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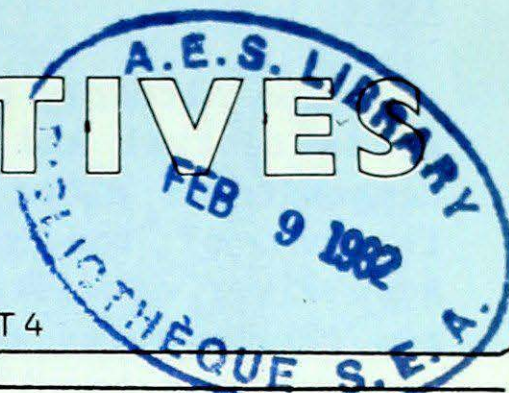
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A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES



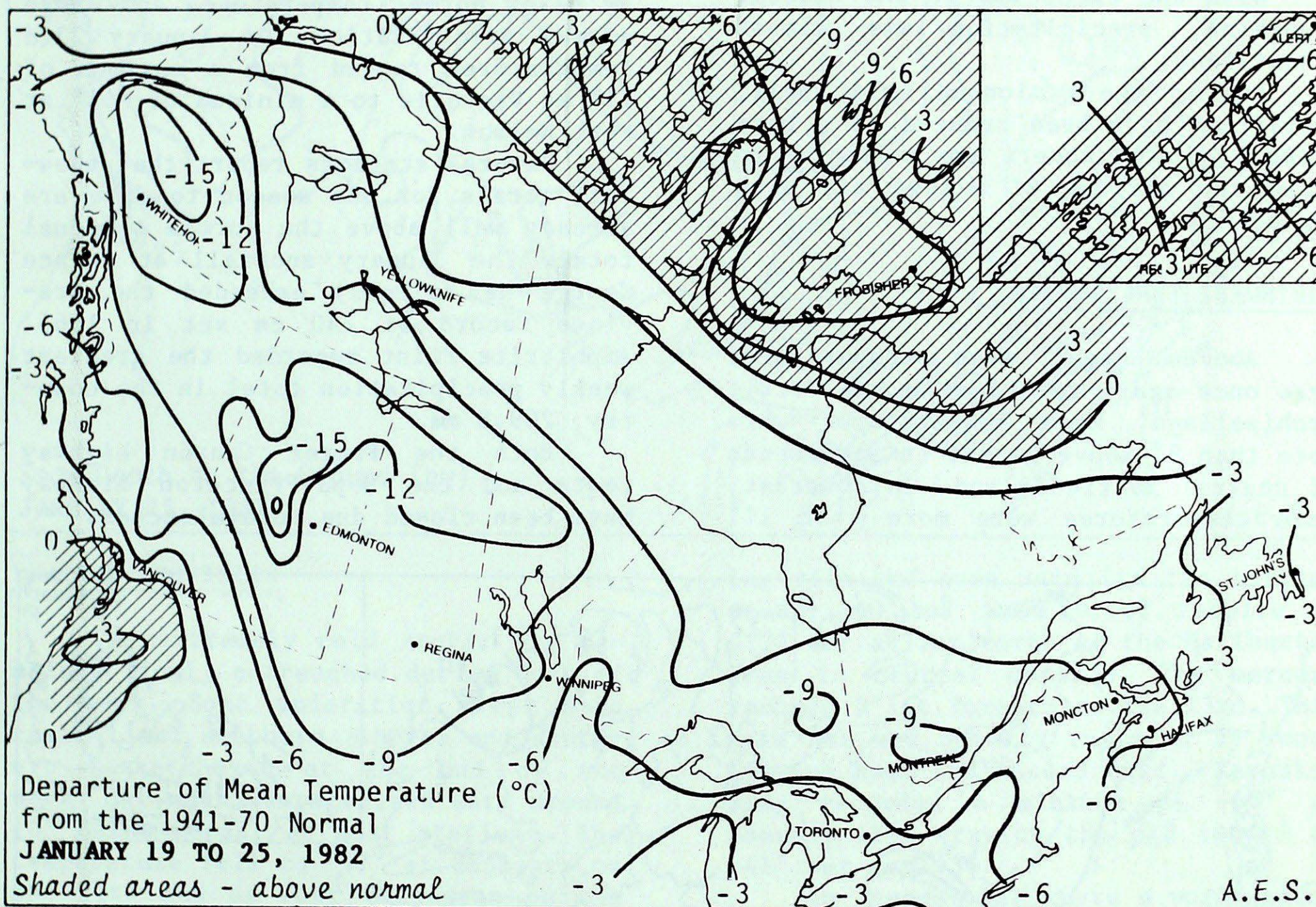
Canada

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

JANUARY 29, 1982

(Aussi disponible en français)

VOL.4 NO. 3



WEATHER HIGHLIGHTS FOR THE PERIOD - JANUARY 19 TO 28, 1982

The Cold weather maintain its domination over Canada

Only in the extreme southern British Columbia and the Franklin and Keewatin districts were the temperature above normal. Everywhere else, the cold weather was firmly entrenched during most of the week.

The cold weather caused an increasing number of mechanical break-

downs and power outages in Alberta.

Avalanches blocked both the trans-Canada highway in the Frazer Canyon and the Hope-Princeton highway.

The temperature touched 11° at Victoria and fell to -55° at Ross River. Precipitation totalled 209.8 mm at Amphitrite Point, 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

The bitterly cold weather continued in central and northern areas with temperatures close to 15° below normal in most of the region. Carmacks and Ross River consistently recorded minimum temperatures of -50° to -55°. The mercury rose to -4° at Komakuk Beach on the 22nd.

With the exception of the coastal mountains, precipitation was almost nonexistent.

Due to the prolonged cold spell, activities have been reduced to a bare minimum. Most Yukoners are beginning to await the arrival of milder air with impatience.

NORTHWEST TERRITORIES

Above normal mean temperatures were once again recorded in the Arctic Archipelago. Mean temperatures were more than 9° above normal in some areas of central Baffin Island. In contrast, mean temperatures were more than 11°

below normal in the extreme south of the Mackenzie District.

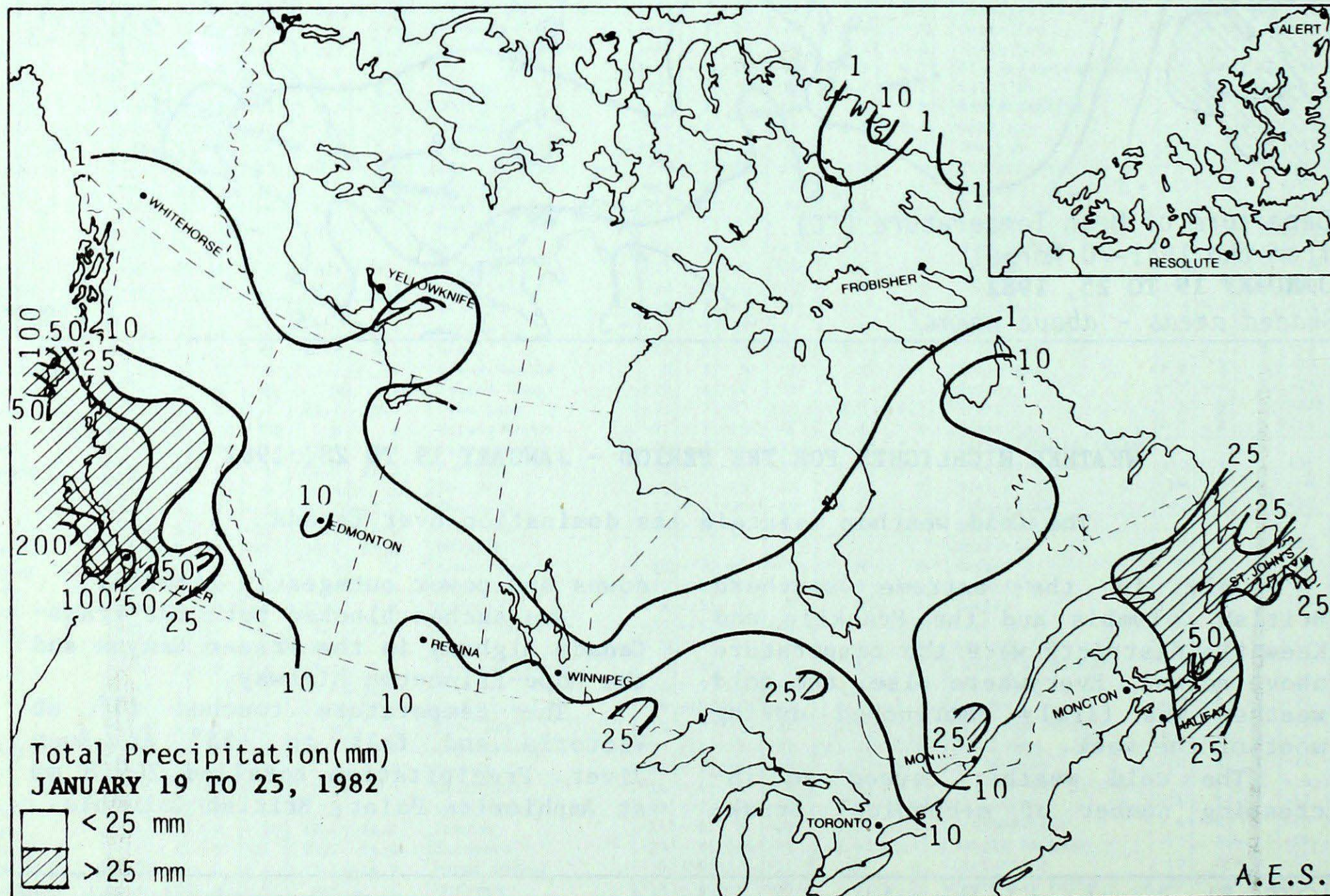
Only Cape Hooper measured a significant amount of precipitation, 12.4 mm. Most stations recorded no precipitation at all.

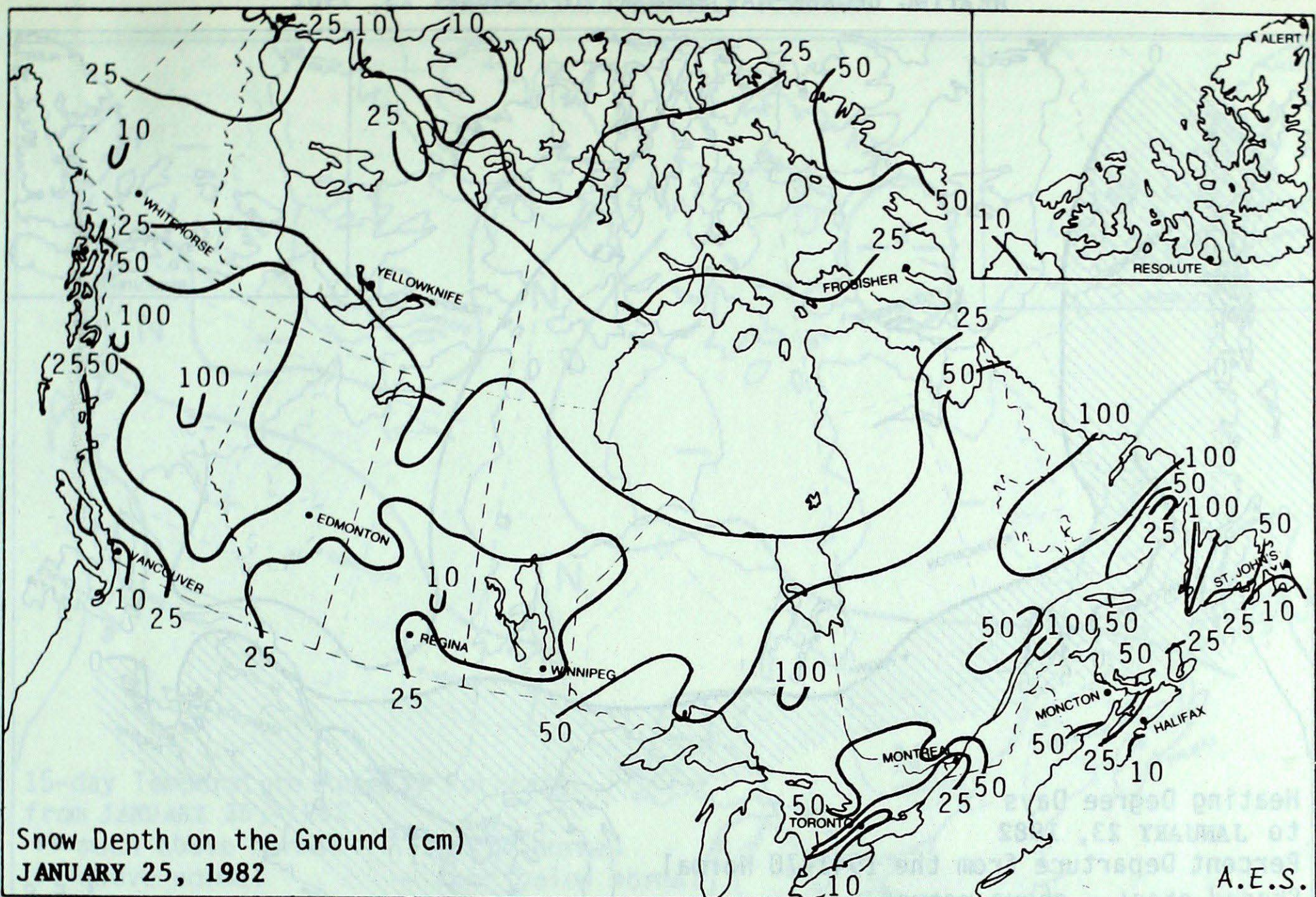
BRITISH COLUMBIA

Most of the province was dominated by below normal temperatures and above normal precipitation. On January 23rd temperatures ranged from a maximum of 11° at Victoria to a minimum of -44° at Fort Nelson.

Several stations report that snowfall totals for the season to date are already well above the normal seasonal total. The January snowfall at Prince George has already exceeded the previous record of 140 cm set in 1965. Amphitrite Point recorded the greatest weekly precipitation total in the country, 209.8 mm.

Both the Frazer Canyon highway route and the Hope-Princeton highway have been closed due to avalanches.





PRAIRIE PROVINCES

The extremely cold Arctic air remained firmly entrenched during most of the week. Some moderation crept into central and southern Alberta and southern Saskatchewan at the end of the week. The mean temperatures were around 10° below normal at most stations. The temperature fell to -47° at Thompson on the 20th and at Fort Chipewyan on the following day, and to -48° at Uranium City on the 19th.

Some central Alberta rural school bus runs were cancelled. Edmonton City was plagued with scattered power failures, and its snow removal equipment, faced with twice the January average snowfalls, had experienced numerous break-downs.

Despite some of the best conditions in the past several winters, attendance at ski facilities throughout Alberta was drastically reduced due to the extreme cold.

ONTARIO

Strong winds and cold temperatures dominated Ontario for the fourth weekend in a row. This time however, freez-

ing rain and even rain (in the extreme south) ushered in a brief respite of mild air as far north as the Haliburton area in central Ontario. The mercury reached 5° at Toronto on the 23rd. This mild air was quickly replaced by snow, blowing snow and record cold. Kapuskasing recorded a minimum of -45° on January 18th erasing the old record of -41° set in 1934.

In Thunder Bay where a world-class ski jump event was in progress from January 22nd to 24th, high and low temperatures of -20° to -30° respectively created numerous hardships for skiers and spectators alike.

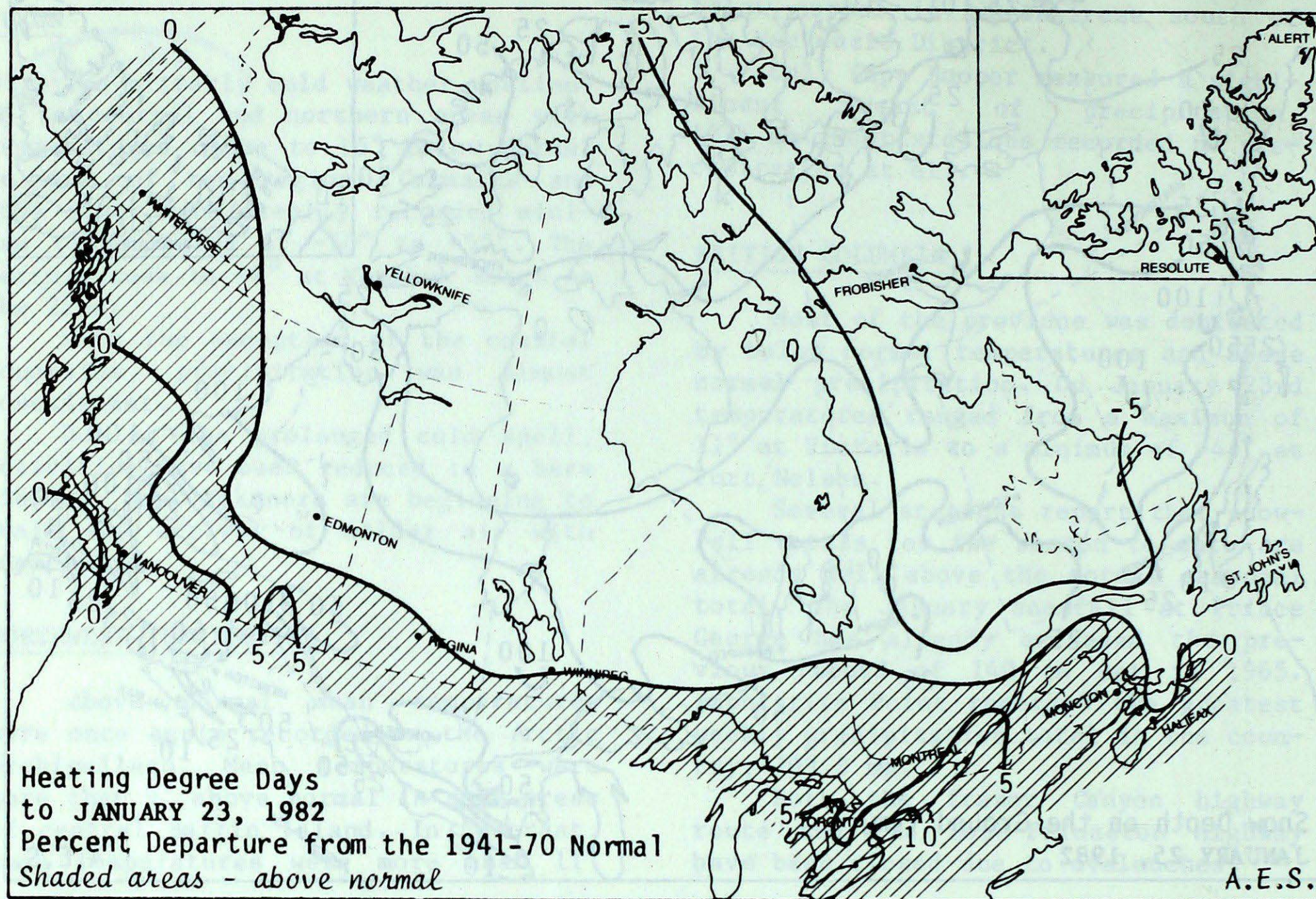
QUEBEC

The cold weather held for another week. The weekly mean temperatures were from 8° to 11° below normal in southern regions. The temperature fell to -42° at Matagami on the 22nd. Eighteen daily low temperature records were set during the week.

Weekly precipitations totals were close to normal at most stations following a storm which touched the province on the 23rd and 24th.

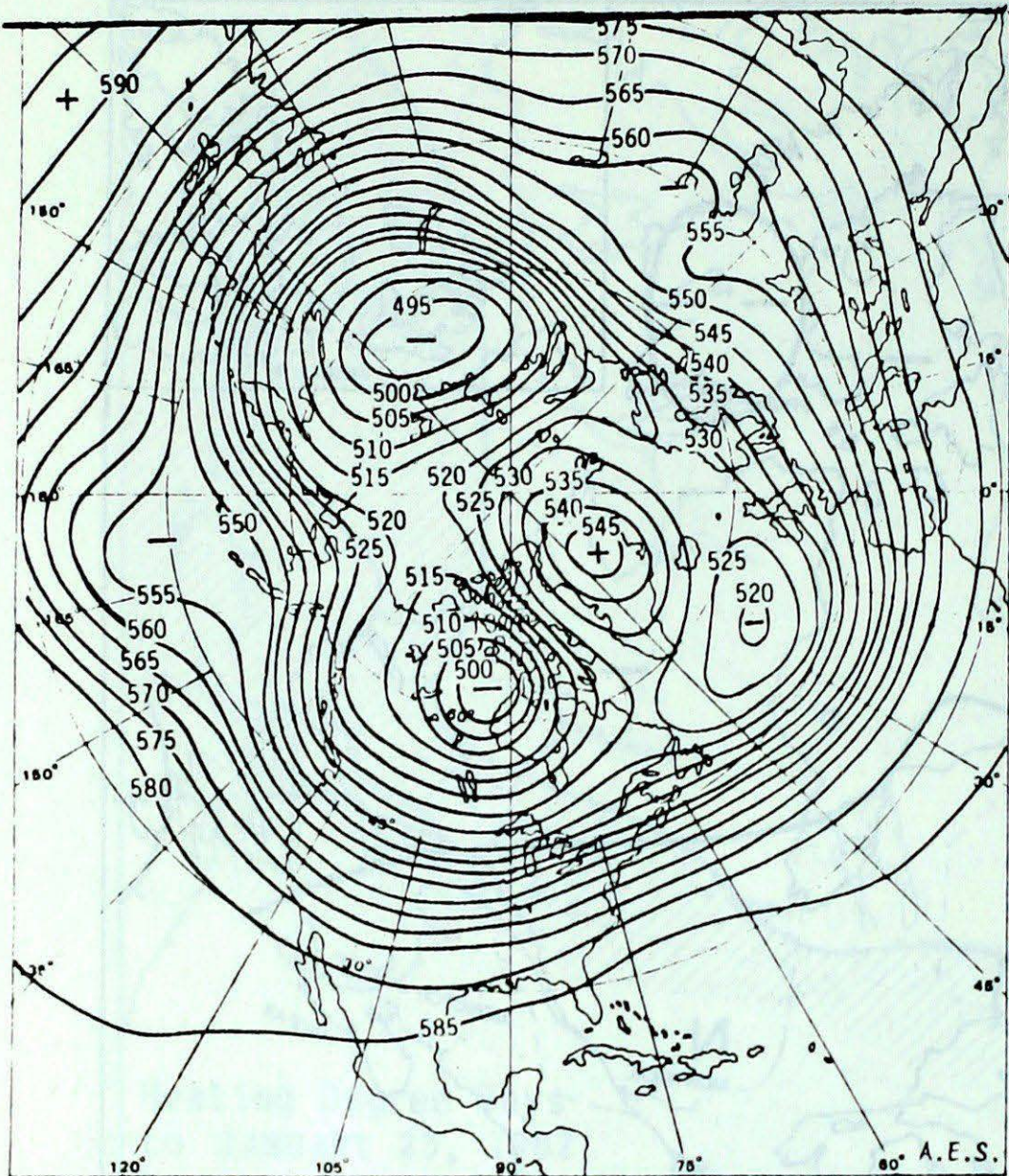
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HEATING DEGREE-DAY SUMMARY TO JANUARY 23, 1982

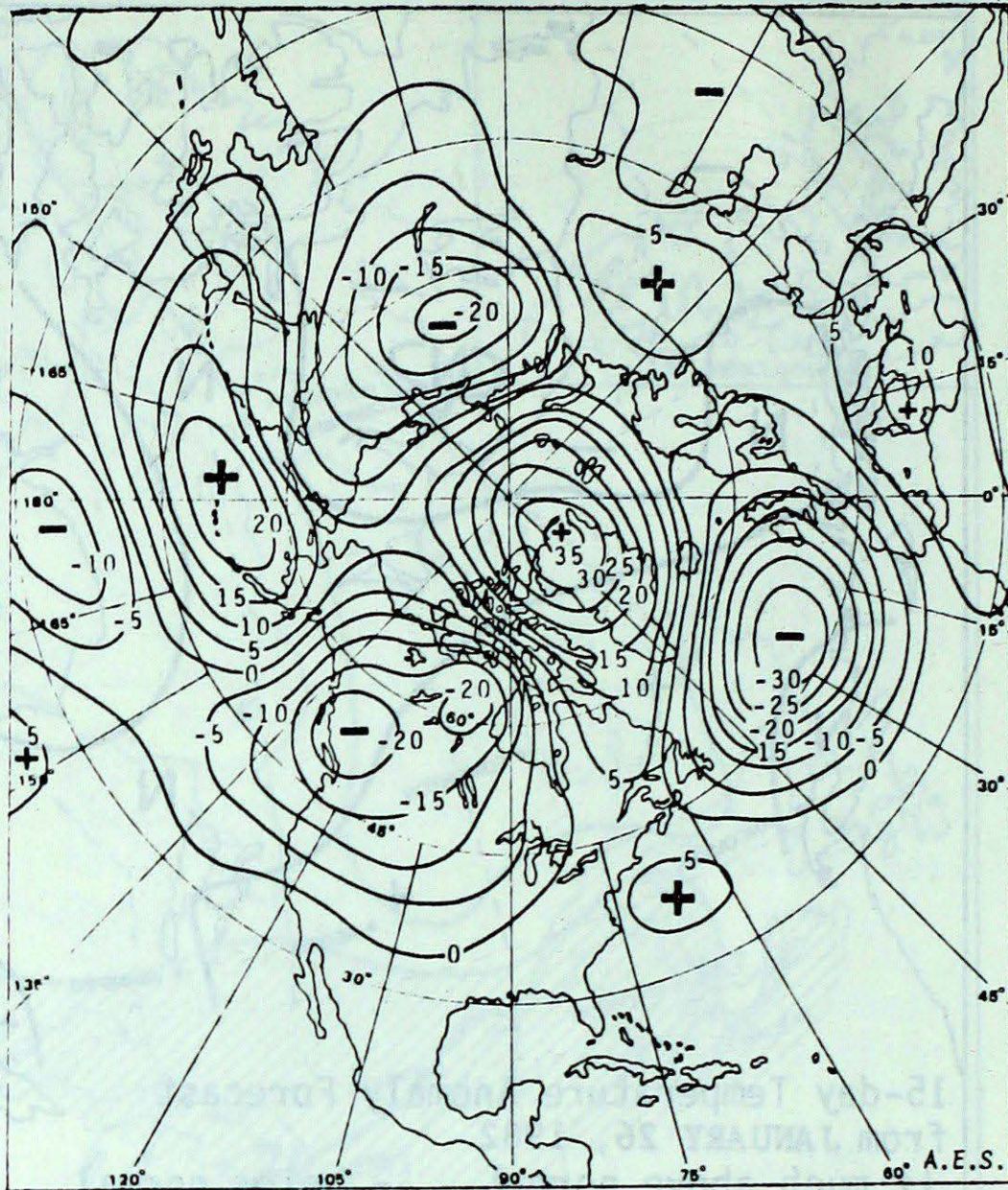


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	1091.0	-62.0	6144.5	-337.5	95
Inuvik	1194.0	80.0	5232.5	-98.5	98
Whitehorse	1151.5	294.5	4007.0	145.0	104
Vancouver	396.5	35.5	1563.5	-29.5	98
Edmonton Mun	959.0	206.0	2916.5	-124.5	96
Calgary	912.5	253.5	2894.5	57.5	102
Regina	1031.5	225.5	3182.5	53.5	102
Winnipeg	1019.0	195.0	3080.5	9.5	100
Thunder Bay	928.0	175.0	3038.0	83.0	103
Windsor	616.0	109.0	1986.5	171.5	109
Toronto	657.0	102.0	2249.0	208.0	110
Ottawa	789.5	122.5	2535.5	122.5	105
Montreal	778.5	143.5	2492.0	219.0	110
Quebec	790.0	117.0	2709.0	126.0	105
Saint John, N.B.	698.0	121.0	2381.5	52.5	102
Halifax	582.0	90.0	1940.5	41.5	102
Charlottetown	650.5	90.5	2152.5	-4.5	100
St. John's, Nfld.	508.5	21.5	2176.5	-54.5	98

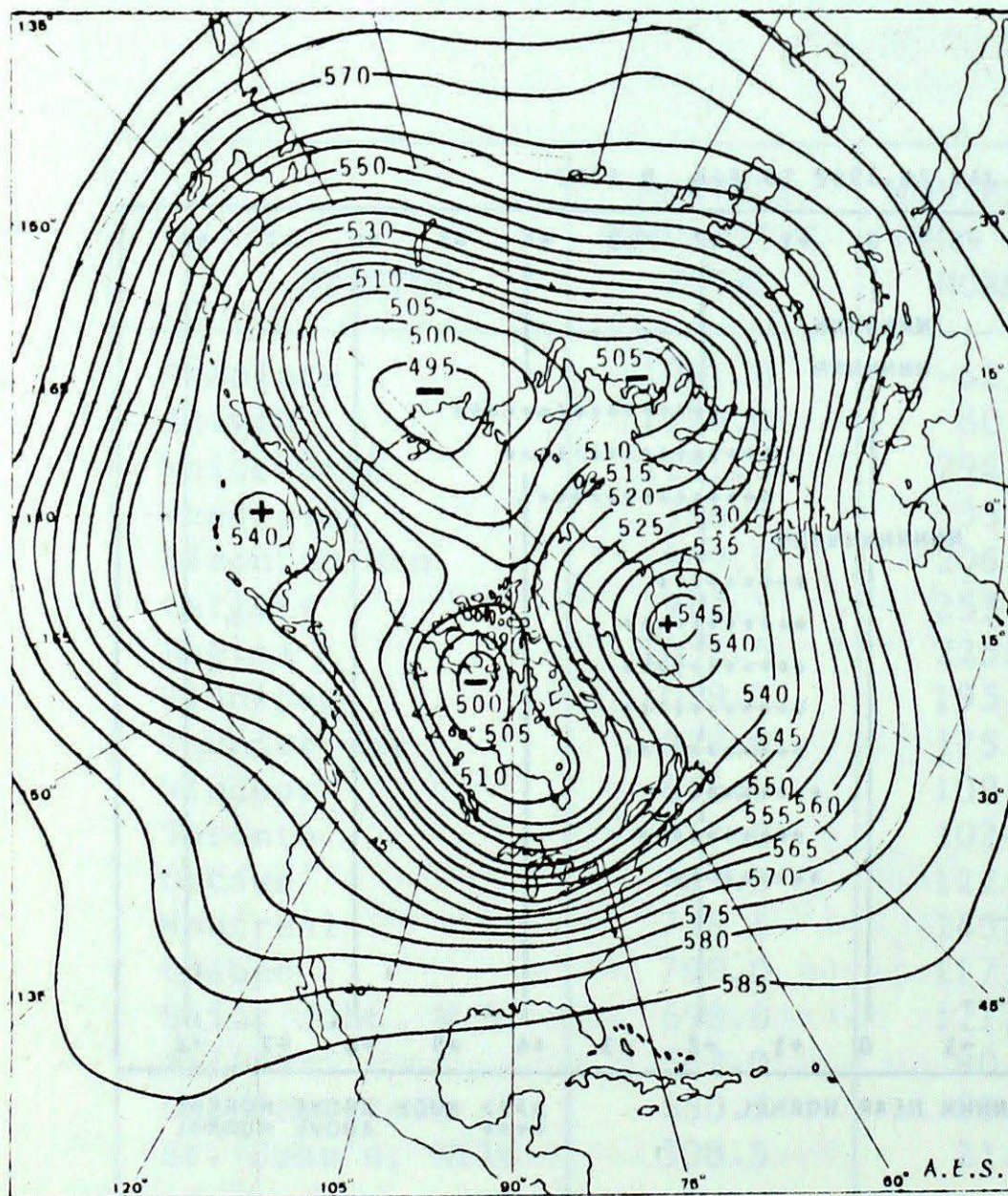
ATMOSPHERIC CIRCULATION



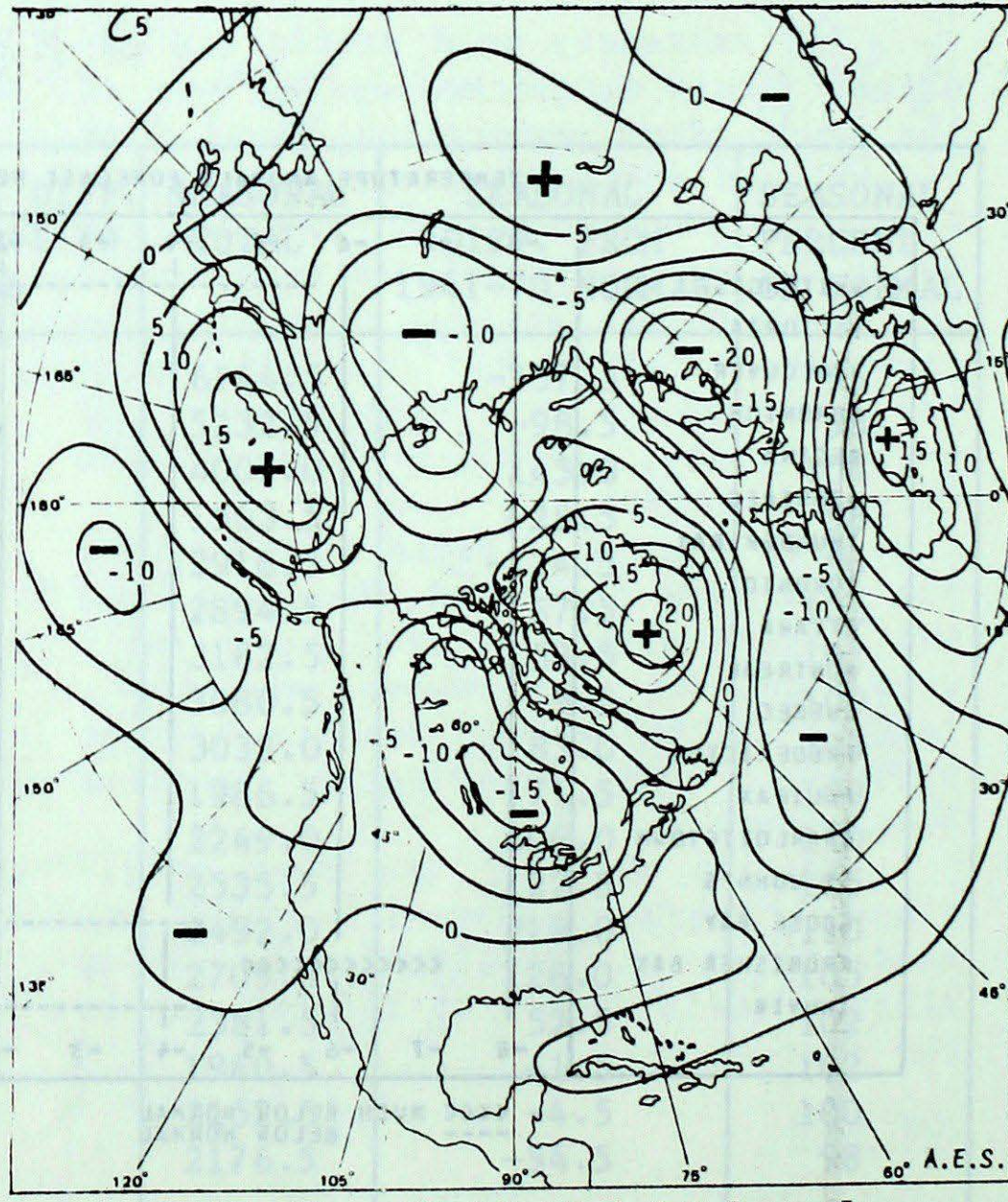
7-day Mean 50 kPa Height (dam)
DECEMBER 28 1981 TO JANUARY 3, 1982



7-day Mean 50 kPa Height Anomaly
(5 dam intervals)
DECEMBER 28 1981 TO JANUARY 3, 1982

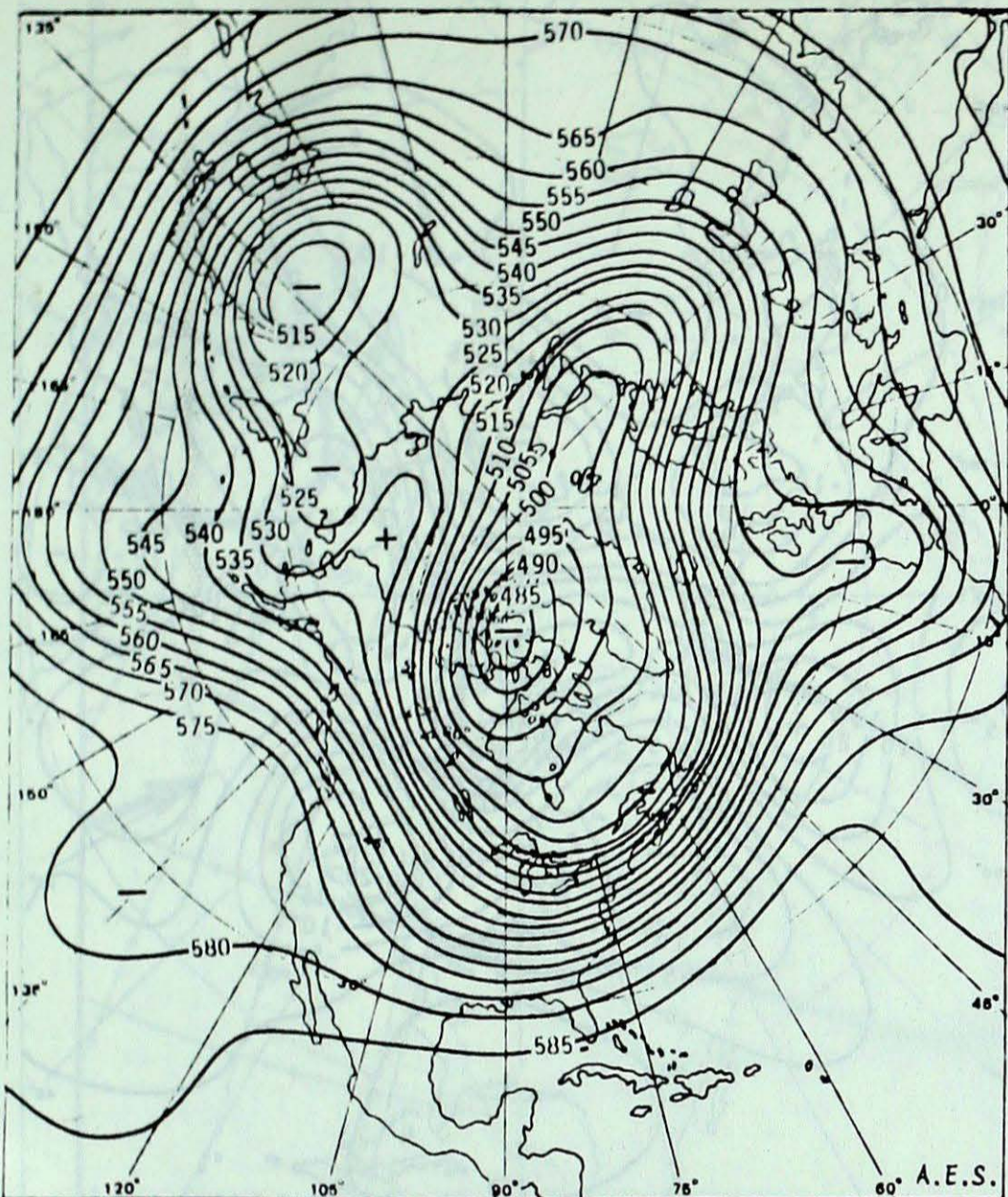


7-day Mean 50 kPa Height (dam)
JANUARY 4 TO 10, 1982

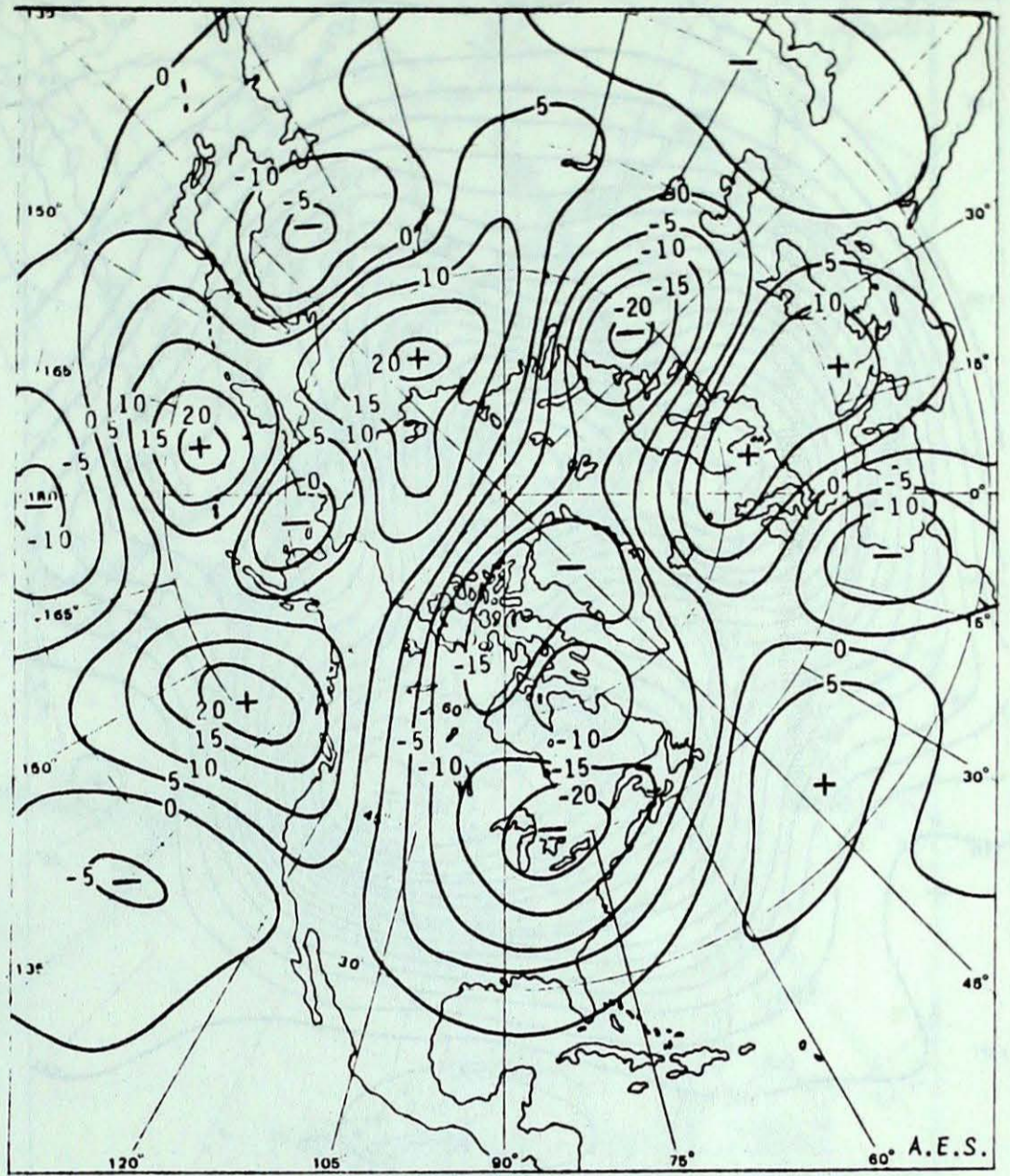


7-day Mean 50 kPa Height Anomaly
(5 dam intervals)
JANUARY 4 TO 10, 1982

ATMOSPHERIC CIRCULATION



7-day Mean 50 kPa Height (dam)
JANUARY 11 TO 17, 1982



7-day Mean 50 kPa Height Anomaly
 (5 dam intervals)
JANUARY 11 TO 17, 1982

(continued from page 3)

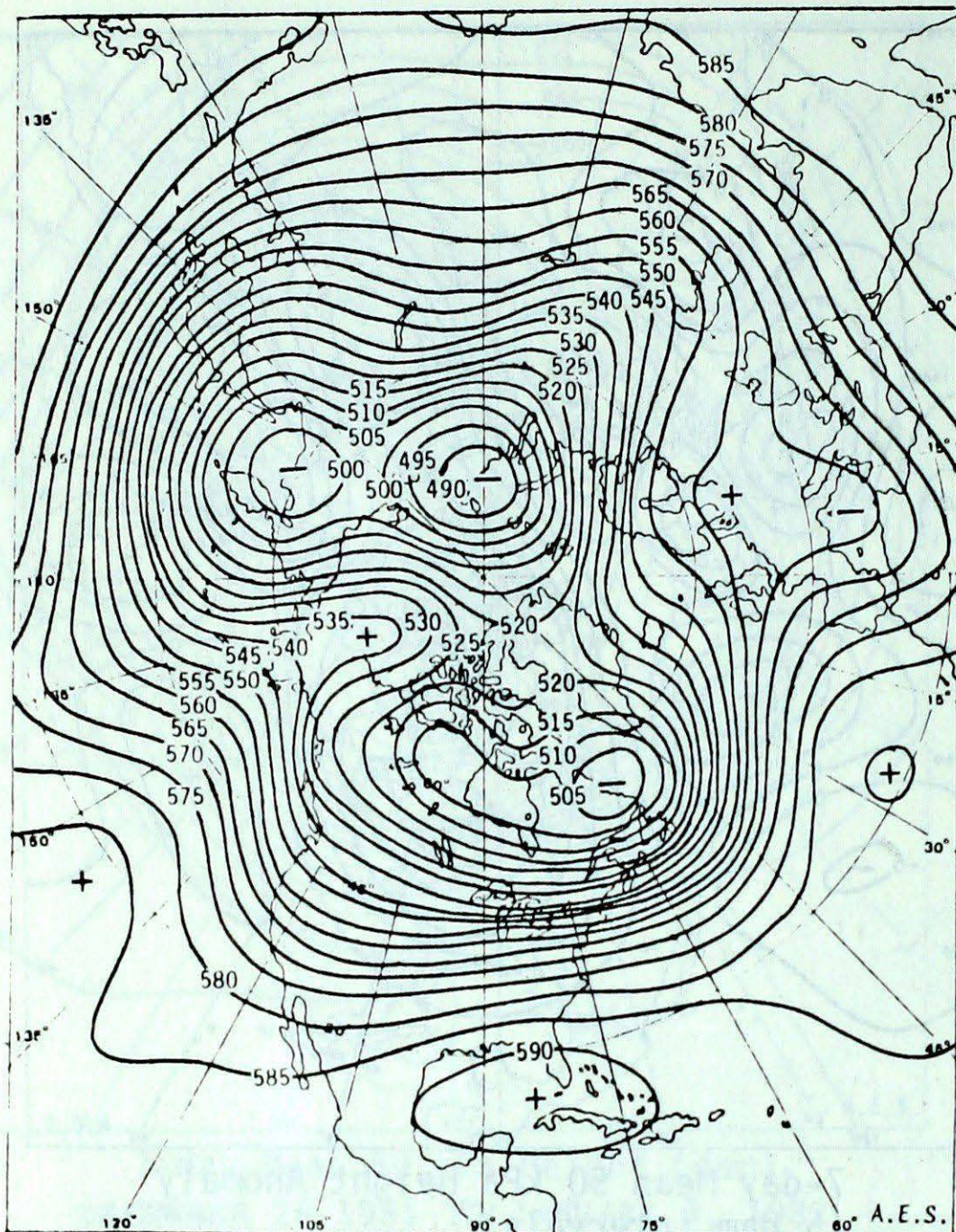
ATLANTIC PROVINCES

Cold weather remained entrenched over the Atlantic Provinces this week. Mean temperatures were more than 8° below normal in southern New Brunswick. On January 23rd, Saint John equalled the previous low temperature record of -27° set in 1871.

Precipitation totals at the majority of stations were near to or below normal. One of the exceptions, Sydney, recorded 57.6 mm.

The fishing fleet, which is usually able to leave port four times in January, has not yet been able to leave port so far this year. Persistent winds have kept the ice jammed into the Halifax harbour.

Atmospheric Circulation

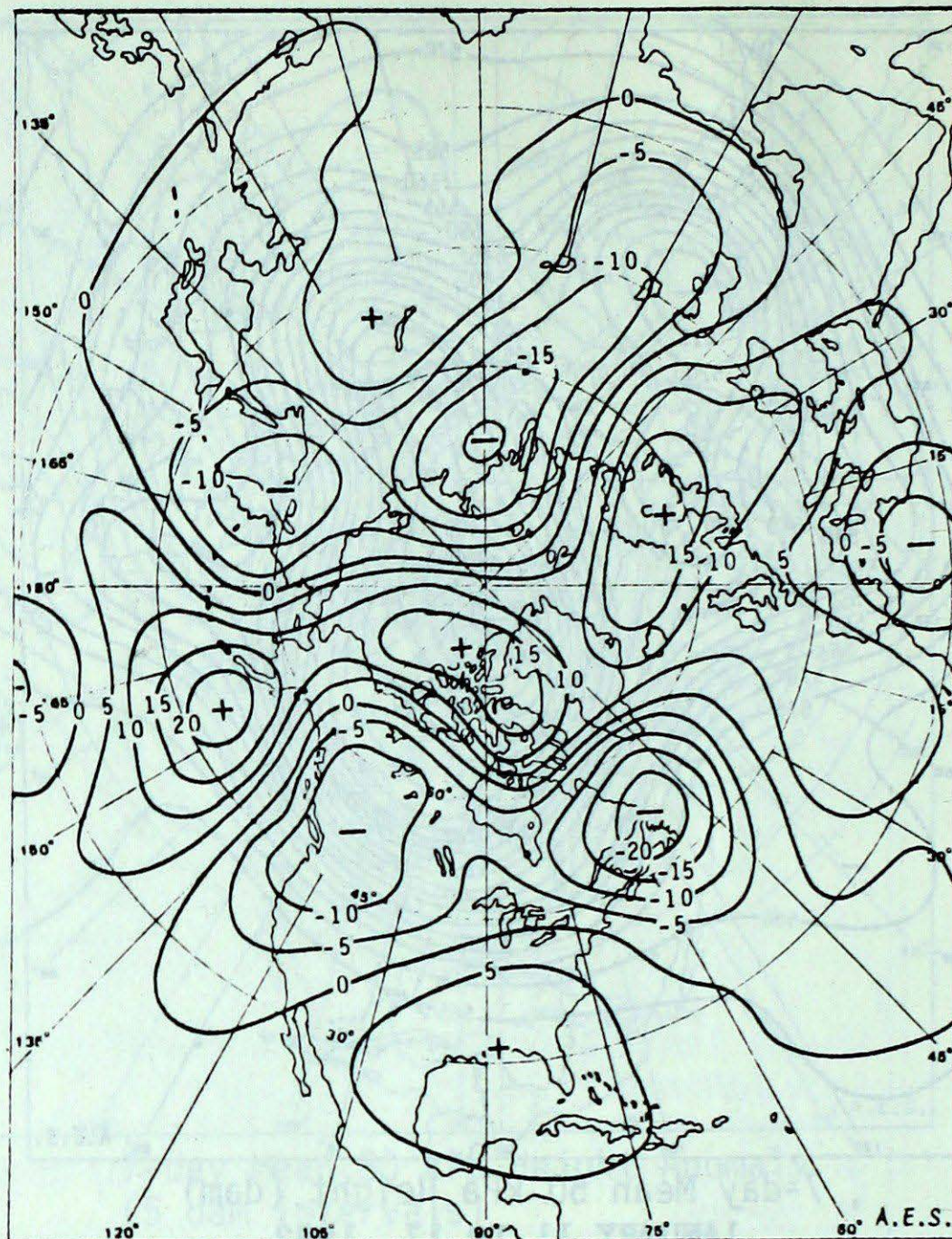


7-day Mean 50 kPa Height (dam)
JANUARY 18 TO 24, 1982

Since the beginning of the new year a deep Arctic Vortex has been a prominent feature in the vicinity of the Canadian Arctic. 50 kPa height anomalies have been consistently below normal. The mean ridge that previously dominated the weather regime in western Canada has shifted to just off the Canadian west coast and northward across Alaska. The combination of these two features has resulted in a very strong atmospheric circulation around the closed upper vortex.

Surges of extremely cold Siberian Arctic air penetrated southeastwards across the prairies and encompassed most of Canada and a large portion of the United States. Mean temperatures throughout the month of January have been well below normal most everywhere as fresh outbreaks of Arctic air drifted southeastwards.

This deep influx of cold air, away from its source region has resulted in strong system development due to the interactions with a much milder airmass to the south.

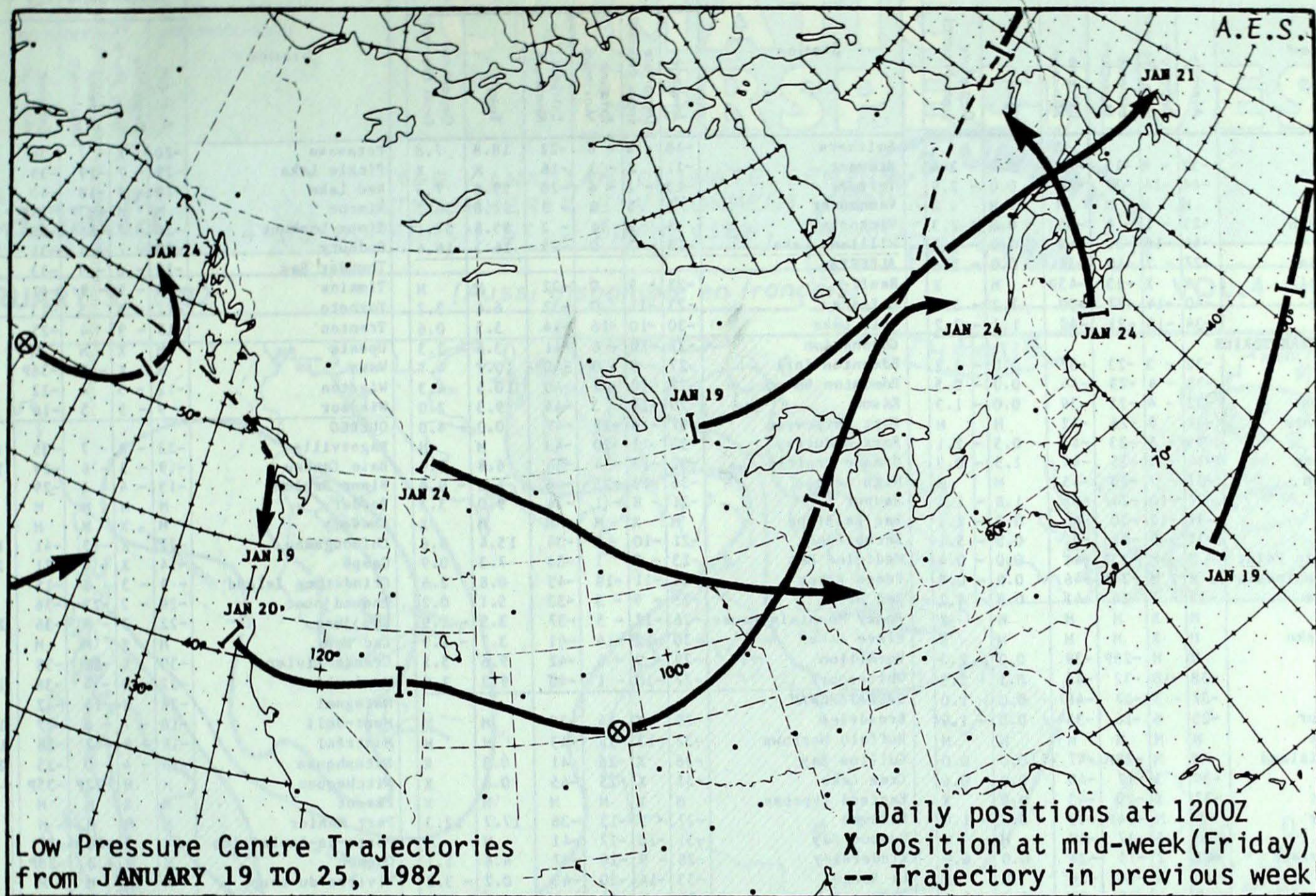


7-day Mean 50 kPa Height Anomaly
(5 dam intervals)
JANUARY 18 TO 24, 1982

Significant low pressure disturbances developed over the American plains and tracked northeastwards. The eastern half of the country received the brunt of these storms. The most intense development took place along the eastern sea-board. The Atlantic provinces were battered by high winds and heavy precipitation on numerous occasions.

Significant rainfall totals along the coast and heavy snowfalls in the British Columbia interior have been a common occurrence in the past few weeks. This has been mainly due to a combination of approaching Pacific weather systems, a strong on-shore flow and an influx of moist Pacific air over running an Arctic airmass. Across the prairies Ontario and Quebec high winds and very cold temperatures gave near blizzard conditions on numerous occasions. Heavy snow squall activity was common to the lee of the Great Lakes.

LOW PRESSURE CENTRE TRAJECTORIES



CLIMATIC PERSPECTIVES

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TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. JANUARY 26, 1982

Table with columns: Station, Temperature (°C) (Average, Departure from Normal, Extreme Maximum, Extreme Minimum), Precip. (mm) (Total, Departure from Normal). Rows include Yukon, Northwest Territories, and British Columbia stations.

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Table with columns: Station, Temperature (°C) (Average, Departure from Normal, Extreme Maximum, Extreme Minimum), Precip. (mm) (Total, Departure from Normal). Rows include Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland stations.

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