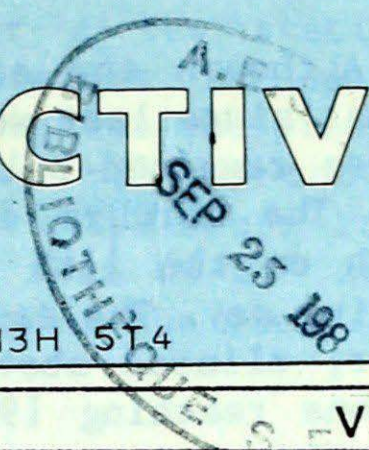


CLIMATIC PERSPECTIVES

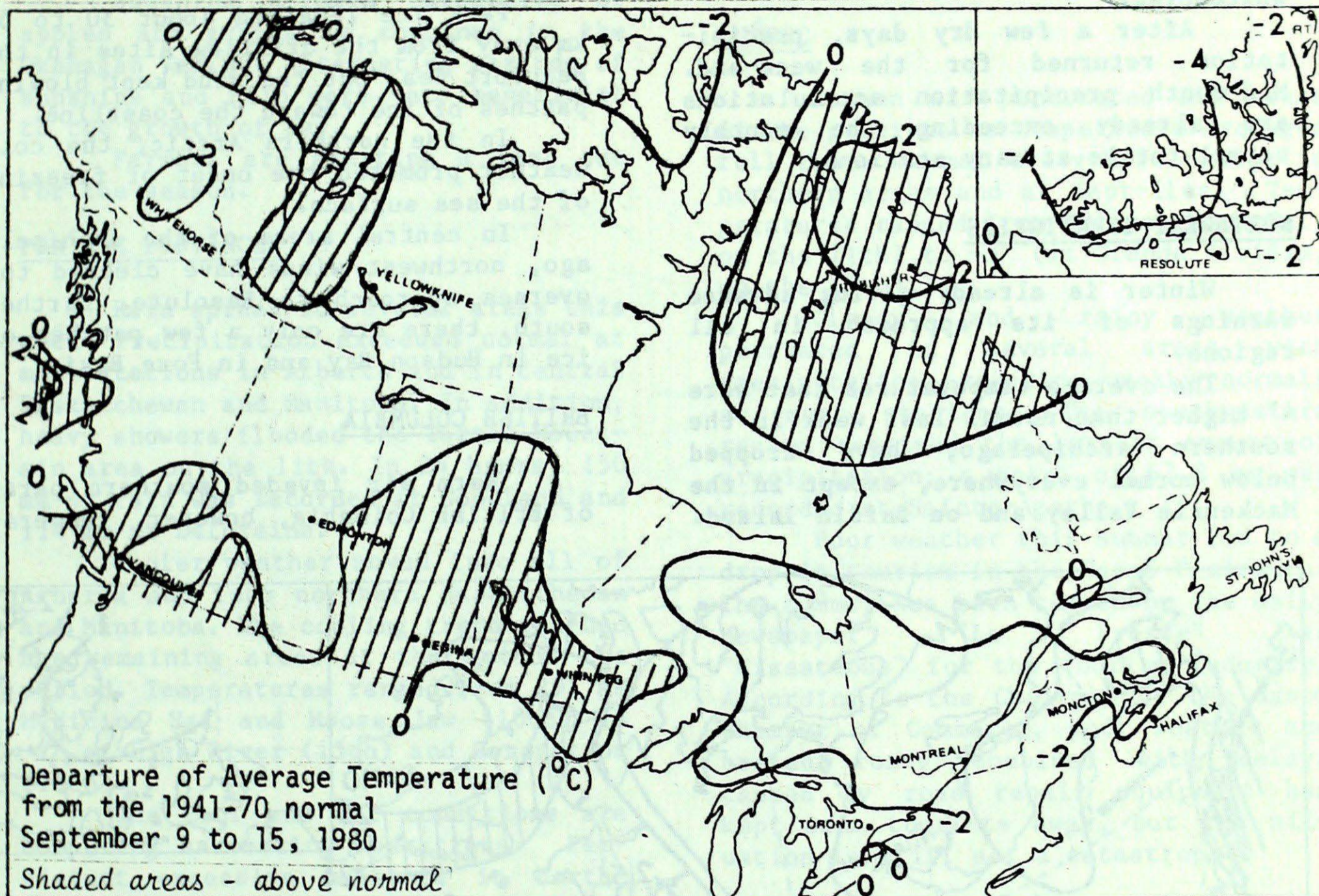
THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4



SEPTEMBER 19, 1980

(Aussi disponible en français)

VOL. 2 NO. 37



WEATHER HIGHLIGHTS FOR THE WEEK - SEPTEMBER 9 - 15, 1980

Rain and Showers Persist East of the Rockies

Most areas east of the Rockies received above normal precipitation. Sunshine was predominant in British Columbia, in southern Saskatchewan and Manitoba, and in the Maritimes.

Harvesting of fruits and hay is progressing in the Okanagan Valley and in the cattle country around Kamloops, respectively. The sunshine allowed good harvesting in the Maritimes.

In contrast, wet conditions prevented harvesting in Alberta and other parts of the Prairies. Only a

small percentage of the cereals cut have been harvested; instead of drying, grains left in the fields have fallen on the ground and are starting to sprout. Rain also continued in the Province of Newfoundland.

Several stations recorded a maximum of 29° this week: Lytton (on the 9th) and Medicine Hat and Moose Jaw (on the 10th).

Cold weather is marshalling its forces in the North; the mercury fell to -18° at Alert on the 12th.

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON

Although the airmass has warmed somewhat since last week, average temperatures remained below normal in most areas. The mercury dropped to -9° at Burwash on the 11th and at Ross, the following day. The daytime temperature, however, climbed above 10° on several occasions reaching 19° on the 15th at Whitehorse.

After a few dry days, precipitation returned for the week-end. Mid-month precipitation accumulations are already exceeding the monthly normal totals at many stations.

NORTHWEST TERRITORIES

Winter is already giving advance warnings of its approach in all regions.

The average temperatures that were 4° higher than normal last week in the southern archipelago, have dropped below normal everywhere, except in the Mackenzie Valley and on Baffin Island.

The mercury dipped to -18° on the 12th at Alert, where the sun will soon disappear for the next six months. At Hay River, farther south, the mercury reached 21° on the 9th.

Precipitation eased off this week in the Mackenzie Valley, but continued to be plentiful in eastern Keewatin District and southern Baffin Island. Snow cover is now 35 cm at Alert.

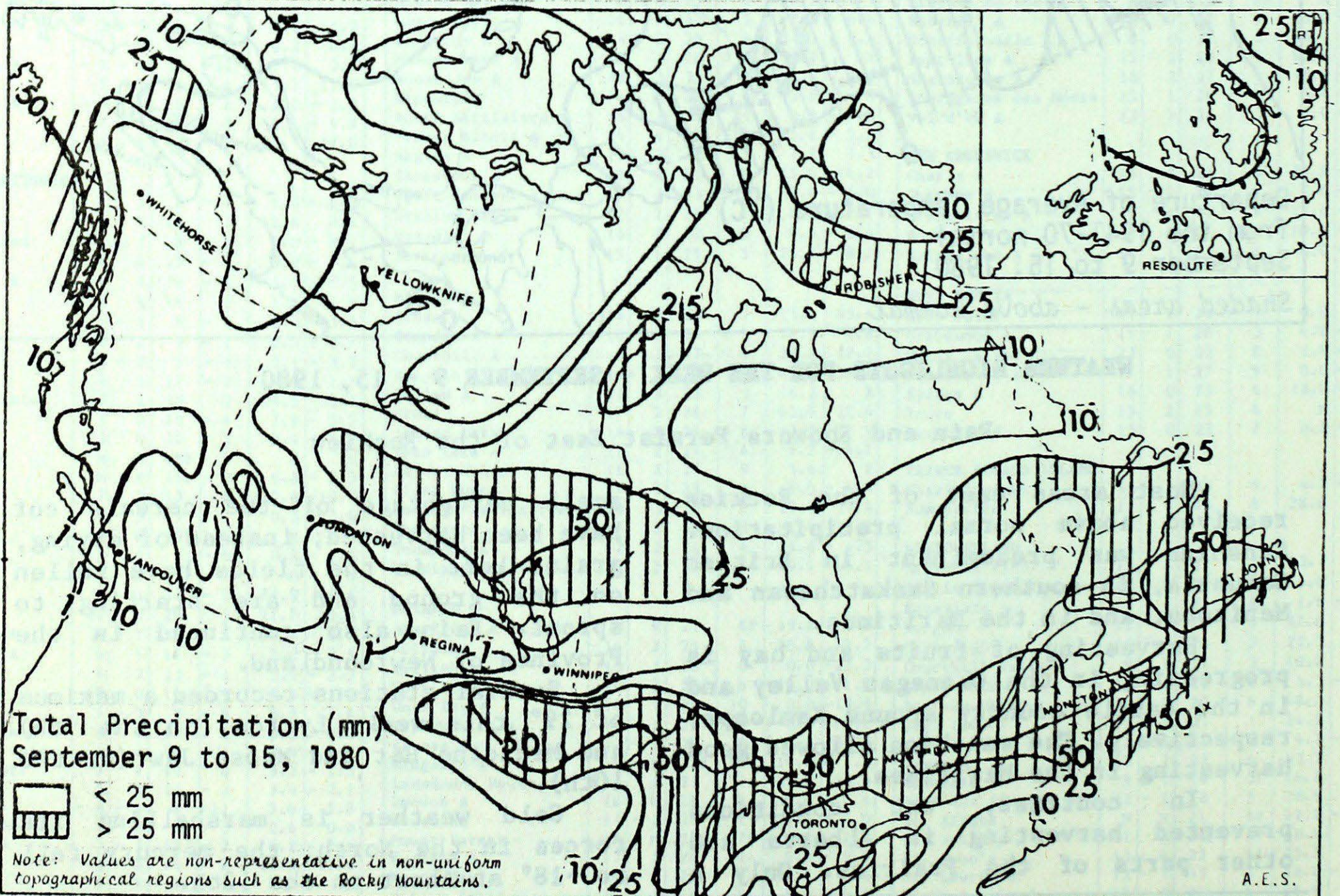
Pack ice remained about 30 to 50 km away from the drilling sites in the Beaufort Sea, but the wind kept blowing patches of ice toward the coastline.

In the northern Arctic, the cold weather promoted the onset of freezing of the sea surface.

In central areas of the Archipelago, northwest winds have cleared the oversea approach to Resolute. Farther south, there are only a few patches of ice in Hudson Bay and in Foxe Basin.

BRITISH COLUMBIA

Warm air invaded southern parts of British Columbia, however, tempera-



tures remained below average in the North. The extremes ranged from 29° on the 9th at Lytton to -4° on the next day at Dease Lake.

Generally, the week was mostly sunny everywhere but one or two rainy periods were experienced by a few areas. Kamloops precipitation is nearly 160% of its monthly normal.

Sunshine allowed harvesting of apples and grapes to continue in the Okanagan Valley. Alternating periods of sunshine and rain were very beneficial to the growth of hay.

Farmers are starting a last cut for the season.

PRAIRIE PROVINCES

Rain spread to several areas this week. Precipitation exceeded normal at most stations in Alberta and in central Saskatchewan and Manitoba. In addition, heavy showers flooded the Turtle Mountain area on the 11th. In 24 hours, 150 mm of rain was recorded at Goodland and 114 mm at Deloraine.

Cooler weather moved into all of Alberta and into northern Saskatchewan and Manitoba. The cooling trend reached the remaining areas at the end of the period. Temperatures ranged from 29° at Medicine Hat and Moose Jaw (10th) to -2° at High River (15th) and Coronation (18th).

The cool and wet conditions are hampering harvesting operations. Persistent excessive moisture in north-central areas of Alberta are resulting in very poor drying conditions. Although two thirds of the cereals have been cut only 10 to 15% are harvested. Grain left in the field to dry has fallen on the ground and is beginning to sprout.

Rain during the past few weeks has also caused many construction delays.

ONTARIO

Most regions had variable weather this week, alternating between rain and sunshine.

Precipitation was heavier than normal in many areas, with a weekly total of 74.5 mm at Thunder Bay.

Except for a few stations, the average temperature dropped below normal all throughout the province. The mercury fell to -3° on the 12th at Timmins (a low temperature record for this date) and rose to 27° at Toronto at the beginning of the week.

QUÉBEC

Autumn air penetrated all areas of the province as temperature averages fell below normal everywhere except in northern areas and at Sept-Îles. Temperatures ranged from 23° (at Montréal, on the 11th) to -3° (at Grande Rivière, on the 15th).

Cloudy and rainy weather persisted in several areas with precipitation exceeding weekly normals at most stations. The southwestern region received the largest amount of precipitation; a total of 67.8 mm was recorded at Sainte-Agathe.

Poor weather this summer led to a drop in tourism in the Gaspé Peninsula. The summer has been termed by the daily newspaper "La Presse" as "disastrous" for the tourism industry. According to the Chairman of the Gaspé Chamber of Commerce, poor weather and broken roads combined with delays caused by road repair equipment has kept some tourists away, but the situation is still not a catastrophe.

ATLANTIC PROVINCES

Rain fell again this week in Newfoundland, however, it was a welcome relief in Nova Scotia, where the soil had become extremely dried out during the past few weeks.

Precipitation exceeded normal at most places: Yarmouth had 81.0 mm receiving more rain within 24 hours than during the previous 60 days.

The weather became cooler in all regions: the average temperature dropped below normal at every station. A high of 22° was recorded at Shearwater on the 9th; a low of -1°, at Wabush Lake on the 15th.

Some areas of Nova Scotia were slightly touched by frost, but the rain and wind have helped to quickly bring temperatures back above freezing.

Cereal harvesting on Prince Edward Island is now 75% complete but yields are considerably less than last year's. The total blueberry crop for the season is lower than normal. In contrast, the grade and amount of the tobacco crop are both excellent this year; about 60% has been harvested.

The cereals are 70% harvested in Nova Scotia with below normal yields.

CLIMATIC PERSPECTIVES

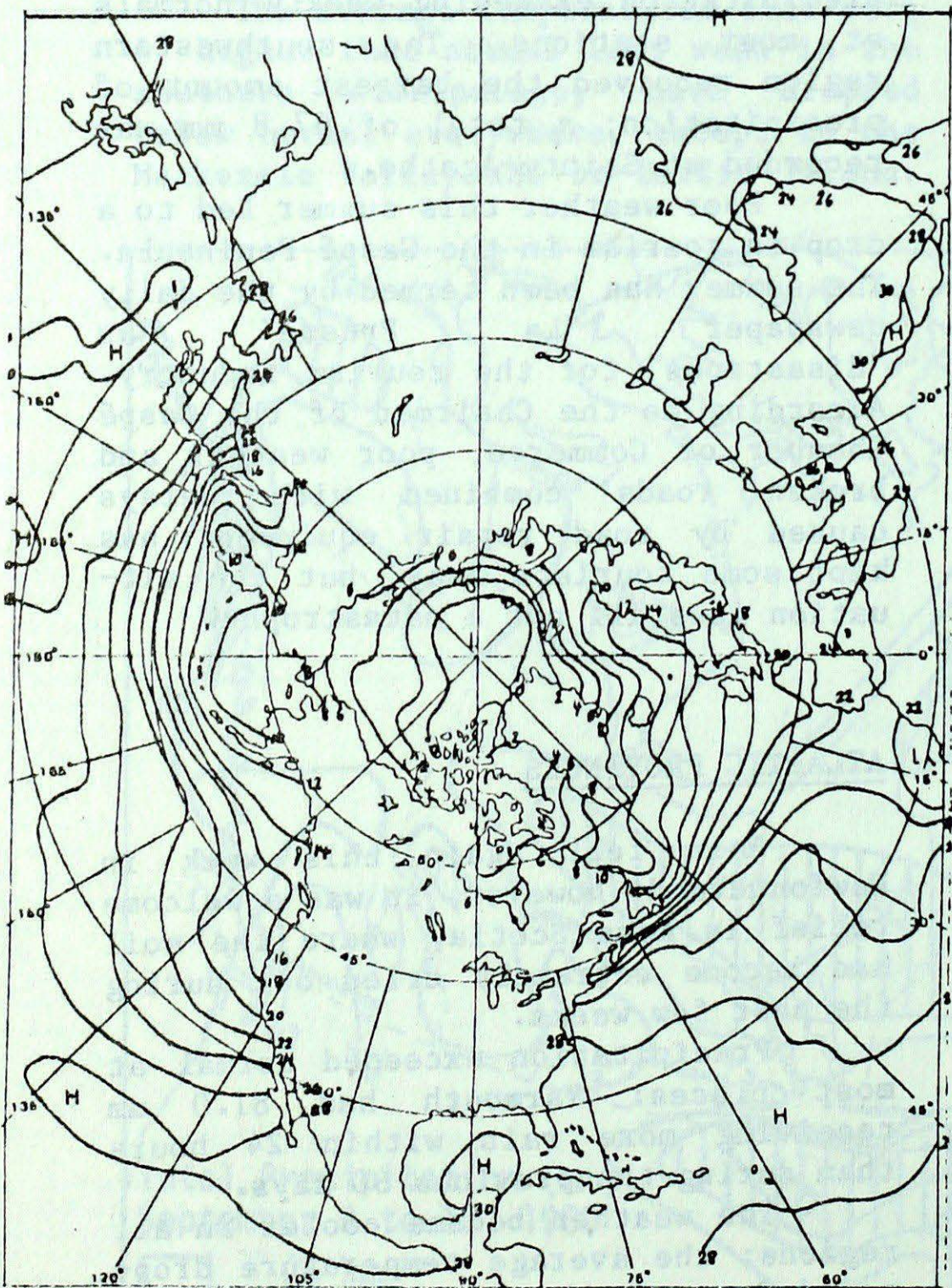
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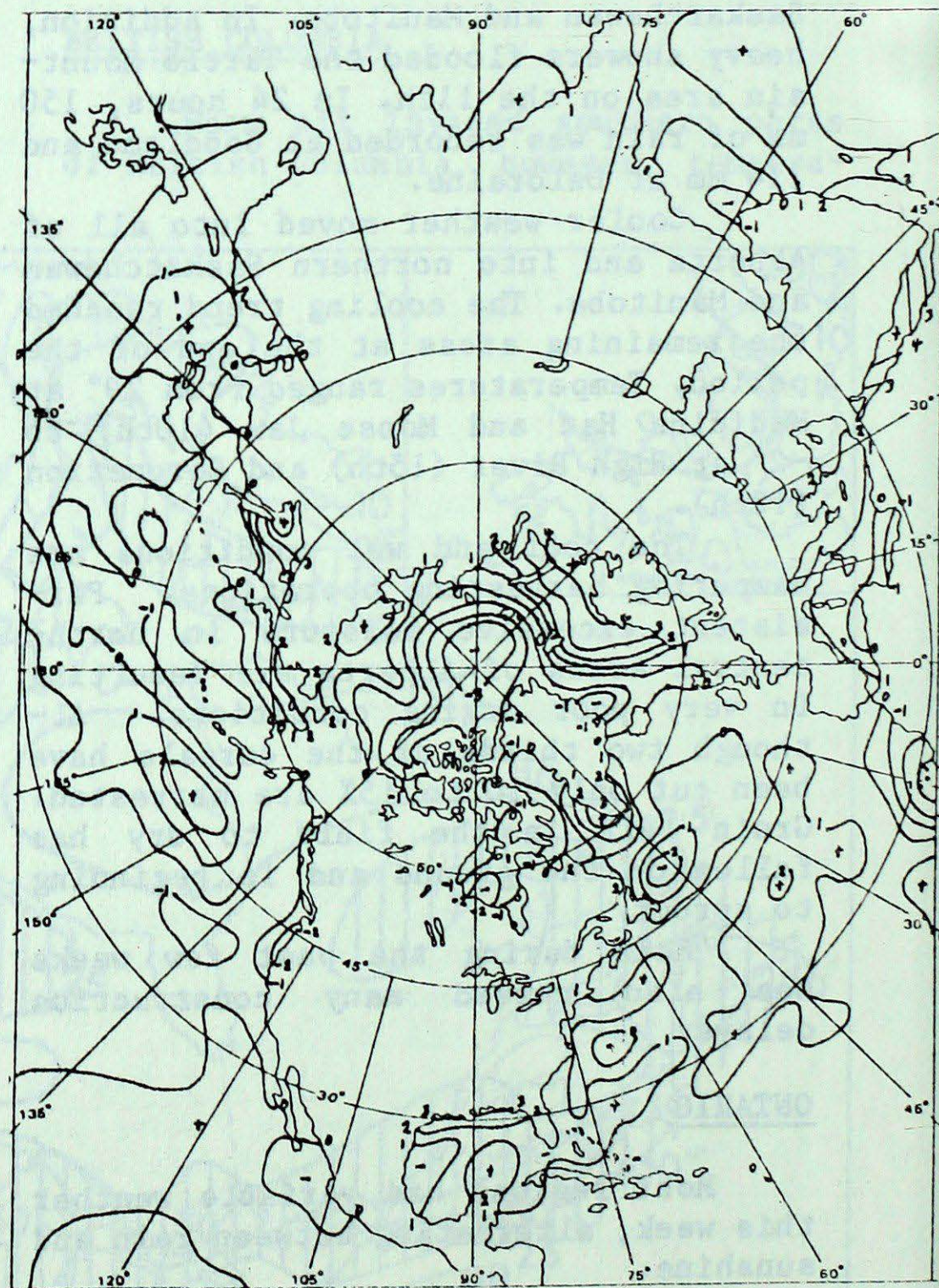
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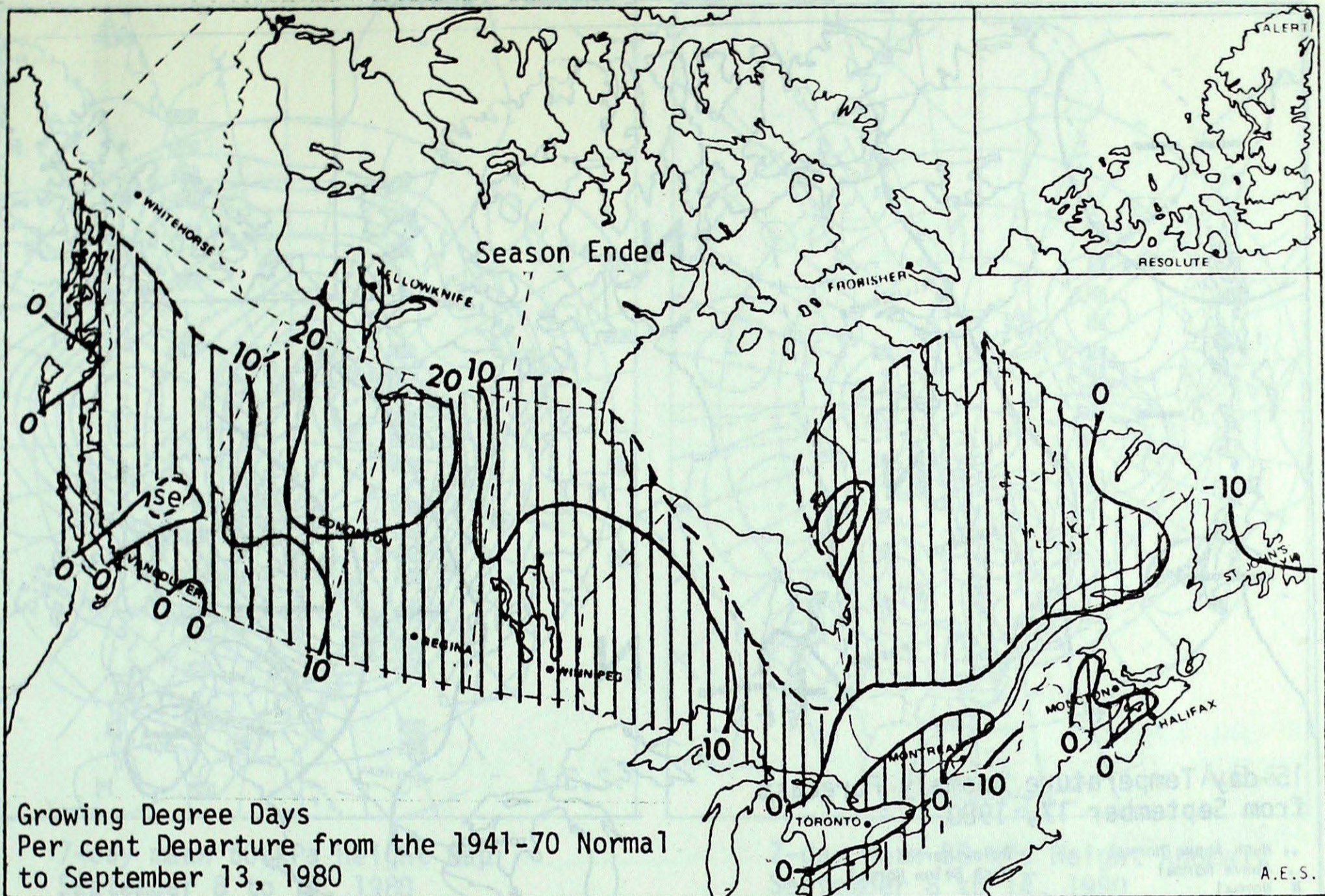


Mean Sea Surface Temperature
August 16 to September 15, 1980



Sea Surface Temperature Anomalies
August 16 to September 15, 1980

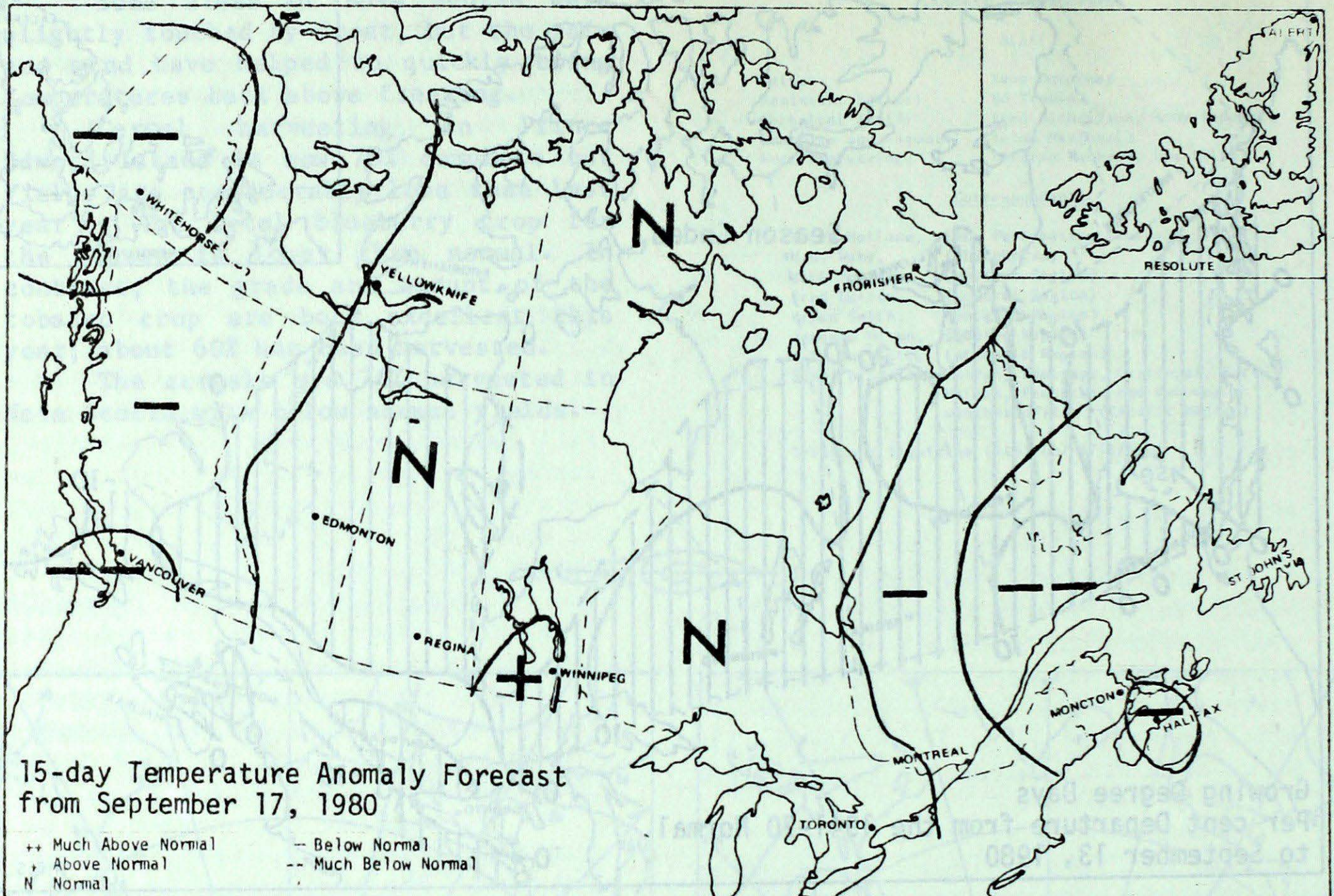
GROWING DEGREE-DAY SUMMARY TO SEPTEMBER 13, 1980



CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse	7.5	-48.5	832.5	-17.5	98*
Penticton	136.5	-10.5	1877.0	61.0	103
Vancouver	123.5	-12.5	1512.5	-80.5	95
Edmonton	99.0	16.0	1504.5	298.5	125
Calgary	96.5	-3.5	1262.5	88.5	108
Regina	139.5	26.5	1719.5	268.5	119
Saskatoon	136.0	25.0	1695.0	263.0	118
Winnipeg	140.5	12.5	1815.0	263.0	117
Thunder Bay	118.0	11.0	1423.0	186.0	115
Windsor	199.0	13.0	2090.0	16.0	101
Toronto	169.5	8.5	1777.5	-24.5	99
Ottawa	151.0	2.0	1785.5	38.5	102
Montréal	147.5	-14.5	1750.0	-58.0	97
Québec	115.5	-15.5	1495.5	1.5	100
Fredericton	132.5	6.5	1556.0	65.0	104
Halifax	148.5	12.5	1308.5	-43.5	97
Charlottetown	133.0	-7.0	1283.5	-42.5	97
St John's	104.0	-4.0	843.5	-100.5	89

* Denotes end of Growing Season

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

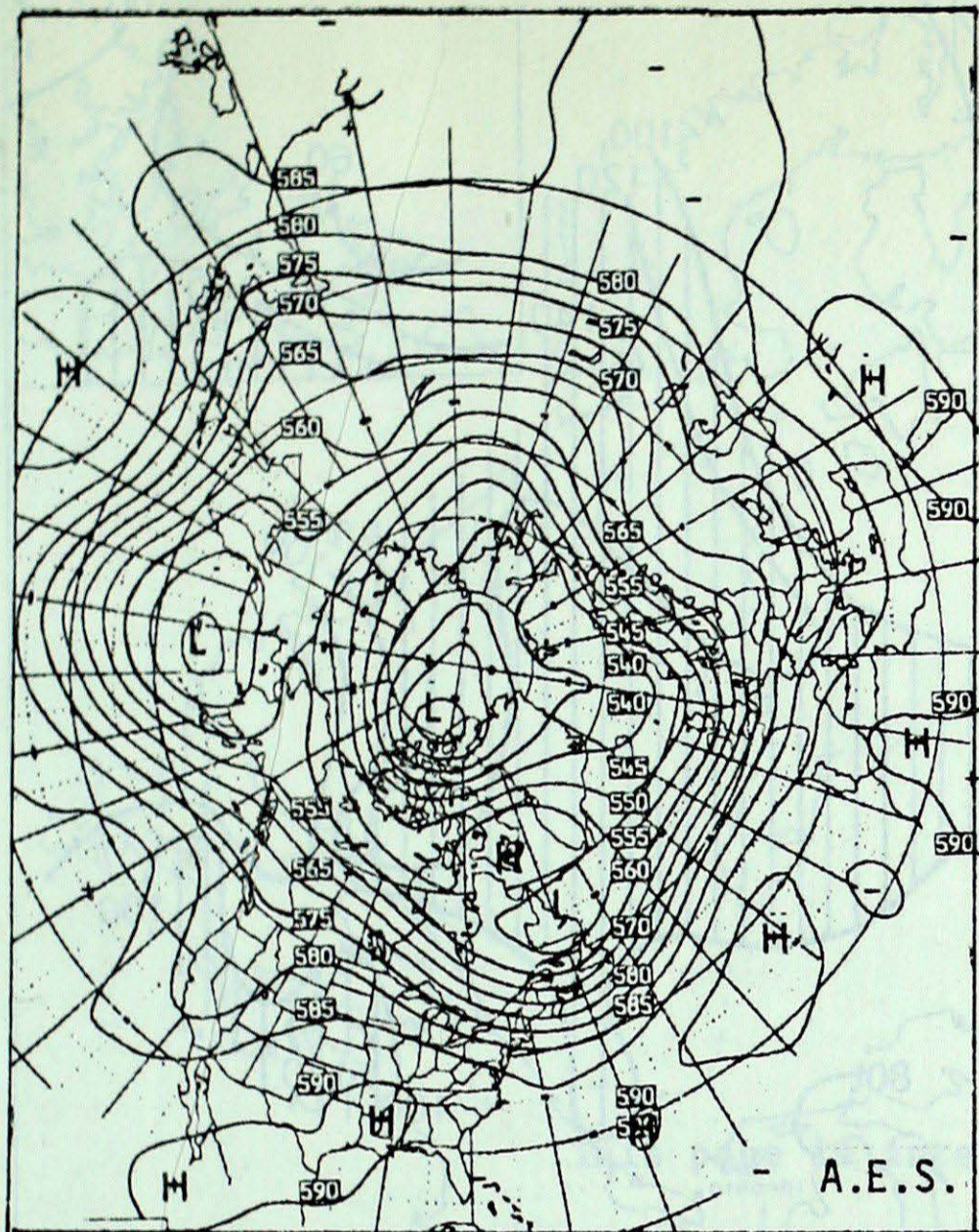
Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

StationCurrent Temperature Anomaly Forecast

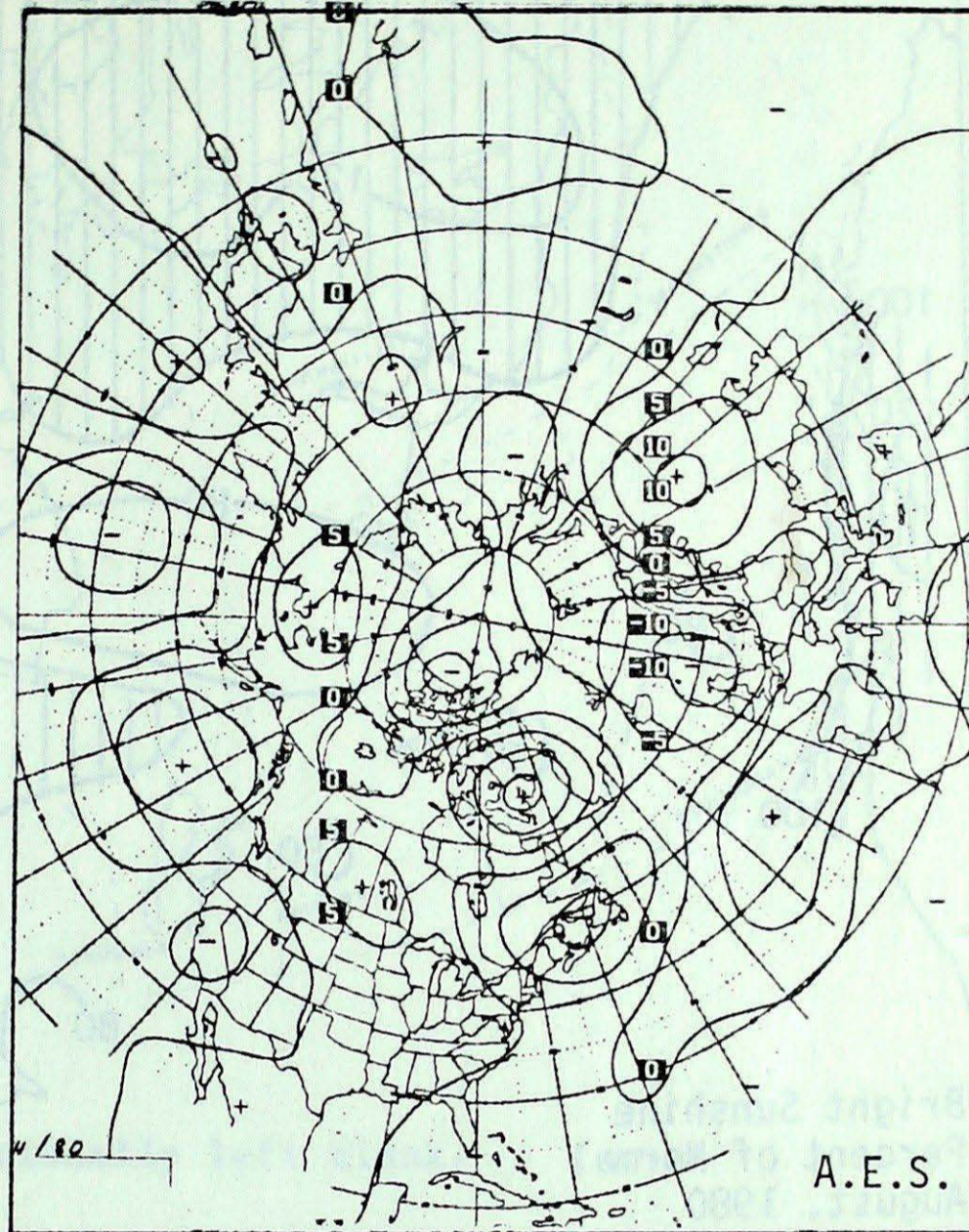
<u>Station</u>	<u>Current Temperature Anomaly Forecast</u>
Whitehorse	Much Below Normal More than 1.8° below Normal
Victoria	Much Below Normal More than 1.0° below Normal
Vancouver	Much Below Normal More than 1.0° below Normal
Edmonton	Near Normal Within 0.7° of Normal
Regina	Near Normal Within 0.6° of Normal
Winnipeg	Above Normal From 0.6° to 1.9° above Normal
Thunder Bay	Near Normal Within 0.4° of Normal
Toronto	Near Normal Within 0.5° of Normal
Ottawa	Below Normal From 0.5° to 1.6° below Normal
Montreal	Below Normal From 0.5° to 1.6° below Normal
Quebec	Much Below Normal More than 1.5° below Normal
Fredericton	Much Below Normal More than 1.5° below Normal
Halifax	Below Normal From 0.3° to 1.2° below Normal
Charlottetown	Much Below Normal More than 1.3° below Normal
St. John's	Much Below Normal More than 1.1° below Normal
Goose Bay	Much Below Normal More than 1.5° below Normal
Frobisher Bay	Near Normal Within 0.4° of Normal
Inuvik	Below Normal From 0.7° to 2.3° below Normal

Note: Anomaly denotes departure from the 1949-73 mean.

Atmospheric Circulation



7-day mean 50 kPa Height Map
September 8 to 14, 1980



7-day Mean 50 kPa Height Anomaly
September 8 to 14, 1980

The mean atmospheric circulation was somewhat similar to that of last week. The strong west to east upper flow now has a more northwesterly component arising from the more pronounced Pacific coast ridge and Atlantic coast trough and resulting in colder mean temperatures across most of Canada.

The deep low that had been stationary over the Arctic Ocean for some time, weakened and drifted east of Greenland.

During the first half of the week an upper closed low drifted slowly eastwards across Ontario and Québec

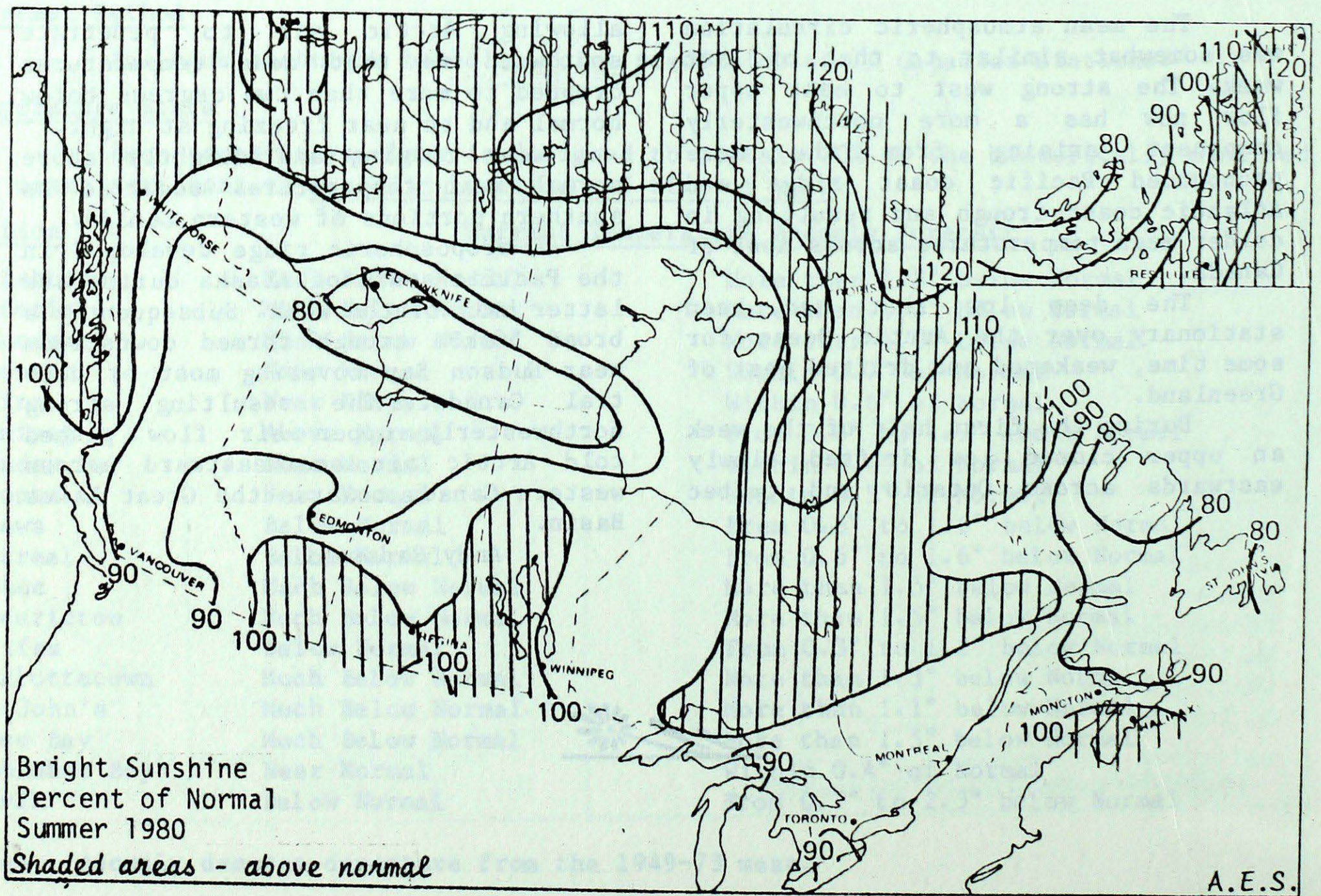
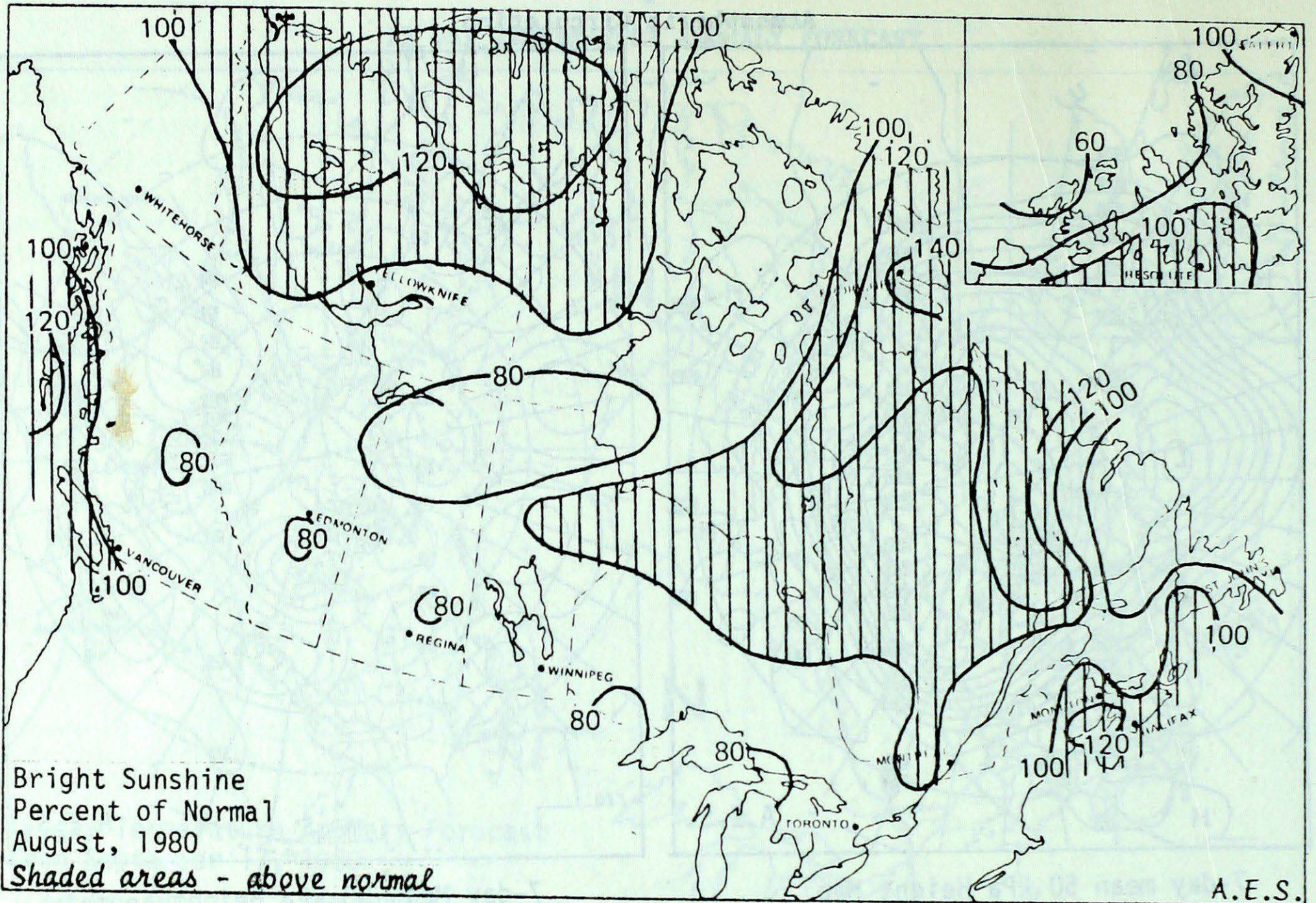
allowing Arctic air to penetrate southward so that mean temperatures dropped to more than two degrees below normal and to near freezing at night.

Weak ridging and slightly above normal mean temperatures occurred in southern portions of western Canada.

A tropospheric ridge developed in the Pacific south of Alaska during the latter half of the week. Subsequently a broad 50 kPa trough formed downstream near Hudson Bay covering most of central Canada. The resulting strong northwesterly upper air flow pushed cold Arctic air southeastward across western Canada towards the Great Lakes Basin.

Andy Radomski





PHENOLIC PERSPECTIVES

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NOTE: The data shown in this report is based on information received from the following sources:

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. SEPTEMBER 15, 1980

Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
BRITISH COLUMBIA						
Abbotsford A	16	0	25	7	8.3	- 8.8
Alert Bay	12	- 1	21	6	0.4	-19.2
Blue River	M	X	25P	0	M	X
Bull Harbour	M	X	16	5P	1.3	-19.3
Burns Lake	M	X	21P	3P	1.0	X
Cape Scott	12	- 1	15	9	1.8	-25.5
Cape St. James	15	2	22	10	2.0	-23.9
Castlegar A	15	0	25	6	5.4	1.3
Comox A	16	2	24	8	0.2	-10.8
Cranbrooke	14	1	25	4	11.0	7.5
Dease Lake	7	- 1	18	- 4	2.5	- 5.7
Estevan Point	M	M	21P	8	M	M
Fort Nelson A	9	- 1	20	- 2	9.6	1.3
Fort St. John A	10	- 1	22	1	3.7	- 4.1
Kamloops A	15	- 1	25	5	13.7	7.9
Langara	12	- 1	15	9	1.4	-27.9
Lytton	16	0	29	7	19.5	16.7
Mackenzie A	M	X	21	0P	3.8	X
McInnes Island	14	0	21	9	0.0	-26.7
Penticton A	15	0	25	6	18.6	13.3
Port Hardy A	11	- 1	19	5	0.6	-25.6
Prince George A	10	0	22	1	0.9	-10.7
Prince Rupert A	10	- 1	21	2	12.0	-27.2
Quesnel A	M	M	23P	3	1.2	- 7.3
Revelstoke A	14	1	22	5	0.4	- 6.7
Sandspit	16	2	24	11	1.4	-12.9
Smithers A	11	0	21	1	1.9	- 7.8
Spring Island	M	M	19P	10	M	M
Stewart A	M	X	21	4P	M	X
Terrace A	14	1	23	7	2.4	-16.1
Vancouver Int'l A	15	0	22	9	2.5	-11.0
Victoria Int'l A	15	1	25	8	1.7	- 7.9
Williams Lake A	11	1	22	2	1.6	- 5.6
YUKON						
Burwash A	6	- 1	18	- 9	3.8	- 3.5
Dawson A	7	- 1	15	- 4	30.1	23.2
Komukuk Beach A	3	1	13	- 4	3.5	2.2
Mayo A	7	- 1	14	- 4	26.9	19.3
Shingle Point A	4	1	13	- 1	3.4	- 0.7
Watson Lake A	7	- 2	15	- 3	1.7	- 8.1
Whitehorse A	7	- 2	19	- 3	2.7	- 2.5
NORTHWEST TERRITORIES						
Alert	-10	0	3	-18	39.2	34.9
Baker Lake	2	- 1	7	- 2	0.8	- 6.2
Broughton Island	0	3	8	- 7	4.0	- 4.0
Byron Bay	0	- 1	10	- 6	0.4	- 6.3
Cambridge Bay A	0	- 1	8	- 7	0.0	- 3.9
Cape Dorset	3	X	6	0	M	X
Cape Dyer A	2	3	10	- 4	0.0	-27.4
Cape Hooper	0	2	9	- 7	7.1	- 1.1
Cape Parry A	1	- 1	7	- 4	0.0	- 4.7
Cape Young A	2	0	12	- 2	0.0	- 6.5
Chesterfield Inlet	2	- 2	5	- 2	40.3	33.0
Clinton Point	2	0	9	- 3	0.5	- 6.5
Glyde	1	1	9	- 3	13.4	6.1
Contwoyto Lake	3	1	9	- 3	8.4	1.7
Coppermine	2	- 1	12	- 4	3.2	- 0.6
Coral Harbour	3	1	10	- 5	13.5	6.4
Dewar Lakes	0	3	6	- 6	1.0	- 5.0
Ennadai	M	M	10P	- 3	M	M
Eureka	-10	- 4	- 1	-17	0.8	- 1.4
Fort Reliance	7	0	12	- 1	4.6	- 0.8
Fort Simpson	9	2	19	- 1	11.5	5.9
Fort Smith A	7	- 2	16	- 2	6.0	0.8
Frobisher Bay A	2	- 1	10	- 2	29.4	21.7
Gladman Point A	- 1	0	5	- 5	0.2	- 4.6
Hall Beach A	1	0	4	- 2	33.1	28.4
Hay River A	8	- 1	21	0	4.0	- 4.9
Inuvik A	4	0	13	- 5	9.1	4.3
Jenny Lind Island	- 2	- 1	5	- 7	1.0	- 3.1
Lady Franklin Point	2	0	7	- 2	0.6	- 3.8
Longstaff Bluff	2	2	7	- 4	12.2	6.0
Mackar Inlet	- 4	- 1	0	- 9	5.2	- 1.0
Mould Bay	- 9	- 4	- 2	-16	3.2	- 1.2
Nicholson Peninsula	1	- 1	7	- 5	2.0	- 1.4
Norman Wells A	7	0	14	0	8.4	- 0.5
Pelly Bay	- 4	- 2	- 1	- 9	0.0	- 6.0
Pond Inlet	- 1	X	6	- 8	3.4	X
Port Burwell	4	X	9	0	10.7	X
Resolute A	- 7	- 3	0	-13	5.8	1.1

Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
Sachs Harbour	M	M	2	-12P	1.3	- 1.6
Shepherd Bay A	- 1	- 1	4	- 7	0.8	- 3.7
Tuktoyaktuk	4	0	10	- 1	2.0	- 0.8
Yellowknife A	7	- 1	13	1	2.6	- 3.4
ALBERTA						
Banff	10	0	25	1	19.6	10.3
Calgary Int'l A	10	- 1	26	2	19.0	9.8
Cold Lake A	10	0	24	1	12.2	2.5
Coronation A	10	- 1	27	- 2	2.8	- 2.7
Edmonton Int'l. A	10	0	24	1	17.2	8.3
Edmonton Mun. A	11	- 1	25	4	13.0	2.6
Edmonton Namao A	10	- 2	24	3	12.6	1.6
Edson A	9	0	25	0	31.4	16.8
Fort Chipewyan	M	M	M	- 1P	M	M
Fort McMurray A	9	- 2	23	- 1	31.9	19.3
Grande Prairie A	10	- 1	24	2	8.4	- 1.7
High Level A	8	0	20	- 2	2.7	- 4.7
Jasper	9	- 2	26	1	6.2	- 0.9
Lethbridge A	13	- 1	28	2	23.9	16.6
Medicine Hat A	14	0	29	2	11.5	4.6
Peace River A	10	0	24	2	12.0	5.2
Red Deer A	10	- 2	27	1	21.6	11.6
Rocky Mountain House	9	- 2	25	0	21.6	8.6
Slave Lake A	9	0	24	1	8.6	- 4.1
Vermilion A	11	0	25	3	3.6	- 4.4
Whitecourt	9	0	24	2	18.3	11.7
SASKATCHEWAN						
Broadview	13	0	27	1	3.7	-11.9
Buffalo Narrows	M	M	20P	3	40.4	26.6
Cree Lake	7	X	18	- 1	19.6	X
Estevan A	13	- 1	27	4	5.2	- 1.9
Hudson Bay	12	2	25	3	9.9	- 2.1
Kindersley	13	1	28	2	0.9	- 6.2
La Ronge A	10	0	22	1	52.6	35.7
Meadow Lake A	11	X	25	1	24.4	X
Moose Jaw A	15	1	29	4	0.5	-10.2
Nipawin A	12	X	25	3	21.2	X
North Battleford A	12	0	27	3	12.4	6.7
Prince Albert	12	1	26	- 1	18.3	11.7
Regina A	14	1	28	1	6.0	- 2.5
Saskatoon A	14	2	28	4	5.0	- 1.7
Swift Current A	13	0	27	4	1.0	- 7.2
Uranium City	7	- 1	17	0	0.2	- 7.1
Wynyard	14	1	26	4	10.4	- 5.7
Yorkton A	13	1	27	2	8.4	0.3
MANITOBA						
Bissett	12	1	24	5	7.5	-14.3
Brandon A	13	1	25	3	0.0	- 8.1
Churchill A	6	0	13	1	11.0	- 0.1
Dauphin A	13	1	27	3	7.8	- 1.7
Gillam A	6	X	14	- 1	30.0	X
Gimli	14	2	25	5	11.5	- 1.9
Island Lake	M	X	15P	2	36.5	X
Lynn Lake	8	0	18	- 1	29.1	13.9
Norway House	10	X	20	2	42.0	X
Pilot Mound	12	0	25	2	10.4	3.1
Portage la Prairie	13	1	26	4	8.8	0.1
The Pas A	12	1	22	3	53.7	38.9
Thompson A	8	0	18	- 1	67.9	49.8
Winnipeg Int'l A	13	0	26	5	4.1	- 7.2
ONTARIO						
Armstrong A	10	0	20	- 1	18.1	- 1.8
Atikokan	11	- 1	22	4	68.0	52.5
Earlton A	10	- 2	18	- 1	24.4	- 2.9
Geraldton	8	- 1	17	- 2	14.0	- 6.5
Gore Bay A	14	- 1	20	6	55.5	32.9
Kapuskasung	8	- 3	20	- 2	11.8	-14.1
Kenora A	13	0	24	7	4.2	-10.1
Kingston A	15	- 1	22	9	27.3	5.2
Lansdowne House	8	- 2	16	1	11.4	- 6.9
London A	16	0	25	7	37.0	18.4
Moosonee	8	- 3	18	0	16.3	- 4.6
Mount Forest	M	M	24	6P	14.4	- 1.8
Muskoka A	13	- 2	21	3	31.9	3.6
North Bay A	10	- 3	20	1	67.2	37.8
Ottawa Int'l A	13	- 2	24	5	24.8	2.3
Petawawa A	11	X	23	0	32.8	X
Pickle Lake	9	- 1	18	1	7.2	-10.4
Red Lake A	11	- 1	24	- 1	7.4	-10.9

Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
Simcoe	17	1	25	11	15.3	2.2
Sioux Lookout A	12	0	24	5	4.0	-15.5
Sudbury A	11	- 1	20	4	33.8	7.7
Thunder Bay A	12	0	26	2	74.5	48.8
Timmins A	8	- 2	17	- 3	26.7	0.2
Toronto Int'l A	15	- 1	27	8	19.1	2.5
Trenton A	15	- 2	23	6	13.8	- 5.2
Trout Lake	7	- 2	14	1	30.3	17.2
Wawa A	9	X	20	- 2	22.9	
Warton A	14	- 2	22	6	10.2	-13.3
Windsor A	18	0	25	10	41.7	24.2
QUÉBEC						
Bagotville A	9	- 3	17	2	28.9	5.2
Baie Comeau	10	- 1	17	2	22.6	- 0.2
Blanc Sablon	10	0	14	4	22.2	- 6.2
Border	M	M	7P	2P	M	M
Chibougamau	7	X	14	1	17.8	
Fort Chimo A	7	1	18	1	2.6	-10.2
Gaspé A	11	X	19	2	17.5	
Grindstone Island	13	- 1	16	10	22.0	3.2
Inouedjouac	6	1	11	3	9.0	- 6.2
Koartak	M	X	8	1P	12.5	
La Grande Rivière A	6	X	11	- 3	15.5	
Maniwaki	10	- 3	19	0	43.8	21.2
Matagami A	M	X	16P	2	12.9	
Mont-Joli A	10	- 2	16	3	32.3	9.2
Montréal (A int.)	13	- 3	23	4	57.2	36.2
Natashquan A	9	- 1	17</			