

Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

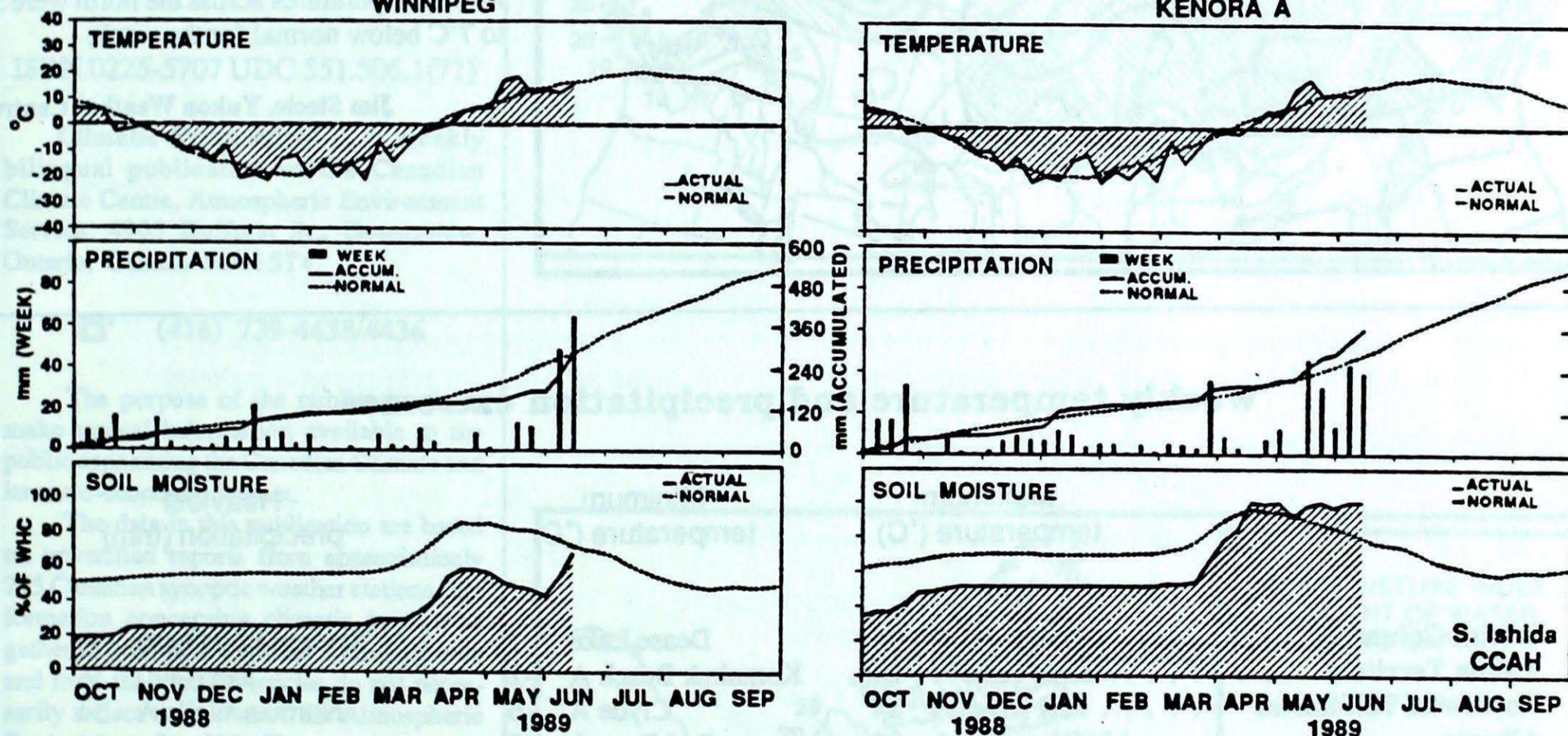
June 12 to 18, 1989

A weekly review of Canadian climate

Vol. 11 No 25

Spring rain totals exceed normal in Ontario and southern parts of Manitoba

TIME-SERIES OF WATER BUDGET COMPONENTS TO JUNE 17, 1989
WINNIPEG KENORA A



NOTE: PLOTTED VALUES BASED ON 7-DAY MEAN/TOTAL

After a dry start to the spring, parts of southern Manitoba have received their fair share of precipitation, for the second week in a row. On June 12th, Gimli received 104.8 mm of rain, Dauphin, 33.6 mm, Portage, 43.1 mm, and Winnipeg 52.2 mm. This welcome rainfall has helped to alleviate dry soil conditions. The rain continued eastwards, depositing 50.2 mm in Kenora, 33.8 mm in Red Lake, 25.6 mm in Sioux Lookout, and 33.4 mm in Thunder Bay, all on the 12th. So far this year, the forest fire season has been quiet in Ontario, due to damp soil conditions, and below-normal temperatures. Only 5,829 hectares of forest have been lost due to forest fires to date this year, compared

to 179,036 hectares lost during the same period in 1988, when it was hot and dry.

Heavy rains in the Sudbury-Parry Sound area on June 16-17, reportedly washed out some roadways. In a 6-hour period beginning on the evening of June 16th, 49.8 mm of rain fell at Sudbury.

Warm spell in the northwest

A ridge of high pressure over the area was responsible for the record high temperatures at the beginning of the week. This is the third week in a row that this area has enjoyed above-normal temperatures. On the 12th, Fort Nelson, B.C. reached 32.8°C. In the Northwest Ter-

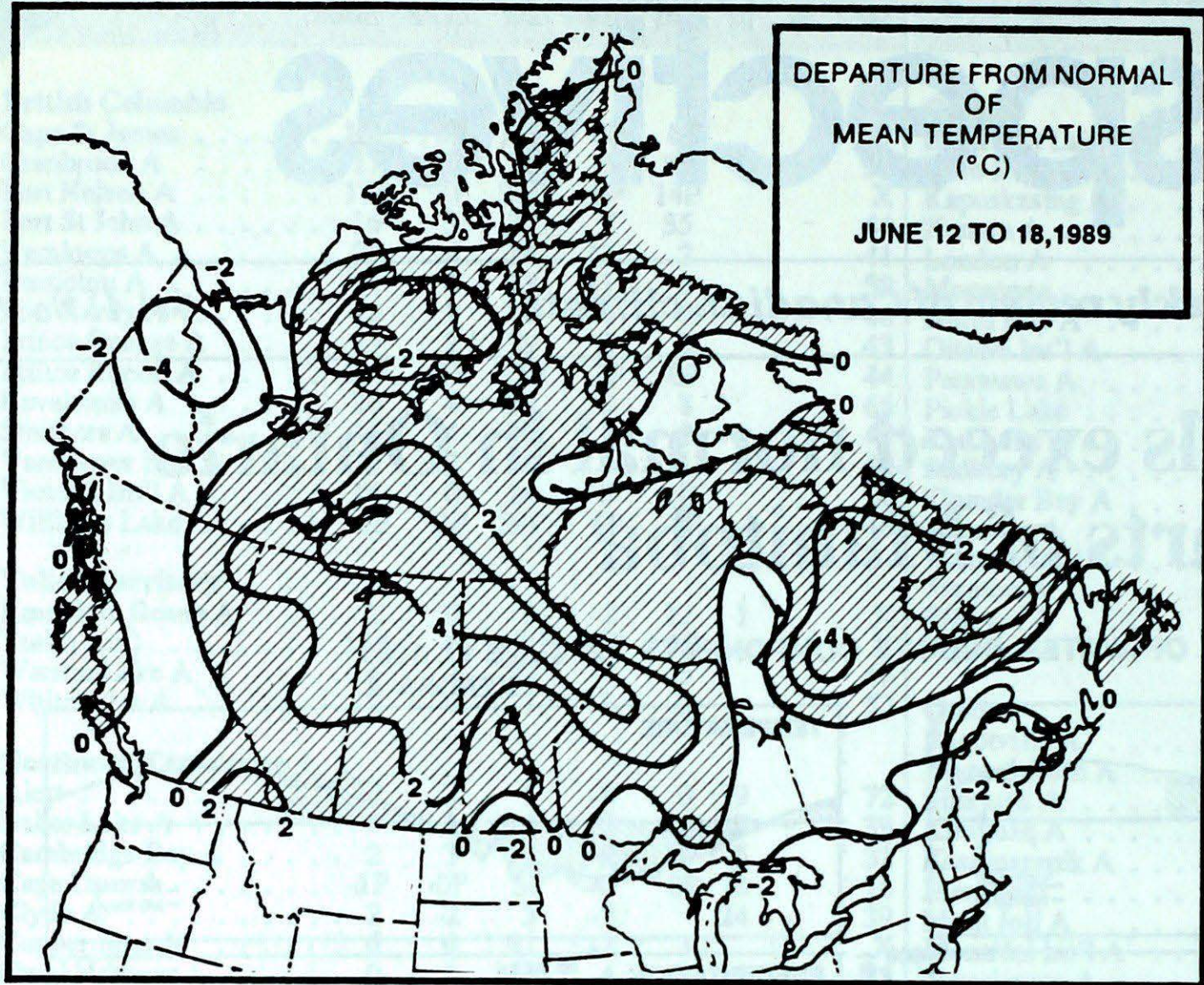
ritories, on the 13th, Hay River reached 34.0°C, and Yellowknife, 26.4°C. On the 14th, Fort Smith recorded 30.7°C, and Yellowknife, 28.1°C.

Warm temperatures expected...

Pronounced high pressure ridging just off the west coast and over the central parts of the country is expected to produce above-normal temperatures across almost all of the country, during the week commencing June 25. Below-normal temperatures are only expected in the high Arctic.

— prepared June 21, 1989

Peter Scholefield,
Canadian Climate Centre



Elsewhere ...

Arctic air invades northern Yukon

An Arctic cold front swept across the north over the weekend, dragging winter along with it. Temperatures plunged at Old Crow from highs in the mid-teens, on the 17th, to afternoon values near zero on the 18th. High winds, visibilities reduced to one kilometre in snow, and high wind chill accompanied the low temperature readings. Mean temperatures across the north were 5 to 7°C below normal for the week.

Jim Steele, Yukon Weather Centre

Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Penticton A 34	Dease Lake -1	Estevan Point (aut) 79
Yukon Territory	Watson Lake A 24	Komakuk Beach A -2	Faro (aut) 15
Northwest Territories	Hay River A 34	Clyde A -6	Norman Wells A 54
Alberta	Medicine Hat A 30	Red Deer A 3	Red Deer A 27
Saskatchewan	Prince Albert A 32	La Ronge A 1	Nipawin A 23
Manitoba	Gillam A 31	Thompson A -2	Gimli 108
Ontario	Geraldton A 29	Armstrong (aut) -2	Sudbury A 72
Québec	Kuujuaq A 27	Inukjuak A -1	Chevery (aut) 58
New Brunswick	Charlo A 23	St Stephen (aut) 2	Fredericton A 21
Nova Scotia	Sydney A 25	Inverness (aut) 3	Yarmouth A 42
Prince Edward Island	Charlottetown A 20	Charlottetown A 5	Charlottetown A 21
Newfoundland	Goose A 30	Badger (aut) -2	St Anthony 33

Across The Country...

Highest Mean Temperature	Big Trout Lake(ONT) 18
Lowest Mean Temperature	Mould Bay A(NWT) 0
.	Resolute A(NWT) 0

CLIMATIC PERSPECTIVES
VOLUME 11

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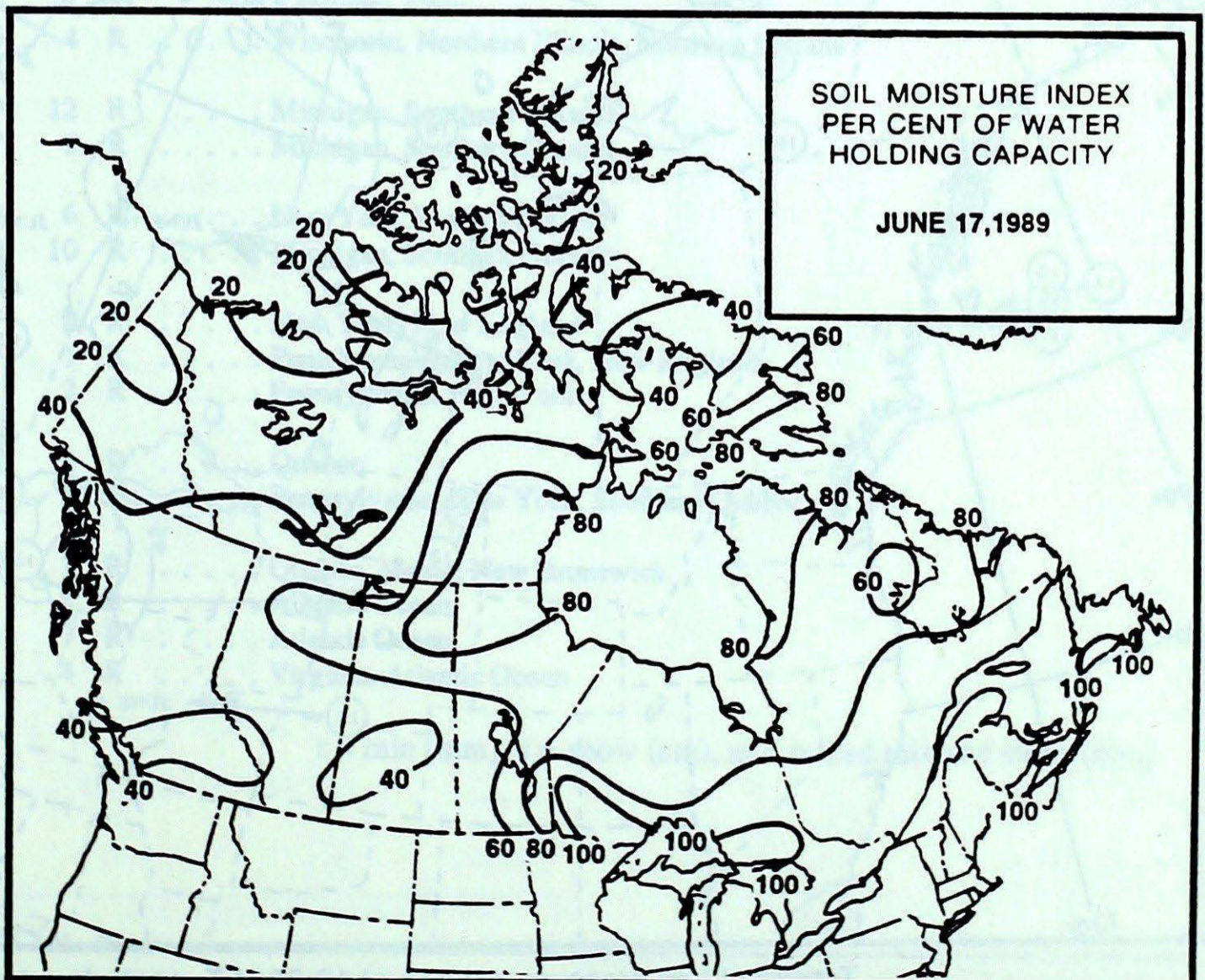
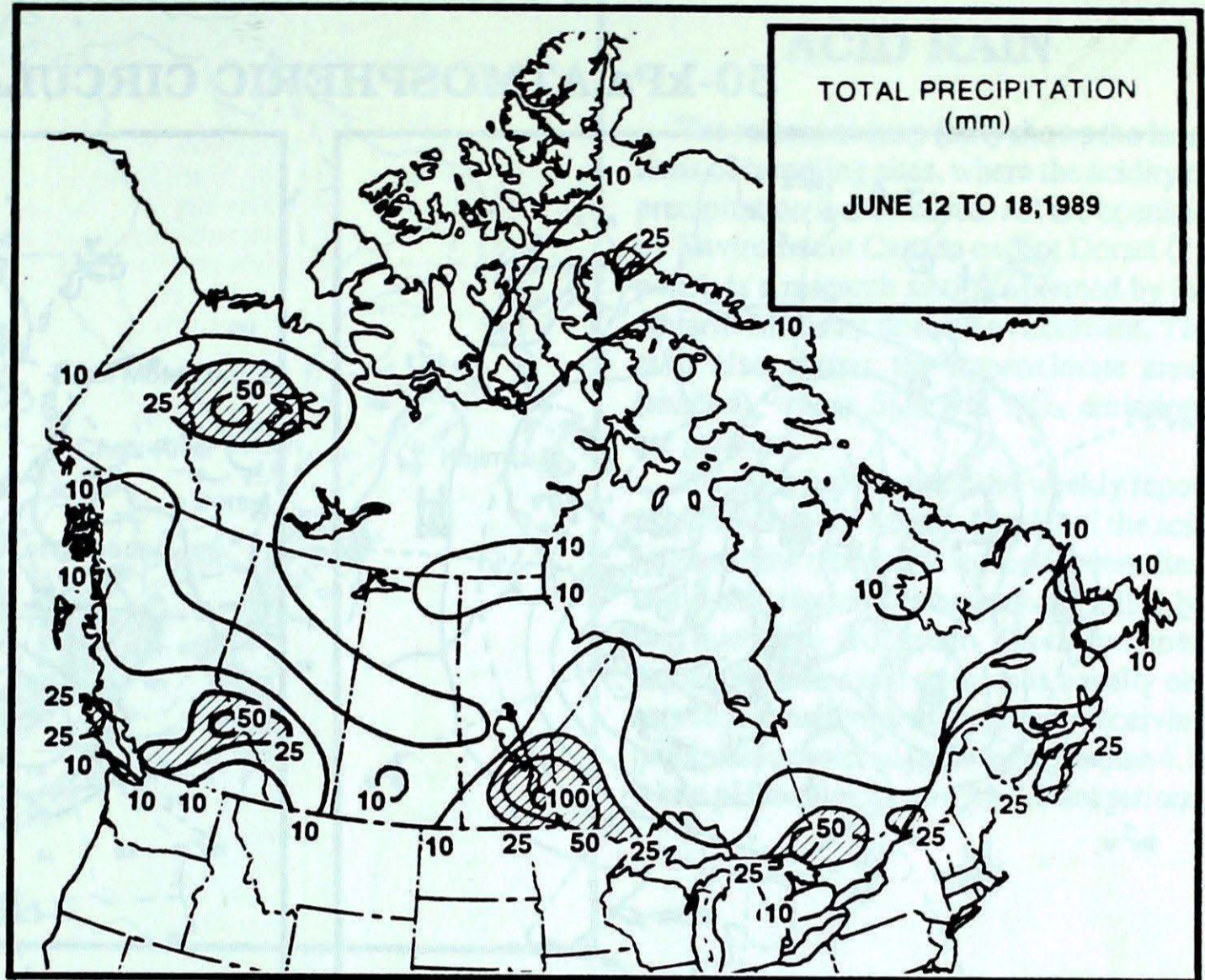
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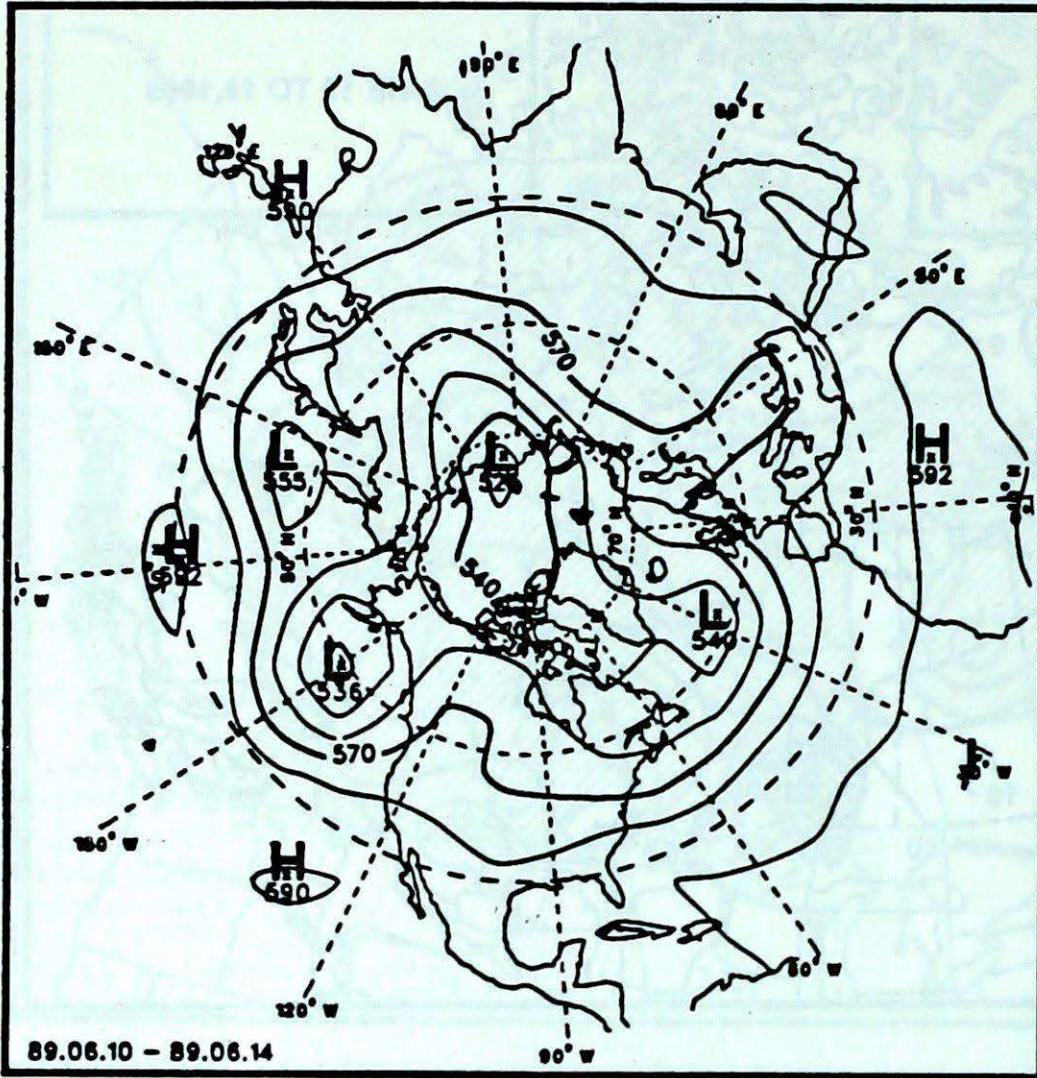
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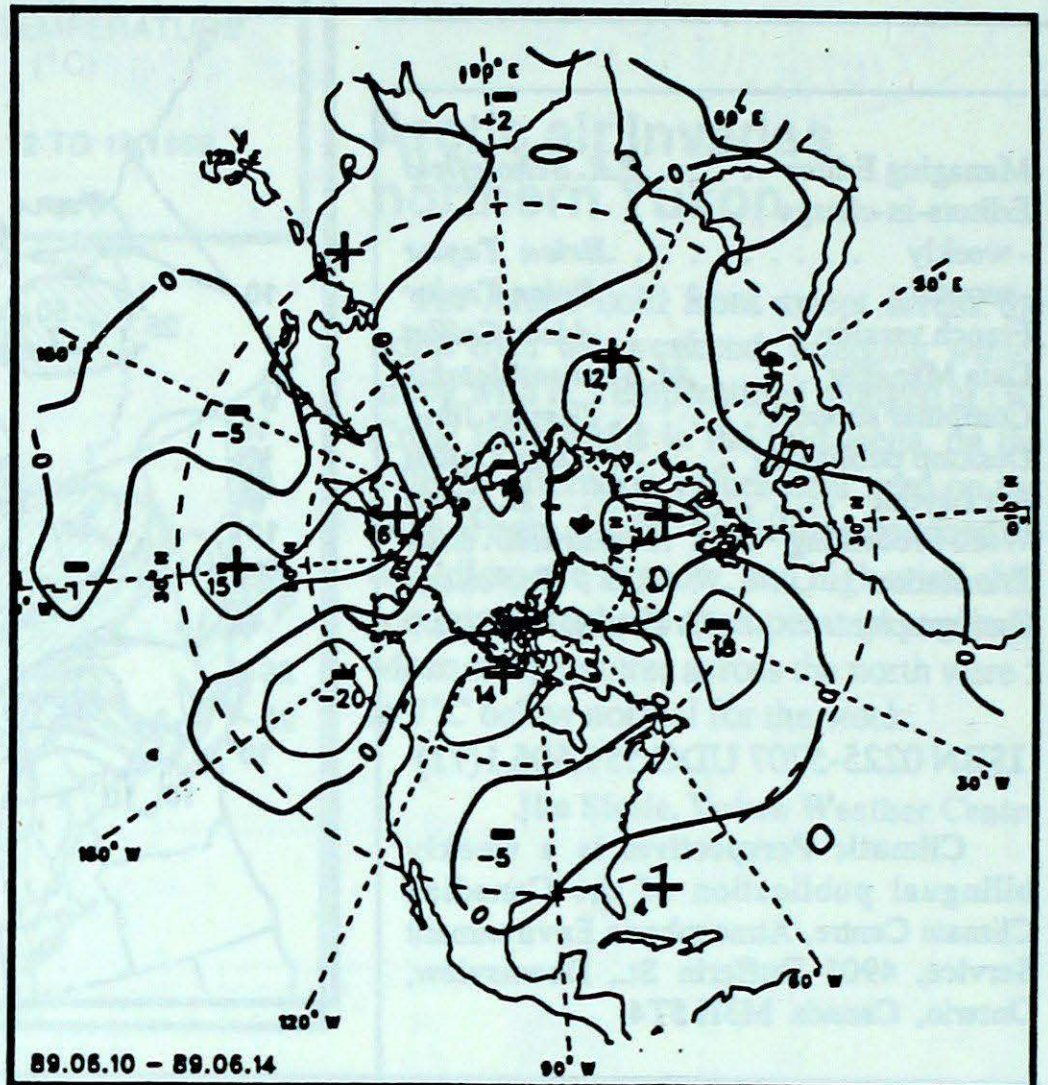
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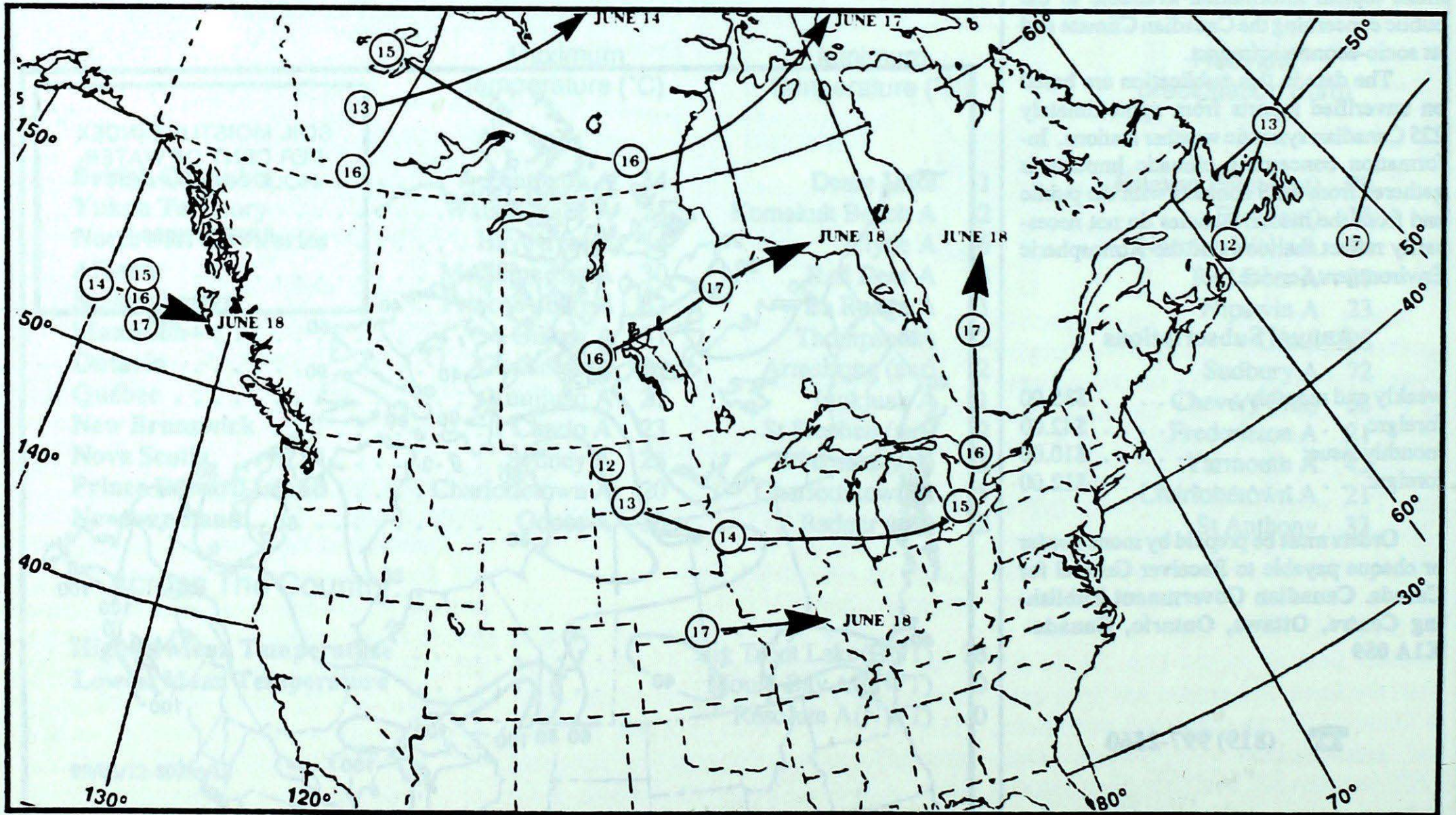
50-kPa ATMOSPHERIC CIRCULATION



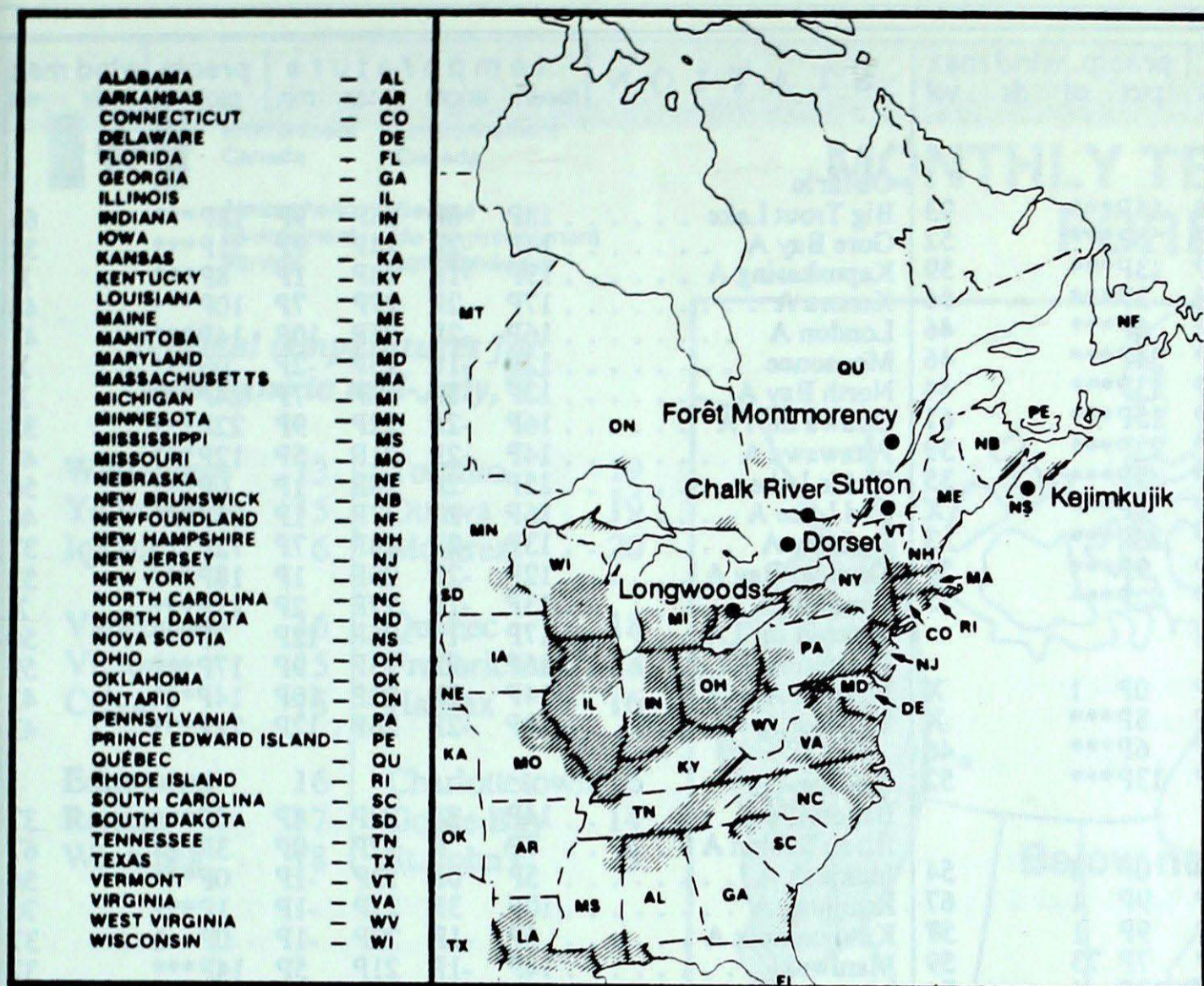
Mean geopotential height
50-kPa level (10 decametre intervals)



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 SO₂ and NO_x 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.

SITE	day	pH	amount	AIR PATH TO SITE
From June 11 to 17, 1989				
Longwoods	12	3.9	8 R	..... Kentucky, Ohio
	17	5.5	4 R	..... Wisconsin, Northern Illinois, Northern Indiana
Dorset *	16	3.9	12 R	..... Michigan, Southern Ontario
	17	4.7	6 R	..... Michigan, Southern Ontario
Chalk River	16	4.3	6 R	..... New York, Eastern Ontario
	17	4.2	10 R	..... Michigan, Southern Ontario
Sutton	15	3.7	8 R	..... New York, New England
	16	3.7	1 R	..... Pennsylvania, New York, New England
	17	4.1	2 R	..... Pennsylvania, New York
Montmorency	11	5.0	3 R	..... Quebec
	17	3.9	5 R	..... Pennsylvania, New York, Southern Quebec
Kejimkujik	11	4.6	1 R	..... Quebec, Maine, New Brunswick
	15	5.1	9 R	..... Atlantic Ocean
	16	4.8	7 R	..... Atlantic Ocean
	17	4.5	4 R	..... Virginia, Atlantic Ocean

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

STATION	temperature				precip. ptot	wind max dir	max vel		STATION	temperature				precip. ptot	wind max dir	max vel								
	mean	anom	max	min						st	dir	vel	mean					anom	max	min	st	dir	vel	
British Columbia									Ontario															
Cape St James	11P	1P	16P	9P	15P***			93	Big Trout Lake	18P	6P	28P	9P	14P***		65								
Cranbrook A	17P	3P	29P	6P	6P***			52	Gore Bay A	14P	-2P	24P	9P	31P***		32								
Fort Nelson A	17P	2P	33P	6P	13P***			59	Kapuskasing A	13P	-1P	28P	1P	8P***		X								
Fort St John A	15P	2P	29P	6P	3P***			56	Kenora A	17P	2P	27P	7P	10P***		48								
Kamloops A	18P	0P	34P	8P	6P***			46	London A	16P	-2P	25P	10P	14P***		41								
Penticton A	18P	1P	34P	8P	34P***			46	Moosonee	12P	-1P	25P	-2P	0P***		X								
Port Hardy A	12P	0P	18P	6P	13P***			44	North Bay A	13P	-2P	22P	7P	24P***		X								
Prince George A	13P	-1P	29P	3P	15P***			61	Ottawa Int'l A	16P	-2P	22P	9P	22P***		35								
Prince Rupert A	12P	1P	16P	5P	23P***			59	Petawawa A	14P	-2P	21P	5P	12P***		48								
Revelstoke A	15P	0P	33P	7P	45P***			35	Pickle Lake	15P	2P	28P	1P	0P***		56								
Smithers A	11P	-1P	24P	0P	8P***			X	Red Lake A	16P	2P	27P	1P	8P***		46								
Vancouver Int'l A	15P	0P	22P	9P	28P***			3	Sudbury A	13P	-2P	24P	7P	72P***		37								
Victoria Int'l A	14P	-1P	20P	6P	9P***			56	Thunder Bay A	12P	-2P	25P	1P	18P***		52								
Williams Lake A	13P	-1P	29P	2P	22P***			52	Timmins A	13P	-1P	27P	2P	13P***		X								
Yukon Territory									Toronto Int'l A															
Komakuk Beach A	4P	0P	18P	-2P	0P	1		X	Trenton A	16P	-2P	23P	9P	17P***		59								
Teslin (aut)	10P	P	21P	0P	8P***			X	Warton A	14P	-2P	22P	10P	14P***		43								
Watson Lake A	13P	0P	24P	1P	6P***			46	Windsor A	18P	-2P	26P	12P	22P***		43								
Whitehorse A	11P	-1P	21P	1P	13P***			52	Québec															
Northwest Territories									Bagotville A															
Alert	0P	1P	7P	-3P	0P	8		54	Blanc Sablon A	7P	P	12P	0P	3P***		67								
Baker Lake A	4P	0P	17P	-1P	9P	1		67	Inukjuak A	5P	0P	13P	-1P	0P***		56								
Cambridge Bay A	5P	3P	14P	-2P	9P	1		57	Kuujuuaq A	10P	3P	27P	-1P	1P***		70								
Cape Dyer A	0P	0P	4P	-4P	7P	73		59	Kuujuuarapik A	6P	-1P	22P	-1P	0P	1	37								
Clyde A	2P	1P	9P	-6P	13P	4		74	Maniwaki	14P	-1P	21P	5P	14P***		32								
Coppermine A	5P	1P	18P	-3P	2P	1		39	Mont Joli A	13P	-2P	23P	3P	1P***		37								
Coral Harbour A	2P	0P	9P	-3P	6P	1		87	Montréal Int'l A	16P	-2P	22P	10P	17P***										
Eureka	2P	0P	5P	-1P	4P	1		54	Natashquan A	12P	1P	20P	4P	1P***		37								
Fort Smith A	18P	4P	31P	4P	4P***			37	Québec A	15P	-2P	22P	7P	7P***		56								
Hall Beach A	2P	2P	6P	-1P	5P	16		63	Schefferville A	11P	3P	25P	1P	21P***		39								
Inuvik A	9P	-3P	17P	0P	4P***			X	Sept-Îles A	11P	-1P	18P	3P	1P***		35								
Iqaluit A	4P	0P	11P	-2P	6P	1		72	Sherbrooke A	13P	-2P	24P	2P	24P***		54								
Mould Bay A	0P	0P	3P	-4P	0P	1		41	Val-d'Or A	13P	-2P	20P	4P	13P***		X								
Norman Wells A	9P	-5P	30P	2P	54P***			59	New Brunswick															
Resolute A	0P	0P	4P	-5P	2P	3		41	Charlo A	13P	-2P	23P	5P	0P***		33								
Yellowknife A	15P	2P	28P	6P	8P***			46	Chatham A	14P	-2P	22P	5P	15P***		35								
Alberta									Fredericton A															
Calgary Int'l A	15P	1P	26P	3P	12P***			59	Moncton A	14P	-2P	21P	7P	21P***		37								
Cold Lake A	15P	1P	25P	5P	10P***			39	Saint John A	13P	-2P	20P	4P	17P***		33								
Edmonton Namao A	16P	1P	25P	7P	2P***			59	Nova Scotia															
Fort McMurray A	16P	3P	28P	7P	21P***			43	Greenwood A	15P	-1P	22P	6P	15P***		39								
High Level A	16P	2P	29P	4P	11P***			39	Shearwater A	13P	-1P	20P	7P	21P***		46								
Jasper	14P	1P	28P	6P	16P***			X	Sydney A	13P	0P	25P	6P	5P***		44								
Lethbridge A	17P	2P	27P	7P	17P***			93	Yarmouth A	12P	-1P	17P	7P	41P***		46								
Medicine Hat A	18P	1P	30P	6P	0P***			56	Prince Edward Island															
Peace River A	15P	2P	30P	5P	1P***			52	Charlottetown A	12P	-2P	20P	5P	18P***		X								
Saskatchewan									Summerside A															
Cree Lake	16P	3P	25P	8P	1P***			43	13P	-2P	19P	5P	15P***		41									
Estevan A	17P	0P	29P	3P	3P***			48	Newfoundland															
La Ronge A	16P	3P	31P	1P	11P***			44	Cartwright	10P	1P	25P	-1P	1P***		59								
Regina A	17P	1P	30P	4P	0P***			65	Churchill Falls A	12P	3P	26P	2P	4P***		4								
Saskatoon A	17P	2P	32P	5P	0P***			52	Gander Int'l A	11P	-1P	26P	1P	6P***		56								
Swift Current A	16P	1P	29P	5P	3P***			54	Goose A	14P	3P	30P	1P	0P***		57								
Yorkton A	16P	1P	29P	4P	0P***			43	Port Aux Basques	10P	1P	15P	4P	1P***		52								
Manitoba									St John's A															
Brandon A	15P	-1P	29P	2P	3P***			78	St Lawrence	10P	2P	19P	2P	11P***		X								
Churchill A	10P	4P	27P	0P	16P	1		52	Wabush Lake A	14P	4P	26P	2P	0P***		46								
Lynn Lake A	15P	3P	28P	2P	9P***			43	89/06/12 - 89/06/18															
The Pas A	16P	2P	27P	3P	19P***			78																
Thompson A	15P	3P	30P	-2P	1P***			39																
Winnipeg Int'l A	17P	0P	27P	5P	6P***			69																

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.



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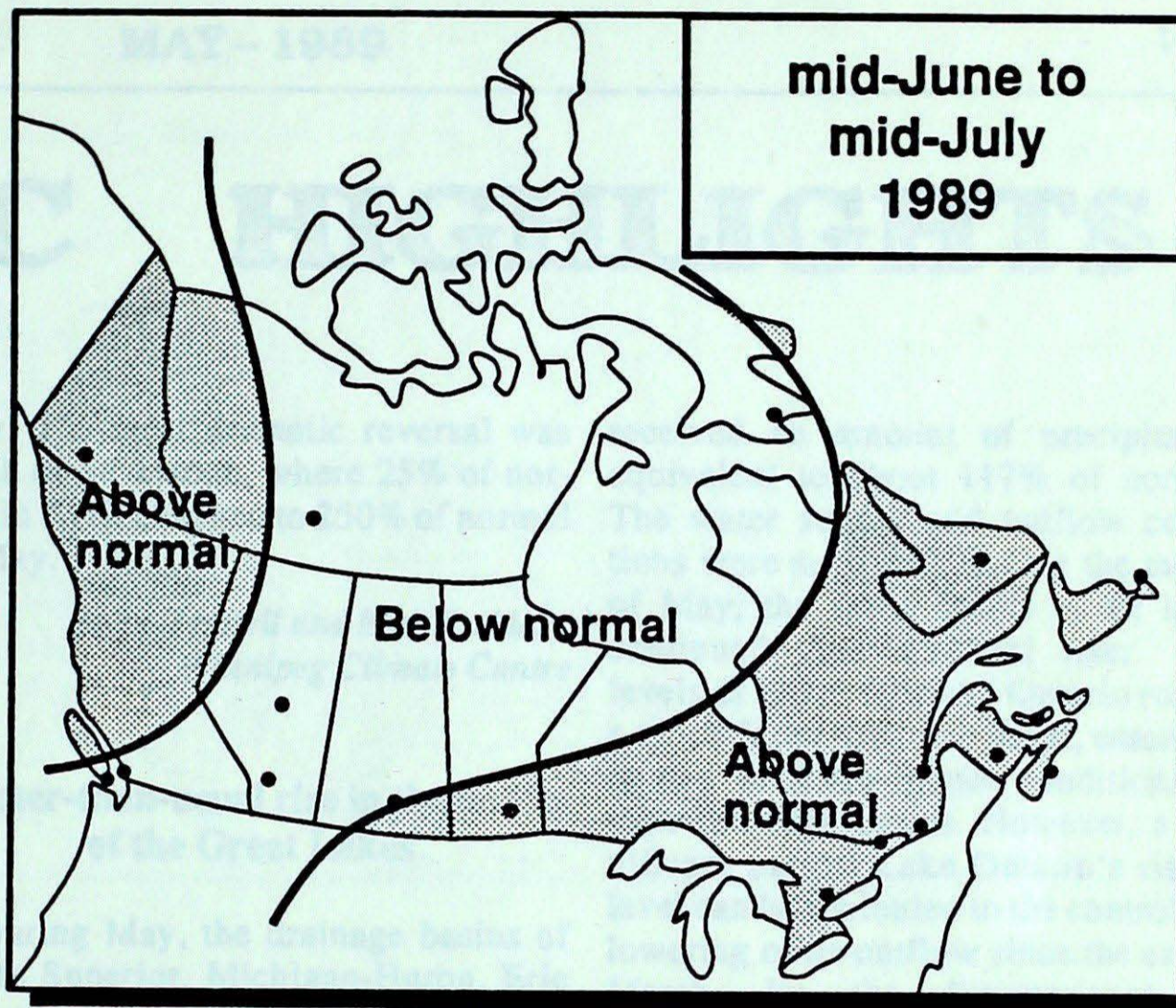
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MONTHLY TEMPERATURE FORECAST

Normal temperatures for mid-June to mid-July, °C

Whitehorse	13	Toronto	19
Yellowknife	15	Ottawa	19
Iqaluit	6	Montreal	20
Vancouver	16	Québec	18
Victoria	15	Fredericton	18
Calgary	15	Halifax	16
Edmonton	16	Charlottetown	16
Regina	17	Goose Bay	14
Winnipeg	18	St. John's	13



Canada

