



Environment Canada / Environnement Canada

A WEEKLY REVIEW OF CANADIAN CLIMATE

Atmospheric Environment / Environnement atmosphérique

CLIMATIC PERSPECTIVES

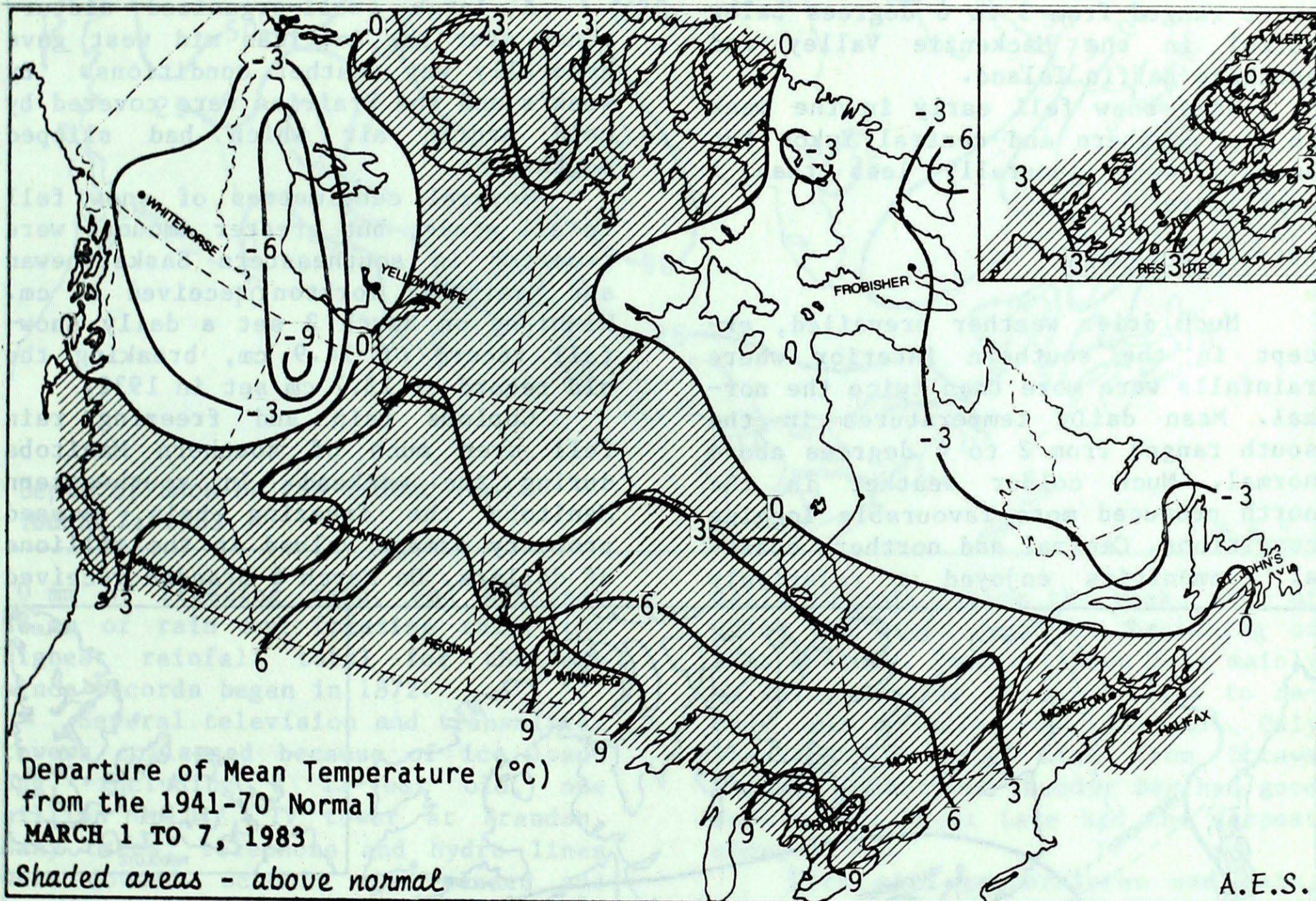
Canada

THE CANADIAN CLIMATE CENTRE,
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MARCH 11, 1983

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WEATHER HIGHLIGHTS FOR THE PERIOD - MARCH 1-7, 1983

- * Extensive freezing rain causes multi-million dollar property damage in southwestern Manitoba ... /page 2
- * Storms continue to lash the Eastern Seaboard ... /page 7
- * Mild winter of 1982-83 in summary ... /page 11
- * Much above normal temperatures forecast from British Columbia to the Great Lakes for the next two weeks ... /page 5

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 THE NORTHWEST TERRITORIES

Cloudy and dull skies dominated the Yukon during the first half of the week, but began to clear by mid-week when night-time minimums plummeted into the -30 to -35 degree range. In the Yukon, the lowest temperature of the week was recorded at Old Crow on March 1, -41.6°. Unseasonably cold temperatures ranged from 3 to 6 degrees below normal in the Mackenzie Valley and southern Baffin Island.

Some snow fell early in the week in the southern and central Yukon but amounts were generally less than 1 centimetre.

BRITISH COLUMBIA

Much drier weather prevailed, except in the southern interior where rainfalls were more than twice the normal. Mean daily temperatures in the south ranged from 2 to 4 degrees above normal. Much colder weather in the north produced more favourable logging conditions. Central and northern coastal communities enjoyed a relatively

pleasant sunny week.

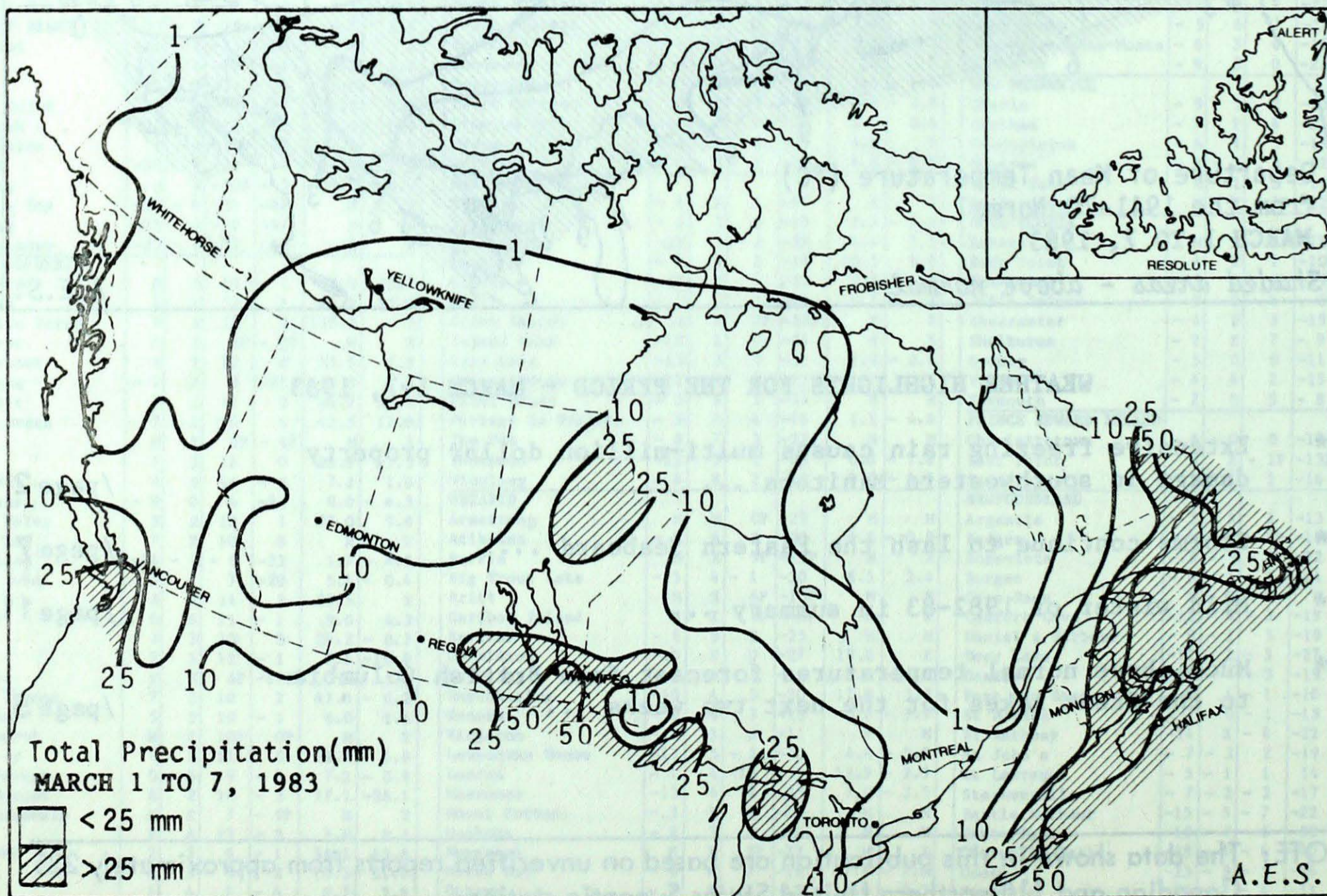
Correction: The winter precipitation value for Vancouver in last week's issue was incorrect and should read 556.2 mm; as a result, this does not set a new record and is only Vancouver's 7th wettest winter period.

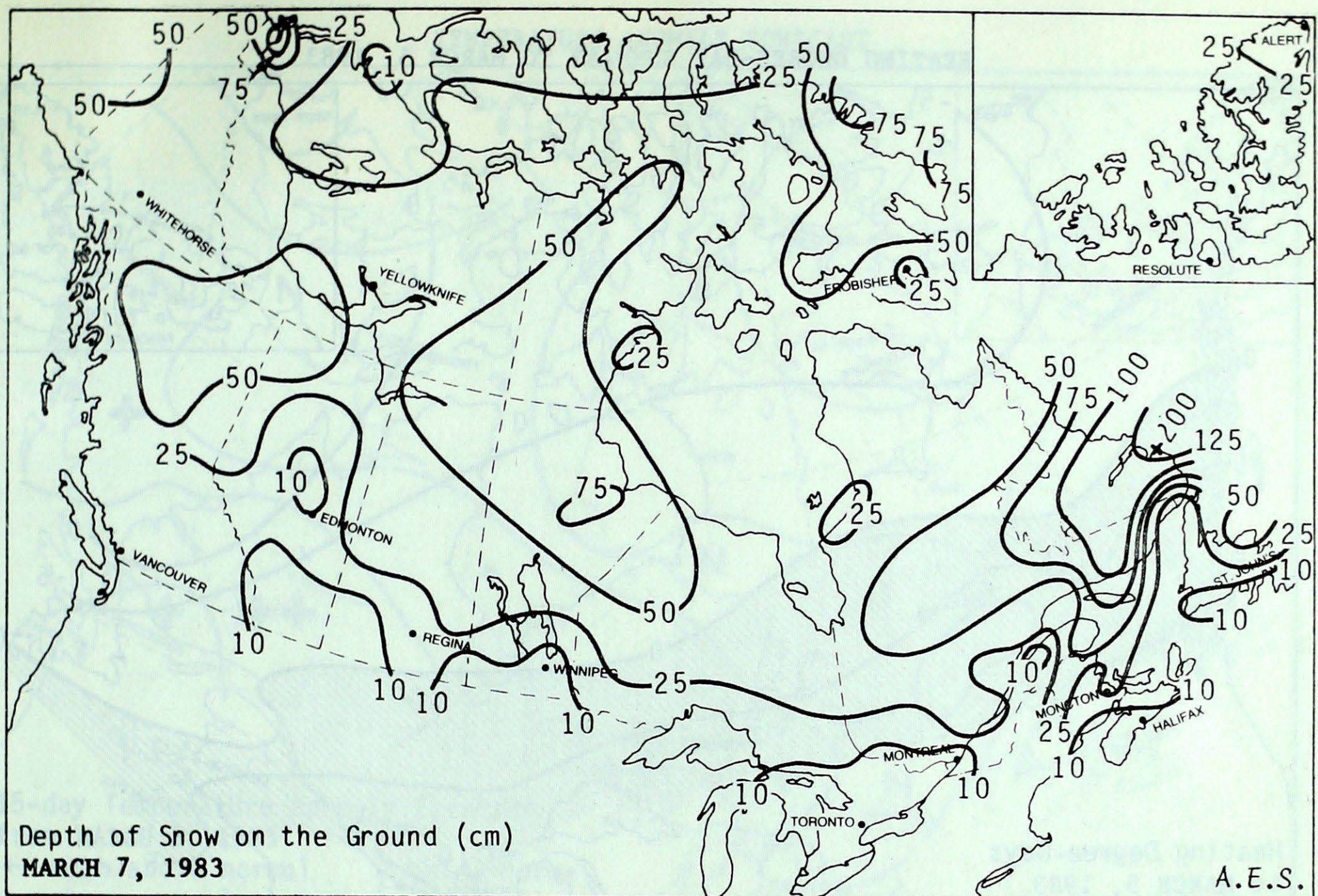
PRAIRIE PROVINCES

A large, well-organized disturbance over the American mid west gave generally wet weather conditions. By week's end the Prairies were covered by cold Arctic air which had slipped southwards.

Several centimetres of snow fell in all areas, but greater amounts were reported in southeastern Saskatchewan and Manitoba. Yorkton received 17 cm. Winnipeg on March 2 set a daily snowfall record of 14.9 cm, breaking the old record of 13.7 cm set in 1932.

Copious rain and freezing rain fell over much of southern Manitoba during the weekend. In southwestern Manitoba the freezing rain, caused property damage valued in the millions of dollars. On March 6 Brandon received





10 mm of freezing rain, and Winnipeg 28 mm of rain and freezing rain, the highest rainfall total for the day since records began in 1872.

Several television and transmitter towers collapsed because of ice loading, including a 12-year old, one million dollar, TV tower at Brandon. Many trees, telephone and hydro lines were downed. Schools were closed and many air flights were diverted or cancelled. Winnipeg International Airport was closed from the evening of the 6th until the morning of the 8th as temperatures plummeted to well below freezing, causing a layer of glare ice to form on the runways.

ONTARIO

Balmy weather ushered in March. Temperatures were 6 to 9 degrees above normal, and as much as 11° in north-western Ontario. Numerous daily record high values were established, for example, 11° at Kingston on March 6 broke the old record of 9° set in 1894. Other central and southern Ontario cities, from Windsor to Timmins, also broke

daily records during the week, many of which had stood from the beginning of this century. Precipitation fell mainly as rain, causing the snow cover to recede and dwindle even further. Only areas north of a line from Ottawa through Sudbury to Thunder Bay had good snow cover; Trout Lake had the deepest snow, 59 cm.

With mild temperatures and rain, the skiing season has virtually come to an end at most central Ontario resorts an early finish to a comparatively poor season.

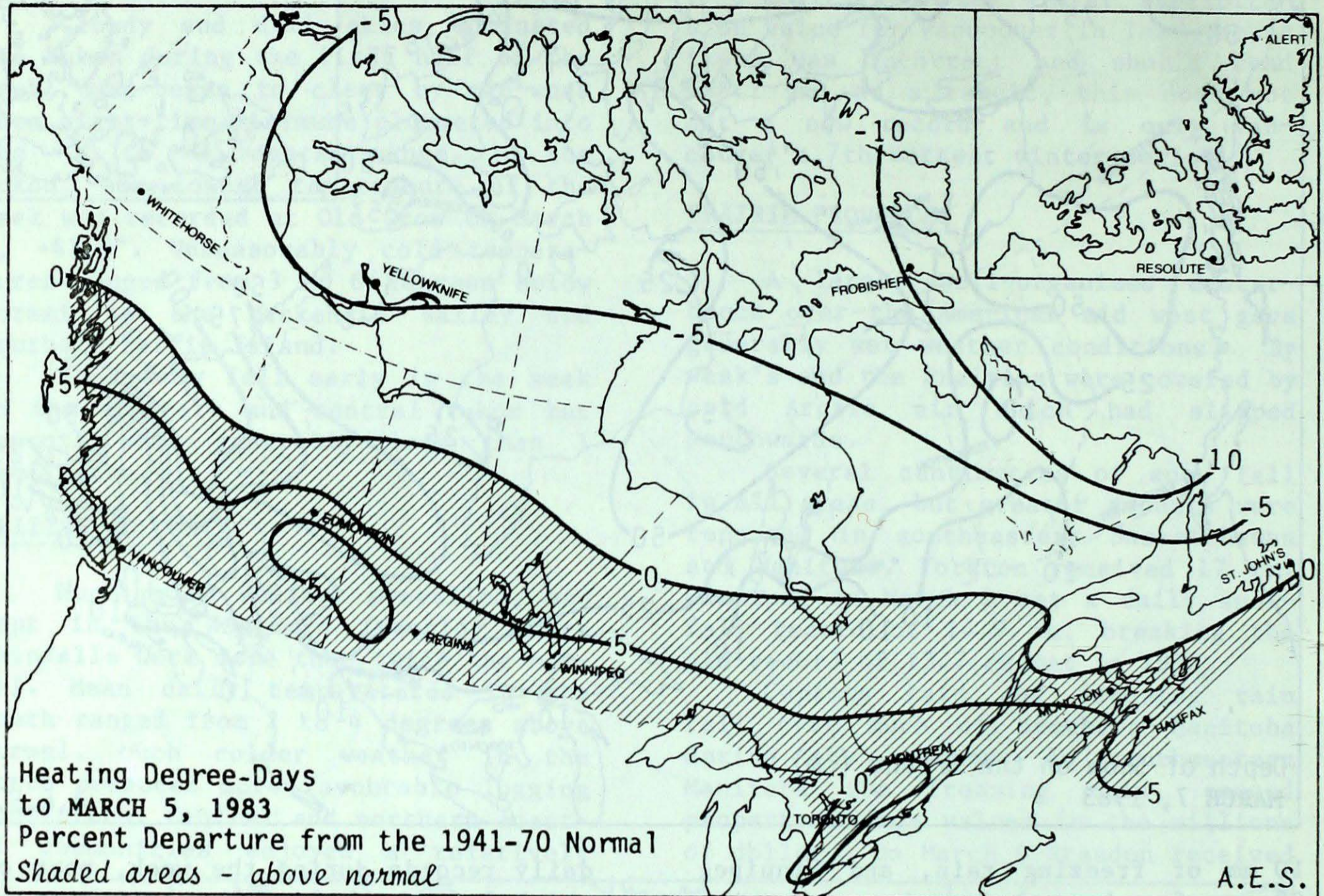
QUÉBEC

Pleasantly sunny, mild weather prevailed across southern Québec, except along the shores of the lower St. Lawrence River where a persistent northeasterly flow of moist air kept the skies cloudy during the week. Snowfall was generally light. Natashquan received the highest weekly snowfall, 51 cm.

Owing to the mild weather the snow cover was non-existent in Montréal

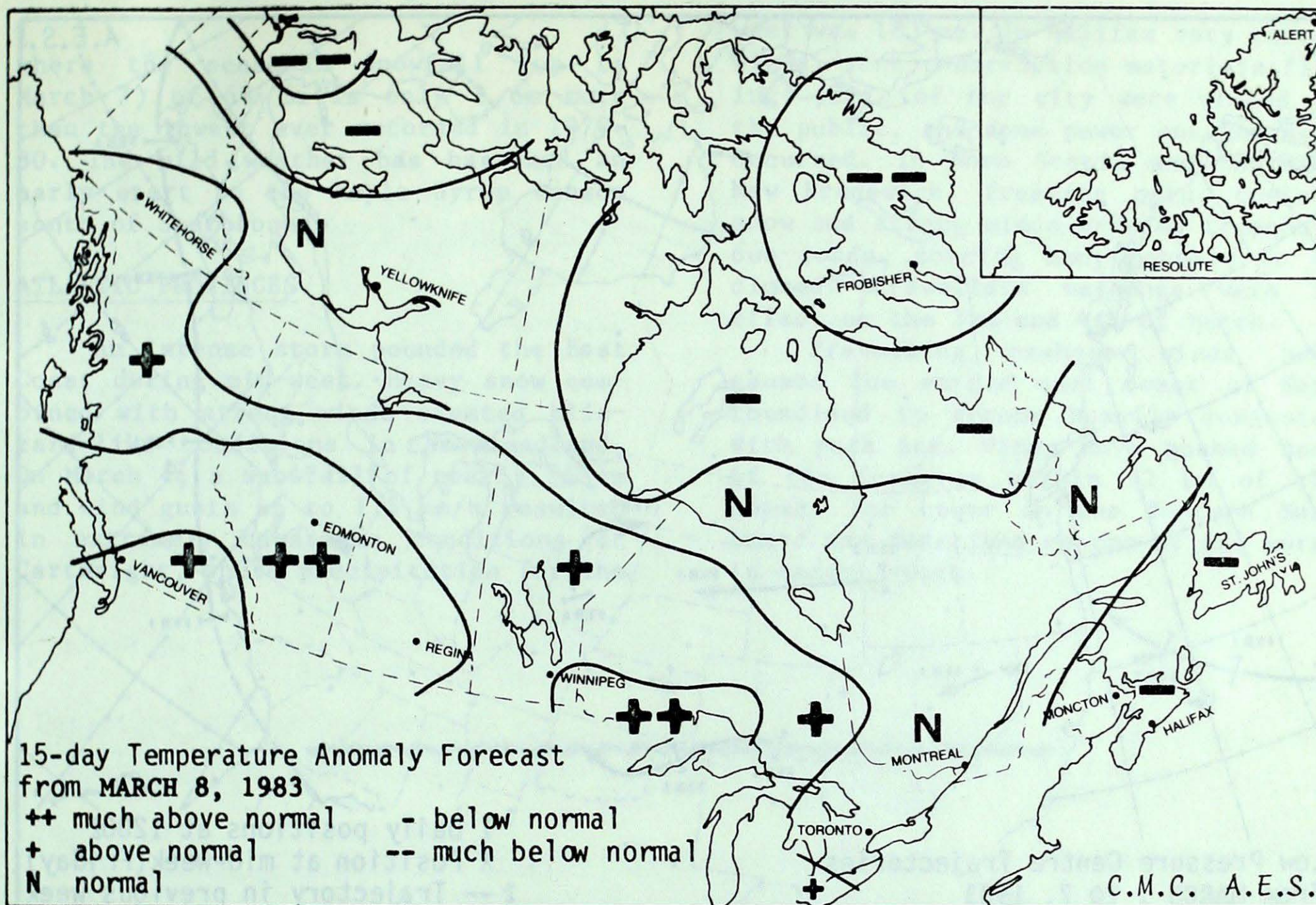
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HEATING DEGREE-DAY SUMMARY TO MARCH 5, 1983

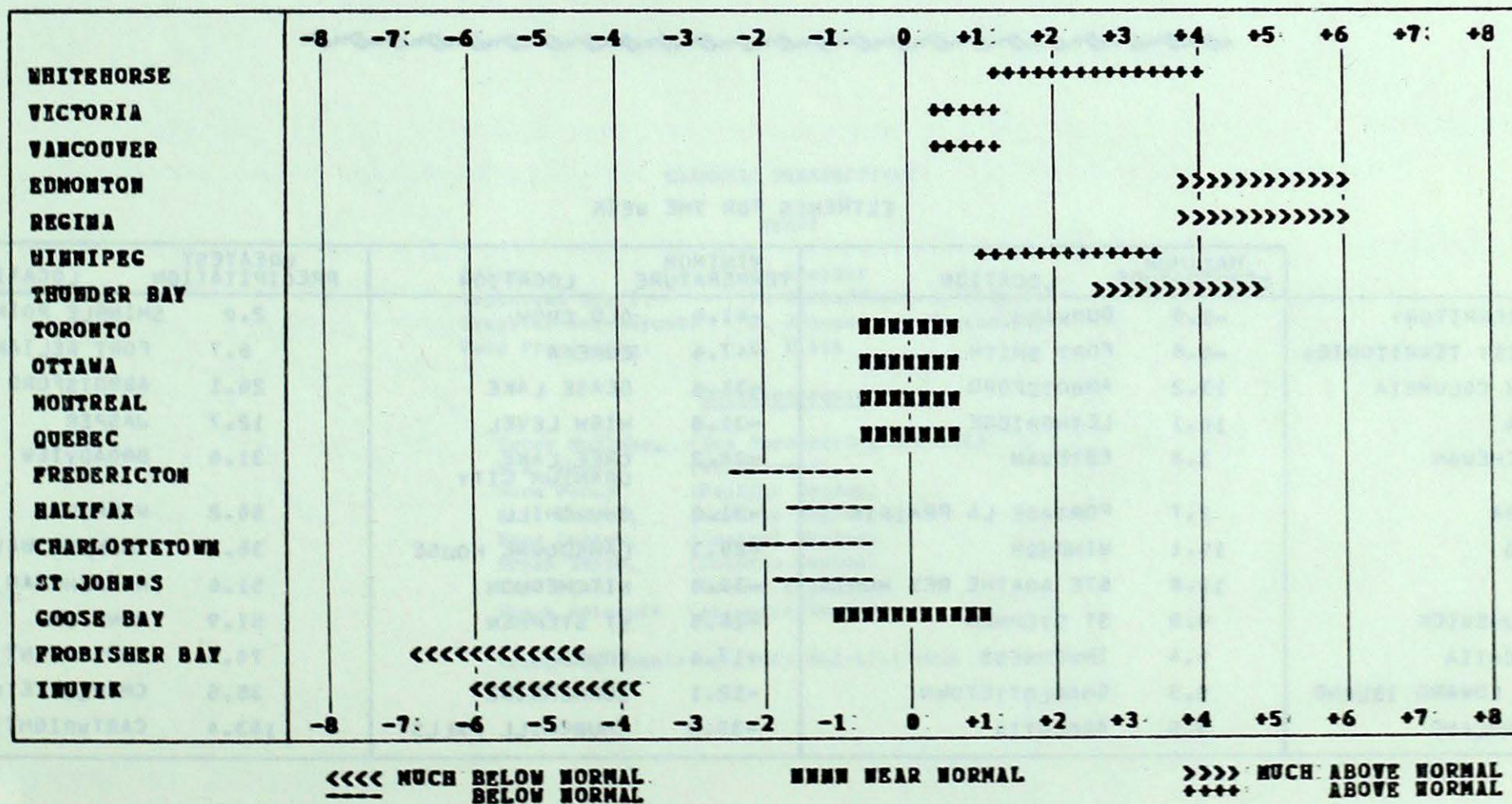


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	265.0	10.0	9073.5	410.5	105
Inuvik	231.5	6.5	7612.5	274.5	104
Whitehorse	152.0	9.0	5160.0	32.5	101
Vancouver	60.5	-4.5	2029.5	-94.5	96
Edmonton Mun	121.5	-14.5	2862.0	-282.5	92
Calgary	120.5	0.5	2518.0	-205.0	92
Regina	103.0	-50.0	4103.0	-310.5	93
Winnipeg	93.5	-59.5	4046.5	-335.5	92
Thunder Bay	108.5	-31.5	3923.5	-242.0	94
Windsor	51.0	-47.0	2330.5	-310.0	88
Toronto	72.5	-36.5	2722.5	-244.5	92
Ottawa	90.5	-35.5	3203.0	-303.0	91
Montreal	95.0	-19.0	3119.5	-220.5	93
Quebec	107.0	-22.0	3532.0	-220.5	94
Saint John, N.B.	94.0	-23.0	3169.0	-187.0	94
Halifax	92.0	-11.0	2692.5	-98.0	96
Charlottetown	101.5	-16.5	3079.0	-109.5	97
St. John's, Nfld.	115.5	10.5	2800.0	-1.0	100

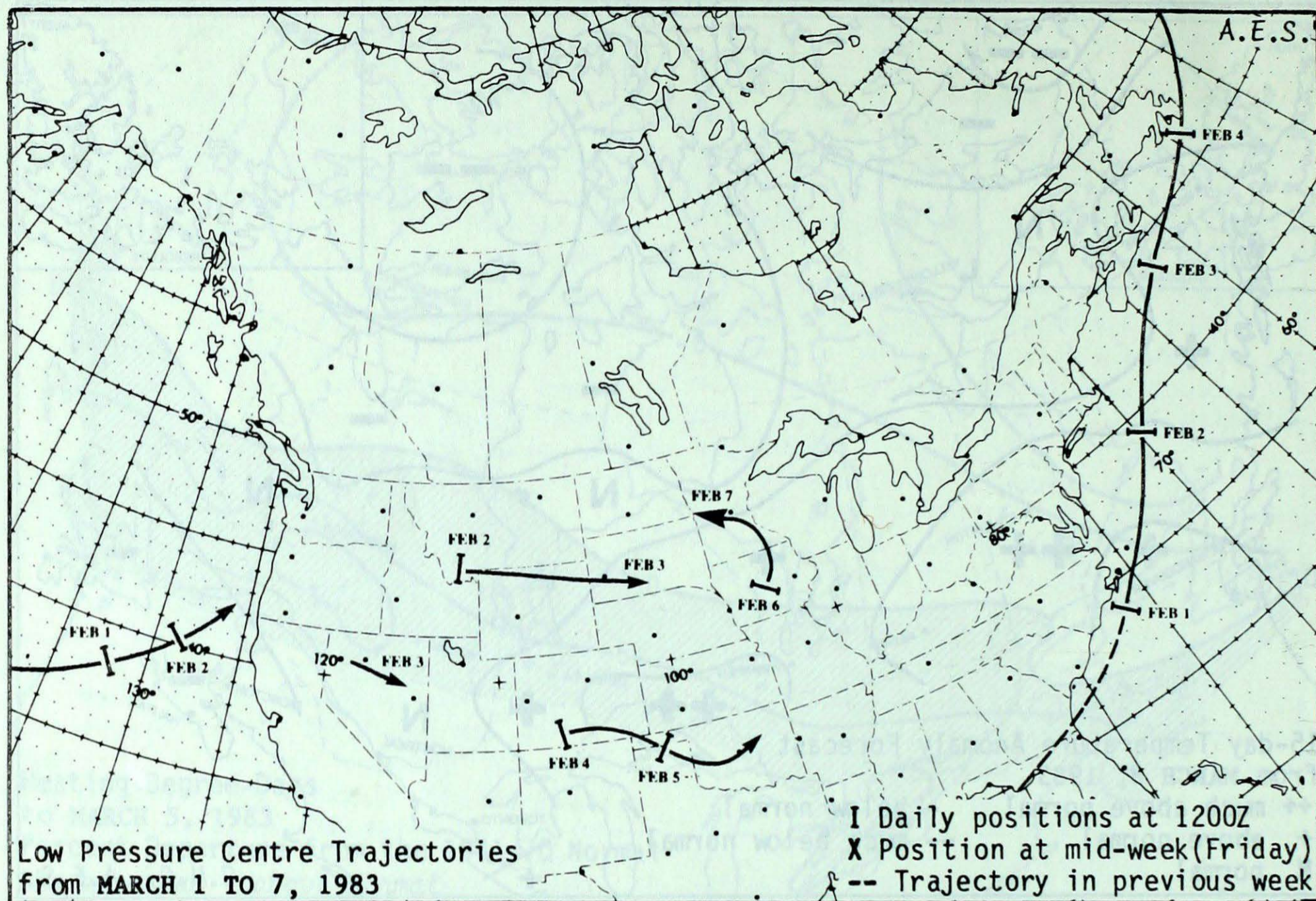
TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR MAR 8 1983 TO MAR 22 1983



LOW PRESSURE CENTRE TRAJECTORIES



EXTREMES FOR THE WEEK

	MAXIMUM TEMPERATURE	LOCATION	MINIMUM TEMPERATURE	LOCATION	GREATEST PRECIPITATION	LOCATION
YUKON TERRITORY	-2.5	BURWASH	-41.6	OLD CROW	2.0	SHINGLE POINT
NORTHWEST TERRITORIES	-6.8	FORT SMITH	-47.4	EUREKA	8.7	FORT RELIANCE
BRITISH COLUMBIA	13.2	ABBOTSFORD	-31.6	DEASE LAKE	26.1	ABBOTSFORD
ALBERTA	10.1	LETHBRIDGE	-31.8	HIGH LEVEL	12.7	JASPER
SASKATCHEWAN	3.8	ESTEVAN	-28.2	CREE LAKE URANIUM CITY	31.6	BROADVIEW
MANITOBA	2.7	PORTAGE LA PRAIRIE	-31.2	CHURCHILL	50.2	WINNIPEG
ONTARIO	19.1	WINDSOR	-28.3	LANSDOWNE HOUSE	36.2	THUNDER BAY
QUEBEC	12.8	STE AGATHE DES MONTS	-39.0	NITCHEQUON	51.6	NATASHQUAN
NEW BRUNSWICK	9.8	ST STEPHEN	-16.5	ST STEPHEN	51.9	MONCTON
NOVA SCOTIA	9.4	INVERNESS	-17.4	TRURO	70.5	EDDY POINT
PRINCE EDWARD ISLAND	5.3	CHARLOTTETOWN	-12.1	SUMMERSIDE	35.5	CHARLOTTETOWN
NEWFOUNDLAND	9.5	ARGENTIA	-33.0	CHURCHILL FALLS	183.4	CARTWRIGHT

(continued from page 3)

where the seasonal snowfall (up to March 7) of 68 cm is only 2 cm more than the lowest ever recorded in 1979-80. The mild weather has hastened an early start to the Maple Syrup season south of Sherbrooke.

ATLANTIC PROVINCES

An intense storm pounded the East Coast during mid-week. Heavy snow combined with strong winds created blizzard-like conditions in Newfoundland. On March 4, a snowfall of nearly 76 cm and wind gusts up to 115 km/h resulted in extremely hazardous conditions at Cartwright, where precipitation for the

week was 183 mm. In Halifax very strong winds, sent construction materials flying; parts of the city were closed to the public, and some power outages also occurred. In Nova Scotia and northern New Brunswick, freezing rain, copious snow and strong winds created treacherous roads, forcing many schools to be closed. Travellers warnings were in effect on the 3rd and 4th of March.

Prevailing onshore winds have caused the entire east coast of Newfoundland to become heavily congested with pack ice. Winds have pushed most of the icebergs within 32 km of the coast. Ice cover on the Eastern Seaboard was described as one of the worst in recent years.

CLIMATIC PERSPECTIVES

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Explanation of various terms used in Climatic Perspectives

Heating degree-days - a measure of the departure of the mean daily temperature from the base temperature of 18°C. 1 degree-day for each degree of departure below 18°C. Only positive values for each day are accumulated. e.g. a mean temperature of 10°C yields 8 heating degree-days. The heating season accumulations run from July 1 to June 30 of the next year.

Monthly cumulative total - the total of a given parameter to date from the beginning of the current month.

Normal - climatic averages for a 30-yr period as recommended by the World Meteorological Organization (current period is 1951-1980).

Depth of snow on ground - a ruler measurement of the depth of snow on the ground at a representative site near each station. Depth is taken once per day at a standard time (1200 GMT).

Departure of mean temperature from the normal - difference between the 7-day average temperature and the 30-year average temperature for the same 7 days. May be also applied to a monthly time scale.

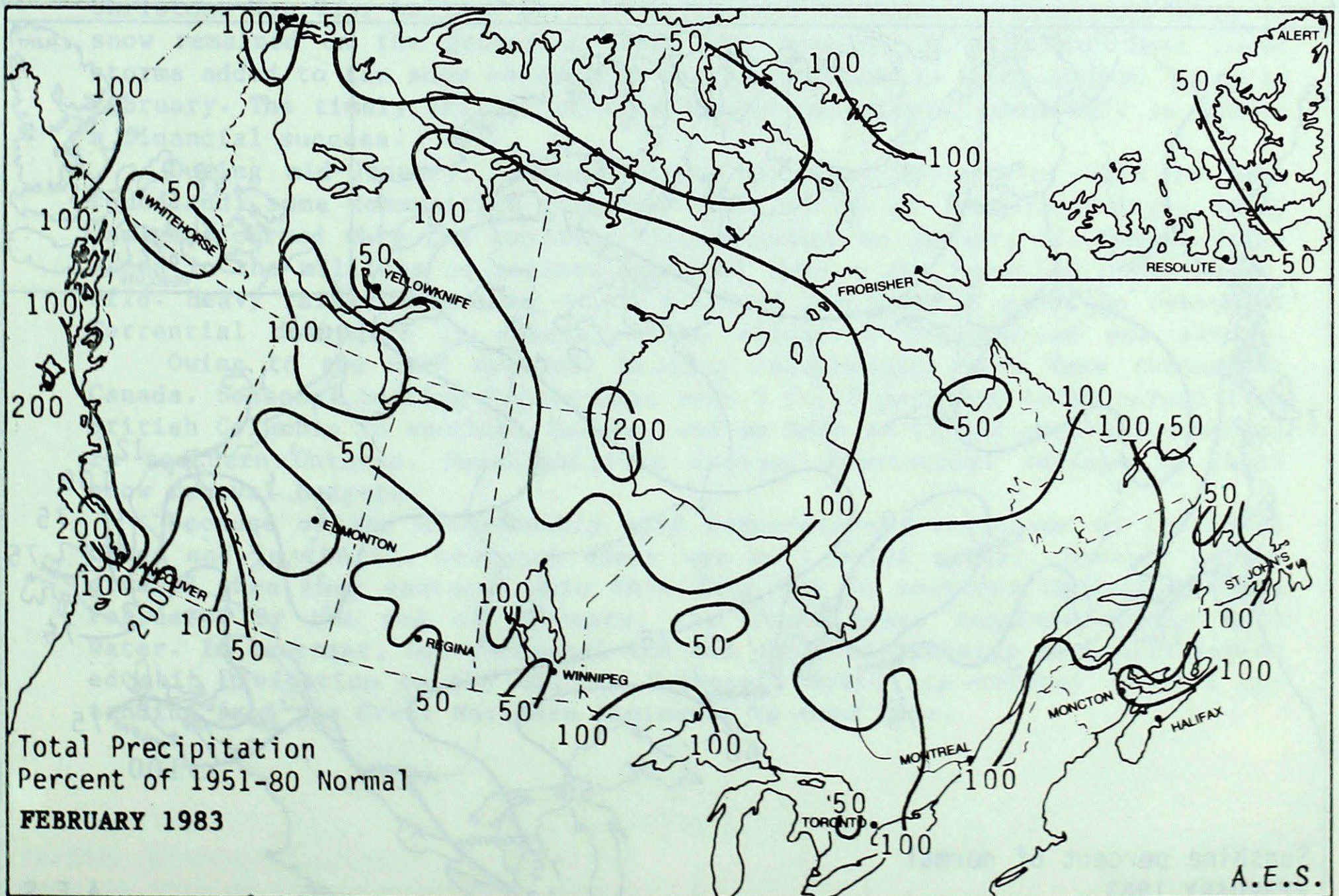
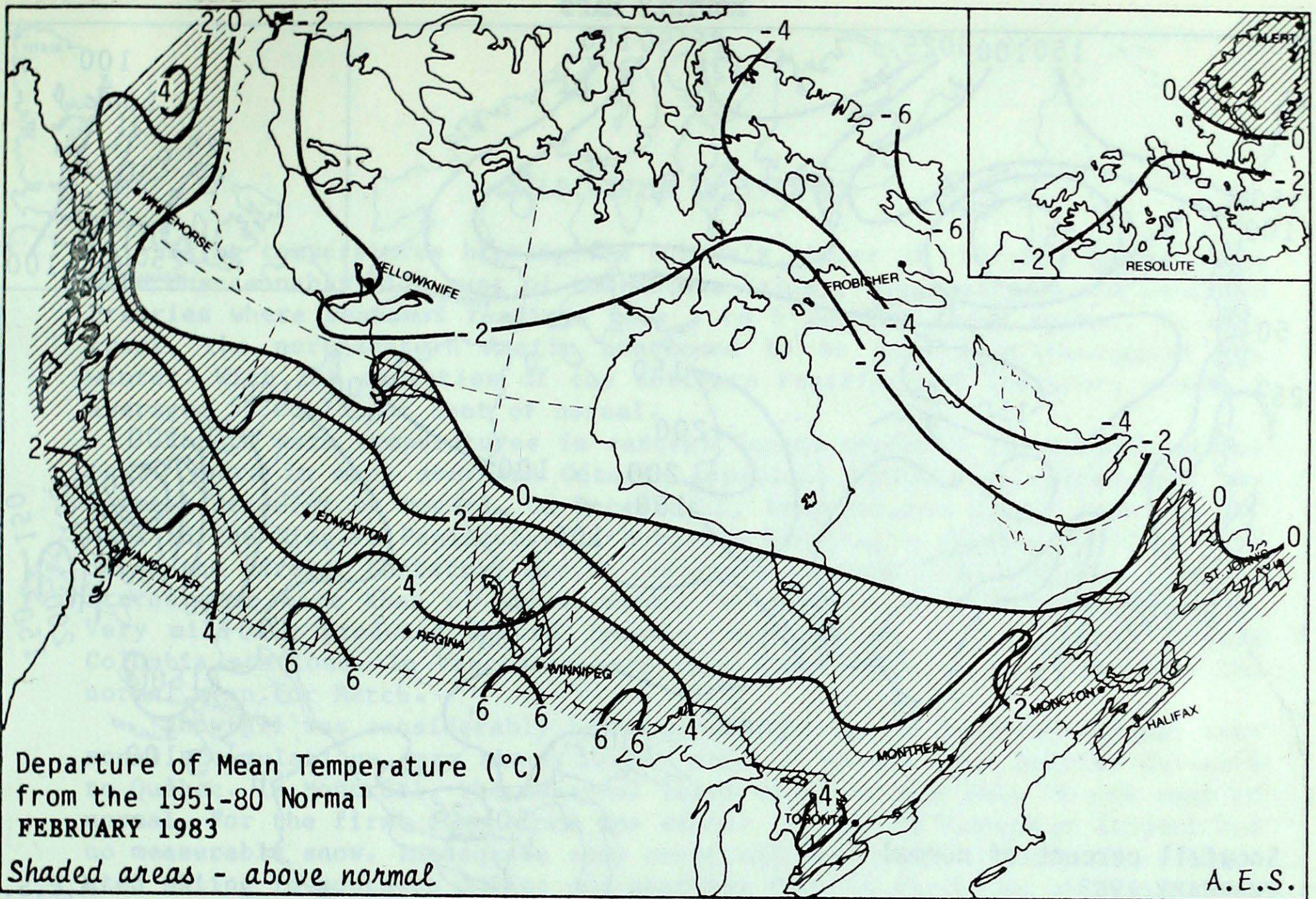
Total precipitation percent of normal - departure of the monthly total precipitation expressed as a percentage of the 30-year average monthly total precipitation.

Snowfall percent of normal - departure of the monthly total snowfall expressed as a percentage of the 30-year average monthly total snowfall.

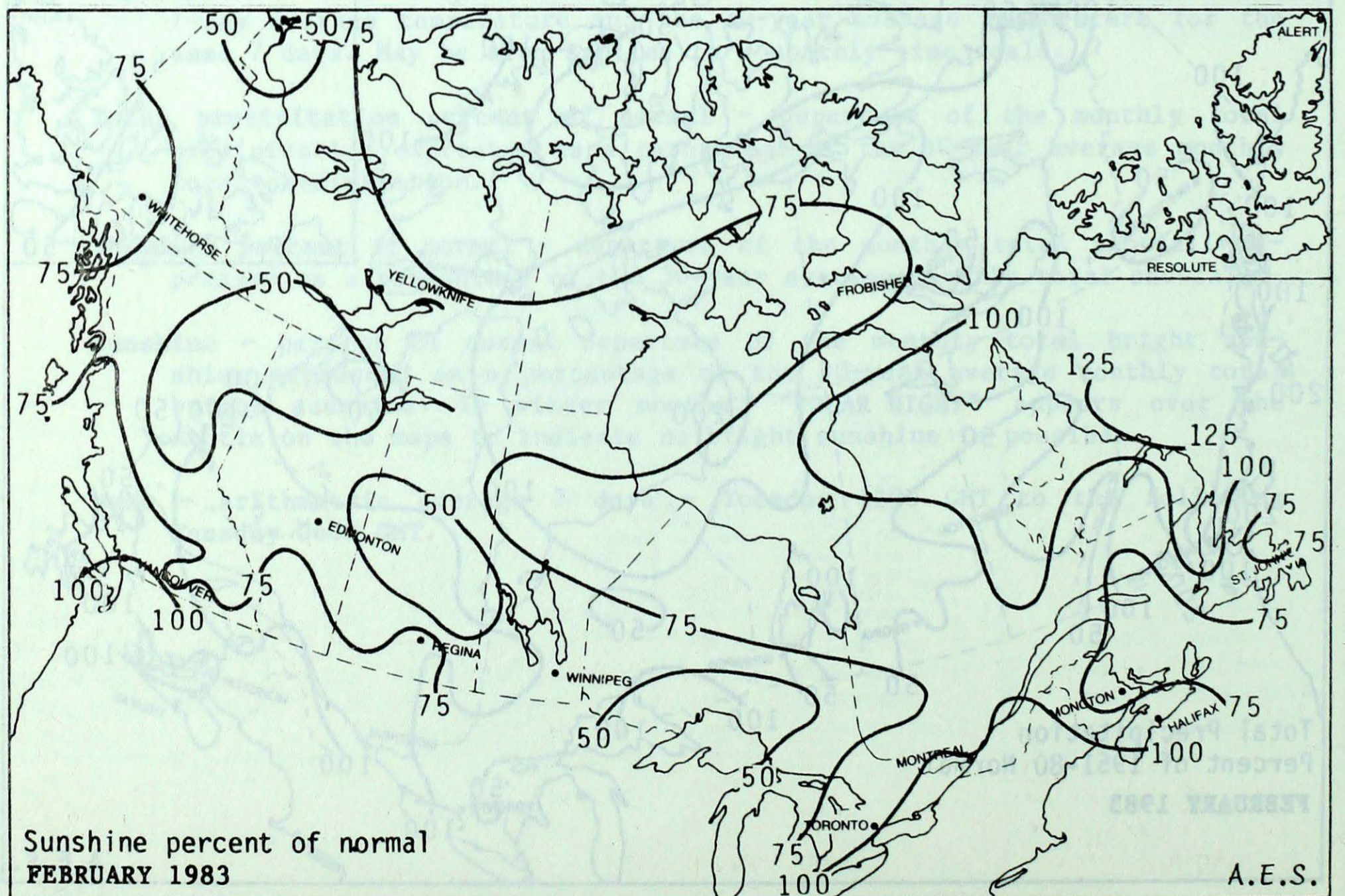
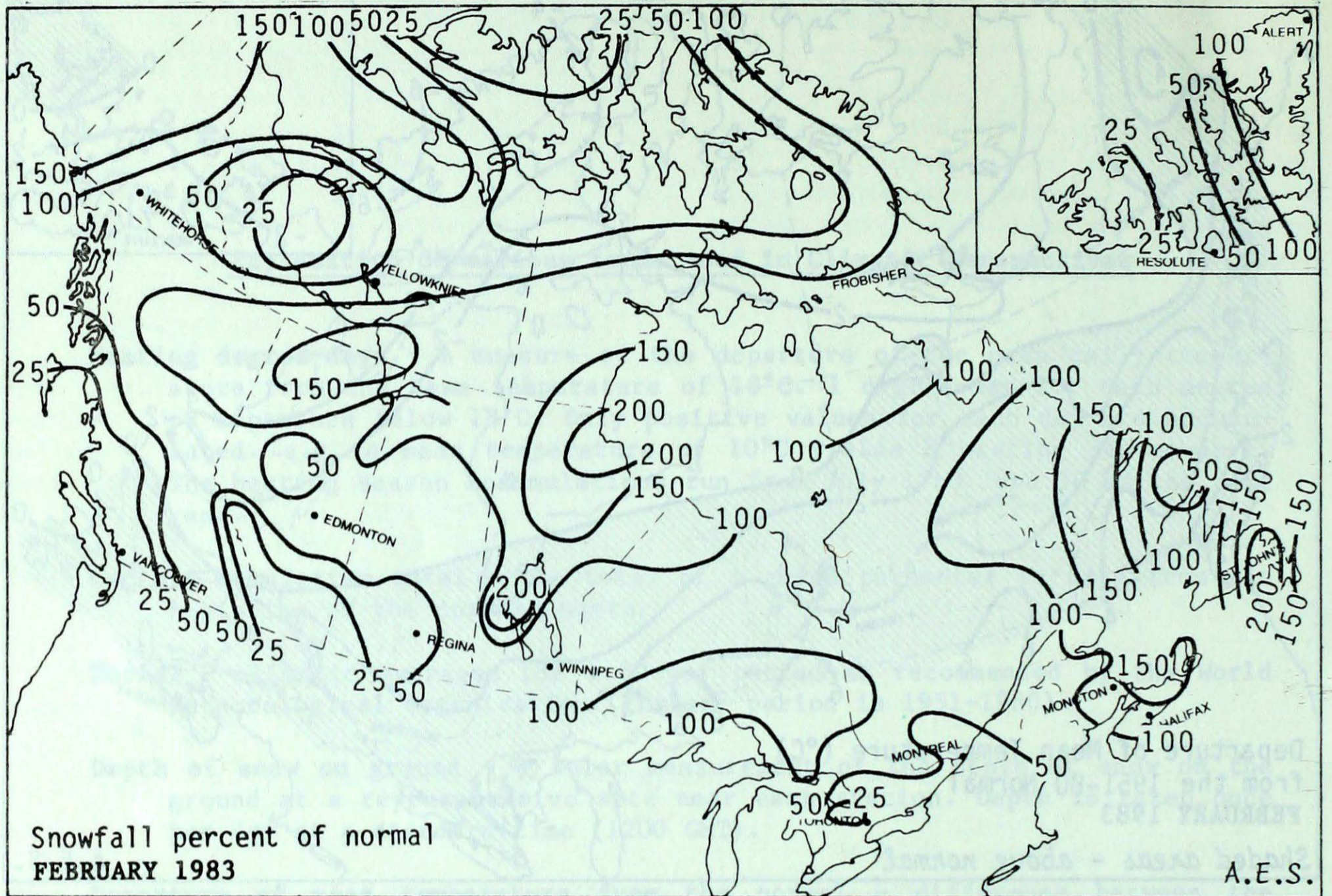
Sunshine - percent of normal departure of the monthly total bright sunshine expressed as a percentage of the 30-year average monthly total bright sunshine. In winter months, "POLAR NIGHT" appears over the Arctic on the maps to indicate no bright sunshine is possible.

Mean - arithmetic average 7 days - Tuesday 1200 GMT to the following Tuesday 0600 GMT.

MONTHLY MAPS



MONTHLY MAPS



MILD WINTER OF 1982-83

Balmy temperatures highlighted Canada's winter of 1982-83. Temperatures were unseasonably mild west of the Ottawa Valley, especially in the southern Prairies where seasonal readings were 3 to 6 degrees above normal. In contrast, the northeastern Arctic continued to be very cold throughout the winter. With the exception of the northern Prairies and Labrador, snowfall averaged 50 to 75 per cent of normal.

Record warm temperatures in central Canada produced the mildest winter in 30 years in many southern Ontario locations which also experienced the warmest December on record. On December 3, temperatures soared near the 20° mark in the Niagara Peninsula. In downtown Toronto, a reading of 17.2° produced the warmest Christmas Day in 142 years of record. Mean January temperatures were more than 6° above normal from Manitoba to British Columbia. Very mild air produced record January temperatures at 8 southern British Columbia stations. In Vancouver, the mean temperature of 6.3° exceeded the normal mean for March.

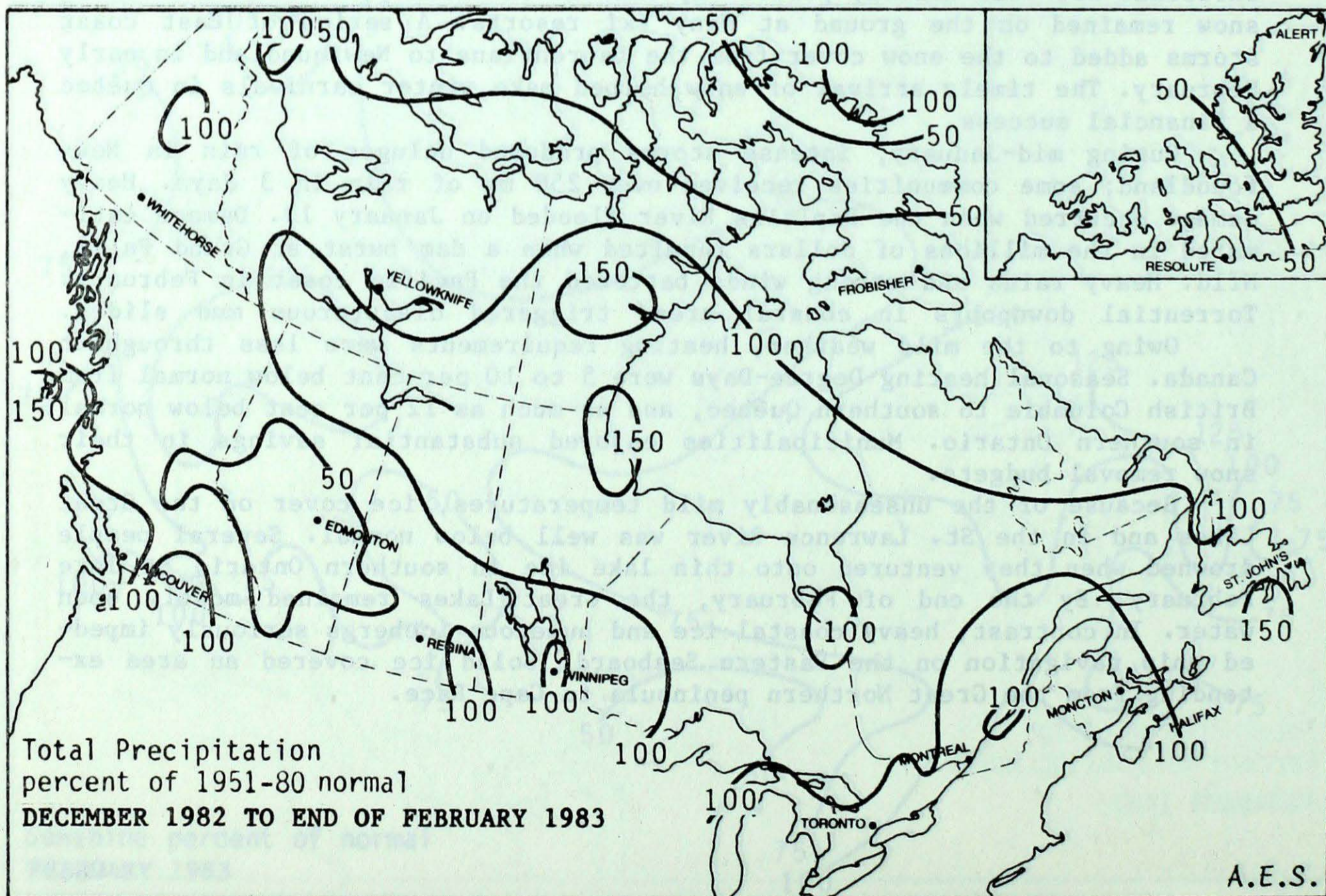
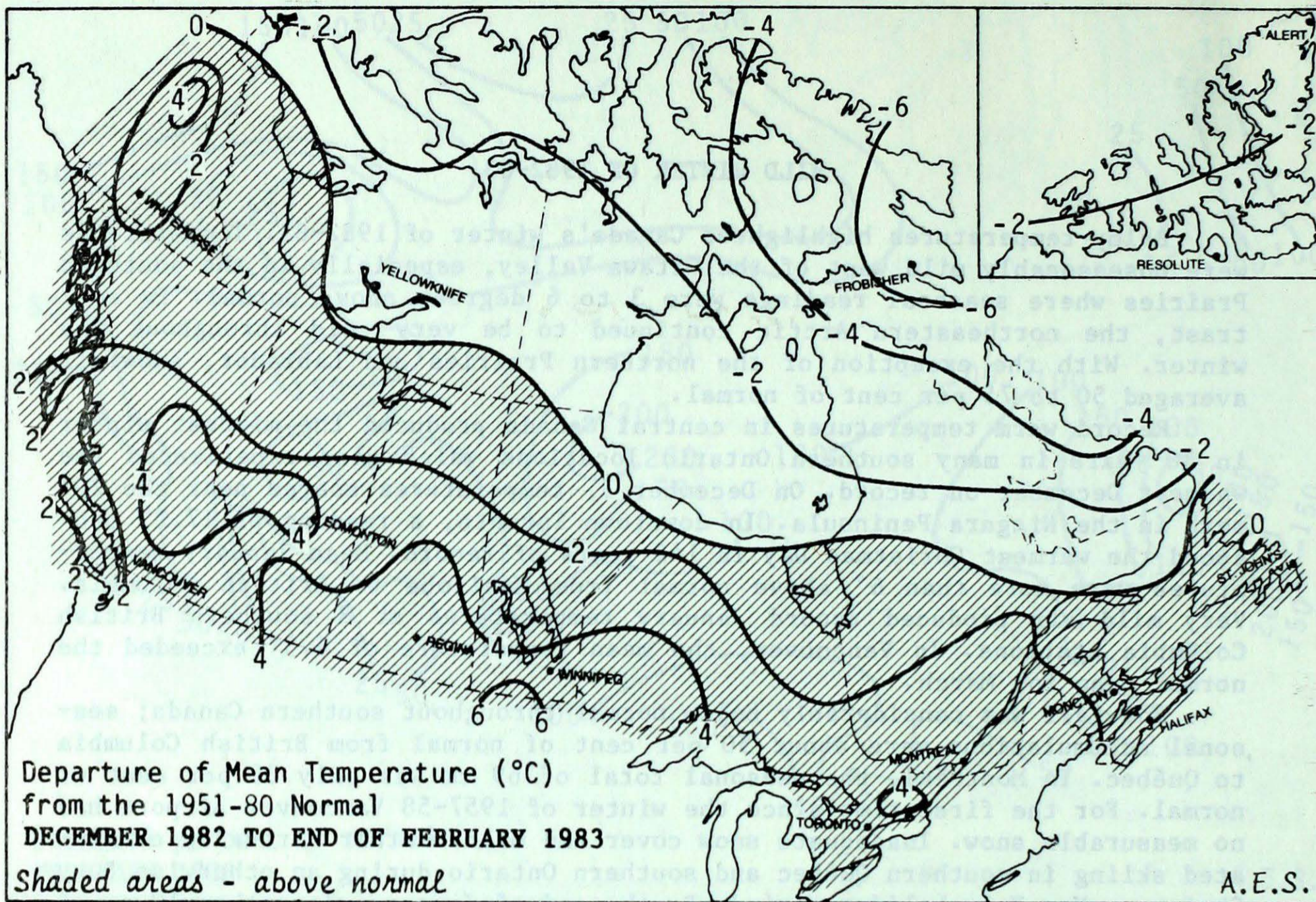
Snowfall was considerably below normal throughout southern Canada; seasonal accumulations were about 50 per cent of normal from British Columbia to Québec. In Montréal, the seasonal total of 69 cm was only 36 per cent of normal. For the first time since the winter of 1957-58 Vancouver Airport had no measurable snow. Inadequate snow cover and mild weather virtually eliminated skiing in southern Québec and southern Ontario during an otherwise busy Christmas-New Year holiday period. By the end of January, less than 10 cm of snow remained on the ground at many ski resorts. A series of East coast storms added to the snow cover from the Laurentians to Newfoundland in early February. The timely arrival of snow helped make winter carnivals in Québec a financial success.

During mid-January, intense storms produced deluges of rain in Newfoundland; some communities received over 250 mm of rain in 3 days. Heavy damage occurred when the Exploits River flooded on January 13. Damage estimated in the millions of dollars resulted when a dam burst at Grand Falls, Nfld. Heavy rains and strong winds battered the Pacific coast in February. Torrential downpours in coastal areas triggered disastrous mud slides.

Owing to the mild weather, heating requirements were less throughout Canada. Seasonal heating Degree-Days were 5 to 10 per cent below normal from British Columbia to southern Québec, and as much as 12 per cent below normal in southern Ontario. Municipalities enjoyed substantial savings in their snow removal budgets.

Because of the unseasonably mild temperatures, ice cover on the Great Lakes and in the St. Lawrence River was well below normal. Several people drowned when they ventured onto thin lake ice in southern Ontario in late February. By the end of February, the Great Lakes remained mostly open water. In contrast, heavy coastal ice and numerous icebergs seriously impeded ship navigation on the Eastern Seaboard. Solid ice covered an area extending from the Great Northern peninsula to Cape Race.

SEASONAL MAPS



SEASONAL MAPS

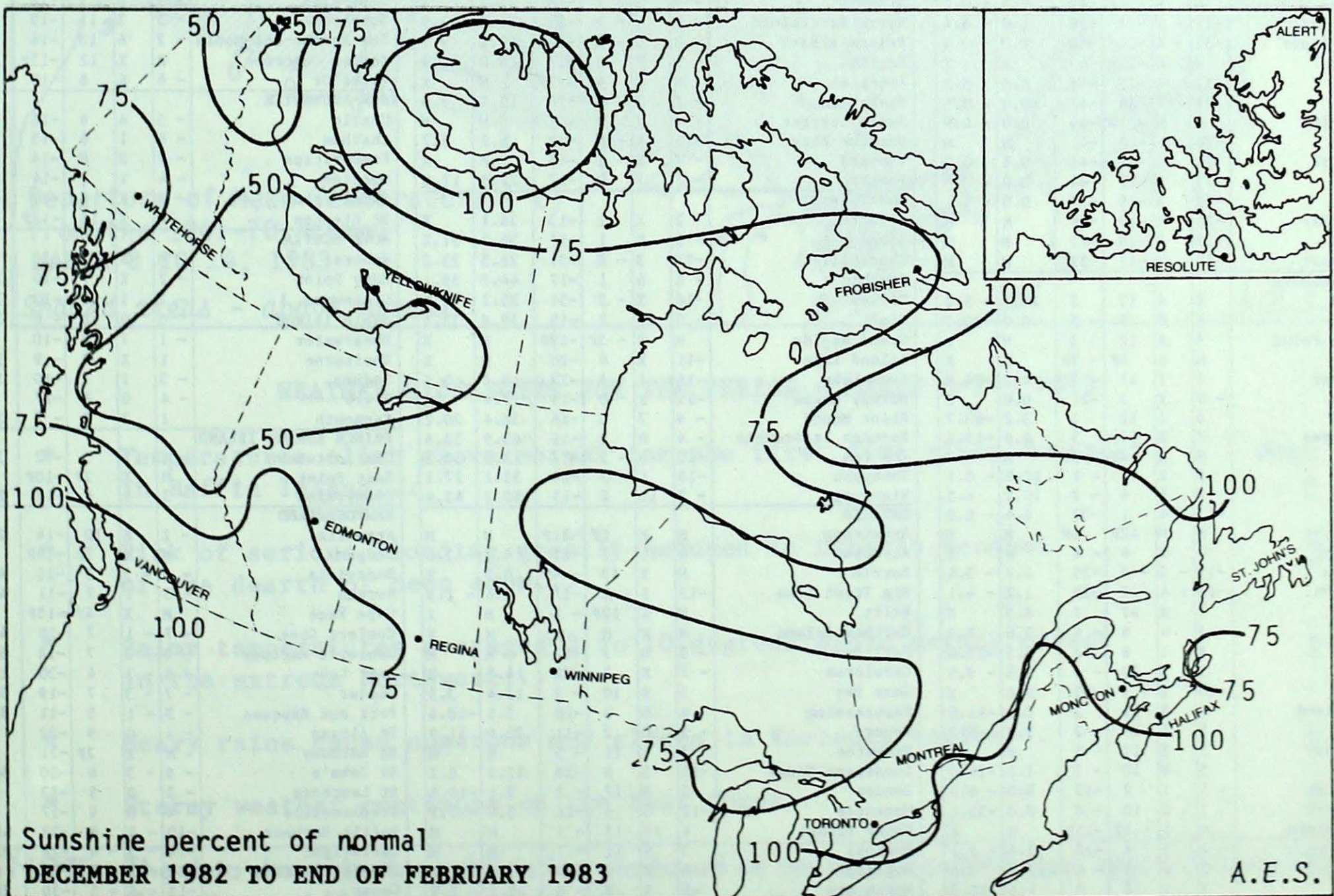
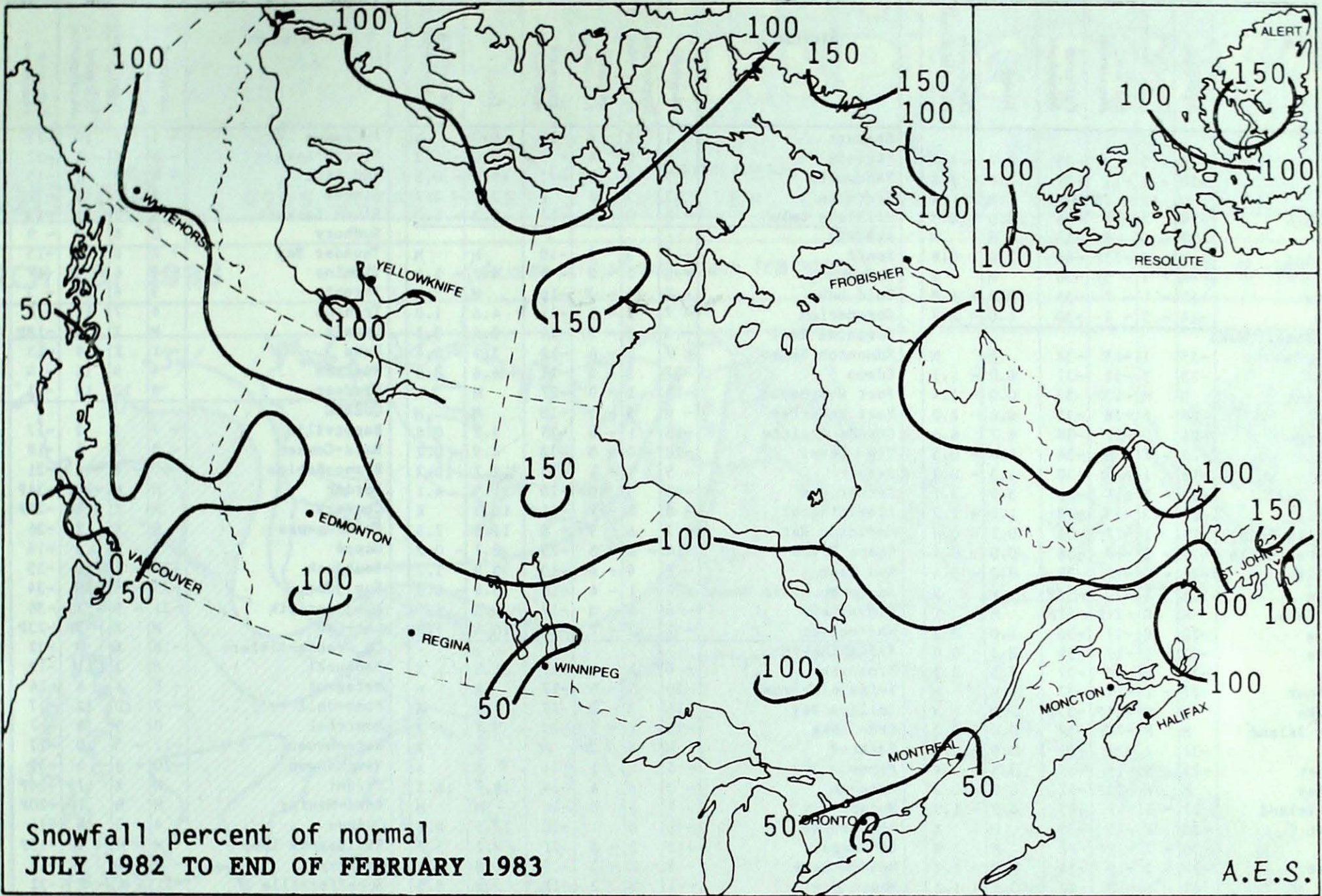


Table with columns: Station, Temperature (°C) [Average, Departure from Normal, Extreme Maximum, Extreme Minimum], Precip. (mm) [Total, Departure from Normal]. Rows include YUKON, NORTHWEST TERRITORIES, BRITISH COLUMBIA, and parts of ALBERTA.

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n = average value based on less than 7 days

X = no normal due to short period

M = not available at press time