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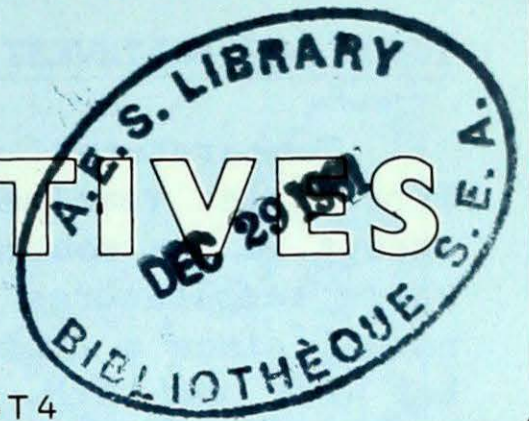
VIEW OF CANADIAN CLIMATE

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VOL 3 ISS 50
CLIMATIC PERSPECTIVES

CLIMATIC PERSPECTIVES



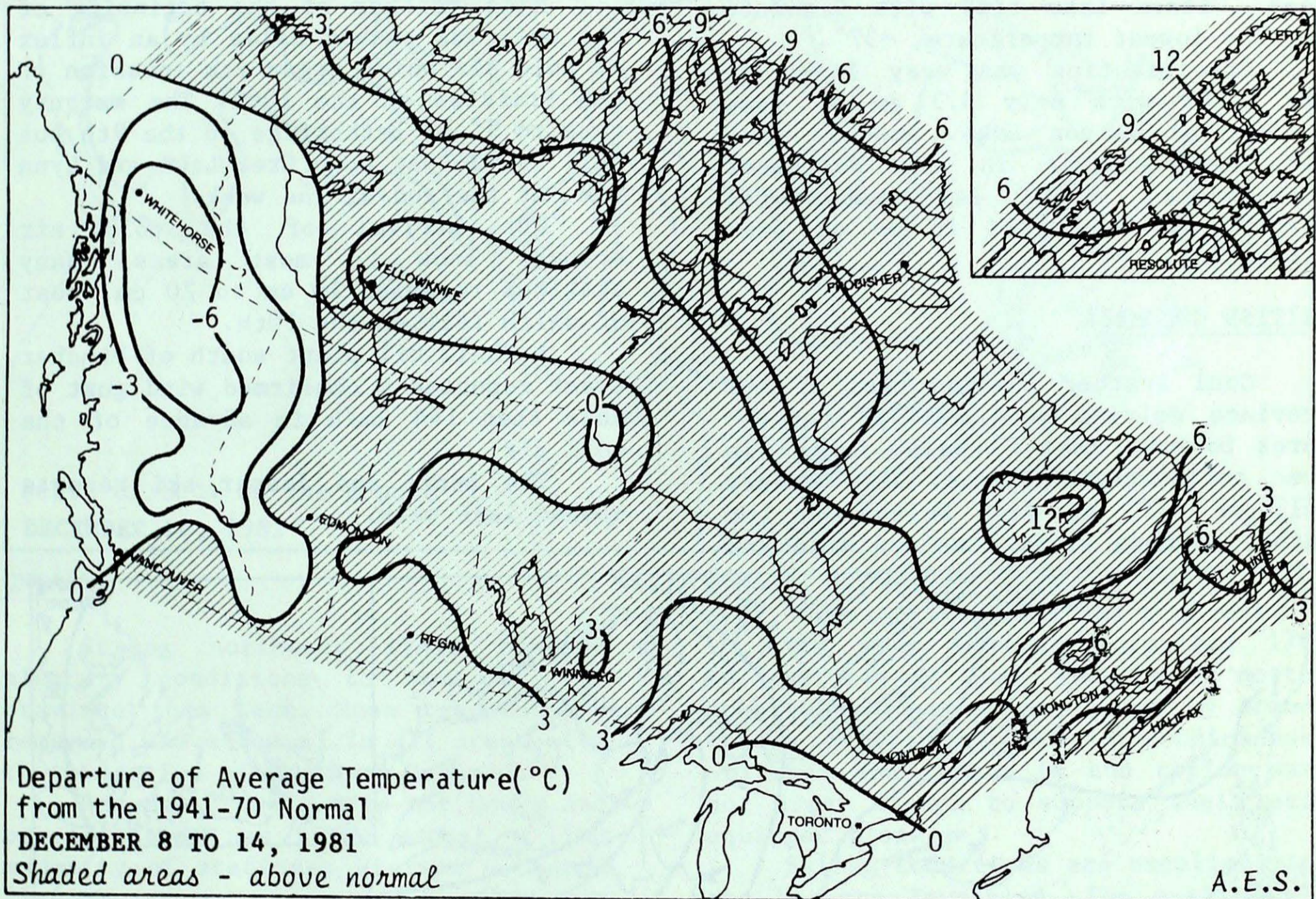
Canada

ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

DECEMBER 18, 1981

(Aussi disponible en français)

VOL.3 NO.50



WEATHER HIGHLIGHTS FOR THE PERIOD - DECEMBER 8 TO 14, 1981

Cold weather moves into the West

The very mild weather which covered most of the West and the Yukon came to an abrupt end this week. The cold air began its invasion of the Yukon at the end of last week, and by the end of this week had marched over the Prairies and into extreme western Ontario. Temperatures throughout most of the West are now below normal.

Most ski resorts across the country are now open with many reporting very good snow conditions.

Temperatures varied from a maximum of 12° at Abbotsford, B.C. to a minimum of -37° at Watson Lake, Yukon and Resolute, N.W.T. The greatest weekly precipitation total, 104.1 mm, was measured at Battle Harbour, Nfld.

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 across most of the Territories remained well above normal except in the southern Mackenzie Valley where temperatures have remained below normal since a dramatic drop on December 7th and 8th. Mean temperatures, which exceeded 12° above normal during the previous week in central Yukon, were more than 6° below normal this week. Watson Lake tied with Resolute for the lowest temperature, -37° .

Precipitation was very light in the Yukon with only 3.3 cm of snow falling at Watson Lake. Amounts were not much greater in the Northwest Territories. Pelly Bay and Coral Harbour both recorded 16 mm of precipitation.

BRITISH COLUMBIA

Cool weather invaded most of the province driving mean weekly temperatures to more than 8° below normal in some north-central areas. The mercury fell to -35° at Fort Nelson on the 14th. Southern areas remained mild and

the mercury reached 12° at Abbotsford on December 9th.

Precipitation was concentrated mostly along coastal areas although Abbotsford recorded the greatest weekly total 59.7 mm.

Most ski areas throughout the province are now open.

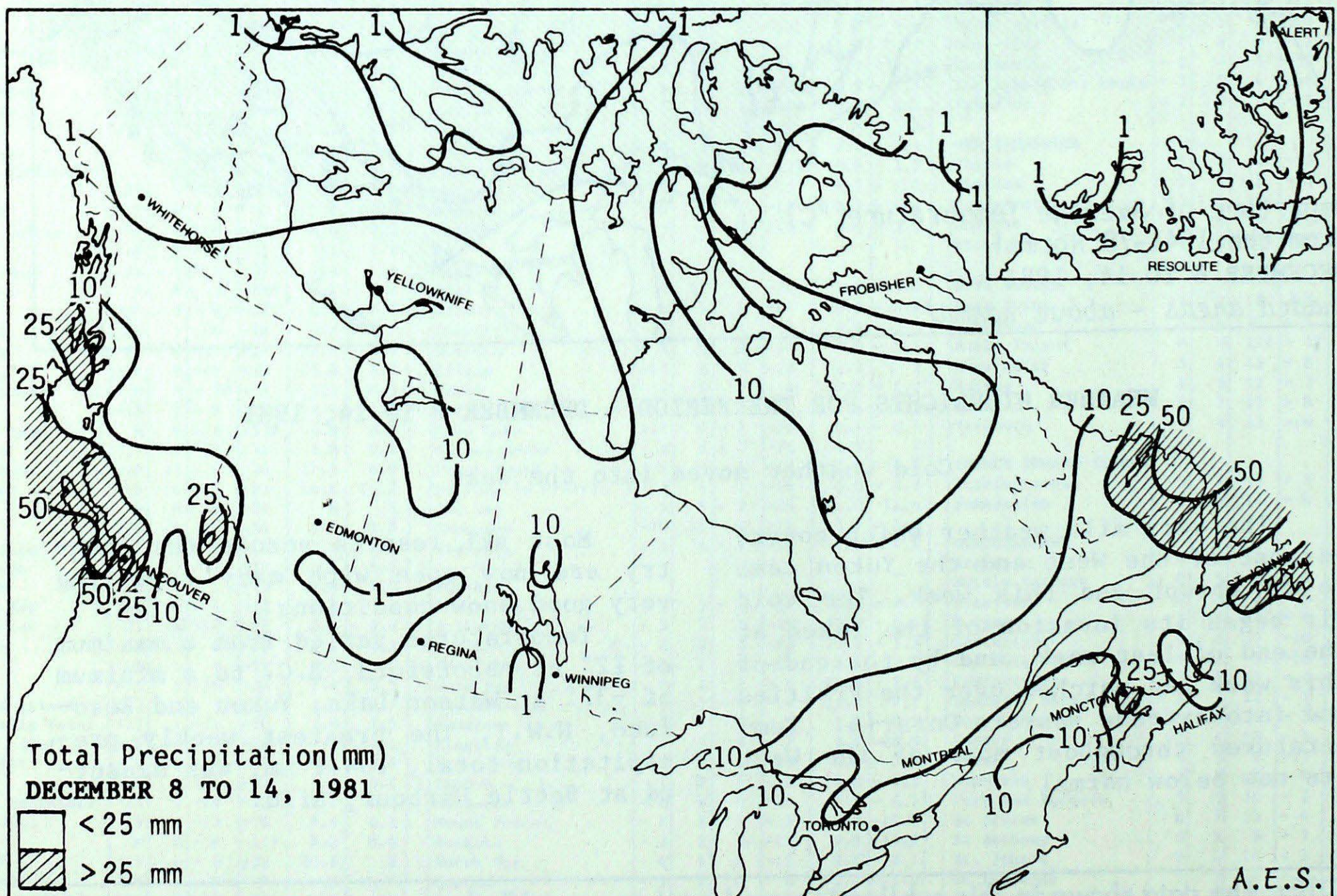
PRAIRIE PROVINCES

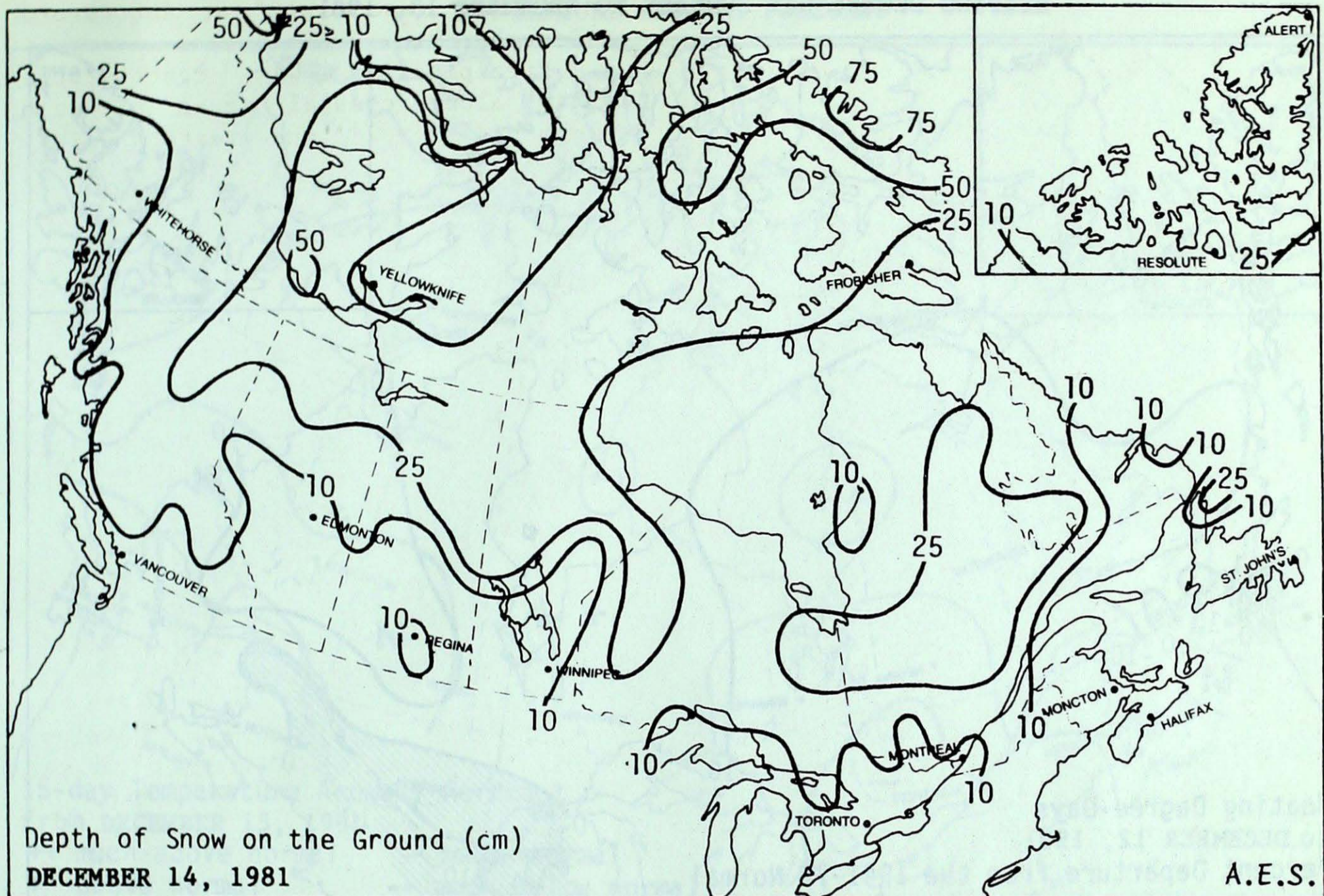
Mild weather at the beginning of the week was pushed aside by an influx of cold air which began its invasion of the Prairies on the 10th. The mercury rose to 9° at Lethbridge on the 9th but fell to -36° at both Cree Lake and Lynn Lake at the end of the week.

The arrival of the cold air brought snow to most areas. Many stations reported 10 cm to 20 cm, most of which fell on the 10th.

A Shell Oil plant south of Pincher Creek reported a confirmed wind gust of more than 144 km/h in advance of the cold air.

The Banff and Jasper ski resorts opened last week.





ONTARIO

Strong northwest winds brought blustery conditions to most of the province this week. Mean temperatures remained above normal in all areas with the exception of southern Ontario.

Snowfall totals were not heavy and precipitation was below normal at the majority of stations. Warton measured 21.6 mm.

Many ski hills are now open for business as the new snow arrived along with the opportunity to make artificial snow.

QUEBEC

Warm weather persisted for another week. Mean temperatures were more than 9° above normal at Schefferville and Inoucdjouac. The warm air set 17 daily high temperature records this week and both Gaspé and Natashquan equalled their new monthly records which were set in the previous week.

Precipitation was concentrated in the Gaspé region; Gaspé recorded 48.3 mm. With the exception of the

Hudson Bay coast and the Ungava Bay area, precipitation was below normal.

The warm weather surprised 170 Indians camped near the lower north coast who had to be evacuated by Armed Forces helicopters. The ice thickness on lakes and rivers in the region was not great enough to support their ski equipped plane.

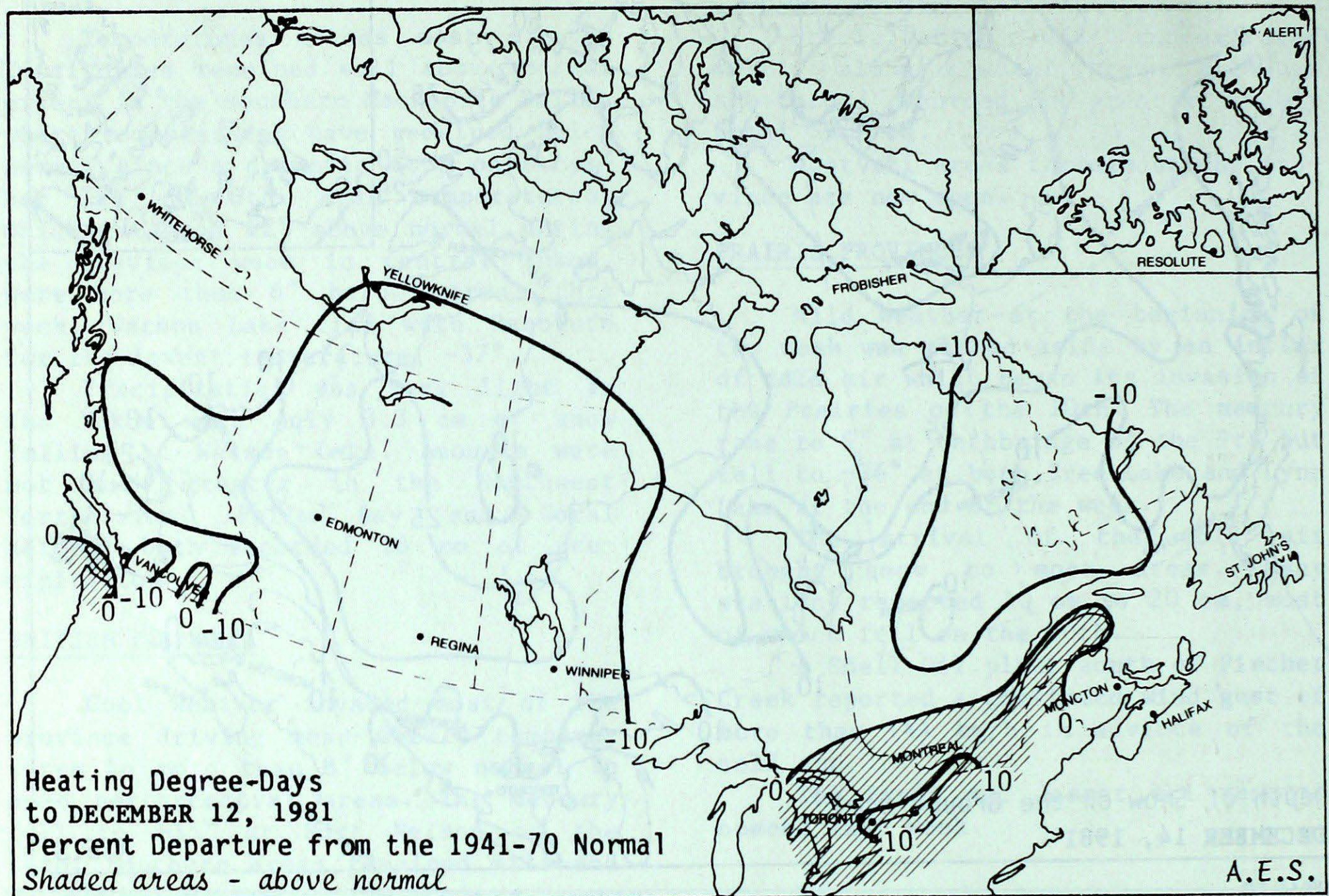
Skiing conditions are excellent in the Eastern Townships. The quality of the powder snow seems to be better than that normally observed in February.

ATLANTIC PROVINCES

Only one storm traversed the Atlantic Provinces this week and temperatures remained well above normal. Stephenville set high temperature records for a period of 5 consecutive days ending on the 8th. The mercury reached 11° on that last day breaking the old record set in 1934.

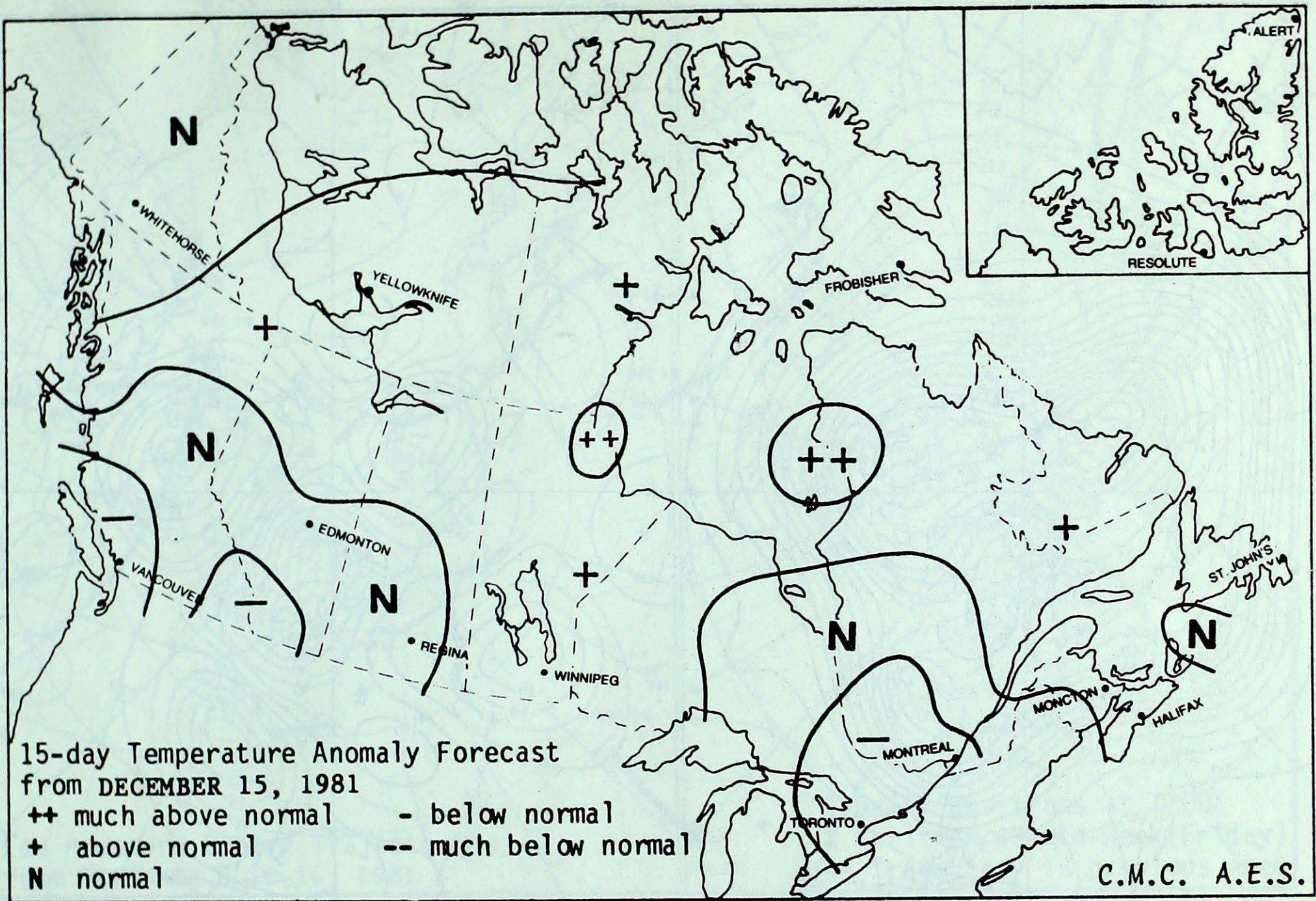
Precipitation fell mainly along the coast of Belle Isle. Battle Harbour recorded 104.1 mm, the highest weekly total in the country. Totals in the Maritimes did not exceed 27 mm.

HEATING DEGREE-DAY SUMMARY TO DECEMBER 13, 1981

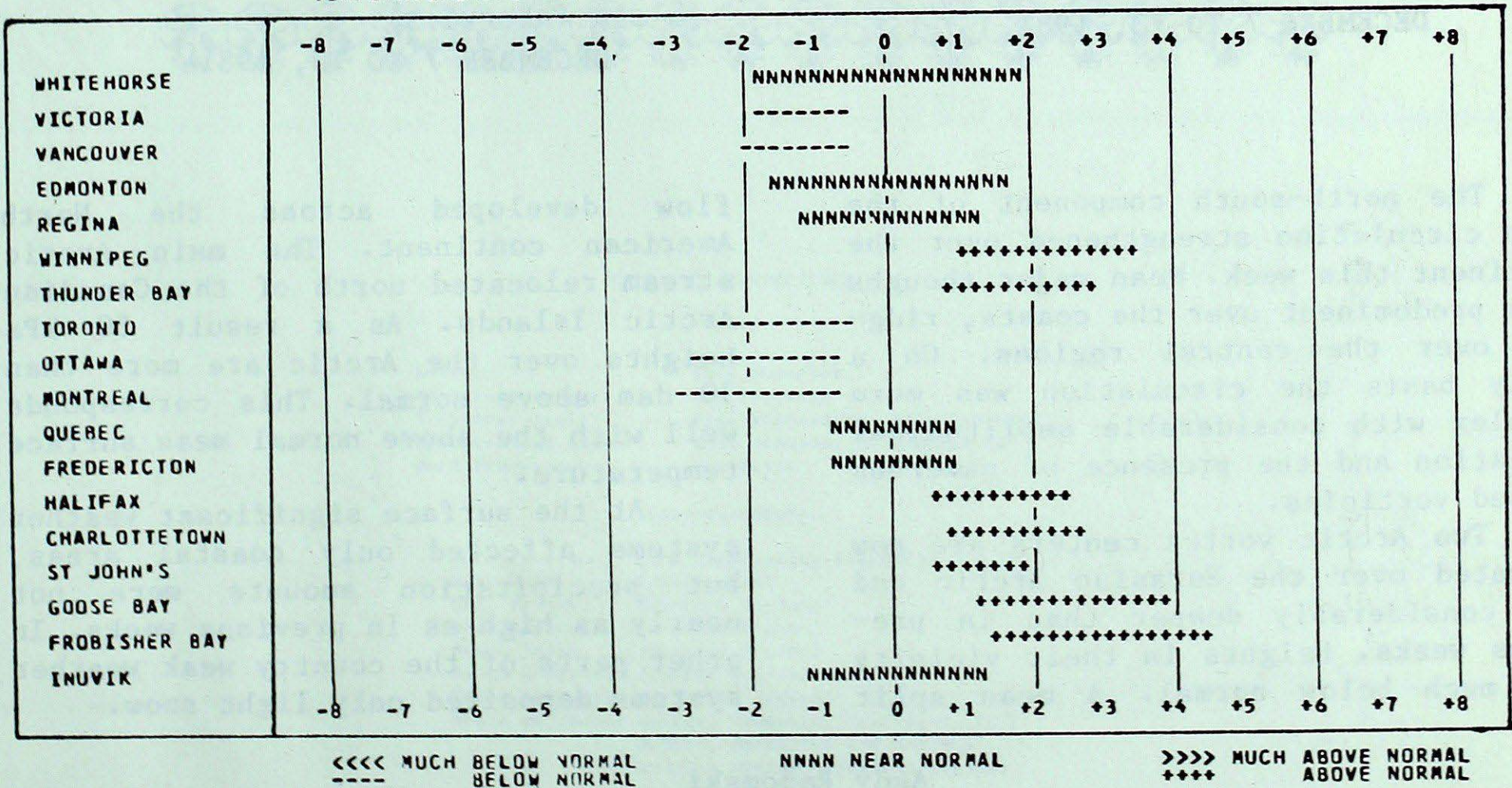


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	496.5	-53.5	4237.0	-190.0	96
Inuvik	479.5	-39.5	3253.0	-92.0	97
Whitehorse	379.0	-12.0	2172.0	-176.0	93
Vancouver	155.5	-5.5	882.5	-70.5	93
Edmonton Mun	269.5	-51.5	1388.5	-330.5	81
Calgary	255.0	-39.0	1452.5	-226.5	87
Regina	322.0	-29.0	1480.0	-235.0	86
Winnipeg	294.0	-58.0	1396.5	-219.5	86
Thunder Bay	285.5	-36.5	1539.5	-91.5	94
Windsor	210.5	-12.5	960.5	47.5	105
Toronto	234.5	-4.5	1180.0	122.0	112
Ottawa	245.5	-40.5	1294.0	58.0	105
Montreal	234.5	-35.5	1263.0	120.0	110
Quebec	238.5	-60.5	1426.5	40.5	103
Saint John, N.B.	189.0	-64.0	1256.0	-47.0	96
Halifax	161.5	-49.5	1009.5	-15.5	98
Charlottetown	169.5	-69.5	1106.5	-57.5	95
St. John's, Nfld.	172.0	-37.0	1294.5	-59.5	96

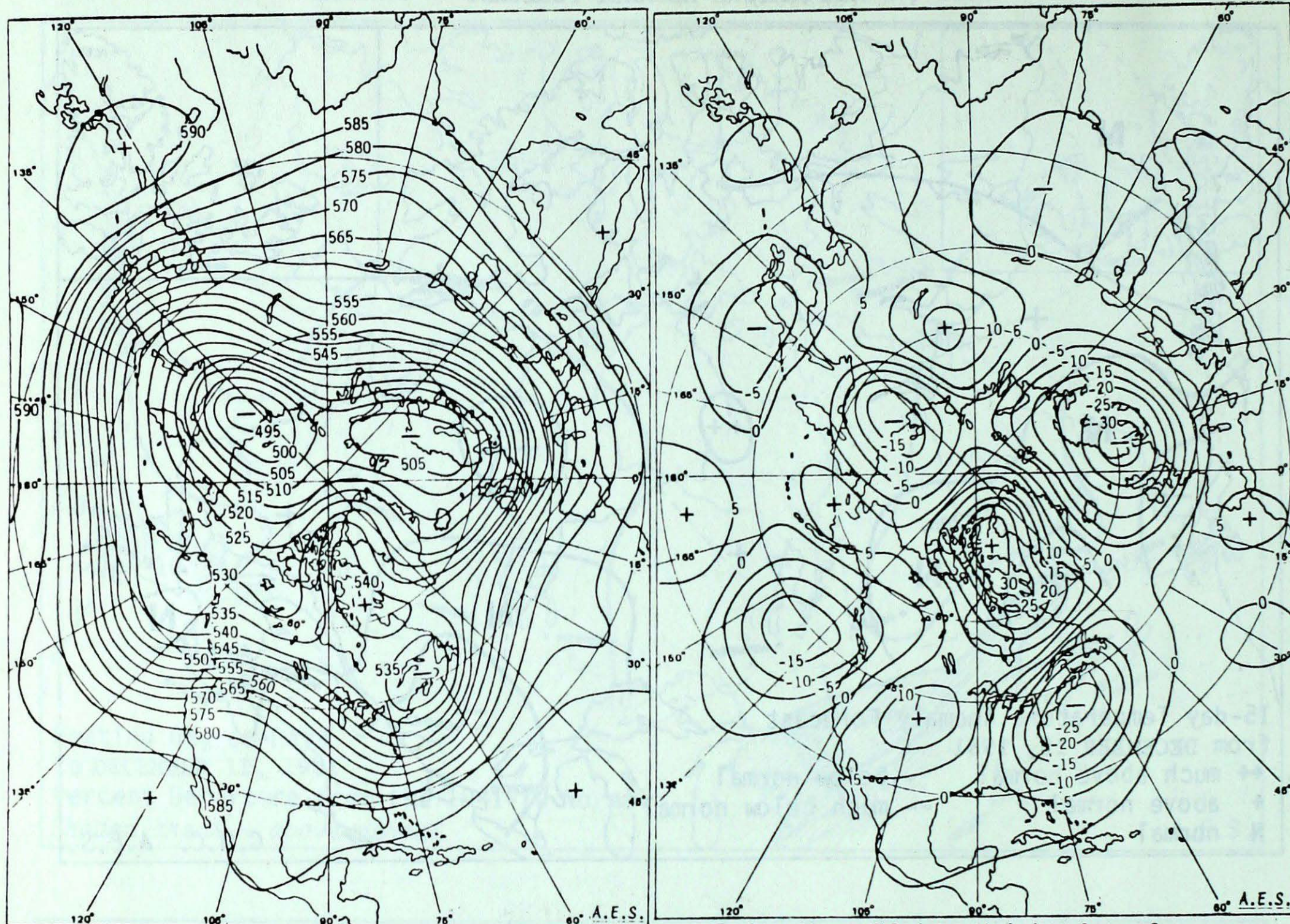
TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR DEC 15 1981 TO DEC 29 1981



ATMOSPHERIC CIRCULATION



7-day Mean 50 kPa Height (dam)
DECEMBER 7 TO 13, 1981

7-day Mean 50 kPa Height Anomaly
(5 dam intervals)
DECEMBER 7 TO 13, 1981

The north-south component of the mean circulation strengthened over the continent this week. Mean major troughs were predominant over the coasts, ridging over the central regions. On a daily basis the circulation was more complex with considerable amplitudinal variation and the presence of numerous closed vorticies.

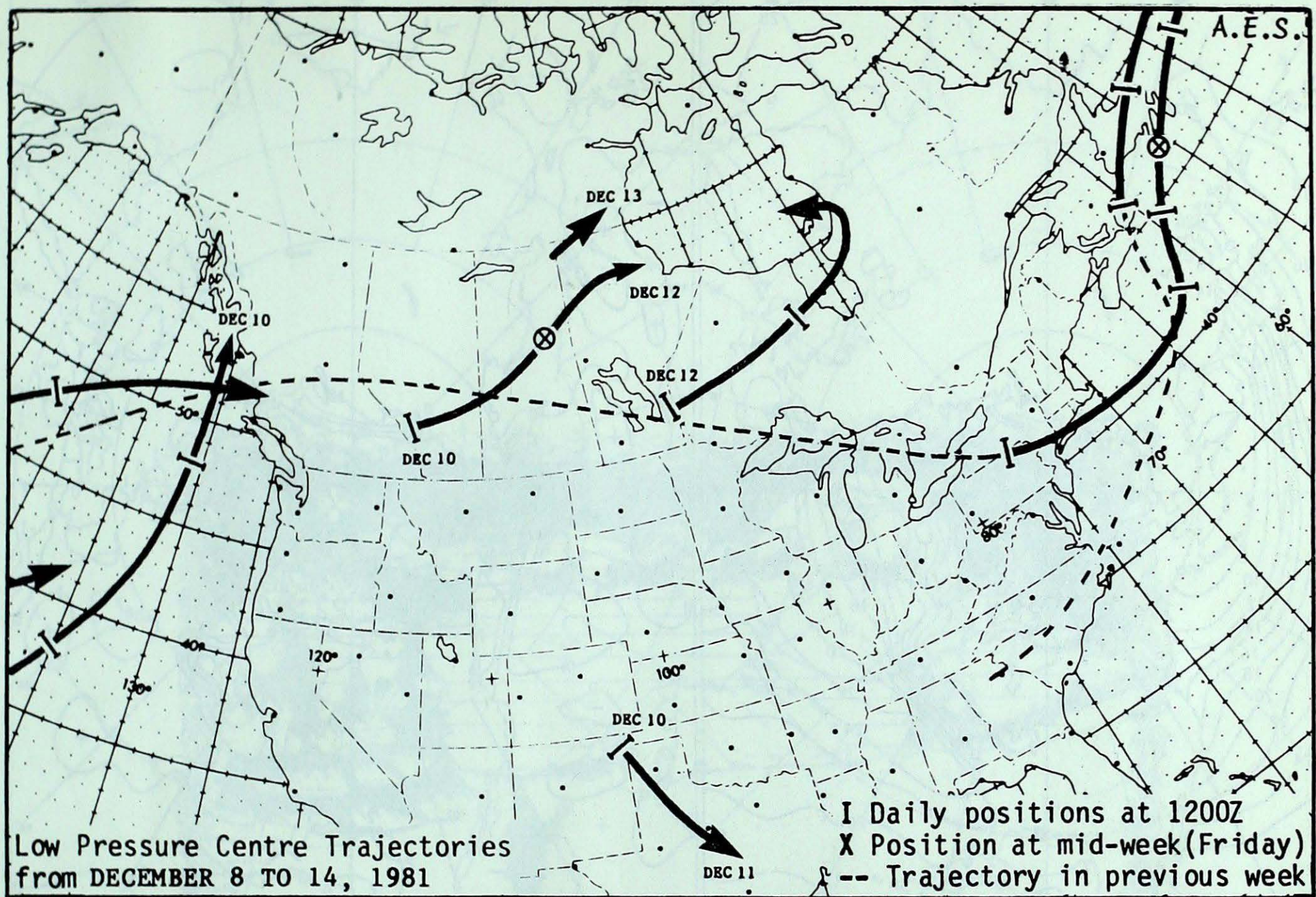
Two Arctic vortex centers are now situated over the Eurasian Arctic and are considerably deeper than in previous weeks. Heights in their vicinity are much below normal. A mean split

flow developed across the North American continent. The main Arctic stream relocated north of the Canadian Arctic Islands. As a result 50 kPa heights over the Arctic are more than 30 dam above normal. This corresponds well with the above normal mean surface temperature.

At the surface significant weather systems affected only coastal areas, but precipitation amounts were not nearly as high as in previous weeks. In other parts of the country weak weather systems deposited only light snow.

Andy Radomski

LOW PRESSURE CENTRE TRAJECTORIES



CLIMATIC PERSPECTIVES

Staff

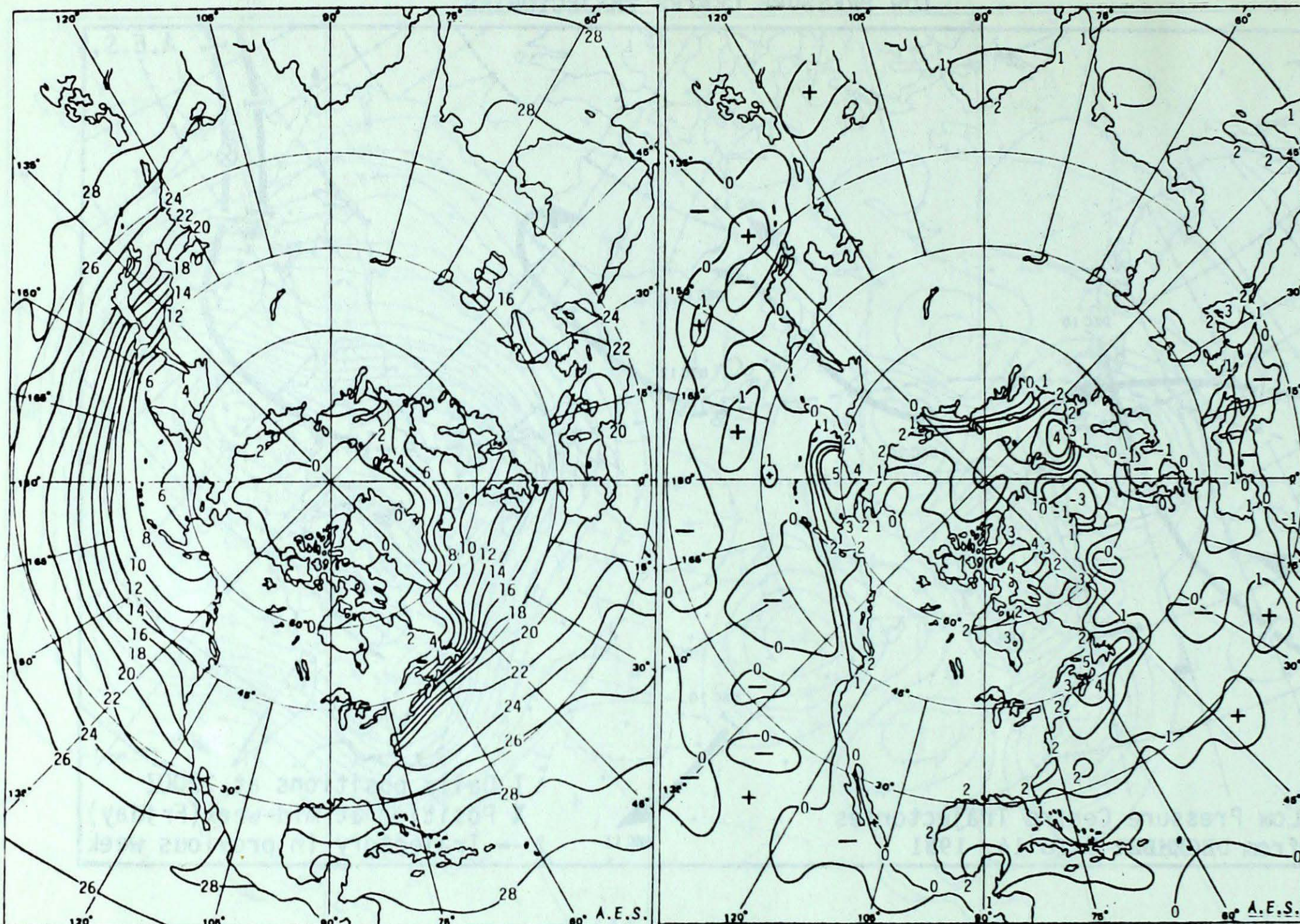
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SEA SURFACE TEMPERATURE



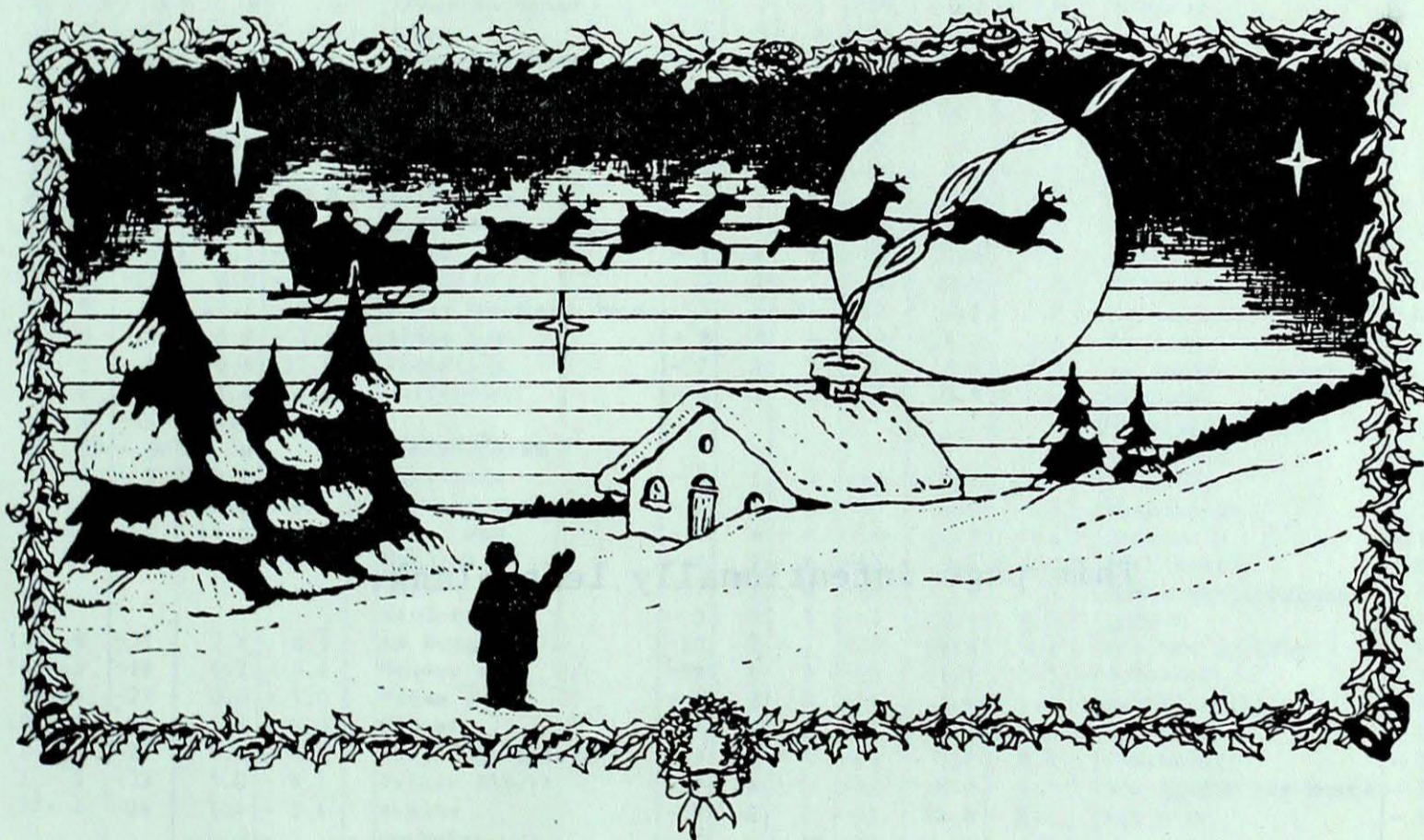
Mean Sea Surface Temperature
NOVEMBER 1981

Sea Surface Temperature Anomaly
NOVEMBER 1981

IMPORTANT NOTICE

Climatic Perspectives will not be published during the Christmas holidays. The temperature and precipitation data tables for December 15 to 28, 1981 will be inserted in the first bulletin in 1982.

Due to problems with our word processing equipment, last week's table contained some erroneous data. The corrected table is reprinted at the end of this issue.



Merry Christmas
and a
Happy New Year

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610 19
TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. DECEMBER 15, 1981

Table with columns: Station, Temperature (°C), Precip. (mm), Station, Temperature (°C), Precip. (mm), Station, Temperature (°C), Precip. (mm). Rows are categorized by province/territory: BRITISH COLUMBIA, ALBERTA, SASKATCHEWAN, MANITOBA, ONTARIO, YUKON, NORTHWEST TERRITORIES, QUEBEC, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD ISLAND, NEWFOUNDLAND.

P - extreme value based on less than 7 days

X - no normal due to short period

M - not available at press time



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