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A WEEKLY REVIEW OF CANADIAN CLIMATE

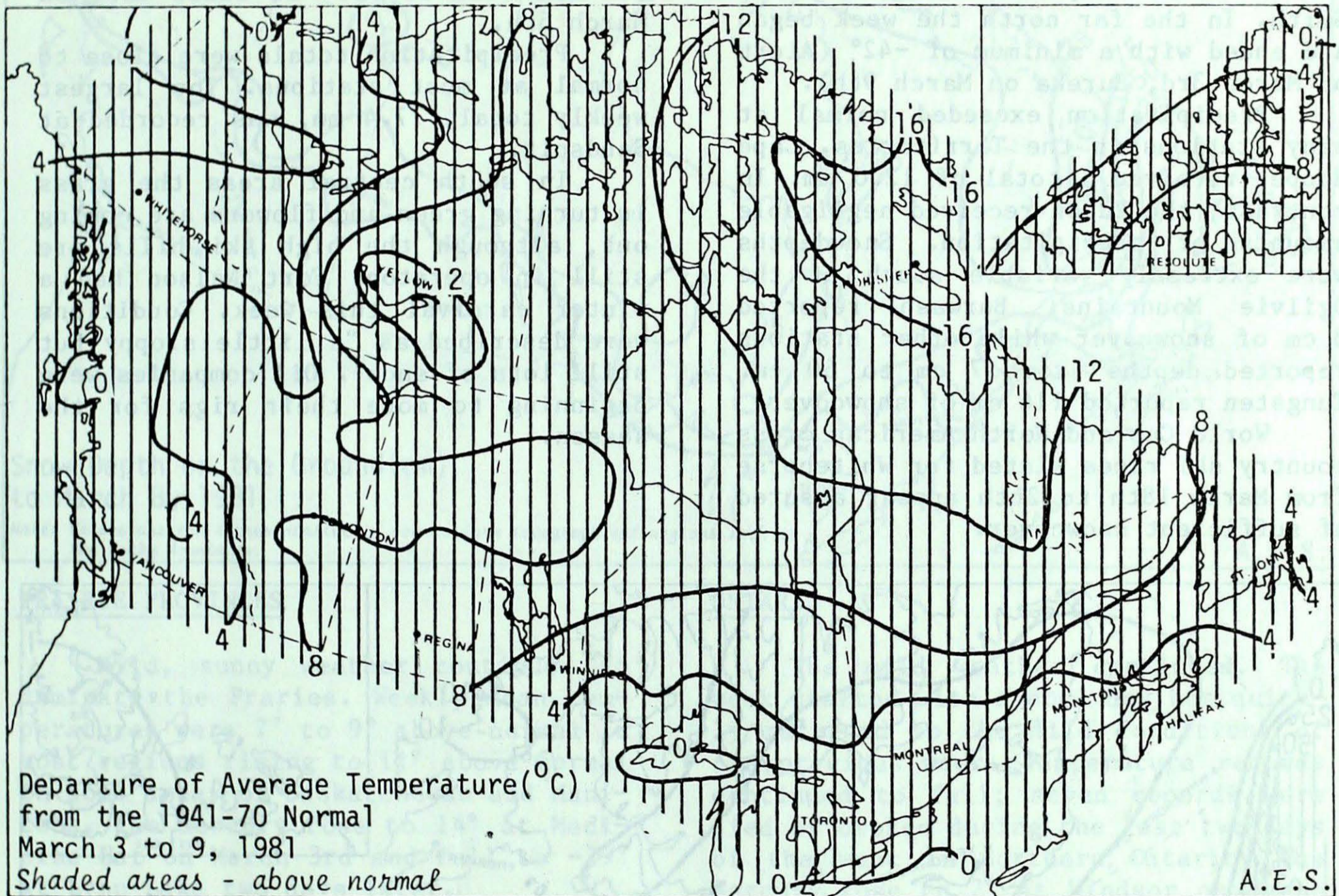
CLIMATIC PERSPECTIVES

THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
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(Aussi disponible en français)

VOL.3 NO.10



WEATHER HIGHLIGHTS FOR THE PERIOD - MARCH 3 TO 9, 1981

The country enjoys mild benign weather

Mild weather dominated almost every region of the country. Weekly mean temperatures varied from near normal to over 16° above normal in Baffin Island. Over half of the country was more than 8° above normal.

Ice conditions in the seaway and off the east coast are about a month ahead of normal. Most ice breakers are already in port or breaking out harbours.

Cooler temperatures in southern Québec helped to reduce water levels in the rivers to more normal levels, eliminating the danger of more flooding.

The temperature rose to a maximum of 19° at Abbotsford, British Columbia and fell to a minimum of -42° at Alert and Eureka, Northwest Territories. The highest recorded weekly precipitation total was 77.4 mm at Sandspit, British Columbia.

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

Above normal temperatures were general over the Territories this week. Mean temperatures reached more than 16° above normal in southern Baffin Island. Only some areas of the Beaufort Sea coast and the tip of Ellesmere Island recorded below normal mean temperatures. The mercury reached 10° at Fort Smith. In the far north the week began and ended with a minimum of -42° (Alert on March 3rd, Eureka on March 9th).

Precipitation exceeded normal at many stations in the Territories. Cape Hooper received a total of 12.0 mm. In contrast, the Yukon received negligible amounts of precipitation. Snowdepths were extremely variable south of the Ogilvie Mountains; Burwash reported 3 cm of snowcover while other stations reported depths from 37 cm to 60 cm. Tungsten reported 116 cm of snowcover.

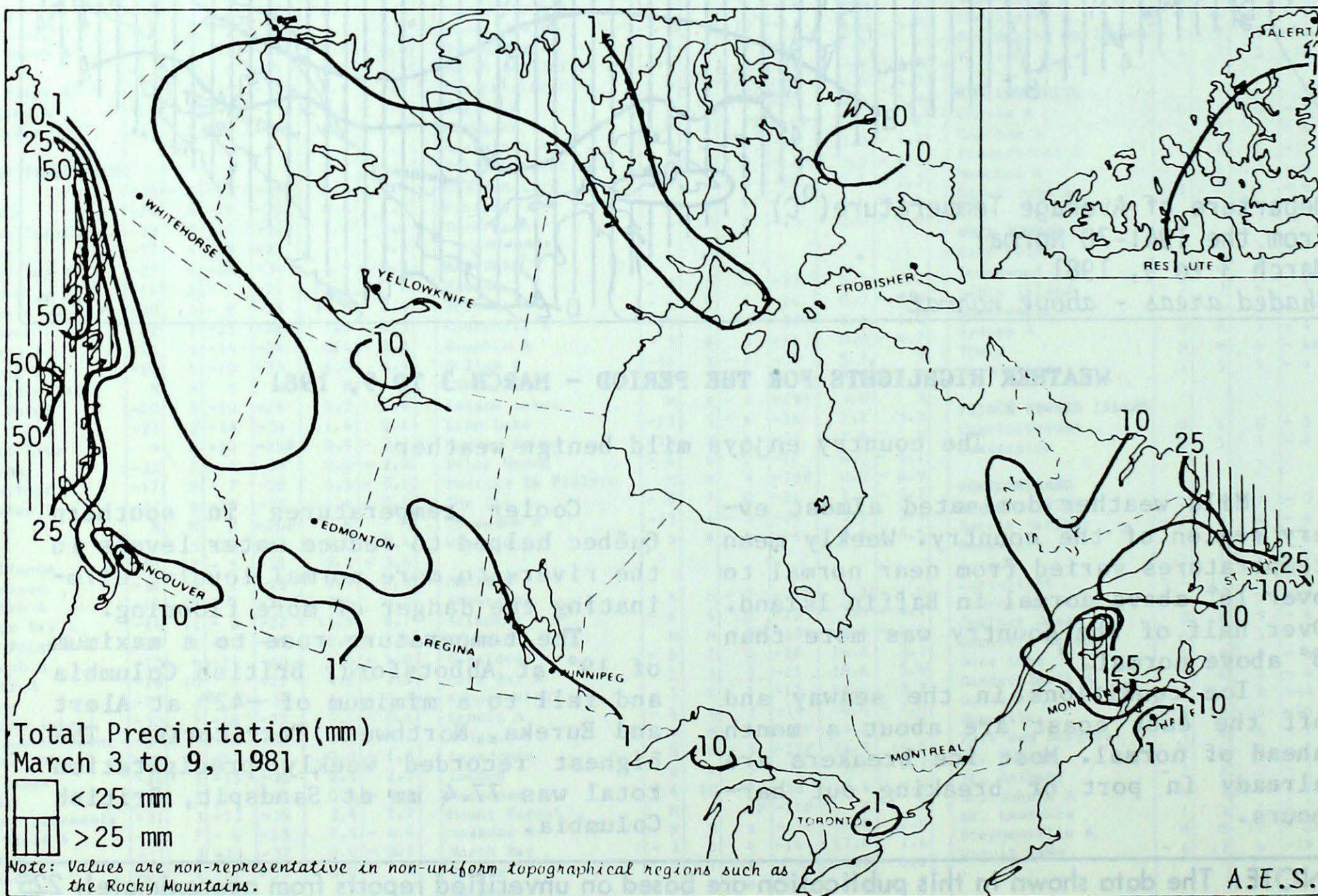
World Cup and North American cross country ski races slated for Whitehorse from March 18th to 26th appear assured of sufficient snowcover.

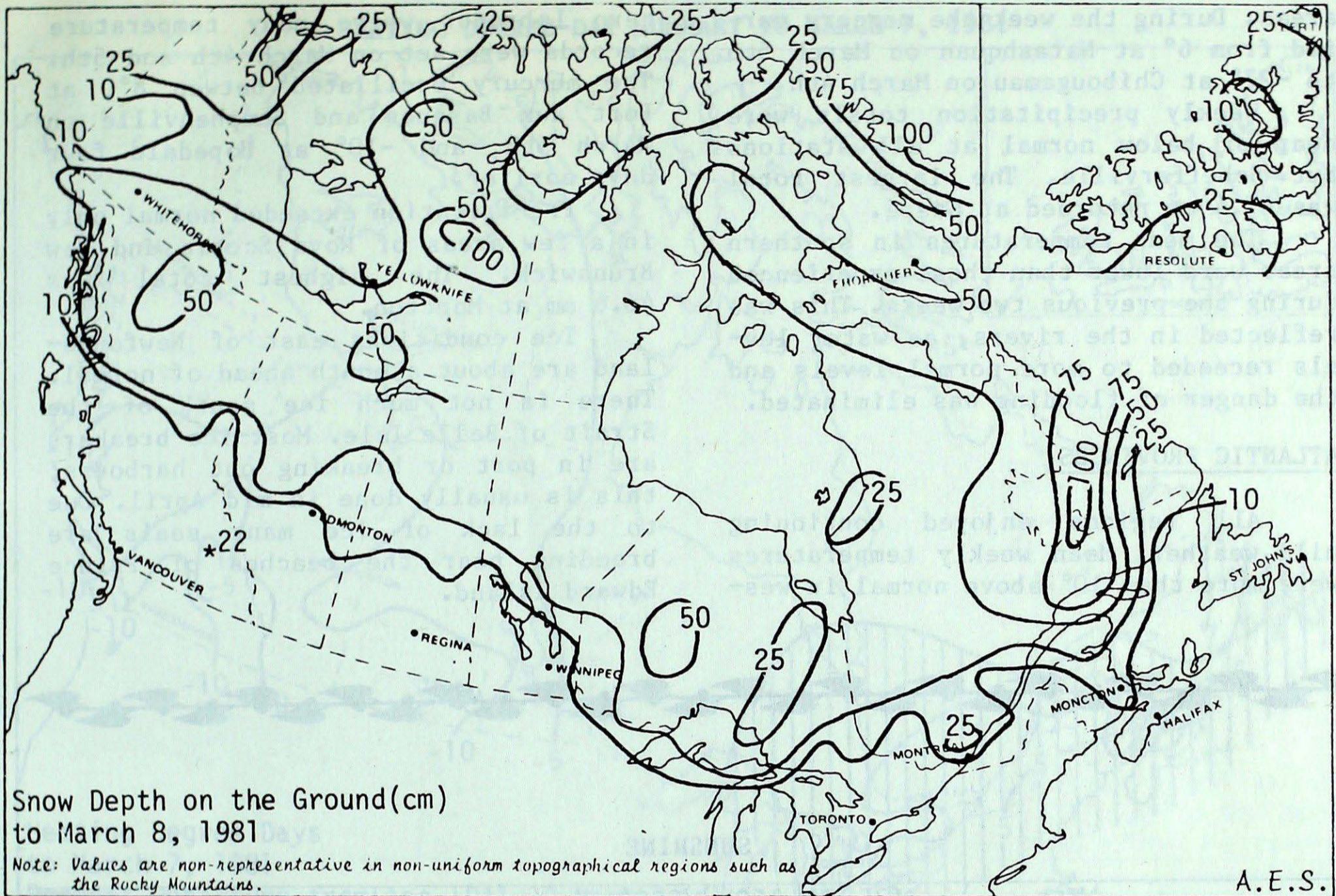
BRITISH COLUMBIA

Mild, sunny weather prevailed over the province this week. Mean temperatures were 2° to 3° above normal in most areas, reaching 8° above normal in north central areas. Some maximum temperature records were set. The mercury climbed to 19° at Abbotsford on March 9th and fell to -20° at Dease Lake on March 5th.

Precipitation totals were close to normal at most stations. The largest weekly total, 77.4 mm, was recorded at Sandspit.

In south central areas the grass is turning green and flowers are coming out, although the high ski hills are still in operation. Fort Nelson had a winter carnival this week. Conditions were described as "a little sloppy but still lots of snow". Oil companies were beginning to move their rigs for the season.





PRAIRIE PROVINCES

Mild, sunny weather continued to dominate the Prairies. Weekly mean temperatures were 7° to 9° above normal in most regions rising to 11° above normal in some areas of Saskatchewan and Manitoba. The mercury rose to 14° at Medicine Hat on March 3rd and fell to -29° at Lynn Lake two days later.

Precipitation totals for the week were generally less than normal with 10 stations reporting no precipitation. The highest weekly total, 14.2 mm, was received at Lynn Lake.

Alberta Environment reported that the snowpack over much of the plains areas of southern and central Alberta has virtually disappeared due to the extremely mild weather of January and February. Consequently, spring snowmelt runoff is expected to be much below normal in southern areas this year.

At this time there is little chance of significant flooding as a result of snowmelt runoff. This situation could change if snowfall in March and April were to be above normal.

ONTARIO

The mild weather continued. The week started with a cool day but quickly returned to the mild conditions of the previous week. Temperature records continued to fall; seven records were tied or broken during the last two days of the week in northern Ontario. The mercury rose to 7° at Windsor on March 8th and 9th. It fell to -30° at Armstrong on March 3rd.

Precipitation was common this week but amounts were not large. The largest weekly total was received at Trout Lake (8.4 mm).

Ice conditions on the Great Lakes are better than normal but clearing is not rapid due to the thickness of the ice (caused by the very cold weather experienced previously).

QUÉBEC

The period from March 3rd to 9th was accompanied by mild weather. Mean temperatures were above normal and exceeded 15° above normal in northern

areas. During the week the mercury varied from 6° at Natashquan on March 5th to -27° at Chibougamau on March 4th.

Weekly precipitation totals were near or below normal at all stations but Schefferville. The largest total was 67.4 mm recorded at Gaspé.

The mean temperatures in southern areas were lower than those experienced during the previous two weeks. This was reflected in the rivers, as water levels receded to more normal levels and the danger of flooding was eliminated.

ATLANTIC PROVINCES

All regions enjoyed continuing mild weather. Mean weekly temperatures were more than 10° above normal in wes-

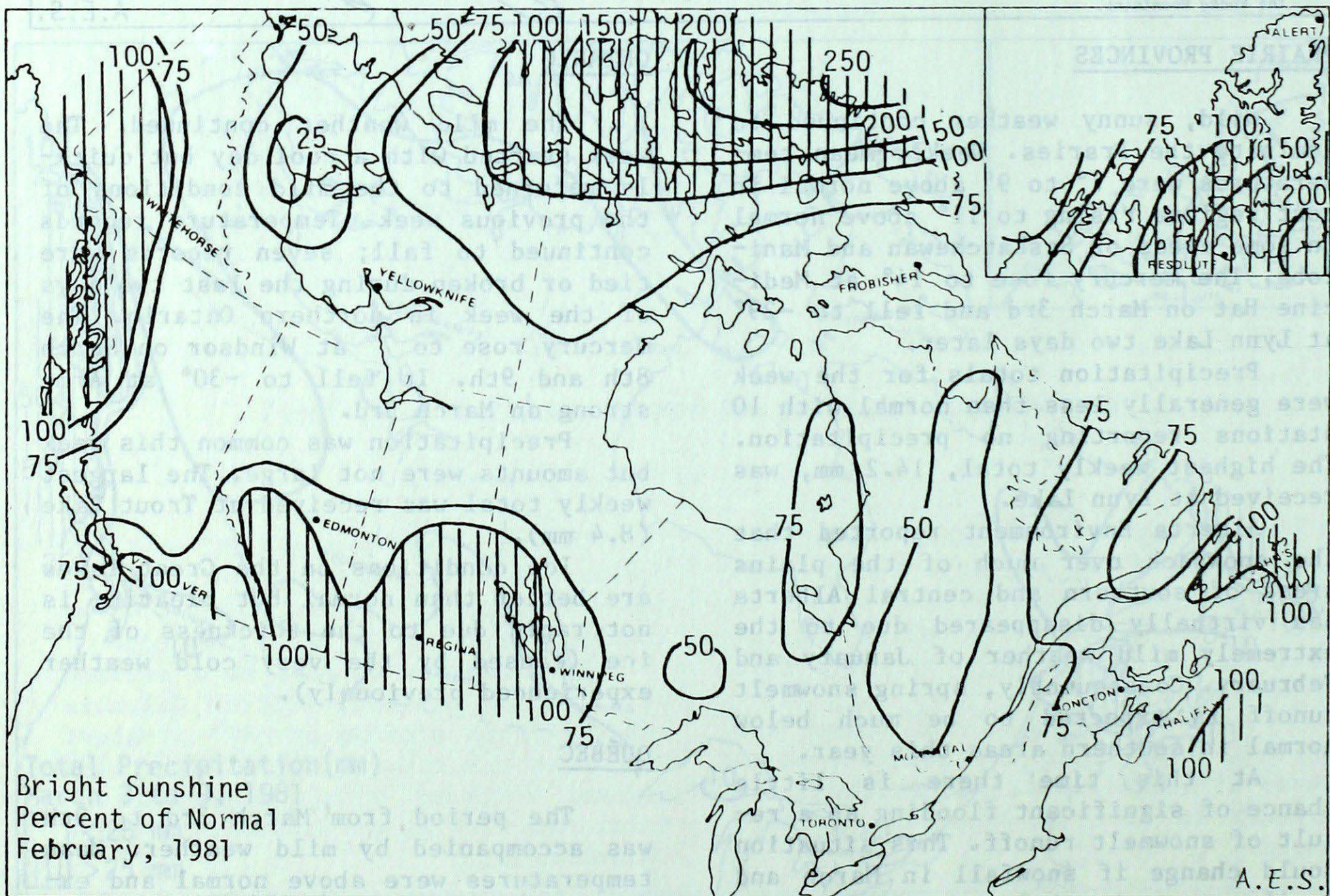
tern Labrador where many temperature records were set on March 4th and 5th. The mercury oscillated between 8°, at Port aux Basques and Stephenville on March 5th, and -10° at Hopedale four days earlier.

Precipitation exceeded normal only in a few areas of Nova Scotia and New Brunswick. The highest total was 46.6 mm at Moncton.

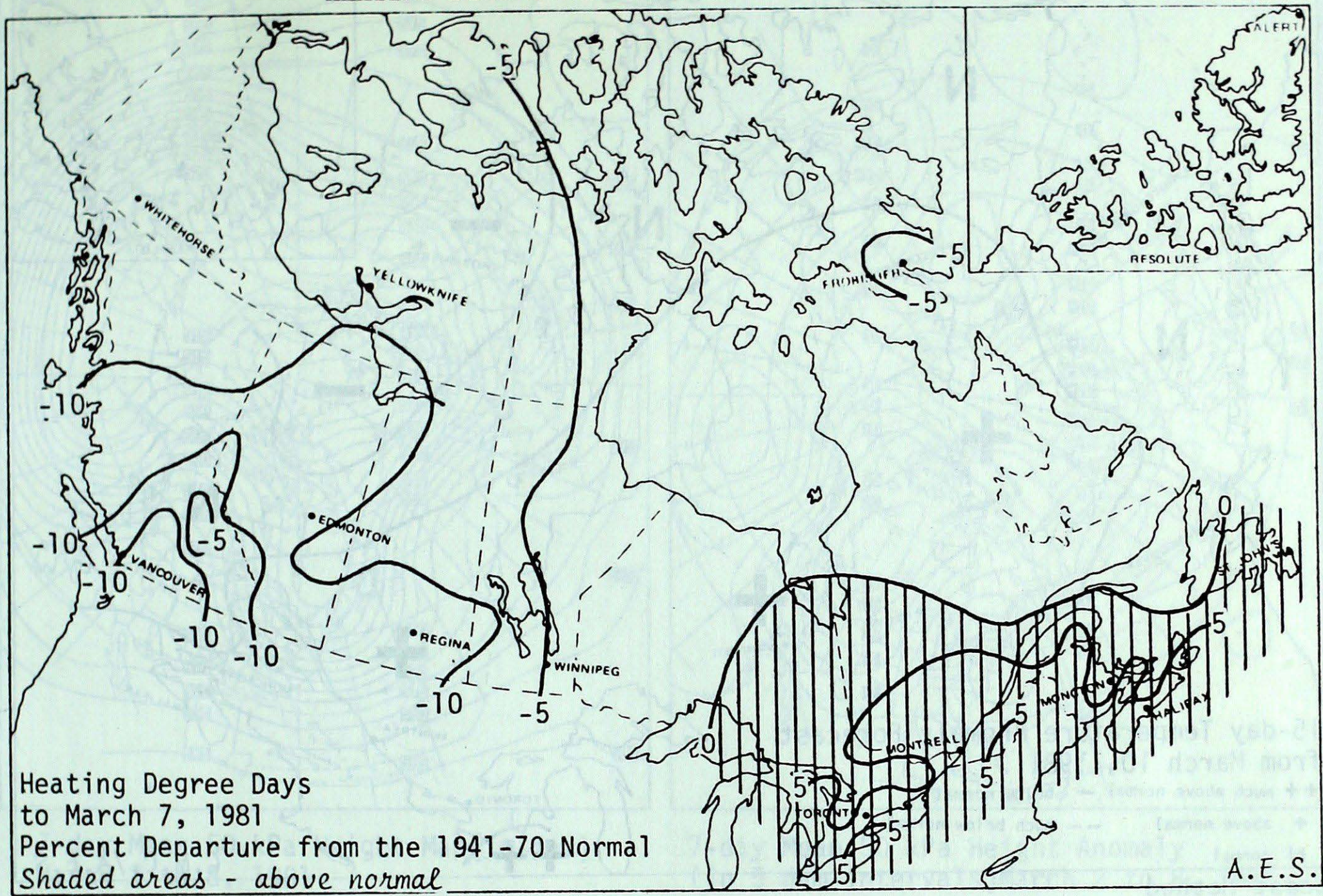
Ice conditions east of Newfoundland are about a month ahead of normal. There is not much ice south of the Strait of Belle Isle. Most ice breakers are in port or breaking out harbours; this is usually done in mid April. Due to the lack of ice many seals are breeding near the beaches of Prince Edward Island.



SUNSHINE

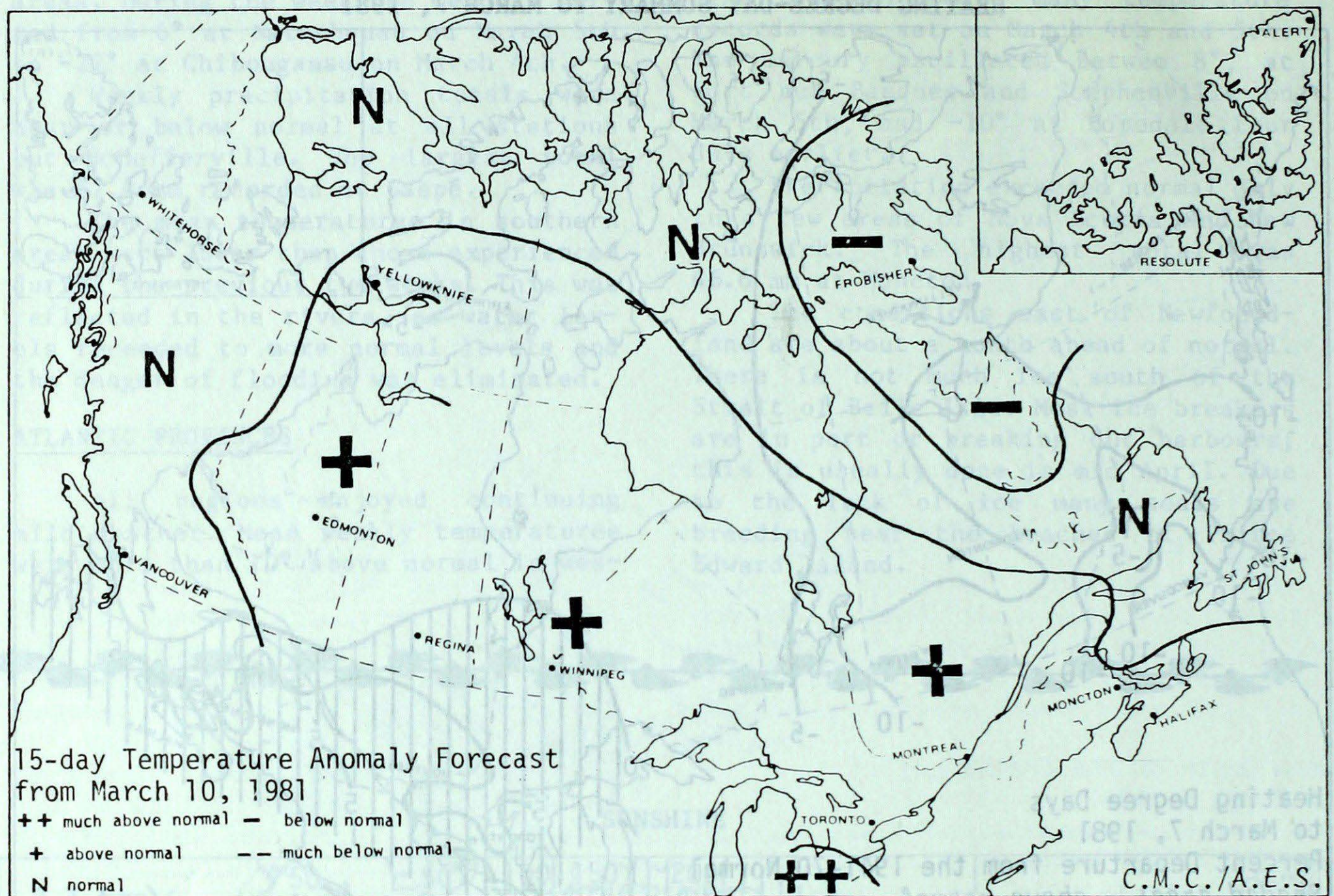


HEATING DEGREE-DAY SUMMARY TO MARCH 7, 1981



| STATION | MONTHLY CUMULATIVE TOTAL | MONTHLY DIFF. FROM 1941-70 NORMAL | SEASONAL TOTAL | SEASONAL DIFF. FROM 1941-70 NORMAL | SEASONAL PERCENT OF NORMAL |
|-------------------|--------------------------|-----------------------------------|----------------|------------------------------------|----------------------------|
| Resolute | 293.5 | -63.5 | 8354.5 | -354.5 | 96 |
| Inuvik | 282.5 | -32.5 | 6829.5 | -545.5 | 93 |
| Whitehorse | 172.0 | -27.0 | 4875.0 | -353.0 | 93 |
| Vancouver | 86.5 | -4.5 | 2026.5 | -163.5 | 93 |
| Edmonton Mun | 138.0 | -50.0 | 3699.0 | -599.0 | 86 |
| Calgary | 128.5 | -39.5 | 3401.5 | -562.5 | 86 |
| Regina | 139.0 | -74.0 | 4049.0 | -495.0 | 89 |
| Winnipeg | 185.0 | -28.0 | 4306.5 | -232.5 | 95 |
| Thunder Bay | 187.0 | -7.0 | 4762.0 | -28.0 | 99 |
| Windsor | 133.5 | -2.5 | 2907.0 | 166.0 | 106 |
| Toronto | 144.5 | -6.5 | 3274.5 | 211.5 | 107 |
| Ottawa | 149.5 | -24.5 | 3787.5 | 190.5 | 105 |
| Montreal | 147.0 | -11.0 | 3755.5 | 337.5 | 110 |
| Quebec | 151.0 | -28.0 | 4113.0 | 295.0 | 108 |
| Saint John, N.B. | 132.0 | -31.0 | 3588.0 | 162.0 | 105 |
| Halifax | 120.5 | -22.5 | 3079.5 | 225.5 | 108 |
| Charlottetown | 134.0 | -30.0 | 3413.5 | 171.5 | 105 |
| St. John's, Nfld. | 119.0 | -28.0 | 3329.0 | 135.0 | 104 |

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

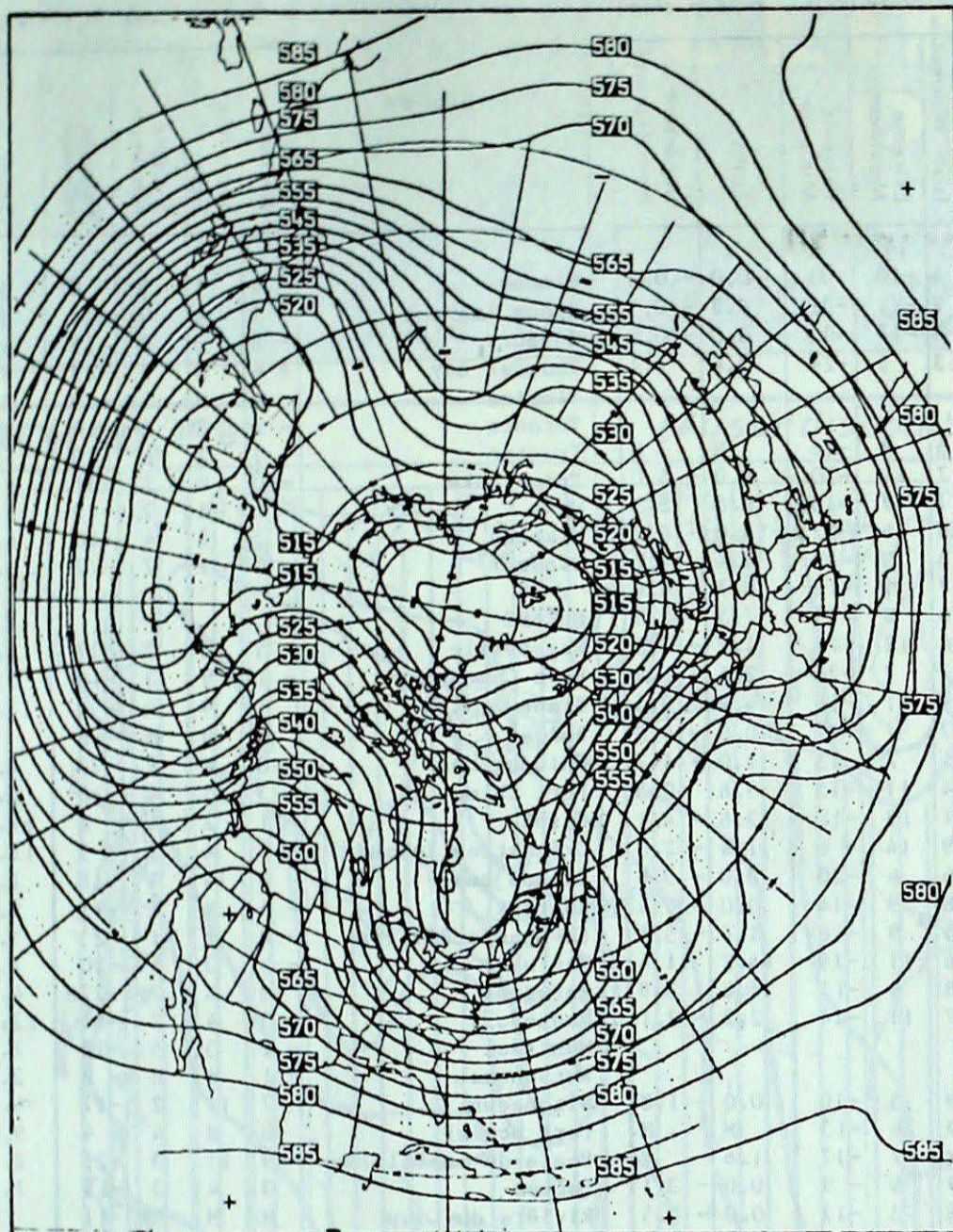
Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

StationCurrent Temperature Anomaly Forecast

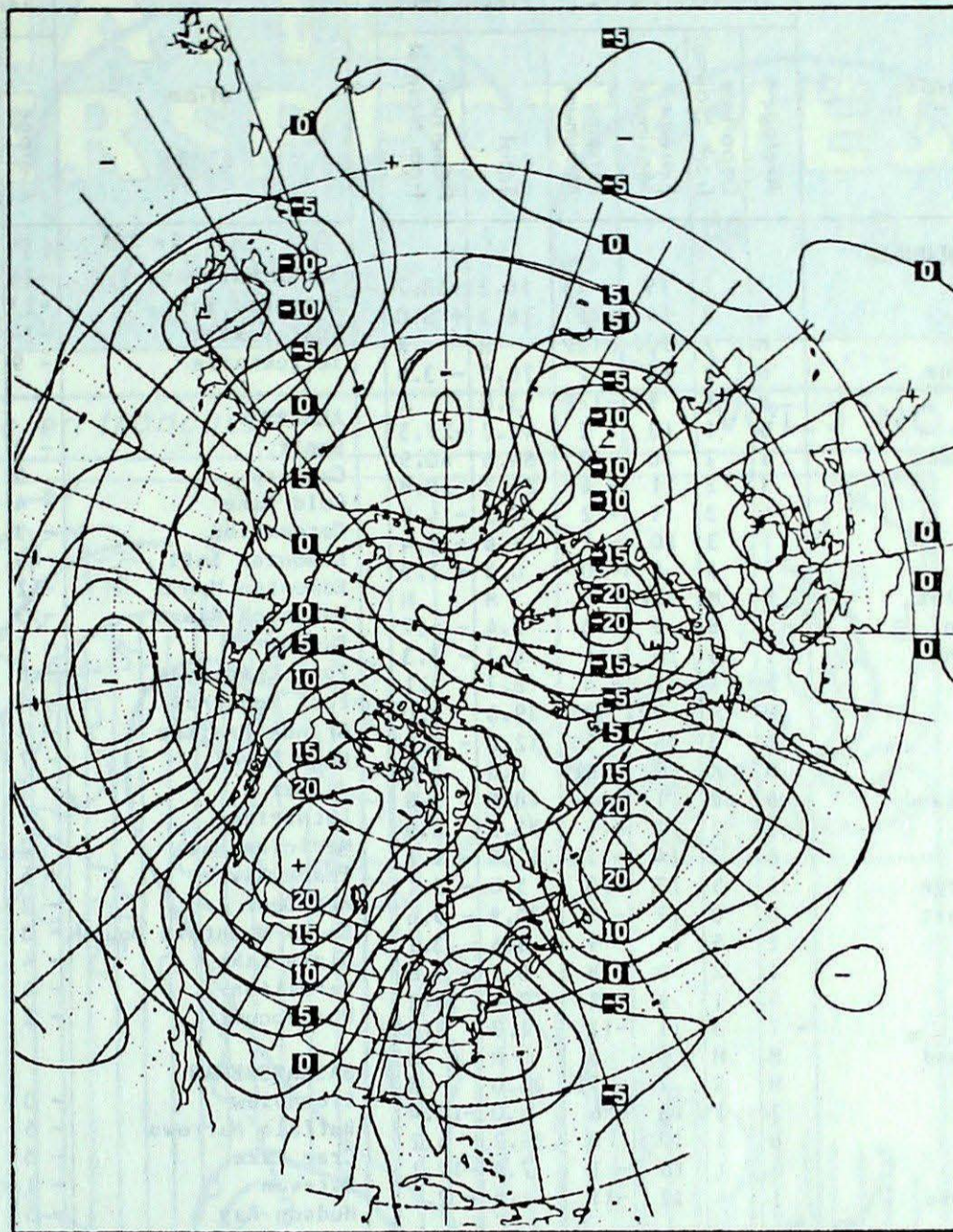
| | | |
|---------------|--------------|--------------------------------|
| Whitehorse | Near Normal | Within 1.2° of Normal |
| Victoria | Below Normal | From 0.3° to 1.1° below Normal |
| Vancouver | Below Normal | From 0.4° to 1.2° below Normal |
| Edmonton | Above Normal | From 1.1° to 3.7° above Normal |
| Regina | Above Normal | From 1.1° to 3.7° above Normal |
| Winnipeg | Above Normal | From 1.0° to 3.3° Above Normal |
| Thunder Bay | Above Normal | From 0.8° to 2.5° above Normal |
| Toronto | Above Normal | From 0.6° to 2.1° above Normal |
| Ottawa | Above Normal | From 0.7° to 2.3° above Normal |
| Montreal | Above Normal | From 0.7° to 2.2° above Normal |
| Quebec | Above Normal | From 0.7° to 2.3° above Normal |
| Fredericton | Above Normal | From 0.7° to 2.3° above Normal |
| Halifax | Above Normal | From 0.5° to 1.7° above Normal |
| Charlottetown | Above Normal | From 0.6° to 2.1° above Normal |
| St. John's | Below Normal | From 0.5° to 1.8° below Normal |
| Goose Bay | Near Normal | Within 1.0° of Normal |
| Frobisher Bay | Below Normal | From 1.4° to 4.6° below Normal |
| Inuvik | Near Normal | Within 1.1° of Normal |

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

Atmospheric Circulation



7-day Mean 50 kPa Height Map(in dam)
March 2 to 8, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) March 2 to 8, 1981

The complex atmospheric circulation of the previous week reorganized itself as the 50 KPa upper flow came into phase. The circulation has once again reverted back to the previously well established pattern; a major ridge and a major trough over western and eastern Canada respectively. Even though the long wave positions over North America are close to normal their respective amplitudes are considerably larger. Positive height anomalies of more than 20 dam dominated western Canada supporting the higher pressures at the surface. Except for coastal areas, generally fair, dry and mild weather conditions prevailed west of Ontario.

Due to the persistence of a nearly stationary major trough and closed upper low, generally cloudy, unsettled, but mild weather prevailed over the eastern half of the country. A series of weak perturbations moving south-eastwards from northwestern Canada in the upper flow triggered some light shower or flurry activity, but no major low pressure systems were observed.

With the approach of the spring equinox Arctic air will slowly begin to retreat to its source region. However occasional outbreaks of very cold Arctic air are still quite possible well after the beginning of Spring.

Andy Radomski

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. MARCH 10, 1981

Table with columns for Station, Temperature (°C) (Average, Departure from Normal, Extreme Maximum, Extreme Minimum, Total), and Precip. (mm) (Departure from Normal, Total). Data is organized into regional sections: BRITISH COLUMBIA, YUKON, NORTHWEST TERRITORIES, ALBERTA, SASKATCHEWAN, MANITOBA, ONTARIO, QUÉBEC, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD ISLAND, and NEWFOUNDLAND.

P = extreme value based on less than 7 days X = no normal due to short period M = not available at press time