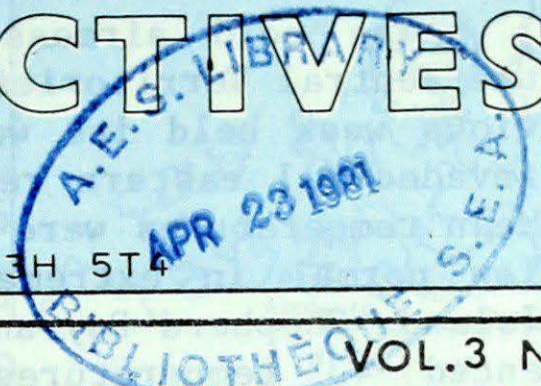


CLIMATIC PERSPECTIVES

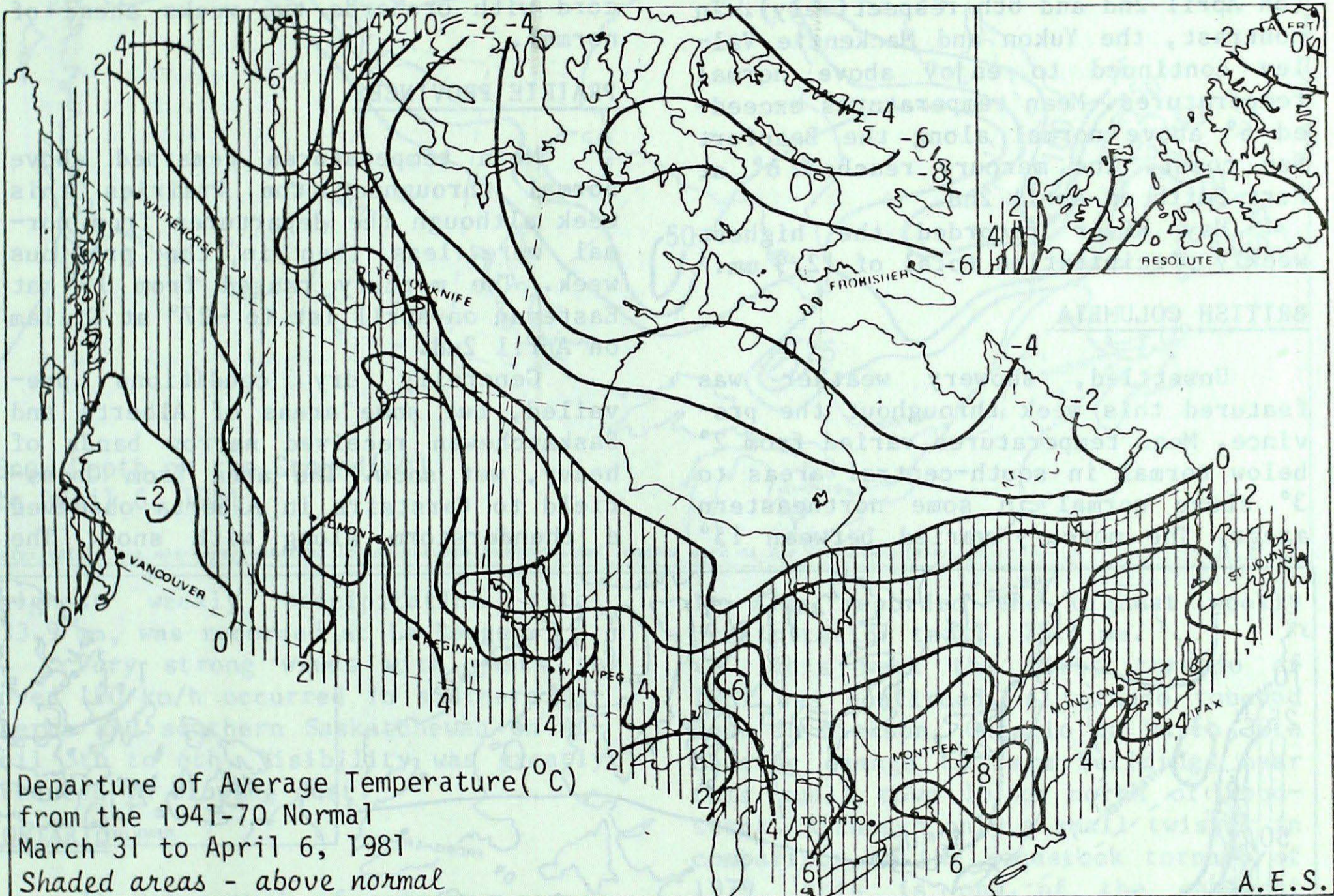
THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4



APRIL 10, 1981

(Aussi disponible en français)

VOL.3 NO.14



WEATHER HIGHLIGHTS FOR THE PERIOD - MARCH 31 TO APRIL 6, 1981

The East experiences record setting weather

An almost uncountable number of high temperature records were set in eastern Canada, mostly on the weekend of April 4th to 5th. Mean temperatures exceeded 8° above normal in southeastern Quebec.

The first thunderstorms of the year occurred in Quebec this week, some associated with pea-sized hail. The first tornado of the year was confirmed as touching down in Hickson, Ontario. This is one of the earliest sightings ever.

Very strong winds with gusts to over 100 km/h occurred in southern Alberta and southern Saskatchewan on April 5th to 6th. Visibility was greatly reduced in the blowing dust.

The highest temperature of the week, 25° , occurred at Petawawa, Ontario and the lowest temperature, -43° , occurred at Eureka and Shepherd Bay, Northwest Territories. McInnes Island, British Columbia recorded the highest precipitation total again this week, 112.8 mm.

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

YUKON AND NORTHWEST TERRITORIES

The cold airmass which occupied the central Territories during the previous week held its western flank and invaded all eastern regions this week. Mean temperatures were more than 8° below normal in extreme eastern Baffin Island. Shepherd Bay and Eureka experienced -43° temperatures again this week (on April 2nd and 6th respectively). In contrast, the Yukon and Mackenzie Valley continued to enjoy above normal temperatures. Mean temperatures exceeded 6° above normal along the Beaufort Sea coast. The mercury reached 6° at Fort Smith on April 2nd.

Hay River recorded the highest weekly precipitation total of 12.9 mm.

BRITISH COLUMBIA

Unsettled, showery weather was featured this week throughout the province. Mean temperatures varied from 2° below normal in south-central areas to 3° above normal in some northeastern areas. The mercury varied between 15°

at Kamloops on March 31st to -11° at Dease lake on April 4th.

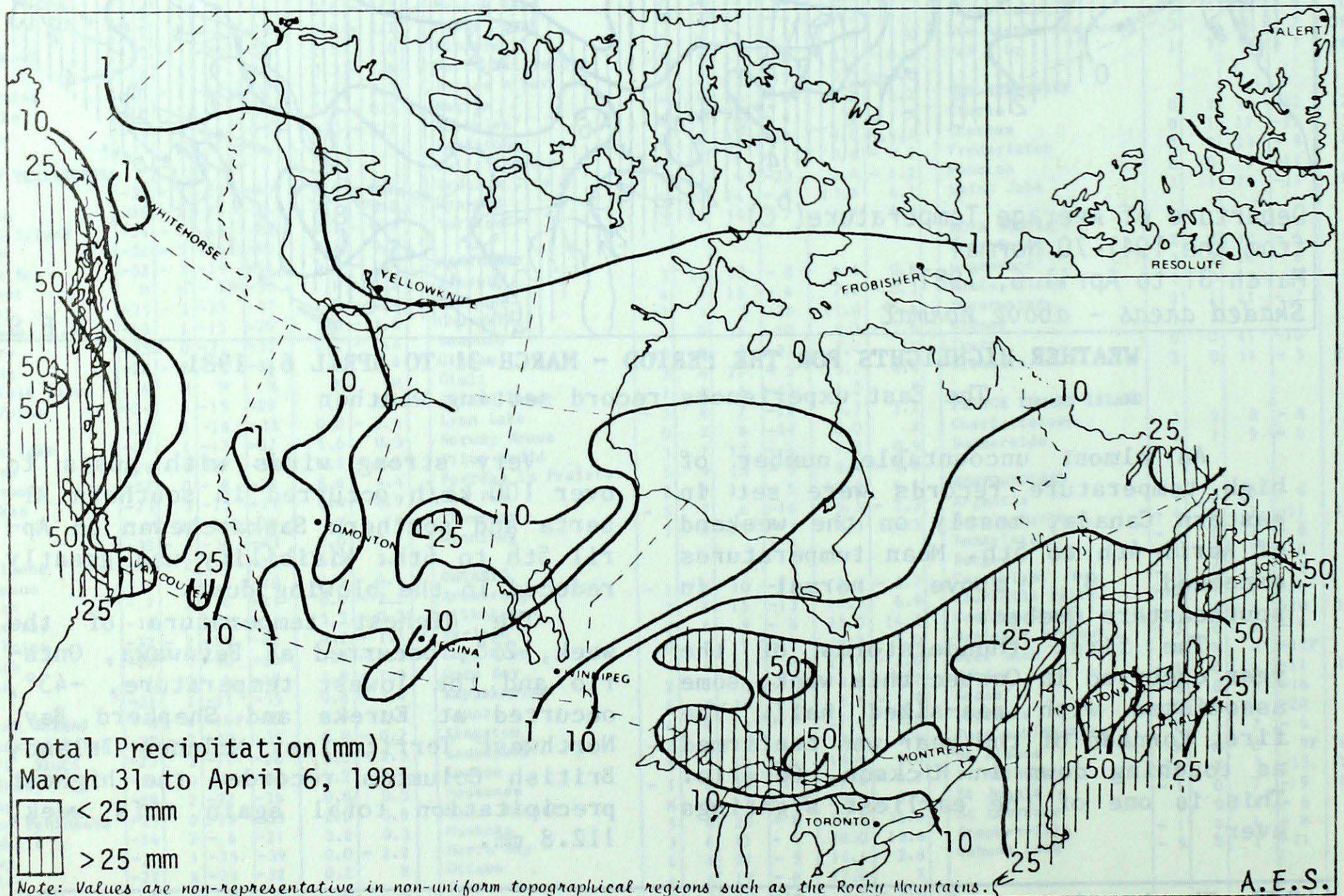
Most stations received above normal precipitation for the week. McInnes Island recorded the highest total, 112.8 mm.

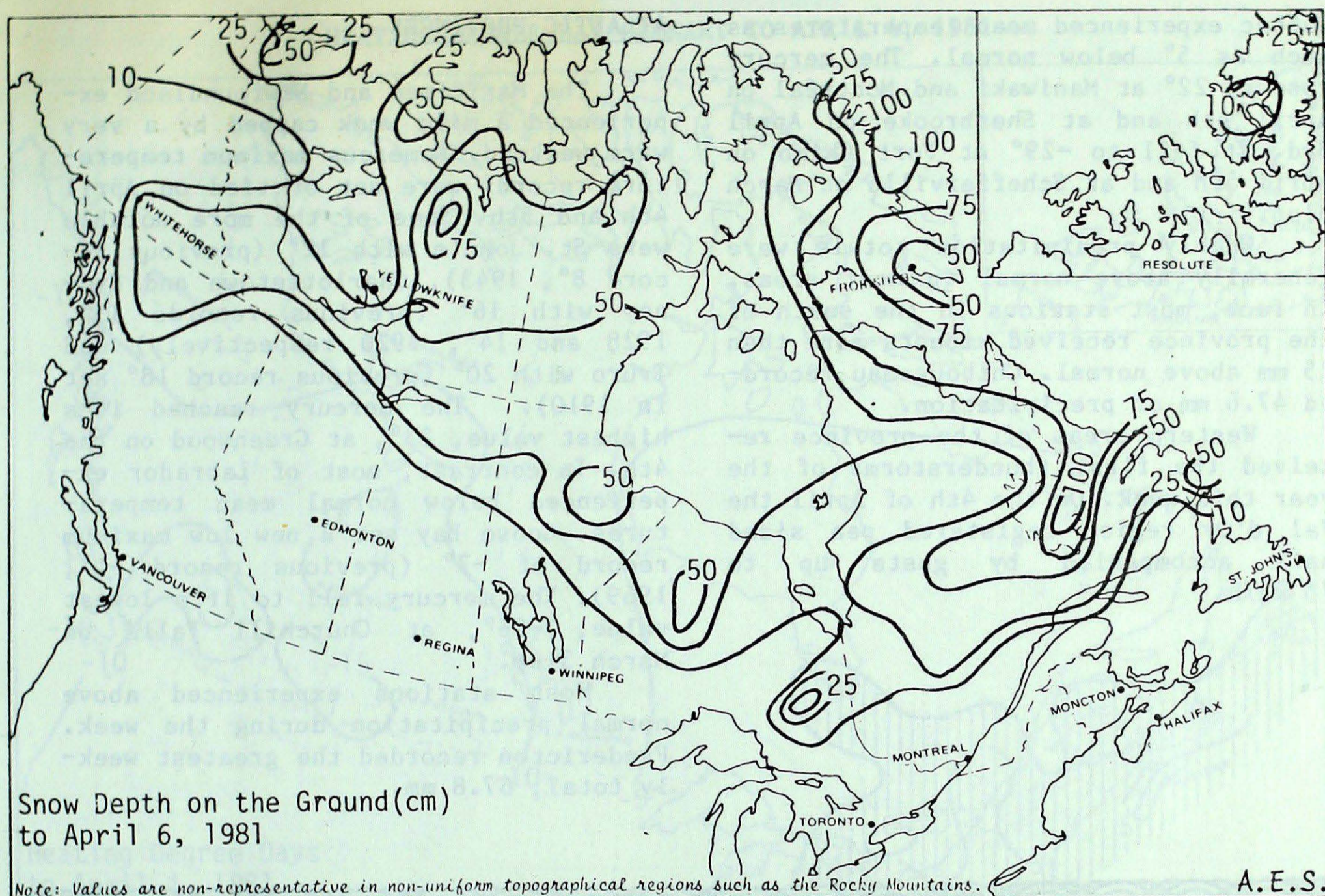
Logging activity in northern and central areas is at a standstill waiting for spring breakup. In the south, crop development is the earliest on record with orchards two weeks ahead of normal.

PRAIRIE PROVINCES

Mean temperatures remained above normal throughout the Prairies this week although the departures from normal were less than in the previous week. The mercury ranged from 19° at Eastevan on April 1st to -27° at Gillam on April 2nd.

Generally dry conditions prevailed, but some areas of Alberta and Saskatchewan received narrow bands of heavy, wet snow. The area from Crossfield to Carstairs in Alberta observed a thunderstorm along with snow. The





highest weekly precipitation total 33.9 mm, was recorded at La Ronge.

Very strong winds with gusts to over 100 km/h occurred in southern Alberta and southern Saskatchewan on April 5th to 6th. Visibility was greatly reduced in blowing dust.

ONTARIO

It was a week of extremes across Ontario last week highlighted by record breaking high temperatures, some heavy snowfalls in the North and by a tornado. On April 3rd and 4th, maximum temperatures reached above 20° in much of the province. At Toronto on April 3rd, a high of 20.8° broke the old daily record established in 1892 (18.3°). Muskoka hit 23° smashing their old mark by 10°. The highest temperature, 25°, was recorded at Petawawa, and the lowest, -26°, at Trout Lake, both on April 3rd.

Cold air quickly replaced these balmy temperatures bringing snow and strong winds. Kapuskasing went from a snowfree condition on Friday morning to 53 cm of snow-cover over the weekend.

It also recorded the highest weekly precipitation total, 75.1 mm.

This week the first tornado of 1981 was confirmed. A tornado touched down in Hickson, Ontario on March 30th causing damage to farm buildings near this small town 15 km north of Woodstock. Although only a small twister in comparison to the Woodstock tornado of 1979, this is one of the earliest sightings ever.

The ice in eastern Lake Erie has reduced considerably and should last about another week. Whitefish Bay and the coastal areas of Lake Superior still have ice.

QUÉBEC

Mean temperatures in southern and eastern areas of the province were above normal again this week rising to more than 10° above normal in the Sherbrooke region. More than 30 temperature records were established during the course of the week, mainly on the 3rd and 4th. These two days represent the earliest dates that temperatures have risen above 20°. In contrast, northern

Québec experienced mean temperatures as much as 5° below normal. The mercury rose to 22° at Maniwaki and Montréal on April 4th and at Sherbrooke on April 3rd. It fell to -29° at Fort Chimo on April 5th and at Schefferville on March 31st.

Weekly precipitation totals were generally above normal in most areas. In fact, most stations in the south of the province received amounts more than 25 mm above normal. Chibougamau recorded 47.6 mm of precipitation.

Western areas of the province received the first thunderstorms of the year this week. On the 4th of April the Val d'Or region registered pea sized hail accompanied by gusts up to 75 km/h.

ATLANTIC PROVINCES

The Maritimes and Newfoundland experienced a mild week capped by a very warm weekend. Numerous maximum temperature records were set or tied on April 4th and 5th. Some of the more notable were St. John's with 12° (previous record 8°, 1943), Charlottetown and Sydney with 16° (previous records 13°, 1928 and 14°, 1920 respectively) and Truro with 20° (previous record 18° set in 1910). The mercury reached it's highest value, 23°, at Greenwood on the 4th. In contrast, most of Labrador experienced below normal mean temperatures. Goose Bay set a new low maximum record of -7° (previous record -4°, 1969). The mercury fell to it's lowest value, -26°, at Churchill Falls on March 31st.

Most stations experienced above normal precipitation during the week. Fredericton recorded the greatest weekly total, 67.8 mm.



CLIMATIC PERSPECTIVES

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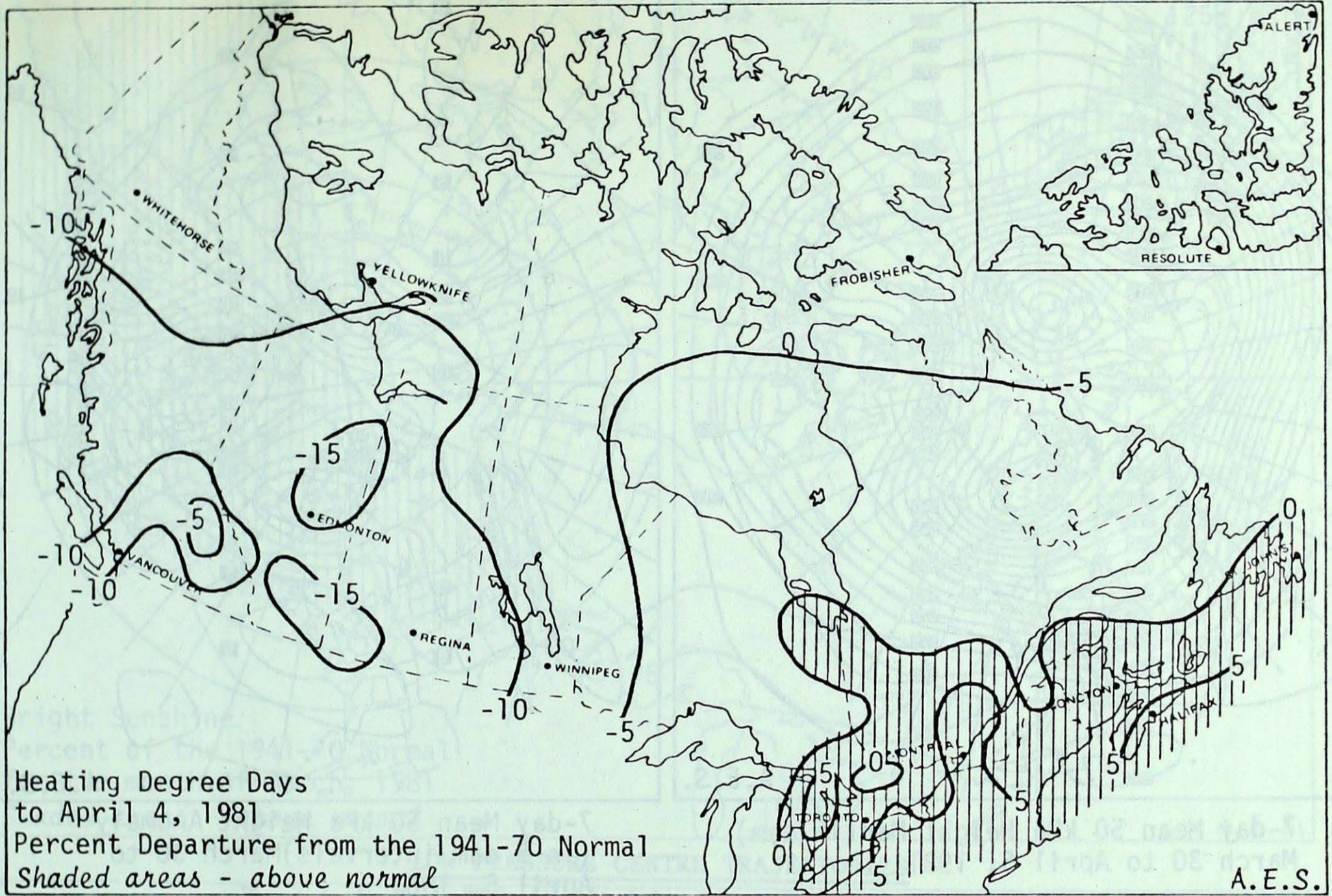
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HEATING DEGREE-DAY SUMMARY TO APRIL 4, 1981

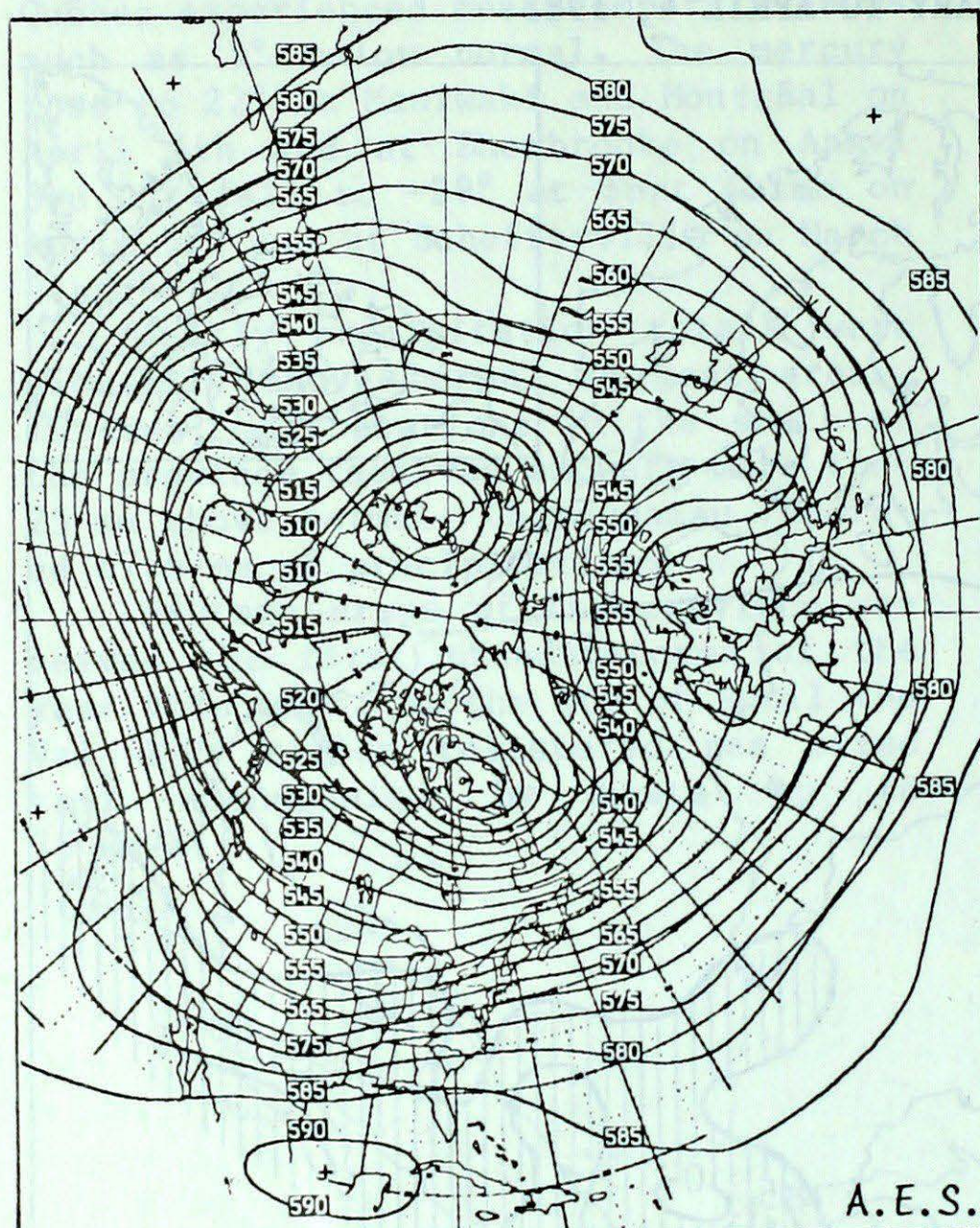


Heating Degree Days
to April 4, 1981
Percent Departure from the 1941-70 Normal
Shaded areas - above normal

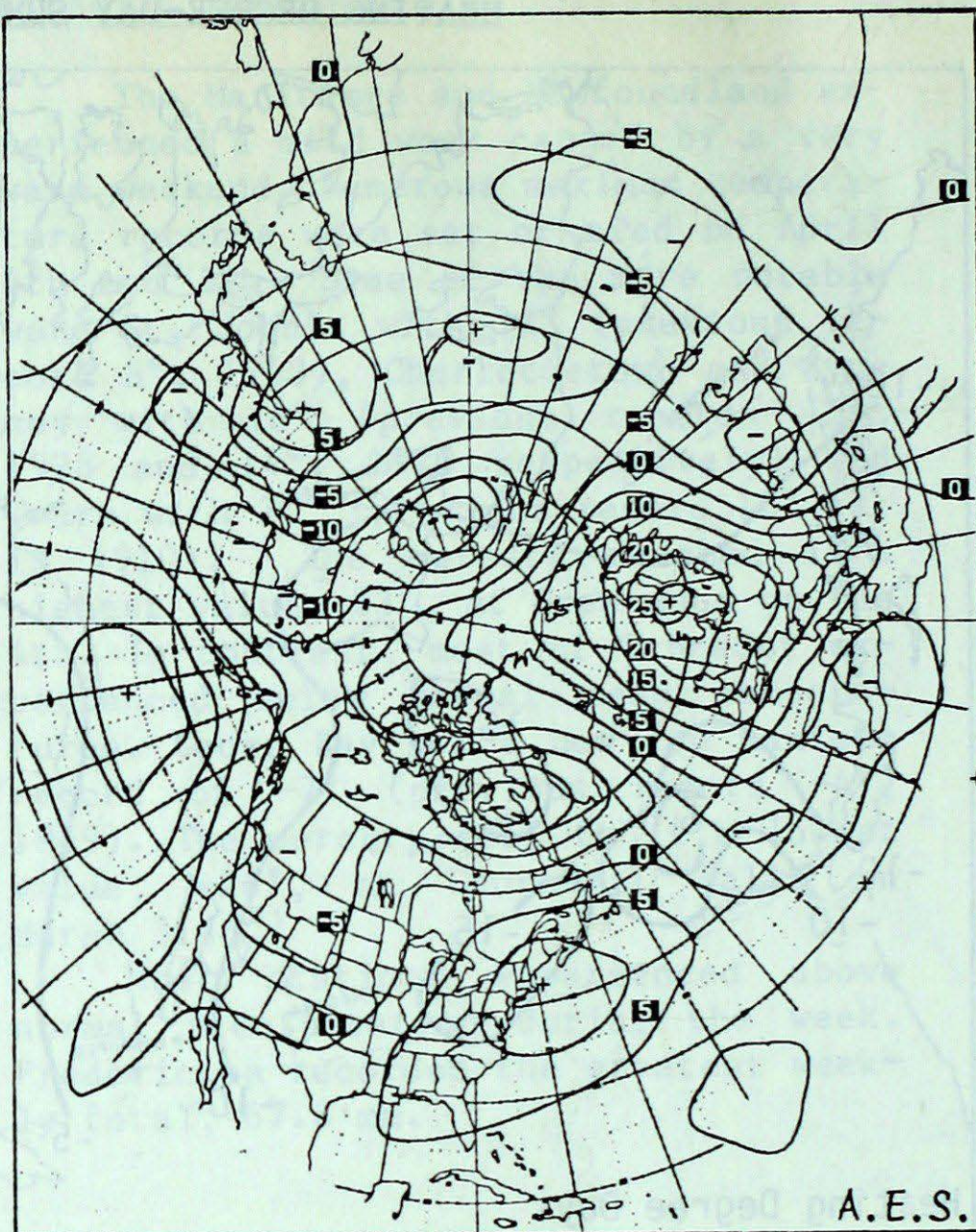
STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	199.5	17.5	9685.0	-376.0	96
Inuvik	111.5	-38.5	7851.5	-678.5	92
Whitehorse	83.0	-2.0	5404.5	-507.5	91
Vancouver	44.5	4.5	2302.0	-214.0	91
Edmonton Mun	56.0	-15.0	4128.5	-779.5	84
Calgary	61.5	-9.5	3828.5	-729.5	84
Regina	59.5	-18.5	4518.0	-708.0	86
Winnipeg	62.0	-16.0	4772.0	-442.0	92
Thunder Bay	68.0	-9.0	4783.5	-138.5	97
Windsor	17.0	-36.0	3276.0	98.0	103
Toronto	22.0	-37.0	3710.0	152.0	104
Ottawa	26.5	-36.5	4236.5	96.5	102
Montreal	30.5	-35.5	4217.0	255.0	106
Quebec	49.0	-25.0	4651.5	246.5	106
Saint John, N.B.	53.5	-14.5	4109.5	138.5	103
Halifax	48.0	-16.0	3547.5	190.5	106
Charlottetown	47.5	-24.5	3901.0	94.0	102
St. John's, Nfld.	67.0	-9.0	3849.0	92.0	102

Low Pressure Centre Trajectories
from March 31 to April 5, 1981

Atmospheric Circulation



7-day Mean 50 kPa Height Map (in dam)
March 30 to April 5, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) March 30 to
April 5, 1981

A zonal mean 50 kPa flow continued the pattern of the preceding week but with slightly lower and higher 50 kPa heights over western and eastern Canada respectively.

Vigorous and frequent perturbations characteristic of springtime moved eastward in the upper atmosphere. An on-shore trajectory permitted a series of these atmospheric triggering pulses to approach the Pacific coast and move inland across the continent. This stimulated the development of several low pressure systems following two distinct tracks; one track crossing British Columbia and the Prairie Provinces, the other extending from the southwestern United States through the Great Lakes.

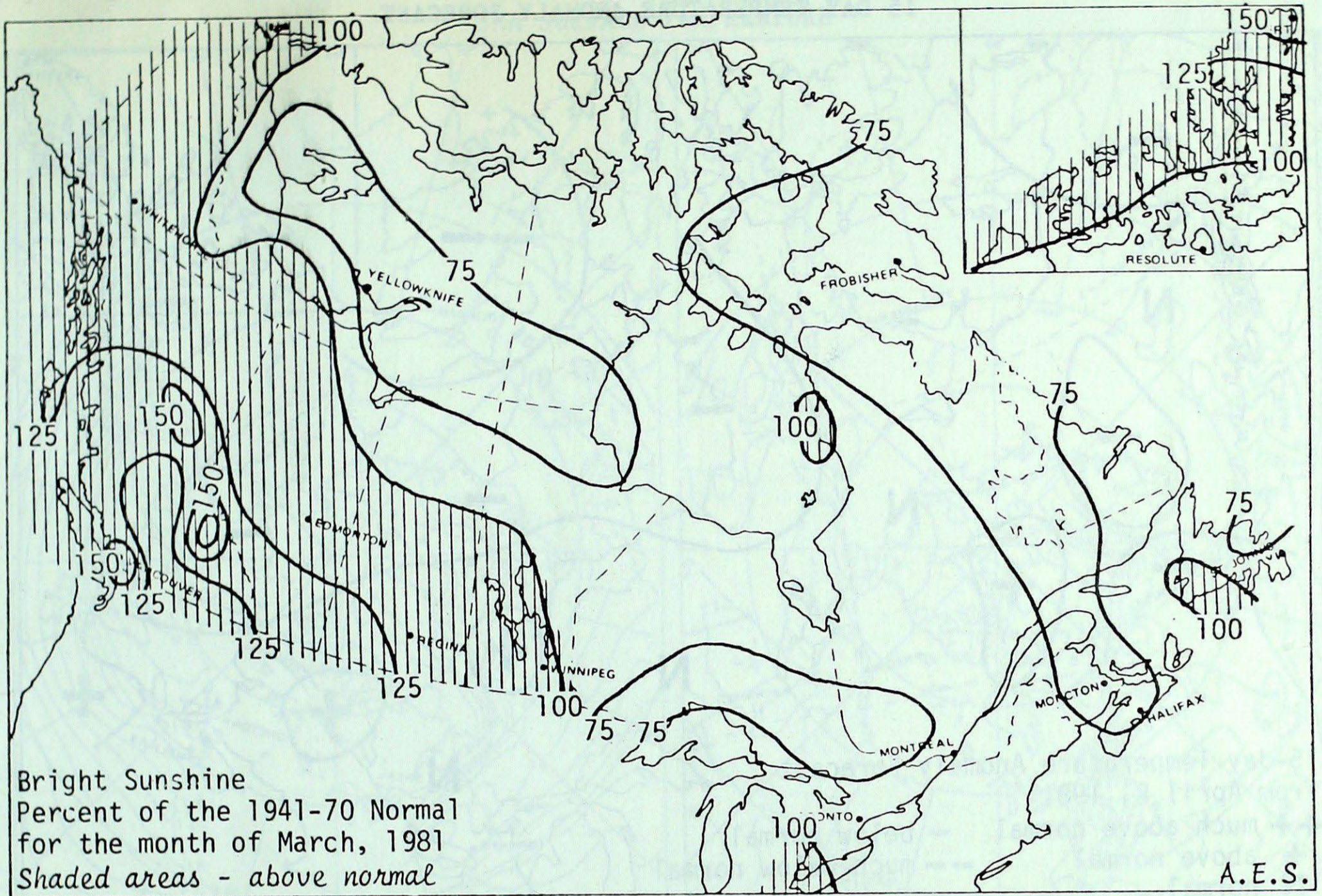
Strong pressure gradients around these cyclonic storms resulted in high winds which caused numerous problems in both western Canada and Ontario.

The accompanying cold fronts have become increasingly active due to greater temperature contrasts. Thunderstorms are starting to become a common weather phenomena across the country.

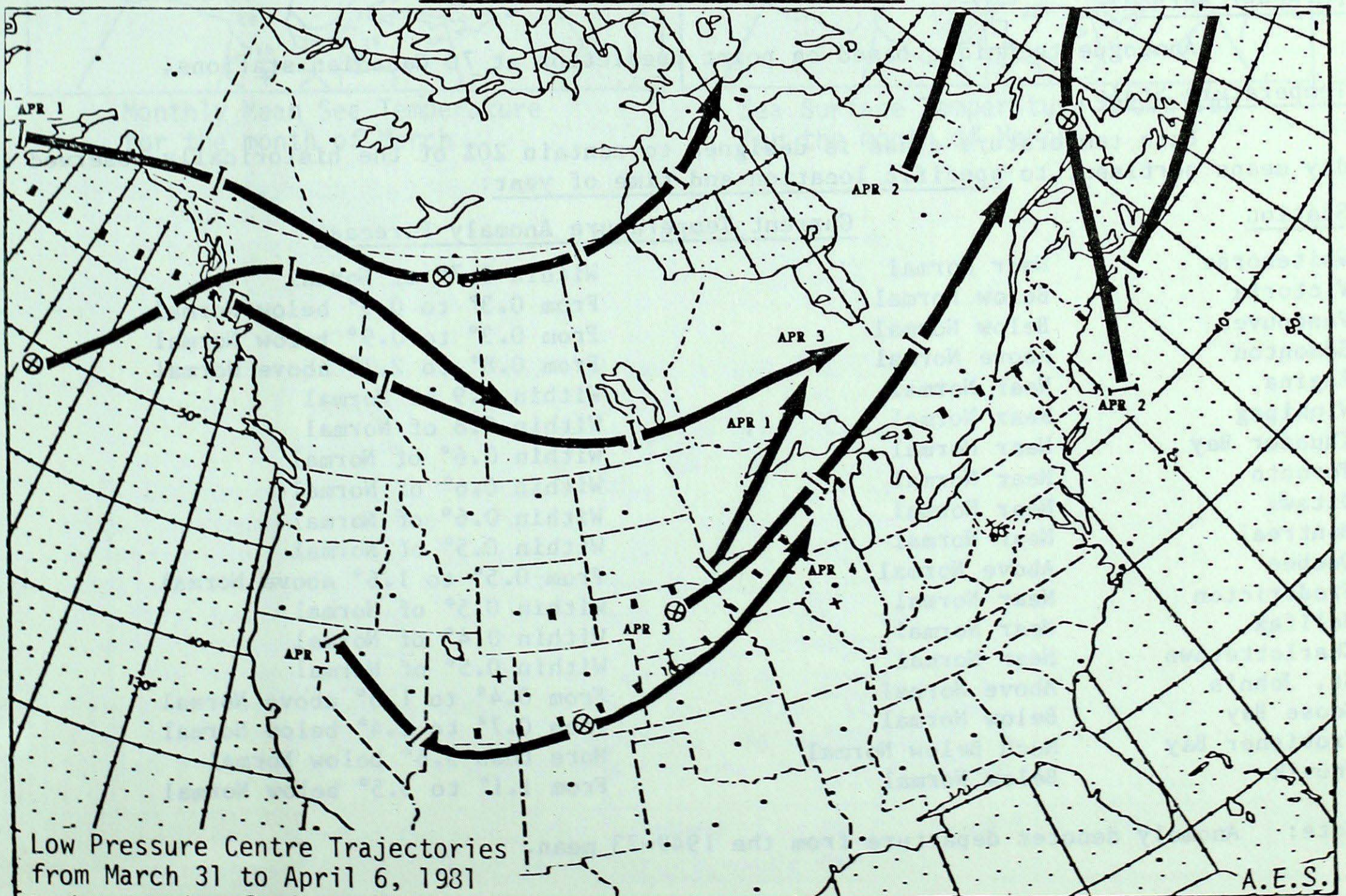
Even though southern Canada has not yet experienced the severe weather that occurred in the American mid-west, a small tornado has already been sighted in southwestern Ontario this month.

Andy Radomski

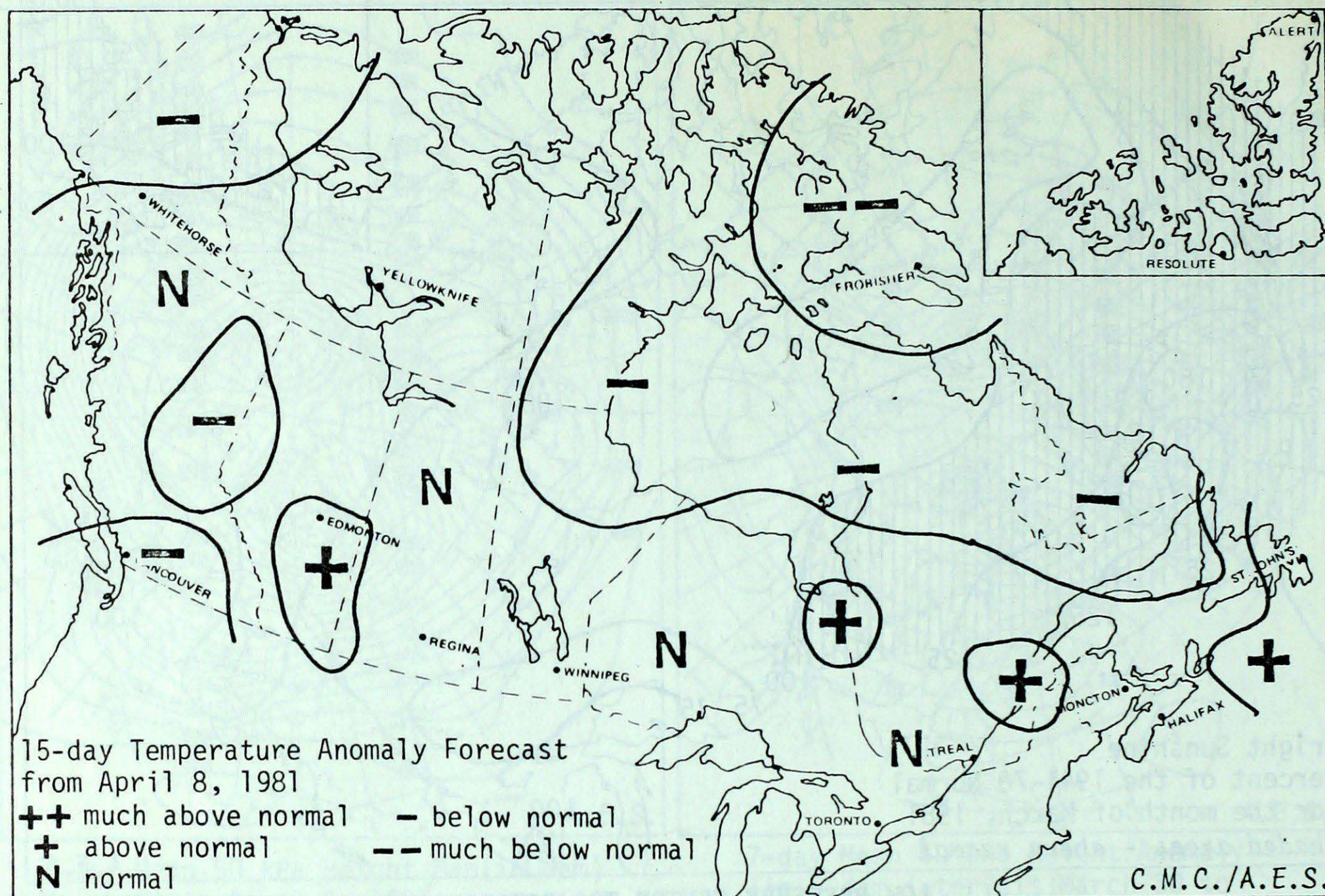
SUNSHINE



LOW PRESSURE CENTRE TRAJECTORIES



15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

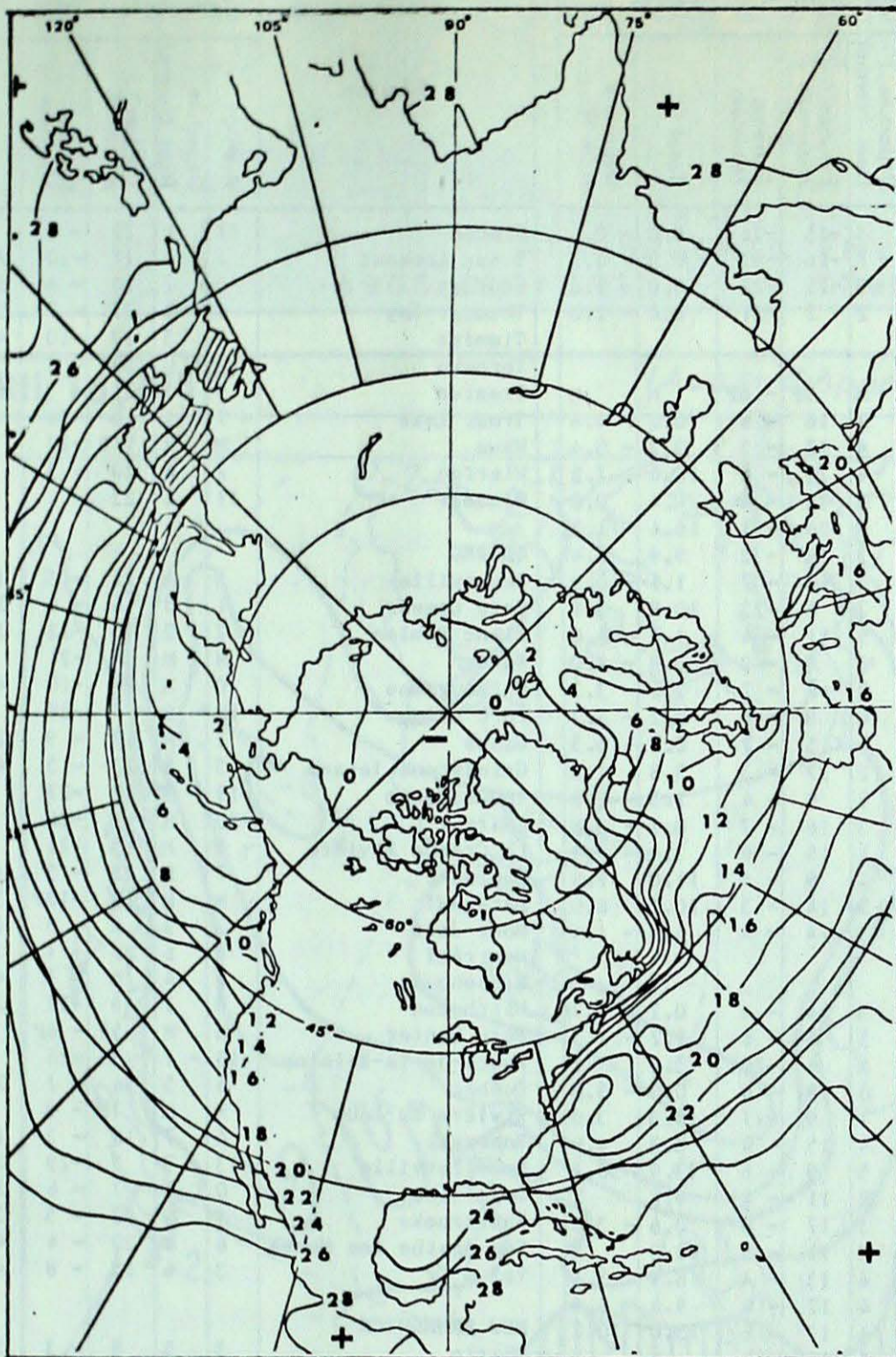
Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

StationCurrent Temperature Anomaly Forecast

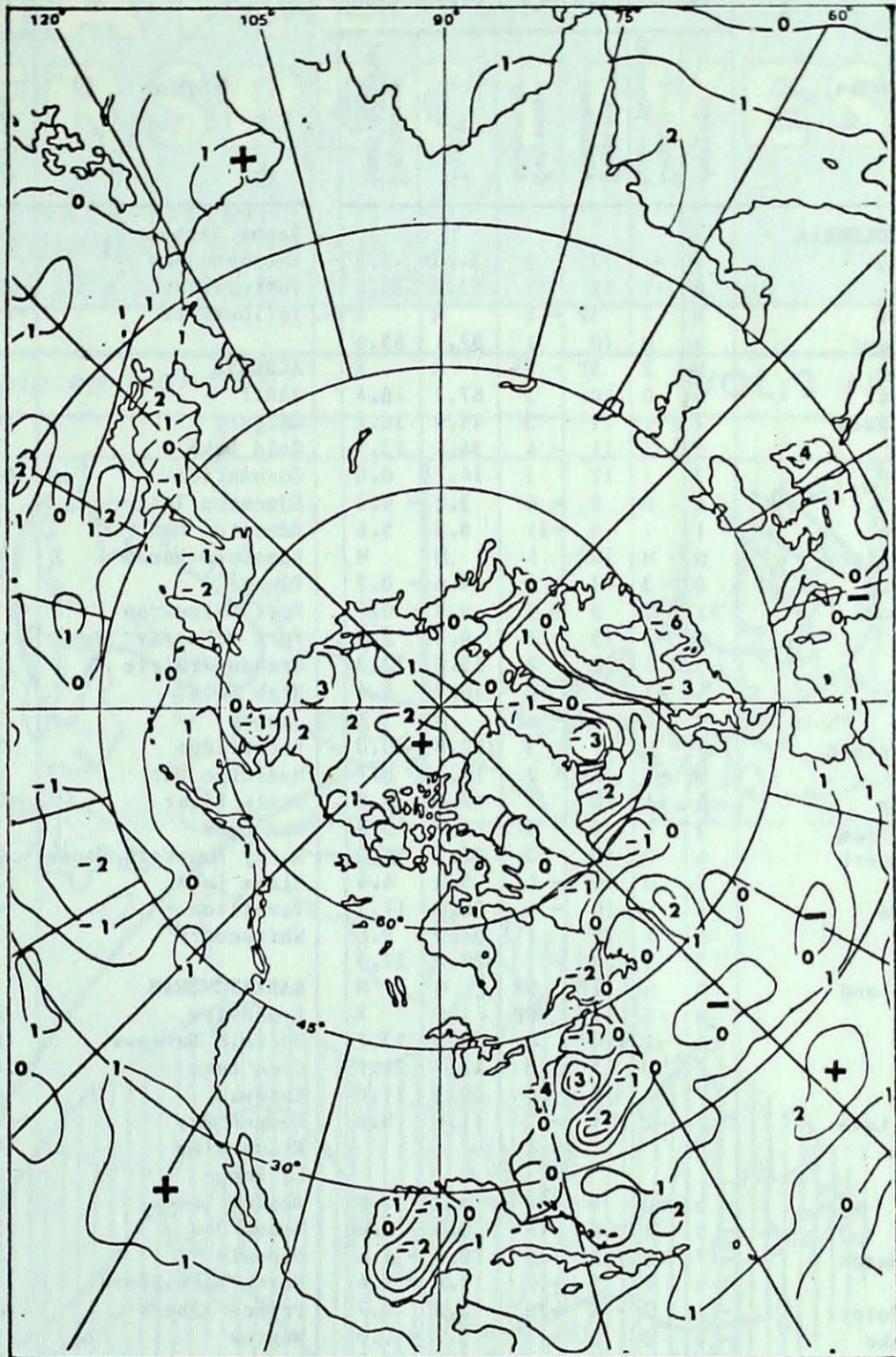
Whitehorse	Near Normal	Within 0.7° of Normal
Victoria	Below Normal	From 0.3° to 0.9° below Normal
Vancouver	Below Normal	From 0.3° to 0.9° below Normal
Edmonton	Above Normal	From 0.8° to 2.7° above Normal
Regina	Near Normal	Within 0.9 of Normal
Winnipeg	Near Normal	Within 0.8 of Normal
Thunder Bay	Near Normal	Within 0.6° of Normal
Toronto	Near Normal	Within 0.6° of Normal
Ottawa	Near Normal	Within 0.6° of Normal
Montreal	Near Normal	Within 0.5° of Normal
Quebec	Above Normal	From 0.5° to 1.6° above Normal
Fredericton	Near Normal	Within 0.5° of Normal
Halifax	Near Normal	Within 0.4° of Normal
Charlottetown	Near Normal	Within 0.5° of Normal
St. John's	Above Normal	From 0.4° to 1.5° above Normal
Goose Bay	Below Normal	From 0.7° to 2.4° below Normal
Frobisher Bay	Much Below Normal	More than 3.6° below Normal
Inuvik	Below Normal	From 1.1° to 3.5° below Normal

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

SEA SURFACE TEMPERATURE



Monthly Mean Sea Temperature for the month of March



Sea Surface Temperature Anomalies for the month of March

