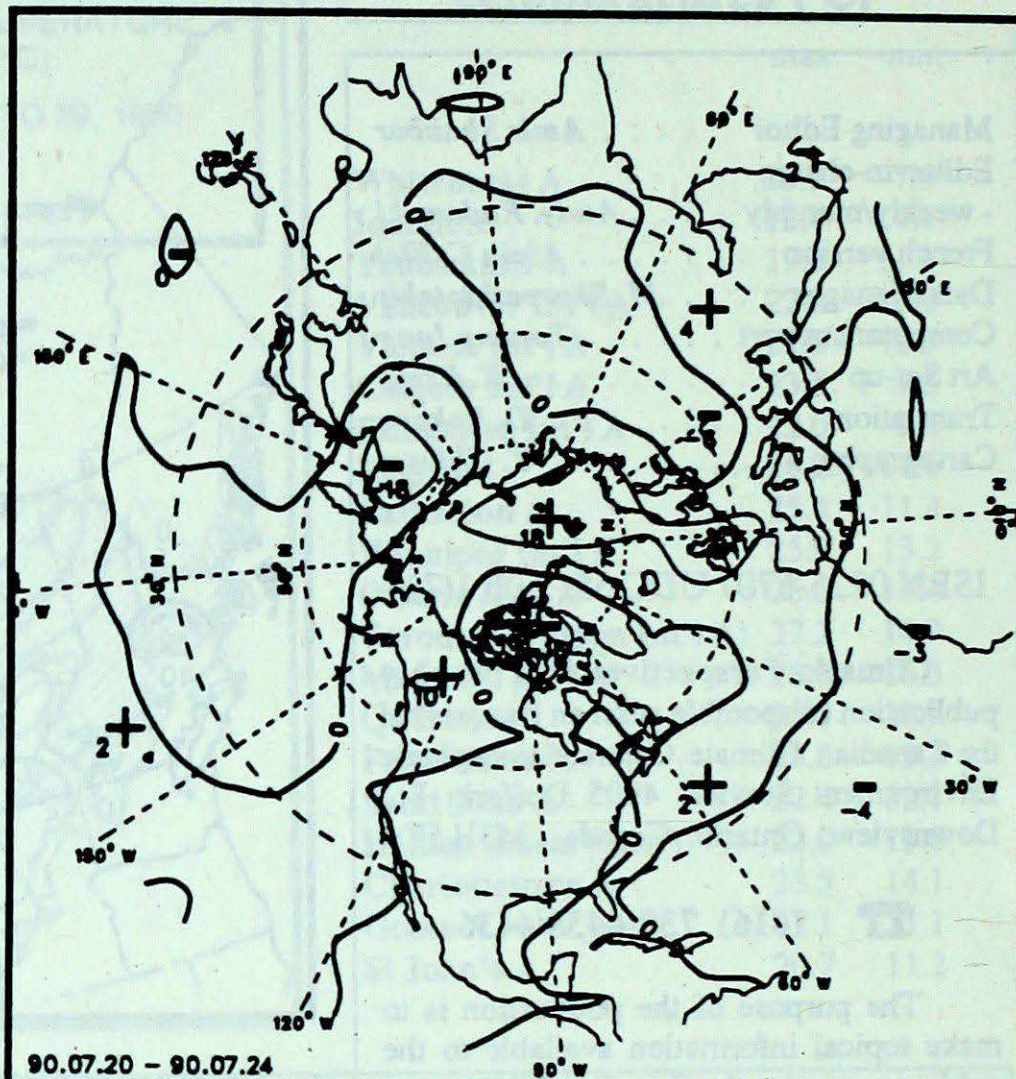




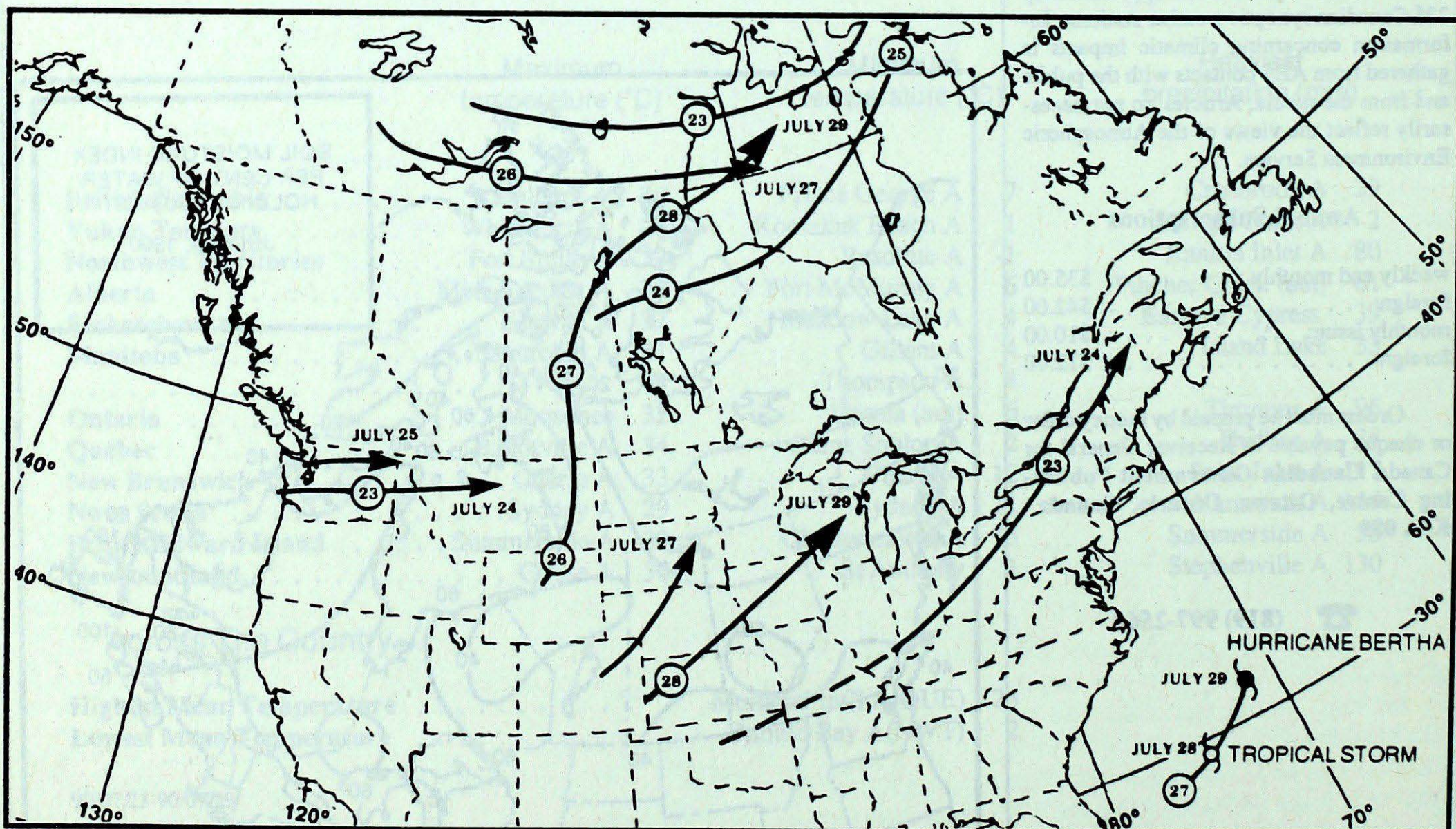
### ATMOSPHERIC CIRCULATION



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

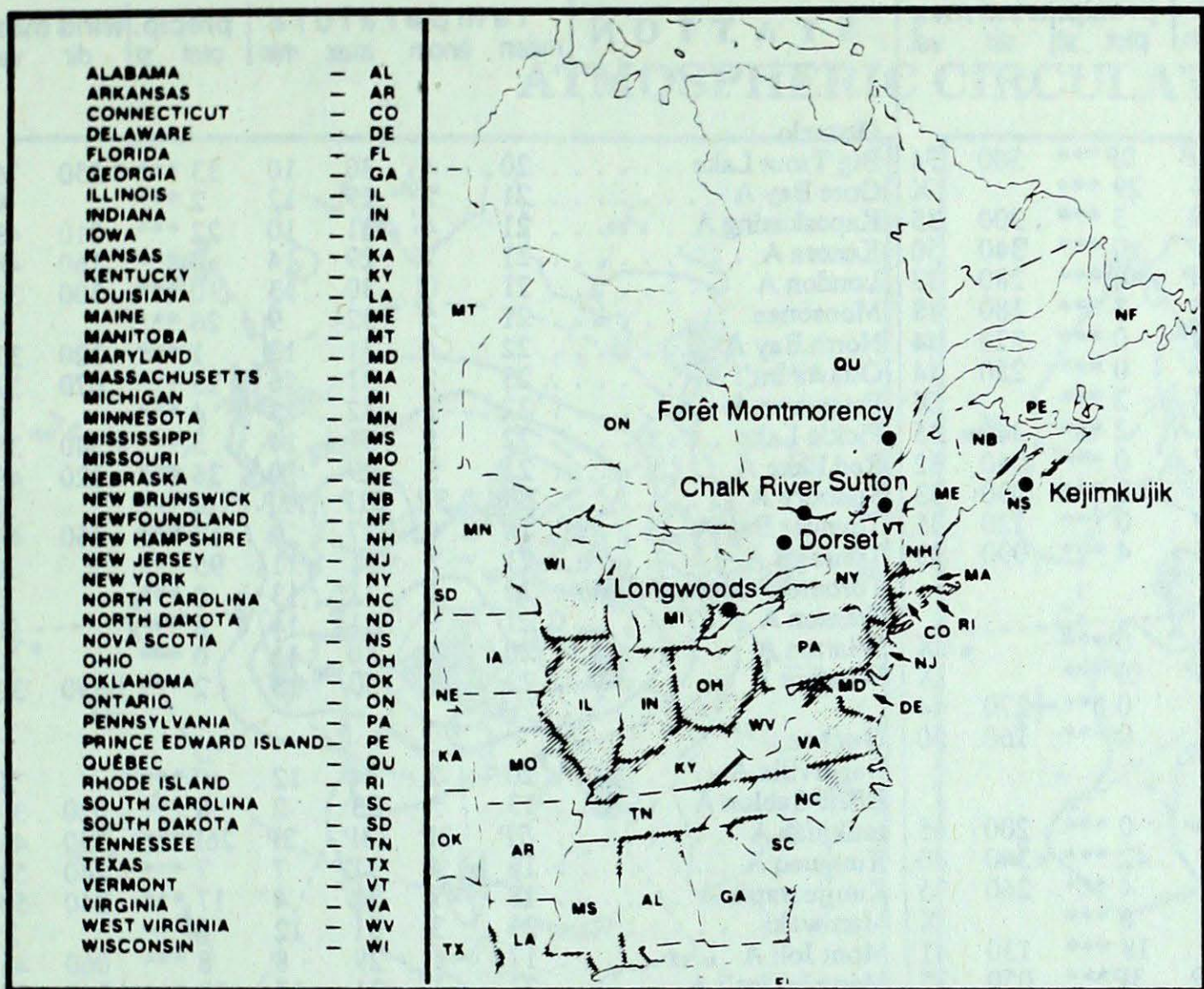


Mean geopotential height anomaly  
50-kPa level (10-decametre intervals)



Tracks of low pressure centres at 12:00 U.T. each day during the period.



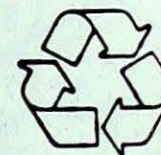


### ACID RAIN

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<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.

Think recycling



Pensez à recycler

Site	day	pH	amount	air path to site	July 22 to 28, 1990
Longwoods	22	3.6	6 R	..... Lake Huron, Southern Ontario	
Dorset *	22	4.5	5 R	..... Central Ontario	
	23	4.2	1 R	..... Central Ontario	
Chalk River	22	4.7	10 R	..... Central Ontario, Northwestern Quebec	
	24	4.5	5 R	..... Central Ontario	
	26	4.8	4 R	..... Central Ontario	
Sutton	22	4.0	13 R	..... Southern Quebec, New York, Vermont, New Hampshire	
	23	3.9	11 R	..... New England	
Montmorency	22	5.1	5 R	..... Northwestern Quebec, Central Quebec	
	23	5.0	8 R	..... Atlantic Ocean, Maine	
	24	4.7	5 R	..... New Brunswick, Quebec	
Kejimikujik	22	4.7	12 R	..... Atlantic Ocean	
	23	4.9	12 R	..... Atlantic Ocean	
	24	4.9	10 R	..... Atlantic Ocean	
	25	5.4	61 R	..... Atlantic Ocean	
	26	5.4	8 R	..... Atlantic Ocean	

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



STATION	temperature				precip.		wind max		STATION	temperature				precip.		wind max								
	mean	anom	max	min	ptot	st	dir	vel		mean	anom	max	min	ptot	st	dir	vel							
<b>British Columbia</b>								<b>Ontario</b>																
Cape St James	15P	2P	21P	11P	0P***		300	74	Big Trout Lake	20	4	30	10	33	***	250	76							
Cranbrook A	17	-3	28	-4	29	***		X	Gore Bay A	21	2	29	12	2	***		X							
Fort Nelson A	20	4	33	9	3	***	300	35	Kapuskasing A	21	4	31	10	22	***	010	43							
Fort St John A	18	3	28	10	0	***	340	50	Kenora A	21	2	29	14	0	***	160	48							
Kamloops A	23P	1P	36P	13P	0P***		280	33	London A	21	0	30	13	0	***	300	33							
Penticton A	23	1	33	13	3	***	180	48	Moosonee	21	5	32	9	26	***		X							
Port Hardy A	15	1	20	2	0	***	320	44	North Bay A	22	4	31	13	1	***	120	37							
Prince George A	19	4	30	7	0	***	250	44	Ottawa Int'l A	23	2	31	16	23	***	070	32							
Prince Rupert A	14	0	19	7	2	***		X	Petawawa A	22	3	32	13	4	***		X							
Revelstoke A	20	0	31	11	2	***	340	35	Pickle Lake	22	5	31	14	3	***	340	35							
Smithers A	19	4	32	7	0	***	060	32	Red Lake A	21	3	29	10	36	***	320	48							
Vancouver Int'l A	18	1	25	12	0	***	090	33	Sudbury A	22P	3P	31P	12P	0P***			X							
Victoria Int'l A	17	1	29	9	0	***	120	35	Thunder Bay A	18	0	27	9	17	***	360	48							
Williams Lake A	18	2	29	8	4	***	090	33	Timmins A	21	3	31	11	95	***		X							
<b>Yukon Territory</b>								<b>Québec</b>																
Komakuk Beach A	9	1	14	1	0	***		X	Bagotville A	20	2	34	12	0	***		X							
Teslin (aut)	16P	*	27P	5P	0P***			X	Blanc Sablon A	13	*	23	2	8	***	020	39							
Watson Lake A	18	3	28	7	0	***	270	44	Inukjuak A	7P	-3P	13P	2P	26P***		150	44							
Whitehorse A	16	2	28	5	0	***	160	50	Kuujuuaq A	16	4	31	7	7	***	240	54							
<b>Northwest Territories</b>								<b>New Brunswick</b>																
Alert	7	3	16	0	0	***	200	65	Charlo A	19	1	33	12	40	***		X							
Baker Lake A	8	-4	14	1	42	***	340	80	Chatham A	20	1	32	14	91	***		X							
Cambridge Bay A	6	-2	11	1	4	***	260	35	Fredericton A	22	2	32	16	70	***		X							
Cape Dyer A	7	1	12	3	6	***		X	Moncton A	22	3	32	14	45	***	200	50							
Clyde A	6	1	12	0	18	***	130	41	Saint John A	19	2	28	13	117	***	200	44							
Coppermine A	7P	-2P	21P	1P	3P***		050	37	<b>Nova Scotia</b>															
Coral Harbour A	6	-4	13	1	69	***	080	48	Greenwood A	23	3	29	15	64	***	220	46							
Eureka	7P	1P	12P	3P	0P***		160	39	Shearwater A	20	2	27	14	34	***	210	43							
Fort Smith A	18	3	32	5	5	***	320	44	Sydney A	22P	3P	29P	11P	34P***		260	54							
Hall Beach A	5	-1	13	0	20	***	070	78	Yarmouth A	20	3	25	14	114	***	180	44							
Inuvik A	11	-1	20	2	2	***	290	37	<b>Prince Edward Island</b>															
Iqaluit A	8	-1	13	3	11	***	150	44	Charlottetown A	22	3	29	15	42	***	180	41							
Mould Bay A	2	-2	8	-1	17	1		X	Summerside A	22	3	30	17	58	***	150	48							
Norman Wells A	16	1	24	9	6	***	300	46	<b>Newfoundland</b>															
Resolute A	2P	-2P	7P	-1P	4P***			X	Cartwright	15	2	30	1	3	***	010	41							
Yellowknife A	15	0	22	10	3	***	260	41	Churchill Falls A	18	4	27	7	0	***	310	46							
<b>Alberta</b>								<b>90/07/23-90/07/29</b>																
Calgary Int'l A	17	1	26	10	11	***	290	56	Gander Int'l A	17	0	30	4	38	***	240	48							
Cold Lake A	18	2	27	8	23	***	340	54	Goose A	19	2	30	10	5	***	220	57							
Edmonton Namao A	18	1	26	10	3	***	330	59	Port Aux Basques	15	1	22	9	52	***		X							
Fort McMurray A	19	4	31	6	1	***	310	54	St John's A	16	0	27	6	11	***	270	59							
High Level A	18	2	30	7	11	***	240	56	St Lawrence	16	2	22	9	22	***		X							
Jasper	18	3	27	10	1	***		X	Wabush Lake A	18	4	29	7	8	***	330	56							
Lethbridge A	18	-1	28	9	25	***	220	54																
Medicine Hat A	20	-1	32	10	16	***	220	63																
Peace River A	19	3	30	8	0	***		X																
<b>Saskatchewan</b>								<b>Manitoba</b>																
Cree Lake	17	2	28	6	8	***	330	44	Brandon A	19P	0P	30P	8P	3P***		230	61							
Estevan A	20	-1	32	8	14	***	160	76	Churchill A	16	4	31	7	24	***	320	89							
La Ronge A	18	2	30	7	38	***	310	50	Lynn Lake A	18	2	29	8	26	***	330	74							
Regina A	19	0	32	8	18	***	240	61	The Pas A	20	2	29	11	4	***	310	56							
Saskatoon A	19	1	30	8	29	***	330	44	Thompson A	17	2	29	4	6	52	300	63							
Swift Current A	18	-1	30	9	25	***		X	Winnipeg Int'l A	22	2	31	10	0	***	150	41							
Yorkton A	19	1	31	9	27	***	220	46																

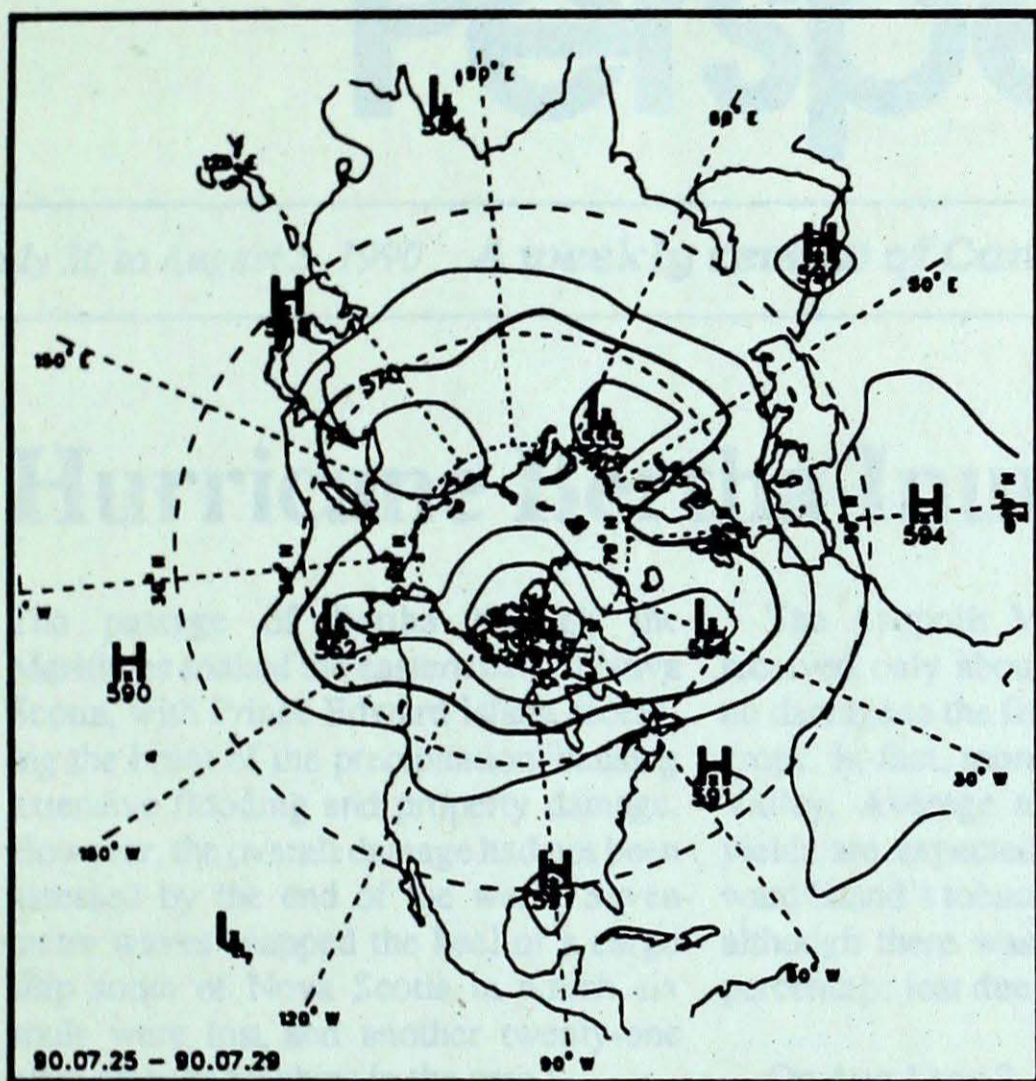
mean = mean weekly temperature, °C  
 max = maximum weekly temperature, °C  
 min = minimum weekly temperature, °C  
 anom = mean temperature anomaly, °C

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

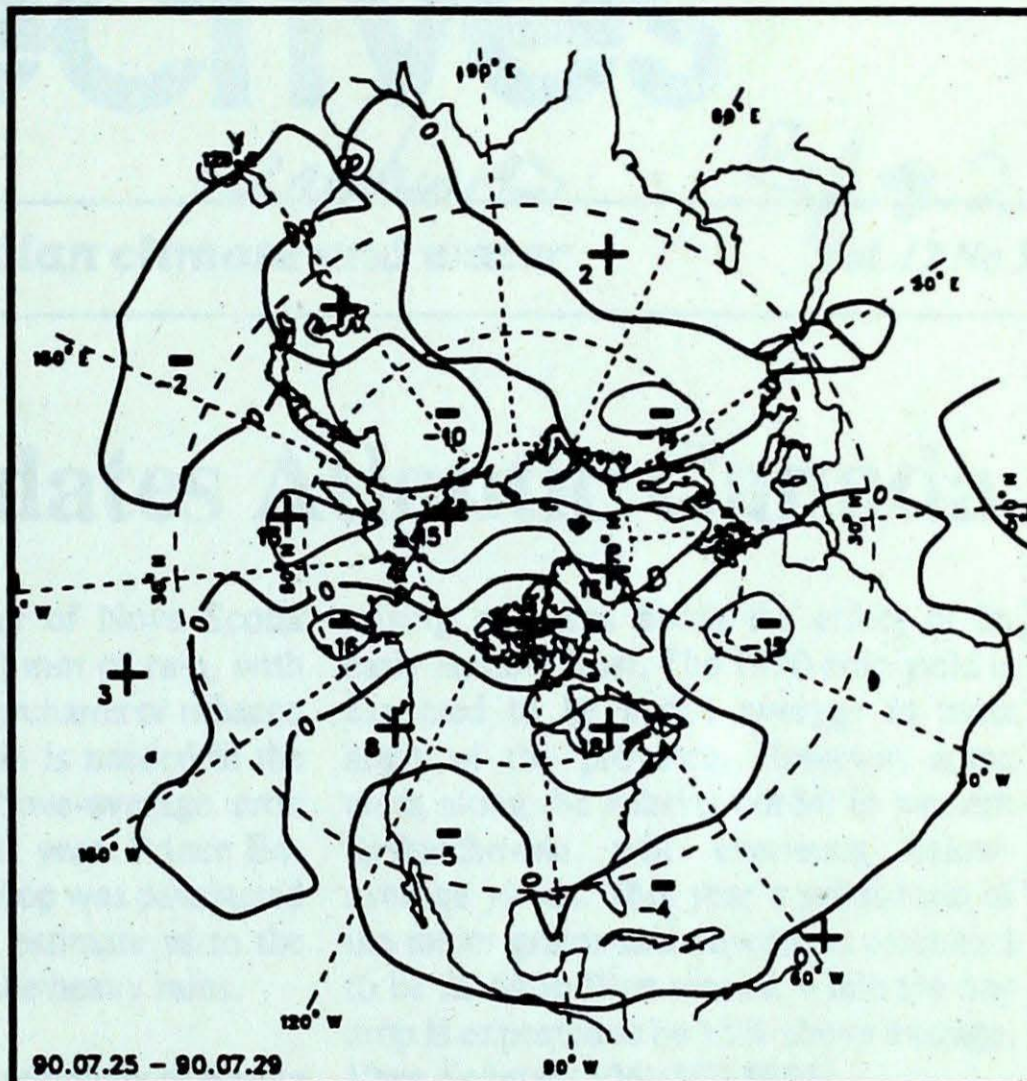
— Annotations —  
 X = no observation  
 P = less than 7 days of data  
 \* = missing data when going to printing.



### ATMOSPHERIC CIRCULATION



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



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

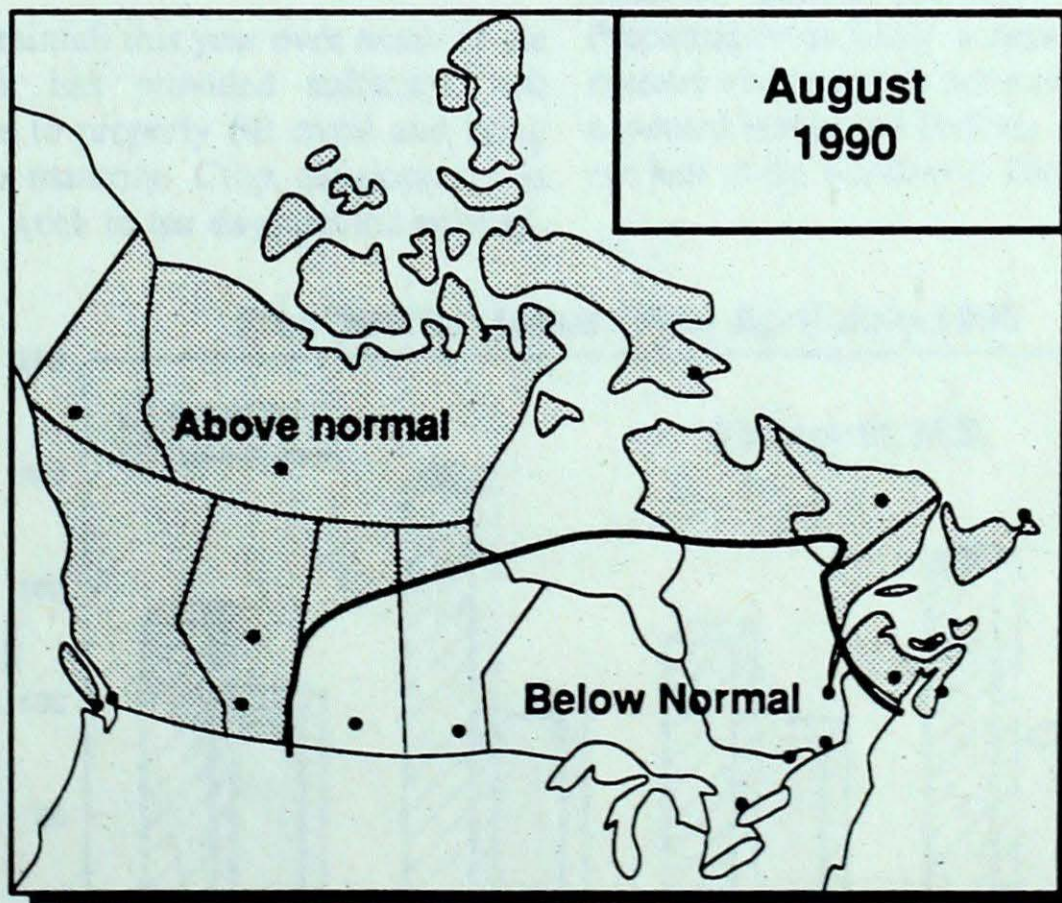


Environment Canada  
Environnement Canada  
Atmospheric Environment Service  
Service de l'environnement atmosphérique

### MONTHLY TEMPERATURE FORECAST

Normal temperatures for the month of August, °C

Whitehorse	13	Toronto	20
Yellowknife	14	Ottawa	19
Iqaluit	7	Montréal	20
Vancouver	17	Québec	18
Victoria	16	Fredericton	18
Calgary	15	Halifax	18
Edmonton	16	Charlottetown	18
Regina	18	Goose Bay	14
Winnipeg	18	St. John's	15



Canada



CLIMATIC PERSPECTIVES

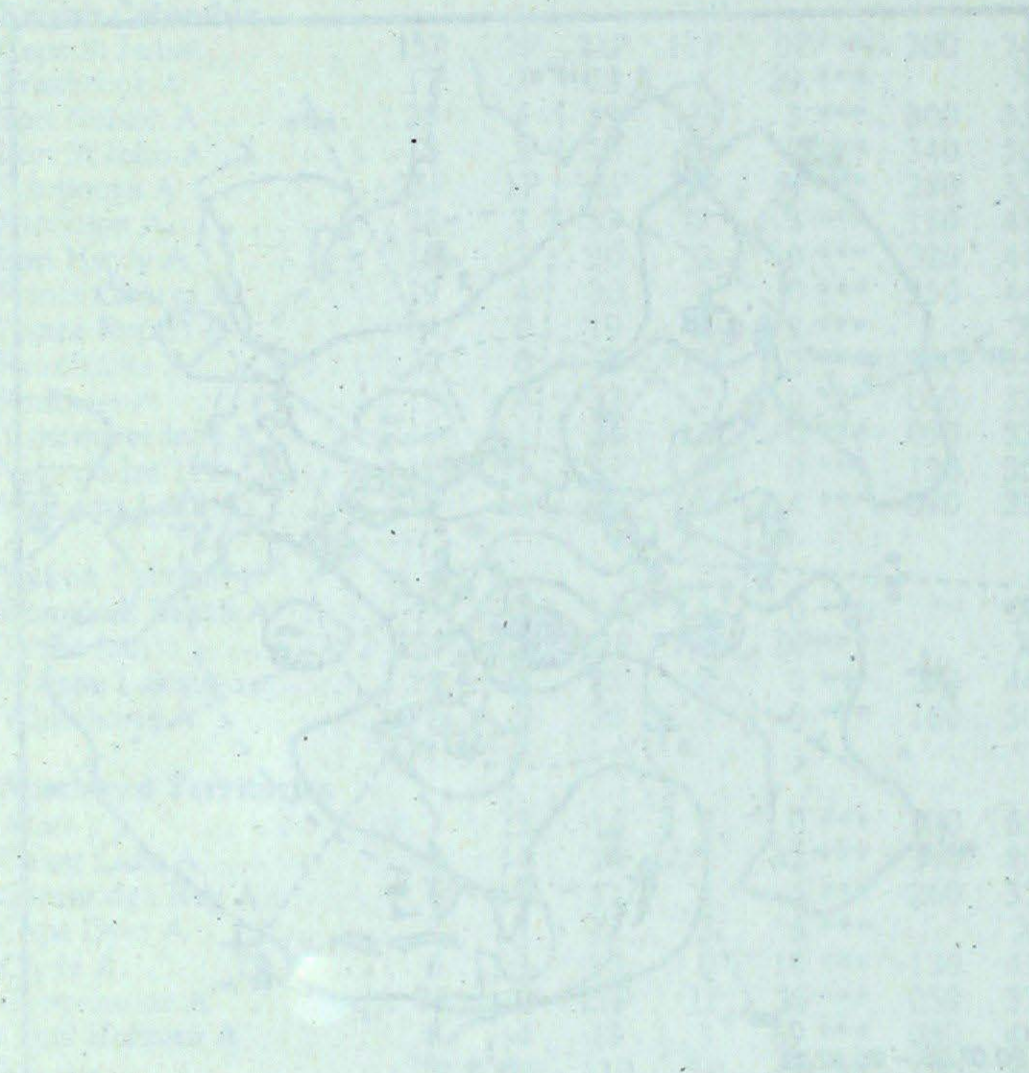
Vol: 12 No: 30 Date: 900729

OTM

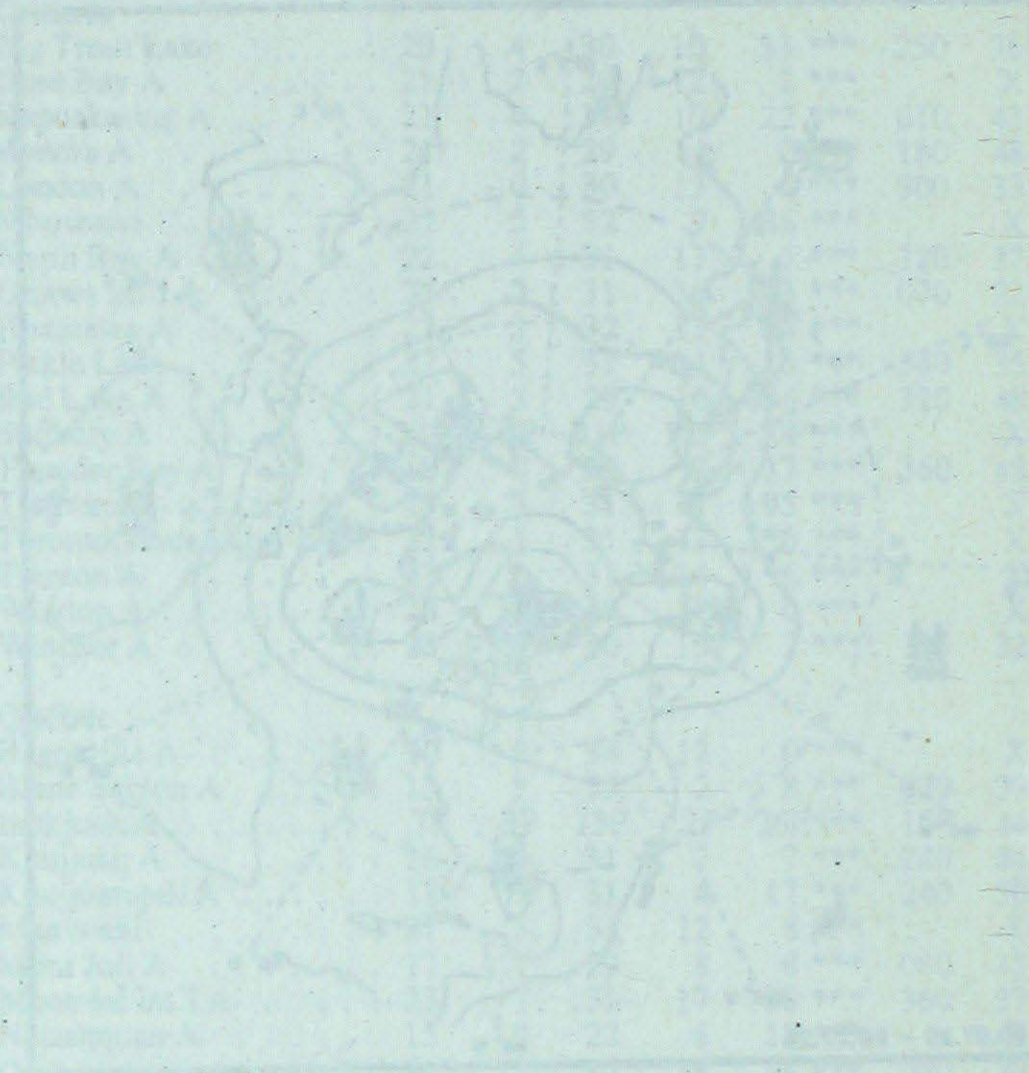
ARCHIVES

1005959D

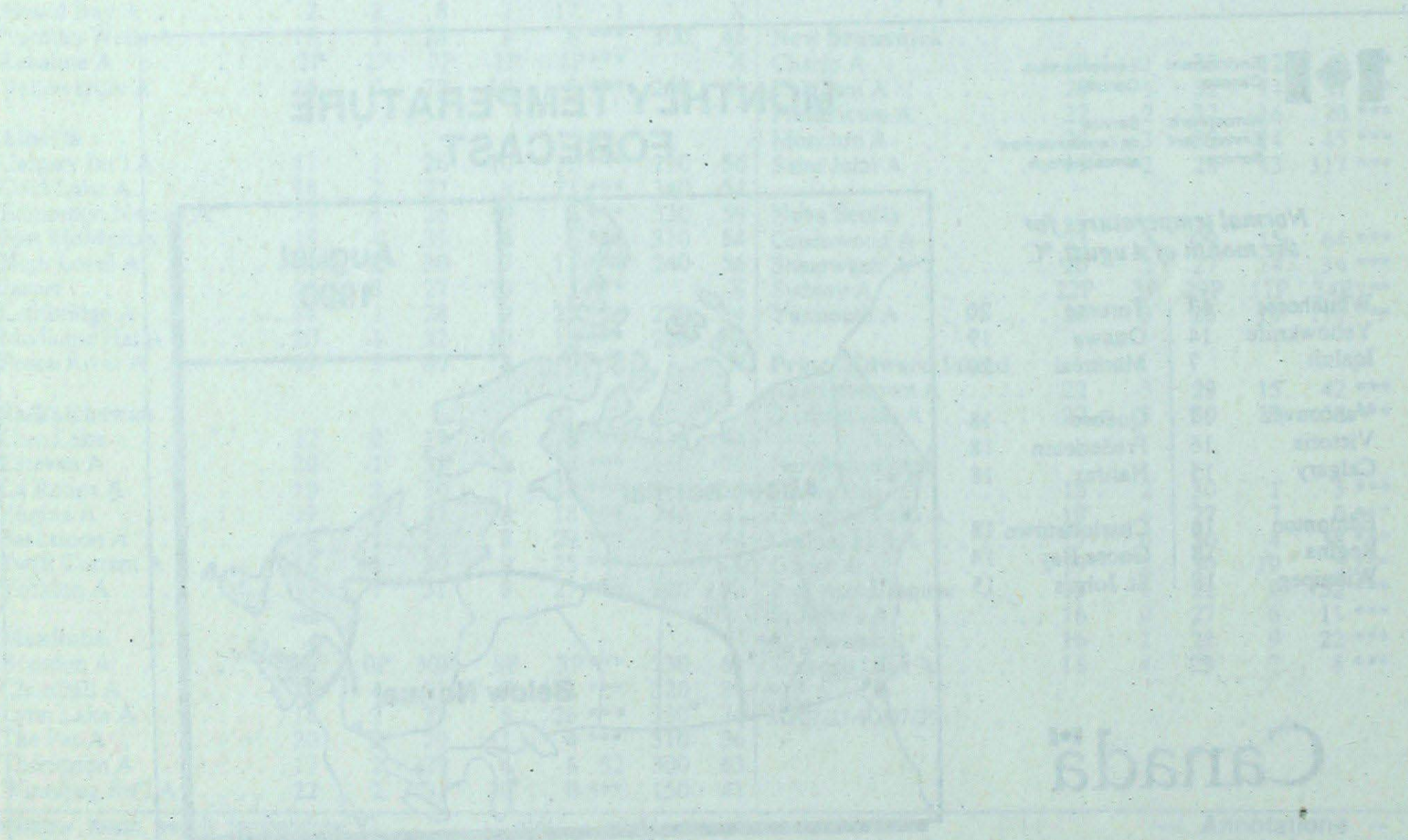
REF 2



Mean monthly isotherms  
for the month of July



Mean monthly isotherms  
for the month of December



Canada