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A WEEKLY REVIEW OF CANADIAN CLIMATE

Atmospheric
Environment

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atmosphérique

CLIMATIC PERSPECTIVES

Canada

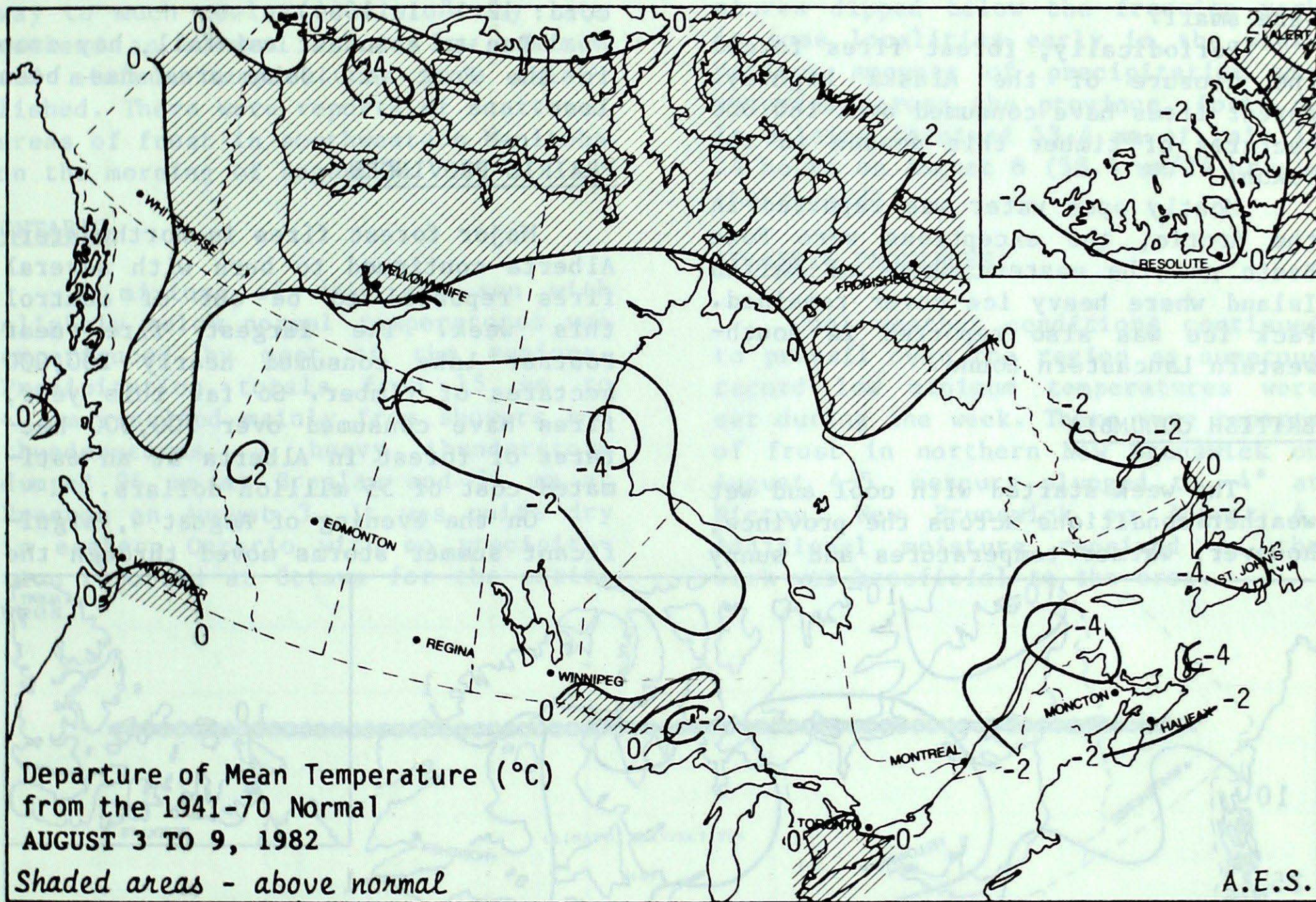
THE CANADIAN CLIMATE CENTRE,
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4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4



AUGUST 13 1982

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WEATHER HIGHLIGHTS FOR THE PERIOD - AUGUST 3-9, 1982

Major forest fires rages on in northern Alberta

Several major forest fires were reported to be out of control in northern Alberta. The largest fire near Footner Lake had consumed nearly 200,000 hectares of timber, bringing the total to 700,000 hectares for the season; at a cost of \$55 million in Alberta this year.

Much cooler air moved into eastern prairies and into New Brunswick, where mercury plunged to near the freezing mark.

Temperatures varied from a high of 36° at Lytton, B.C. to a low of -4° at Nictou, N.B. Breslau, Ont. received 96 mm of rain.

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

Temperatures dropped to near normal values during the week in the Yukon which helped to ease the forest fire situation. However, with the hot weather continuing in the Liard Basin, large fires were still reported to be out of control there. Precipitation was spotty in nature over all areas and amounts were small.

Periodically, forest fires forced the closure of the Alaska highway. Forest fires have consumed over 160,000 hectares of timber this season in the Yukon.

Mostly open water was reported in the Arctic, the exceptions were Foxe Basin and the eastern shore of Baffin Island where heavy ice cover remained. Pack ice was also reported in southwestern Lancastern Sound.

BRITISH COLUMBIA

The week started with cool and wet weather conditions across the province, however, warmer temperatures and sunny

skies returned on the weekend.

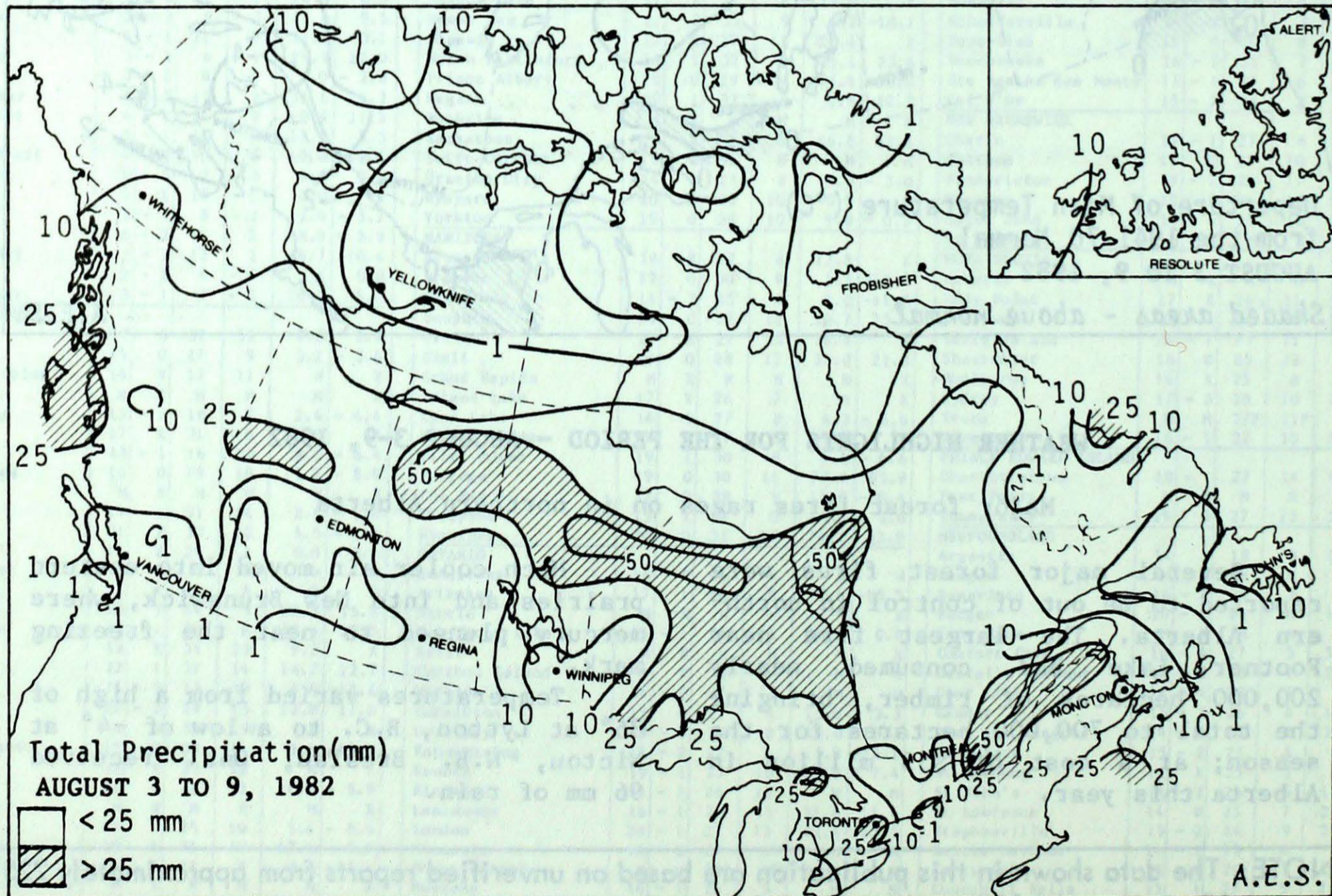
The cool and wet weather during the week had substantially helped the forest fire situation with fire weather index back to normal across much of British Columbia. Below normal temperatures established record low maximum of 14.1° at Terrace on August 5, (previous record: 14.6° in 1975) and 10.4° at Fort St. John on August 3 (previous record: 12.1° in 1964).

Due to abundant rainfall, hay crop in the Fort St. John area has been lost.

PRAIRIE PROVINCES

Major forest fires in northwestern Alberta continued to burn with several fires reported to be out of control this week. The largest fire near Footner Lake consumed nearly 200,000 hectares of timber. So far this year, fires have consumed over 700,000 hectares of forest in Alberta at an estimated cost of 55 million dollars.

On the evening of August 4, significant summer storms moved through the



Edmonton area. Lightning from these storms ignited 15 fires, one blaze was reported at the meat packing plant, damage to the plant was estimated at a quarter of a million dollars. With the dry weather conditions moving into southern Alberta, crops were reported to be progressing well.

Elsewhere in the Prairies, seasonable temperatures during the week gave way to much cooler conditions by late weekend as several record low maximum and minimum temperatures were established. There were reports of scattered areas of frost in southwestern Manitoba on the morning of August 9.

ONTARIO

A mixture of rain and sun with slightly below normal temperatures was experienced by most of the regions. Precipitation totals from 15 mm to 40 mm resulted mainly from showers and thunderstorms. A heavy thunderstorm dumped 96 mm at Breslau and 51 mm at Preston on August 3. It was quite dry in eastern Ontario with no precipitation reported at Ottawa for the entire week.

Agricultural crops appear to be in excellent shape with fresh fruits and vegetables making their annual appearance on schedule.

QUÉBEC

Below normal temperatures during the week resulted in some record low minimum temperatures. Overnight temperatures dipped below the freezing mark in some localities early in the week. Various amounts of precipitation was recorded across the province. Poste de la Baleine received 53.4 mm of rain in 24 hours on August 8 (58.4 mm/24 hrs is the record).

ATLANTIC PROVINCES

Cool weather conditions continued to prevail over the region as numerous record low minimum temperatures were set during the week. There were reports of frost in northern New Brunswick on August 4-5, mercury plunged to -4° at Nictou, New Brunswick on August 4. Additional moisture received in the week was beneficial to the crop.

CLIMATIC PERSPECTIVES

Staff

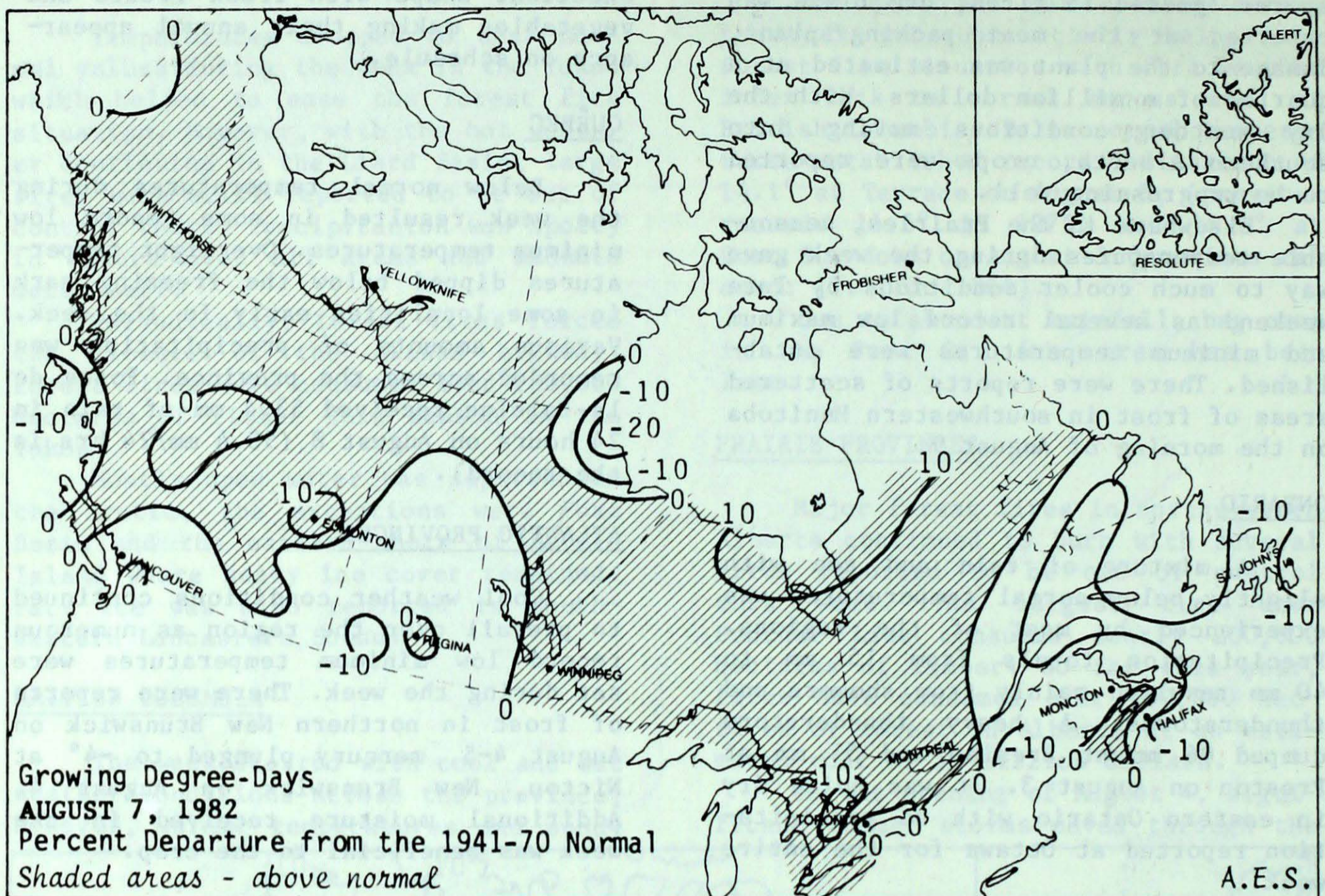
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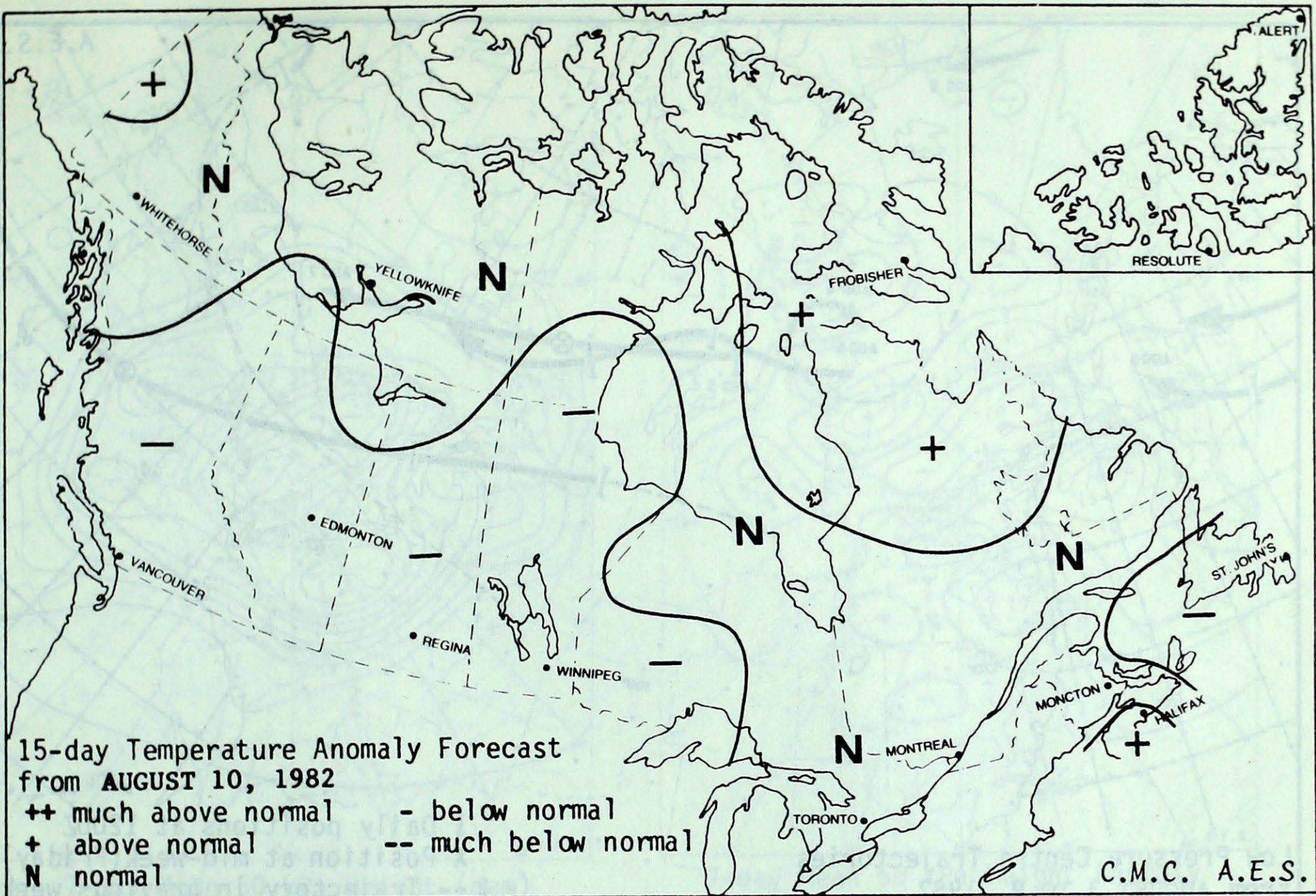
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GROWING DEGREE-DAY SUMMARY TO AUGUST 7, 1982

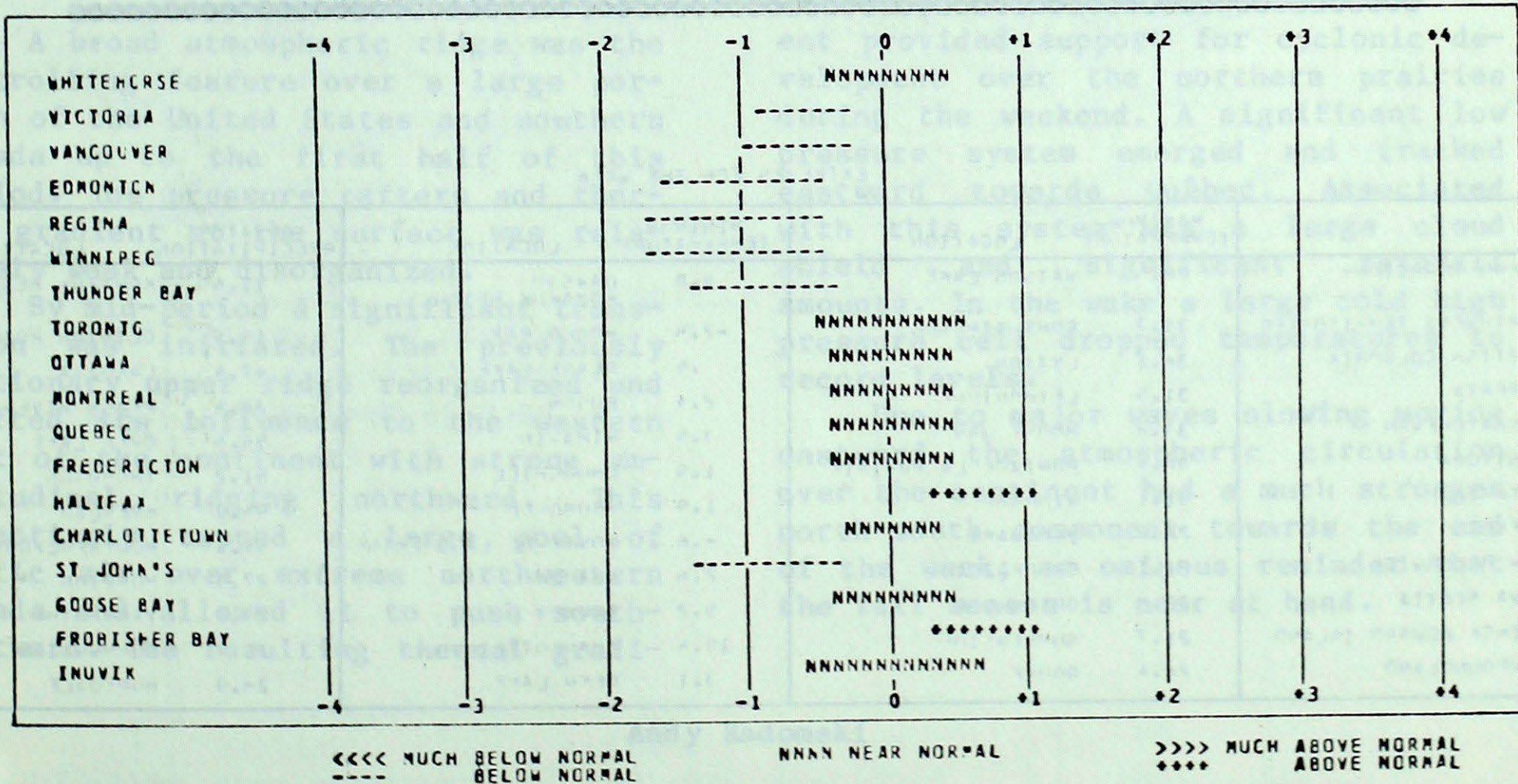


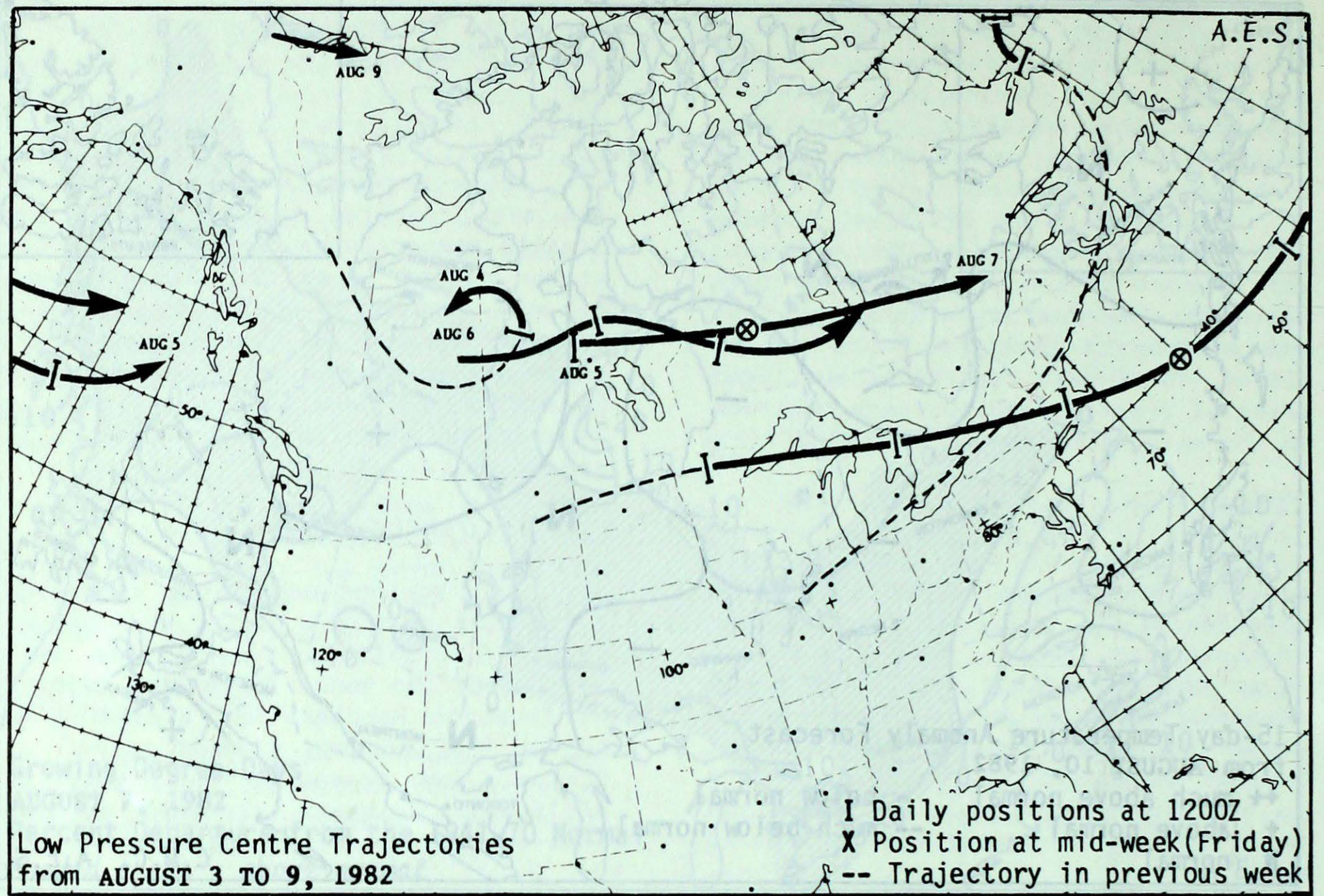
| STATION | MONTHLY CUMULATIVE TOTAL | MONTHLY DIFF. FROM 1941-70 NORMAL | SEASONAL TOTAL | SEASONAL DIFF. FROM 1941-70 NORMAL | SEASONAL PERCENT OF NORMAL |
|---------------|--------------------------|-----------------------------------|----------------|------------------------------------|----------------------------|
| Whitehorse | 46.0 | -13.0 | 634.0 | 9.0 | 101 |
| Penticton | 100.0 | -7.0 | 1283.0 | -51.0 | 96 |
| Vancouver | 80.0 | -11.0 | 1121.5 | -52.5 | 96 |
| Edmonton | 80.0 | -3.0 | 1018.5 | 132.5 | 115 |
| Calgary | 79.5 | -2.5 | 849.5 | 10.5 | 101 |
| Regina | 108.5 | 8.5 | 1066.5 | 29.5 | 103 |
| Saskatoon | 97.5 | 0.5 | 971.0 | -61.0 | 94 |
| Winnipeg | 108.0 | 2.0 | 1155.5 | 48.5 | 104 |
| Thunder Bay | 66.0 | -18.0 | 855.0 | -2.0 | 100 |
| Windsor | 125.0 | 8.0 | 1560.5 | 62.5 | 104 |
| Toronto | 104.0 | -2.0 | 1252.0 | -30.0 | 98 |
| Ottawa | 94.0 | -10.0 | 1323.0 | 65.0 | 105 |
| Montréal | 93.5 | -18.5 | 1314.0 | 18.0 | 101 |
| Québec | 76.5 | -16.5 | 1049.5 | -10.5 | 99 |
| Fredericton | 74.0 | -24.0 | 1048.0 | -11.0 | 99 |
| Halifax | 78.0 | -15.0 | 816.0 | -93.0 | 90 |
| Charlottetown | 74.5 | -22.5 | 837.0 | -47.0 | 95 |
| St. John's | 60.5 | -19.5 | 480.0 | -112.0 | 81 |

TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR AUG 10 1982 TO AUG 24 1982

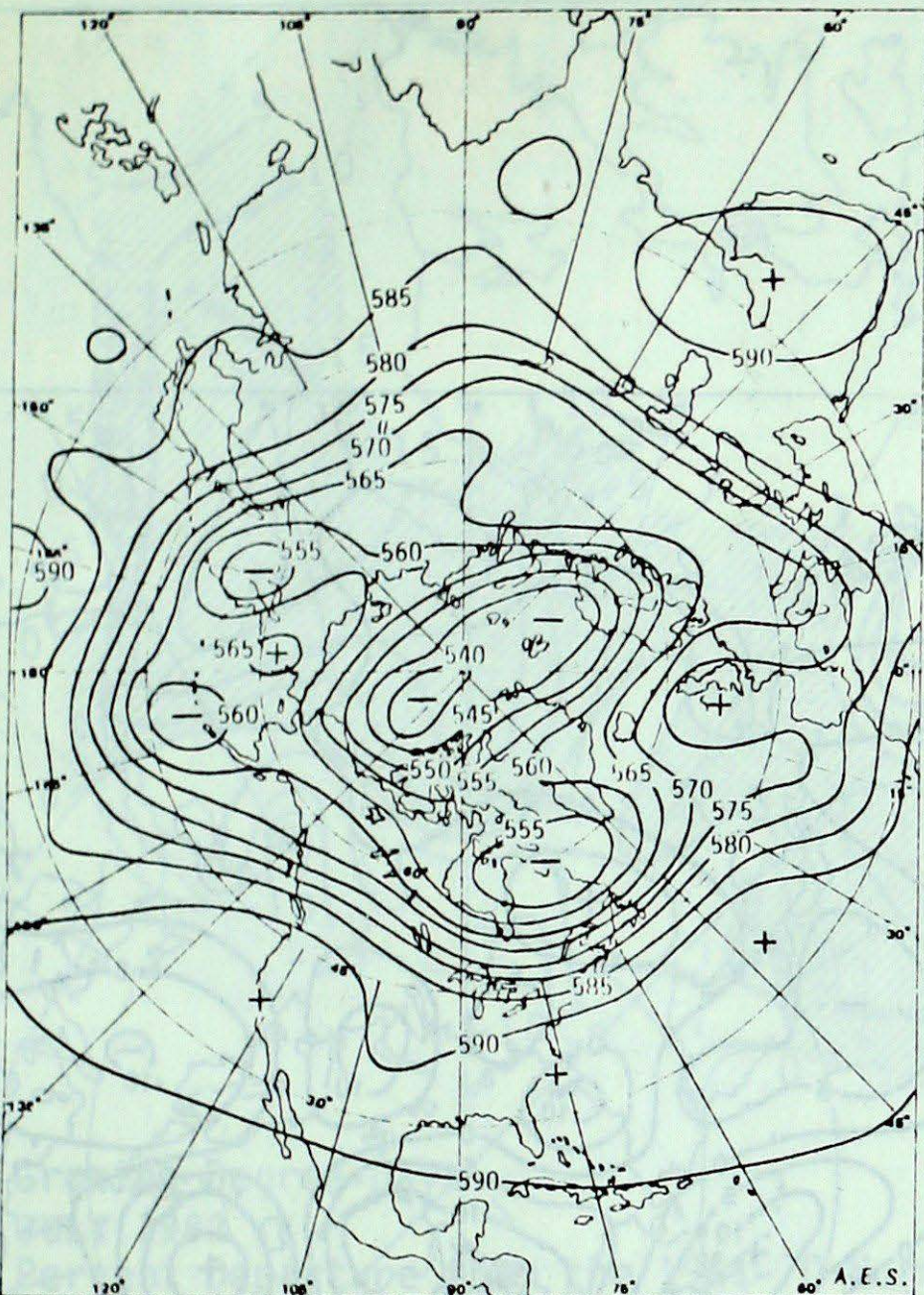




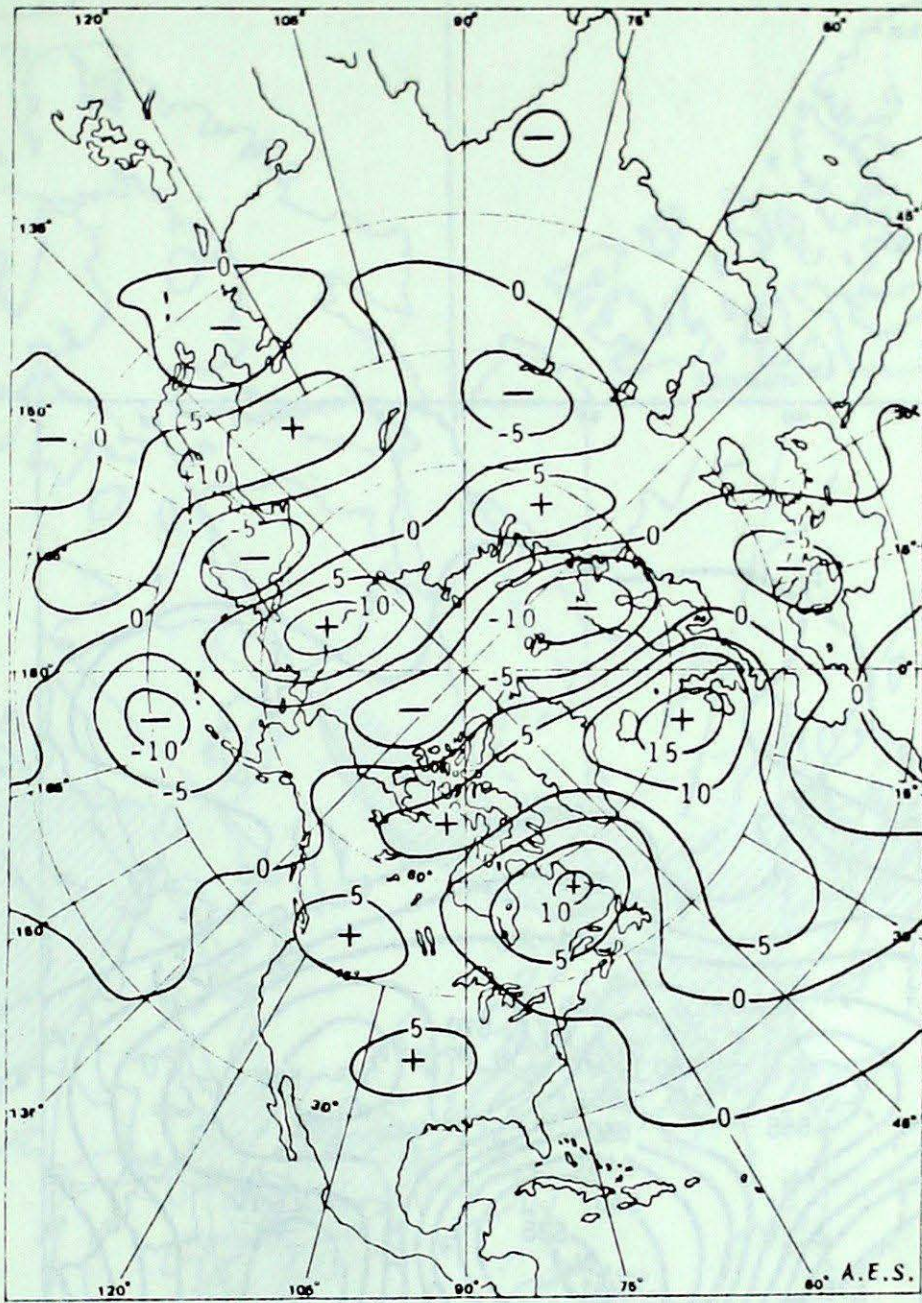
EXTREMES FOR THE WEEK

| | MAXIMUM TEMPERATURE | LOCATION | MINIMUM TEMPERATURE | LOCATION | GREATEST PRECIPITATION | LOCATION |
|-----------------------|---------------------|--------------------|---------------------|-------------------------|------------------------|-----------------|
| YUKON TERRITORY | 28.5 | WATSON LAKE | 0.0 | DAWSON KOMAKUK BEACH | 11.6 | KOMAKUK BEACH |
| NORTHWEST TERRITORIES | 30.3 | FORT SIMPSON | -2.5 | MOULD BAY | 19.4 | CLINTON POINT |
| BRITISH COLUMBIA | 36.1 | LYTTON | .5 | DEASE LAKE | 47.4 | LANGARA |
| ALBERTA | 31.5 | LETHBRIDGE | 2.4 | EDSON | 38.4 | PEACE RIVER |
| SASKATCHEWAN | 33.8 | MOOSE JAW | 3.5 | NIPAWIN | 56.6 | CREE LAKE |
| MANITOPA | 30.4 | PORTAGE LA PRAIRIE | 1.9 | CHURCHILL | 51.2 | THOMPSON |
| ONTARIO | 31.1 | WINDSOR | 1.9 | MOOSEE | 96.0 | BRESLAU |
| QUEBEC | 28.2 | MANIWAKE | -1.6 | POSTE DE LA PALEINE | 54.4 | MONTREAL/DORVAL |
| NEW BRUNSWICK | 24.1 | FREDERICTON | 2.6 | CHARLO | 27.0 | MONCTON |
| NOVA SCOTIA | 23.8 | GREENWOOD | 5.2 | SYDNEY | 29.0 | YARMOUTH |
| PRINCE EDWARD ISLAND | 21.7 | SUMMERSIDE | 10.4 | CHARLOTTE TOWN | 20.4 | SUMMERSIDE |
| NEWFOUNDLAND | 26.4 | GOOSE | 3.1 | DEFO LAKE | 24.9 | HOPEDALE |

Atmospheric Circulation



7-day Mean 50 kPa Height (dam)
AUGUST 2 TO 8, 1982



7-day Mean 50 kPa Height Anomaly
(5 dam intervals)
AUGUST 2 TO 8, 1982

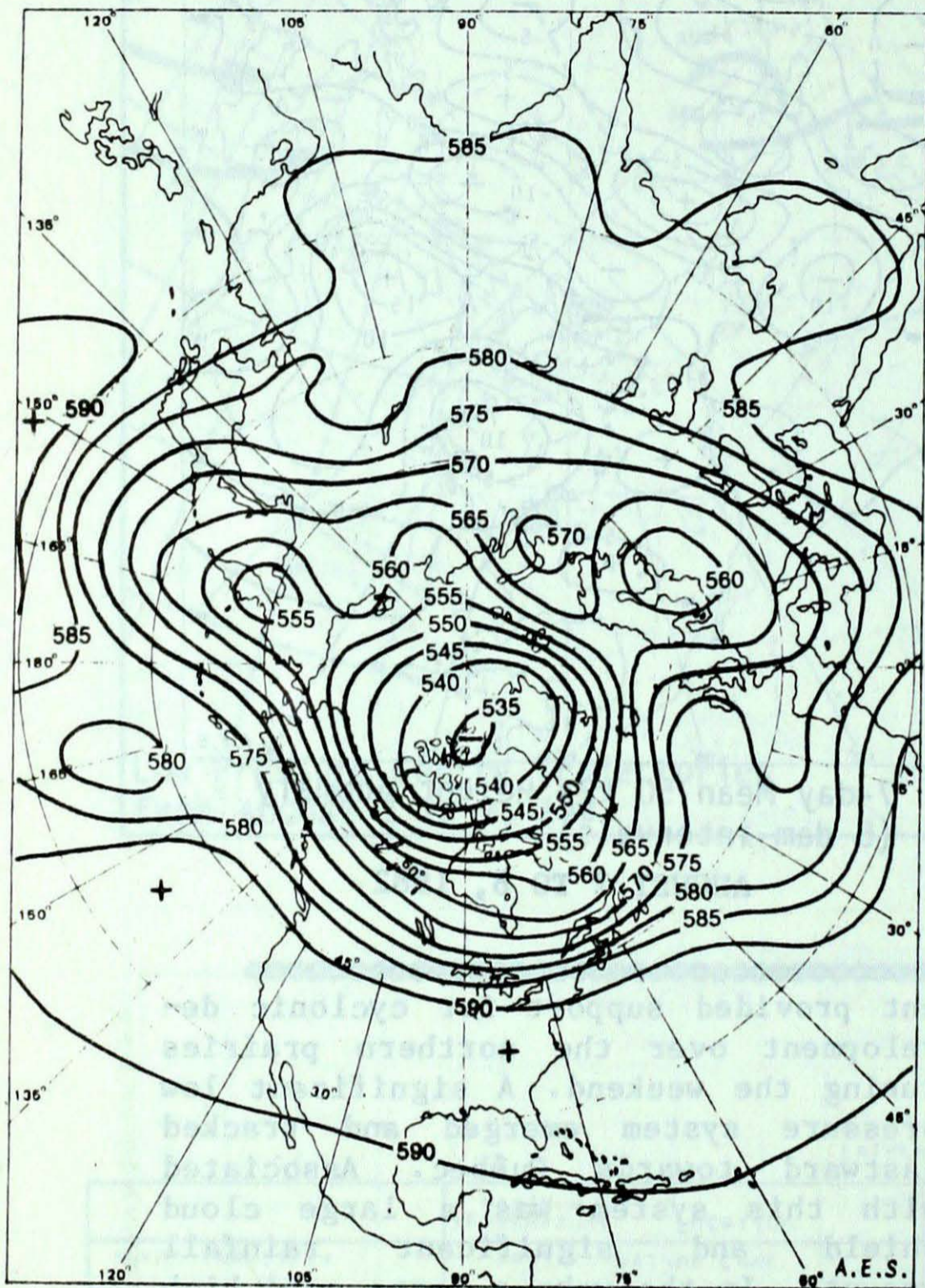
A broad atmospheric ridge was the controlling feature over a large portion of the United States and southern Canada up to the first half of this period. The pressure pattern and thermal gradient at the surface was relatively weak and disorganized.

By mid-period a significant transition was initiated. The previously stationary upper ridge reorganized and shifted its influence to the western part of the continent with strong meridional ridging northward. This effectively tapped a large pool of Arctic air over extreme northwestern Canada and allowed it to push south-eastward. The resulting thermal gradi-

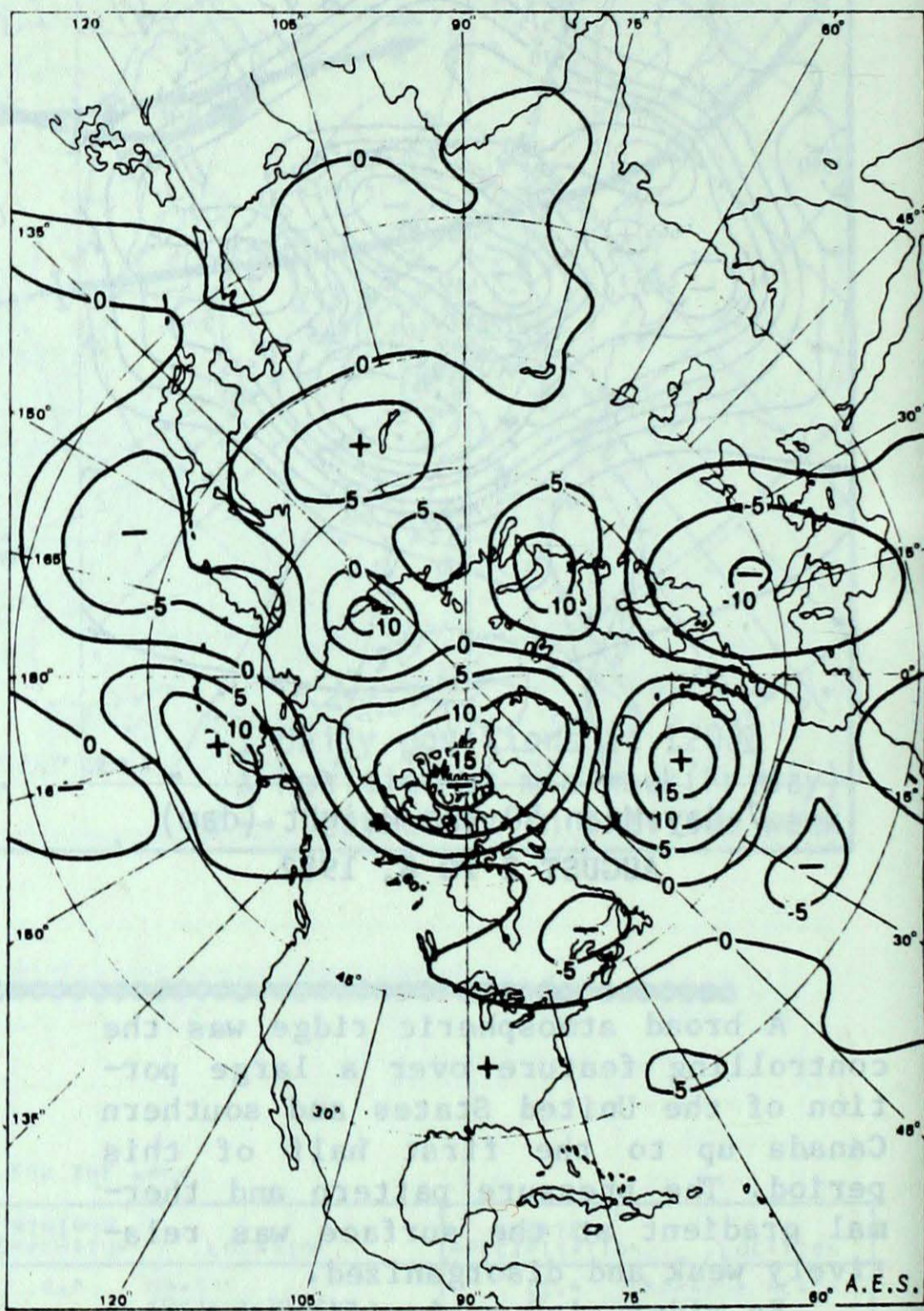
ent provided support for cyclonic development over the northern prairies during the weekend. A significant low pressure system emerged and tracked eastward towards Québec. Associated with this system was a large cloud shield and significant rainfall amounts. In the wake a large cold high pressure cell dropped temperatures to record levels.

Due to major waves slowing moving eastward the atmospheric circulation over the continent had a much stronger north-south component towards the end of the week; an ominous reminder that the fall season is near at hand.

Andy Radomski

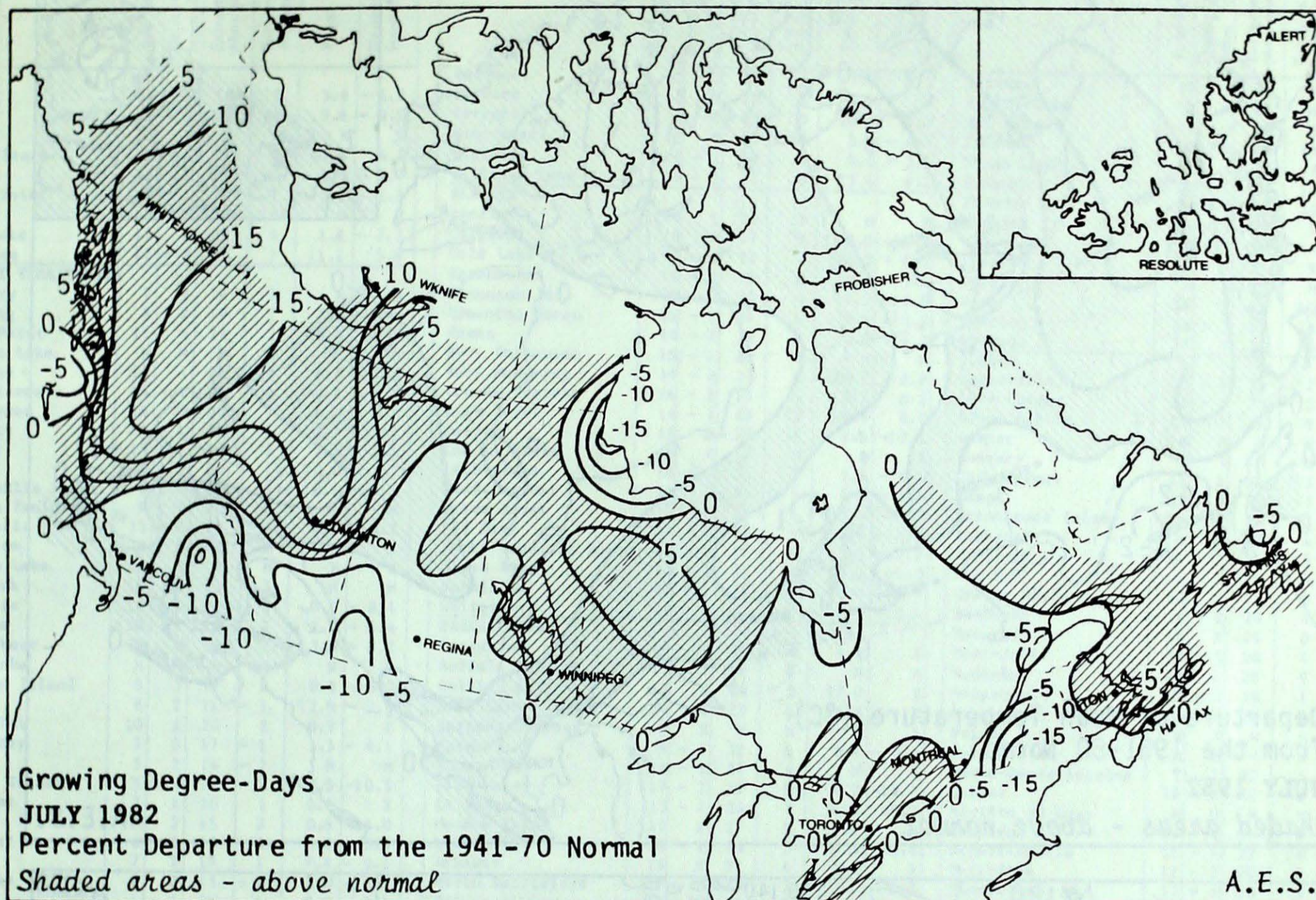


7-day Mean 50 kPa Height (dam)
 JULY 26 TO AUGUST 1, 1982



7-day Mean 50 kPa Height Anomaly
 (5 dam intervals)
 JULY 26 TO AUGUST 1, 1982

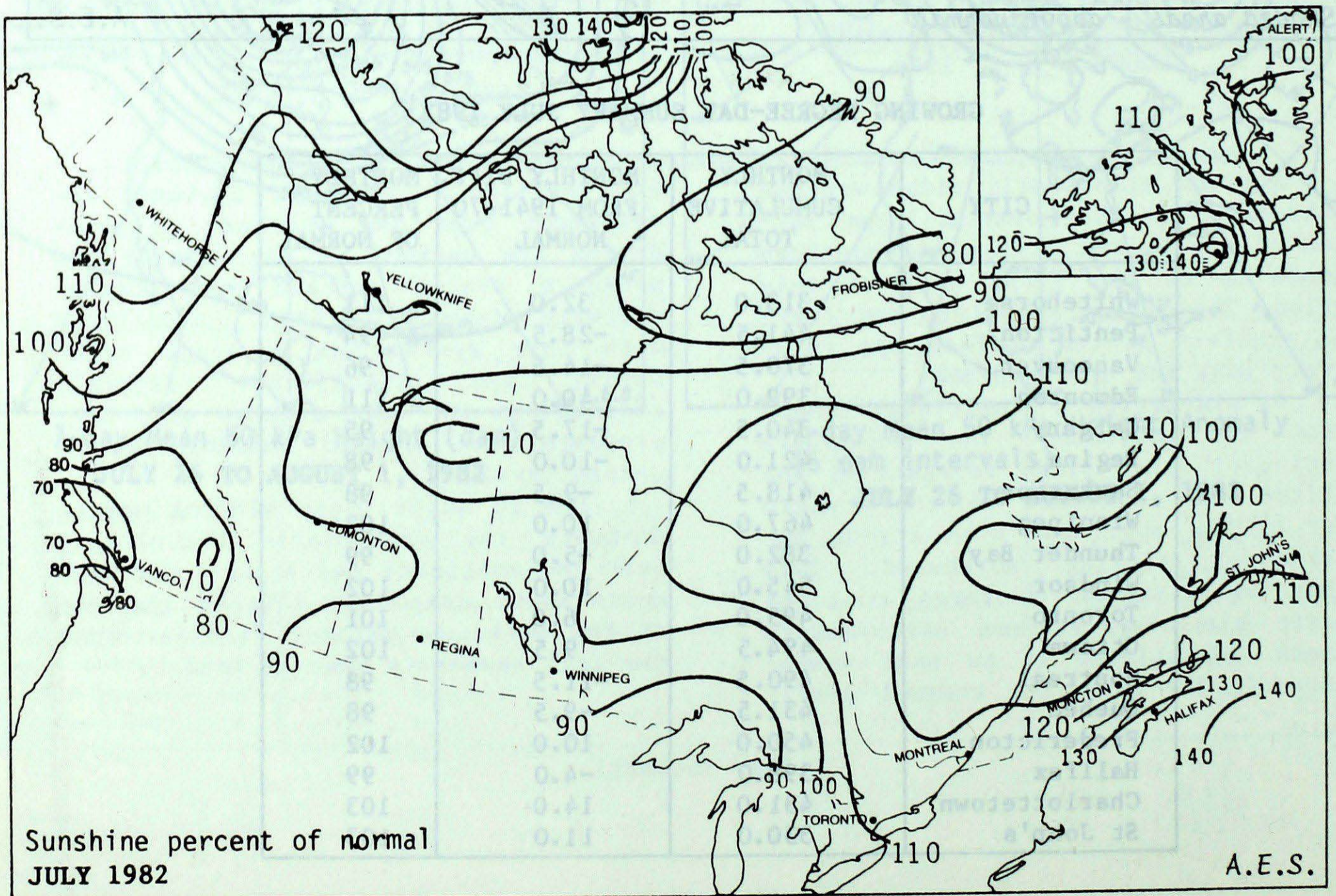
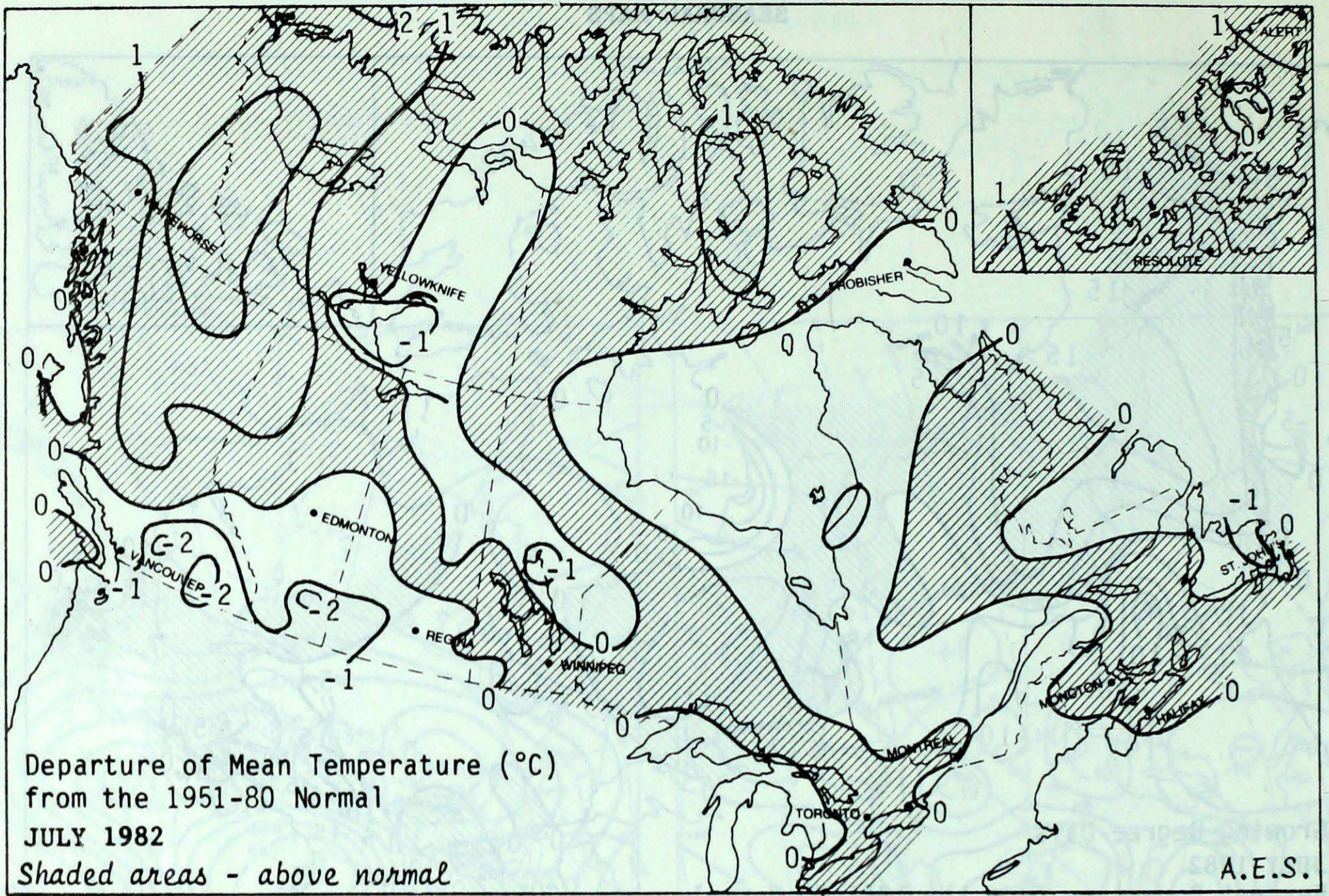
SEASONAL MAPS



GROWING DEGREE-DAY SUMMARY JULY 1982

| CITY | MONTHLY CUMULATIVE TOTAL | MONTHLY DIFF. FROM 1941-70 NORMAL | MONTHLY PERCENT OF NORMAL |
|---------------|--------------------------|-----------------------------------|---------------------------|
| Whitehorse | 313.0 | 32.0 | 111 |
| Penticton | 441.5 | -28.5 | 94 |
| Vancouver | 370.5 | -14.5 | 96 |
| Edmonton | 392.0 | 40.0 | 111 |
| Calgary | 340.5 | -17.5 | 95 |
| Regina | 421.0 | -10.0 | 98 |
| Saskatoon | 418.5 | -9.5 | 98 |
| Winnipeg | 467.0 | 10.0 | 102 |
| Thunder Bay | 382.0 | -5.0 | 99 |
| Windsor | 545.0 | 10.0 | 102 |
| Toronto | 495.0 | 6.0 | 101 |
| Ottawa | 494.5 | 9.5 | 102 |
| Montreal | 490.5 | -11.5 | 98 |
| Quebec | 431.5 | -9.5 | 98 |
| Fredericton | 450.0 | 10.0 | 102 |
| Halifax | 398.0 | -4.0 | 99 |
| Charlottetown | 431.0 | 14.0 | 103 |
| St John's | 330.0 | 11.0 | 103 |

SEASONAL MAPS



SEASONAL MAPS

