Canada

Atmospheric Environment

A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES

THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
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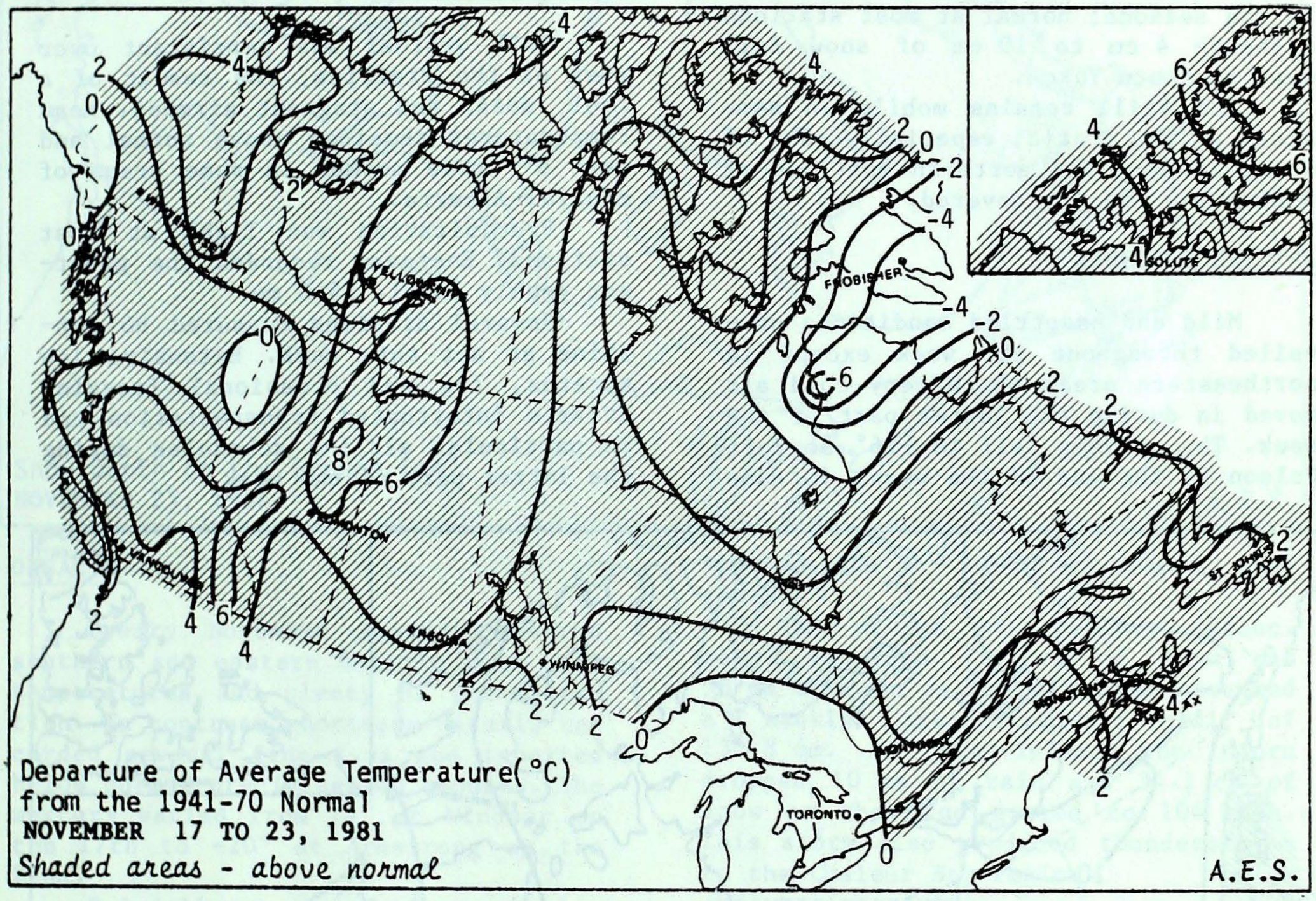
NOVEMBER 27, 1981 *(Aussi disponible en français)* **VOL.3 NO.47**



WEATHER HIGHLIGHTS FOR THE PERIOD - NOVEMBER 17 TO 23, 1981

Typical November weather

Most regions of the country experienced cloudy skies with very little sunshine reported. Precipitation was abundant along both coasts and some local flooding was reported in Nova Scotia. With the exception of the eastern Arctic and southern areas of Ontario, mean temperatures were above normal.

Temperatures varied from a maximum of 16° at Greenwood, Nova Scotia to a minimum of -35° at Eureka and Shepherd Bay, Northwest Territories. The coastal precipitation was reflected in the 166.1 mm recorded at Cape Scott, British Columbia and the 130.8 mm recorded at Gaspé, Québec.

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 throughout the Territories continued the slide to lower values but in general remained above normal. Mean temperatures were more than 7° above normal in the central Yukon and the northern Arctic. Only in the southern regions of Baffin Island were mean temperatures below normal.

Precipitation was generally close to the seasonal normal at most stations although 4 cm to 10 cm of snow fell over southern Yukon.

Ice still remains mobile in some areas of the Arctic, especially east of Resolute Bay. The northern portions of Hudson Bay are ice covered.

BRITISH COLUMBIA

Mild and unsettled conditions prevailed throughout the week except in northeastern areas where very cold air moved in during the latter part of the week. The mercury fell to -26° at Fort Nelson by the end of the week. In some southeastern areas mean temperatures exceeded 6° above normal.

Above normal amounts of precipitation fell on coastal areas. Cape Scott recorded a weekly total of 166.1 mm.

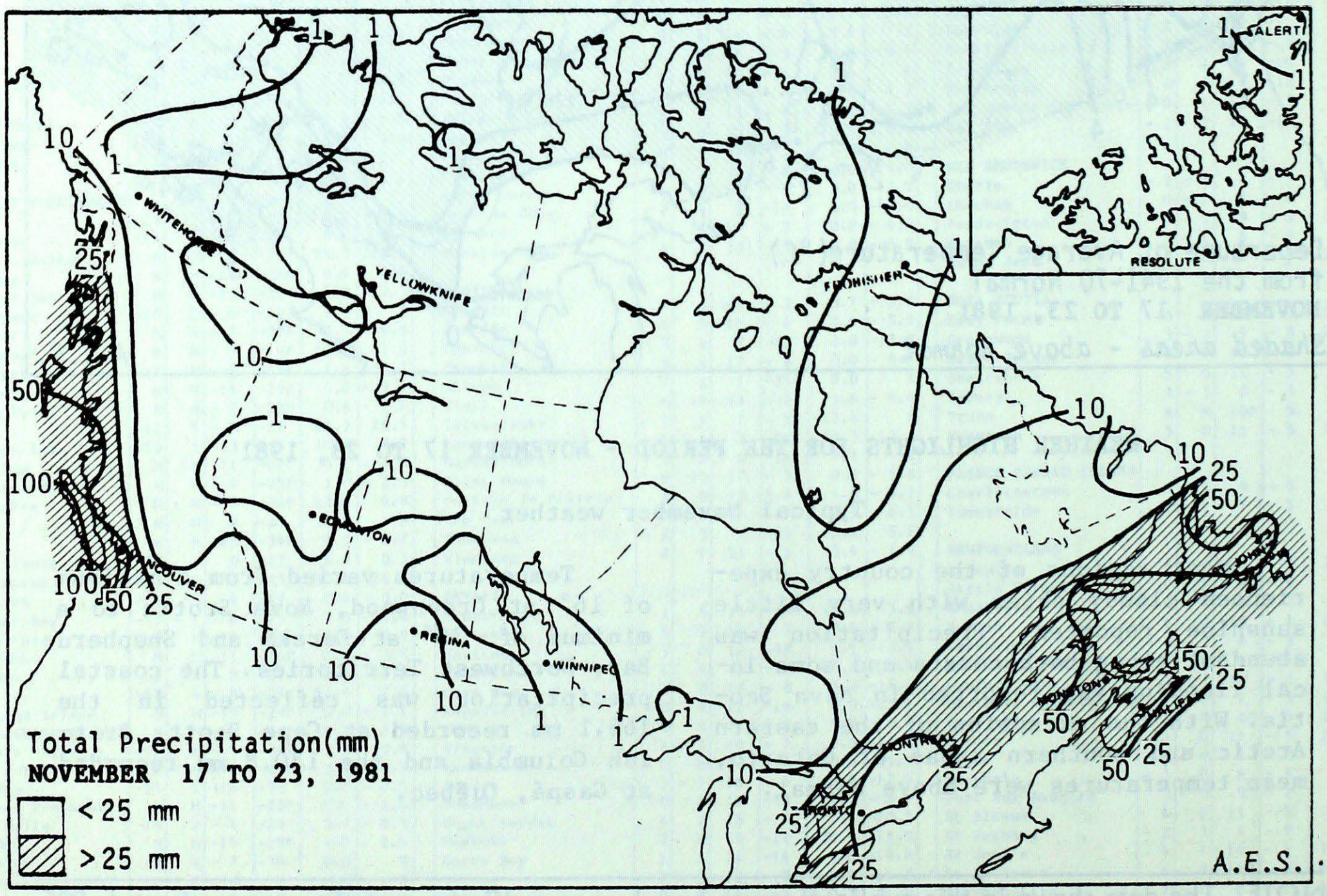
Kelowna reports that the total amount of precipitation received to date this year has already exceeded the previous 1971 record.

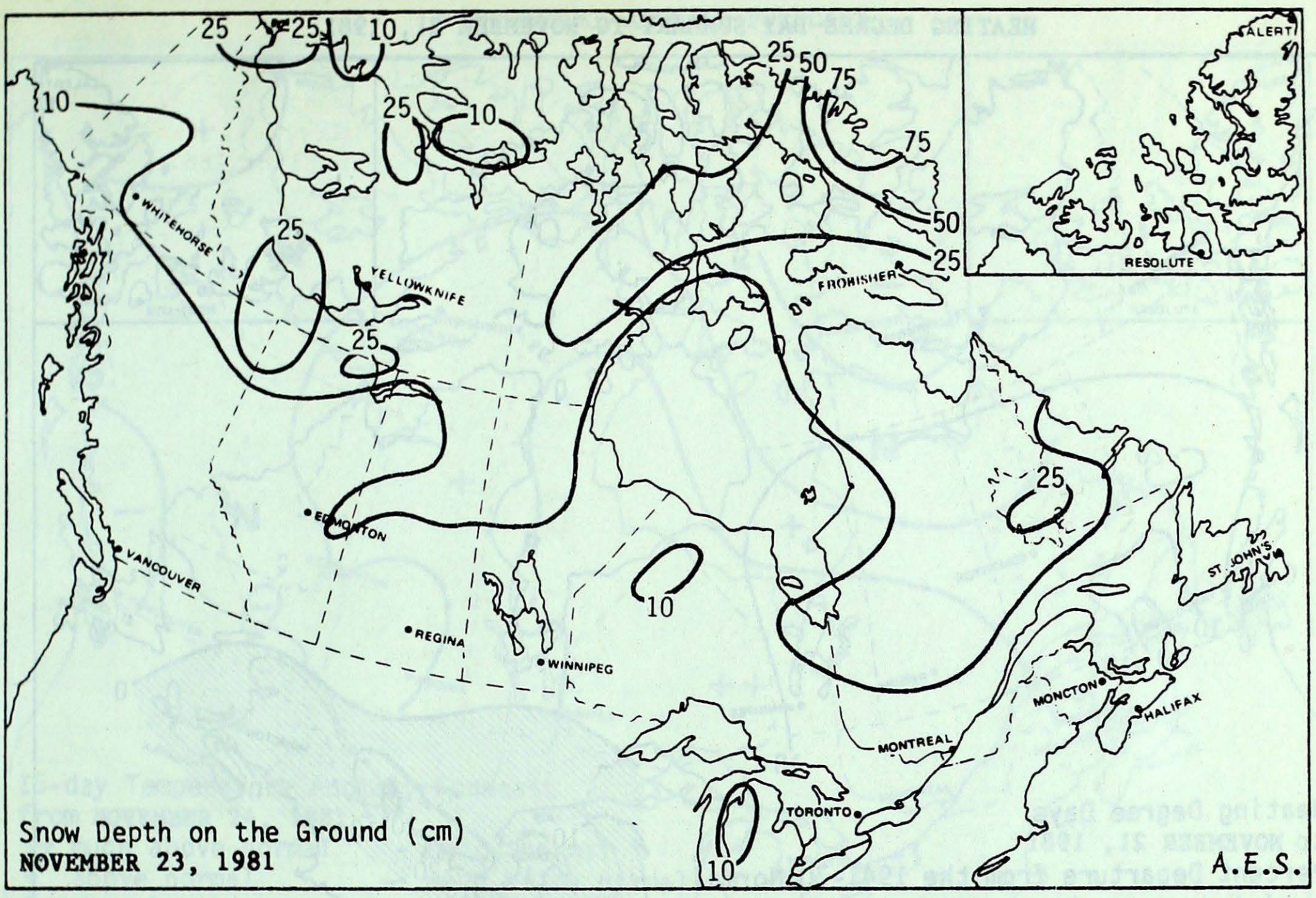
PRAIRIE PROVINCES

Dull weather was persistant over most of the Prairies, the result of a cool, moist and stagnant airmass. Mean temperatures remained above normal and were 8° above normal in some areas of central Alberta.

Precipitation was light at most stations. Eastevan recorded the greatest weekly total, 15.6 mm.

Several stations measured no sunshine at all this week. Extensive low stratus, fog and occasional freezing drizzle interrupted transportation and in particular airline schedules during the latter part of the week.





ONTARIO

Dreary November weather covered southern and eastern Ontario with cool temperatures and plenty of precipitation. In contrast, northern Ontario recorded several fine days and reported below normal precipitation amounts. The mercury varied from 14° at Windsor on the 17th to -20° at Armstrong on the 22nd.

Rainfall was prevalent at the beginning of the week, being especially heavy in the Muskoka and Kawartha Lakes areas, with 30 mm to 40 mm falling on November 16th. Later, a flow of cold air brought snow to most of Ontario north of a line from Sarnia to Toronto, and Muskoka recorded 10 cm to 15 cm of snow.

QUÉBEC

Temperatures were above normal this week with the exception of the North where the mercury fell to -20° at Inoucdjuac on the 17th. The mercury reached the 9° mark at several stations.

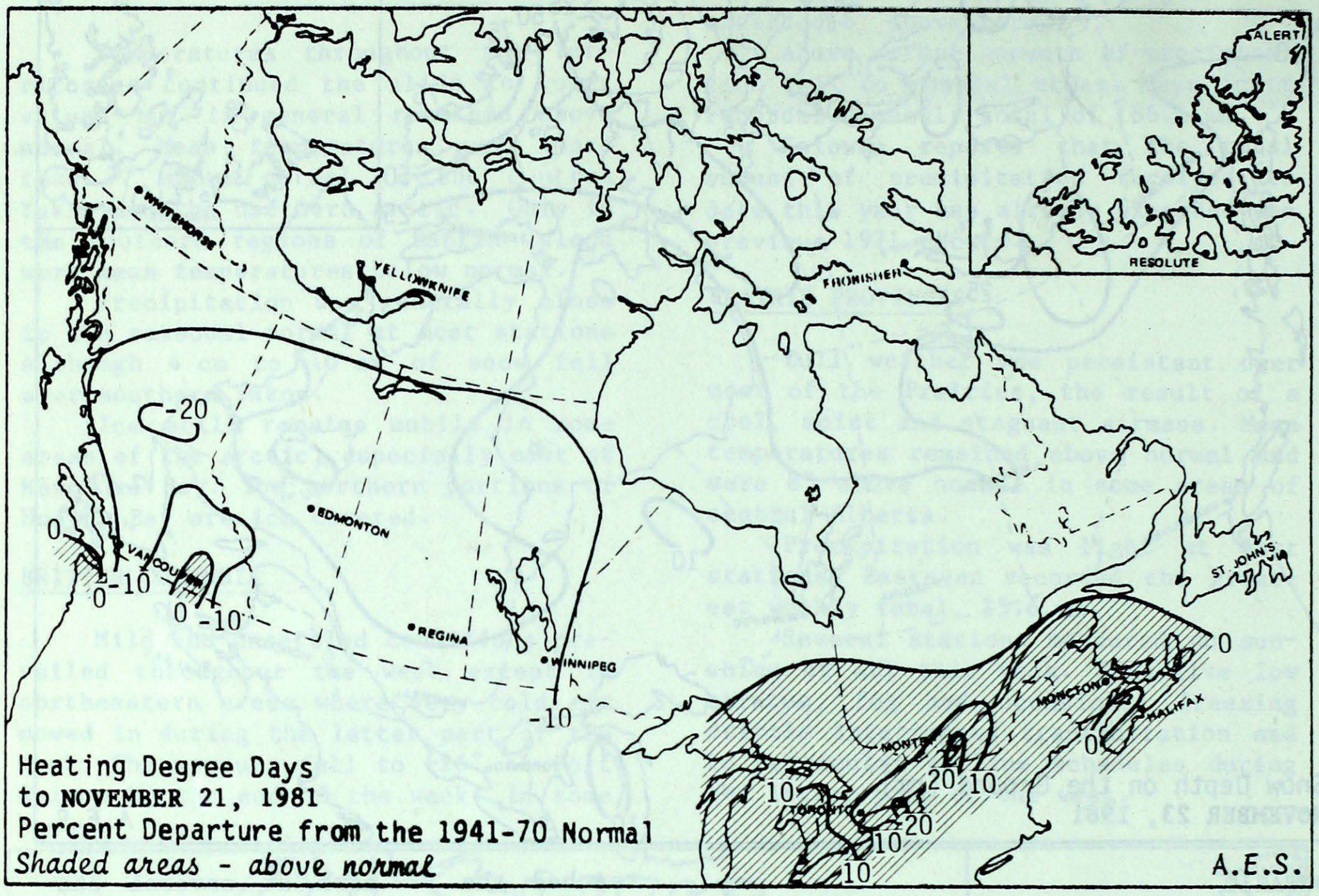
Two storms hit eastern Québec. Gaspé recorded 71.4 cm of snow and 58 mm of rain on the 21st and measured a weekly precipitation total of 130.8 mm. At Sept-Isles, the storm dropped 10 mm of rain and 34.1 cm of snow as the wind gusted to 104 km/h. This storm also produced thunderstorms in the Chaleur Bay region.

ATLANTIC PROVINCES

This was a mild, but very wet week in the Atlantic Provinces. A series of 3 storms passed through the region, and by the third storm the ground was saturated and some local flooding occurred. Several stations recorded more than 100 mm of precipitation. Charlottetown measured 122.9 mm.

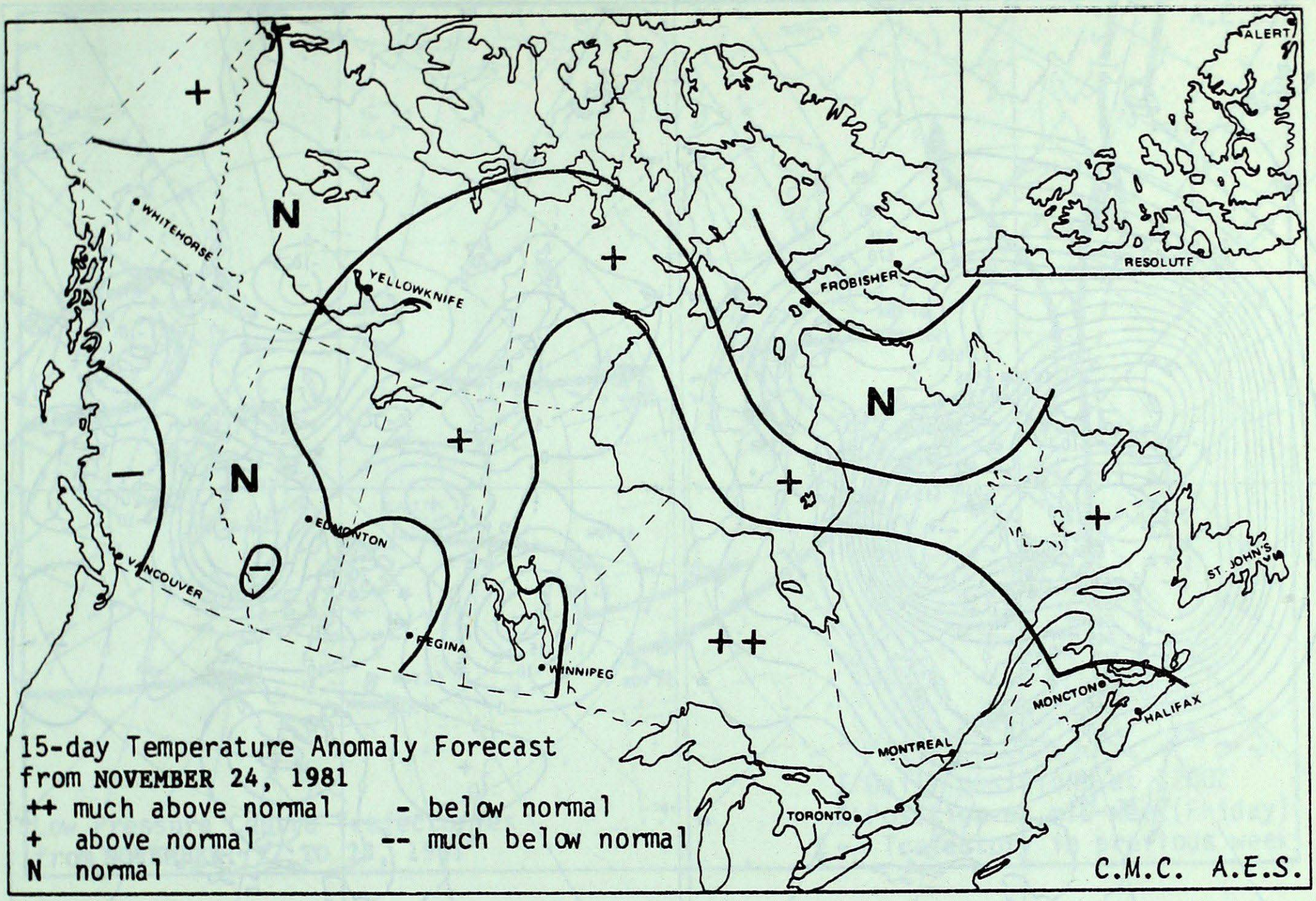
Mean weekly temperatures were above normal in all regions reaching 5° above normal in western Labrador. The mercury rose to 16° at Greenwood on the 21st, the highest reading in the country.

HEATING DEGREE-DAY SUMMARY TO NOVEMBER 21, 1981

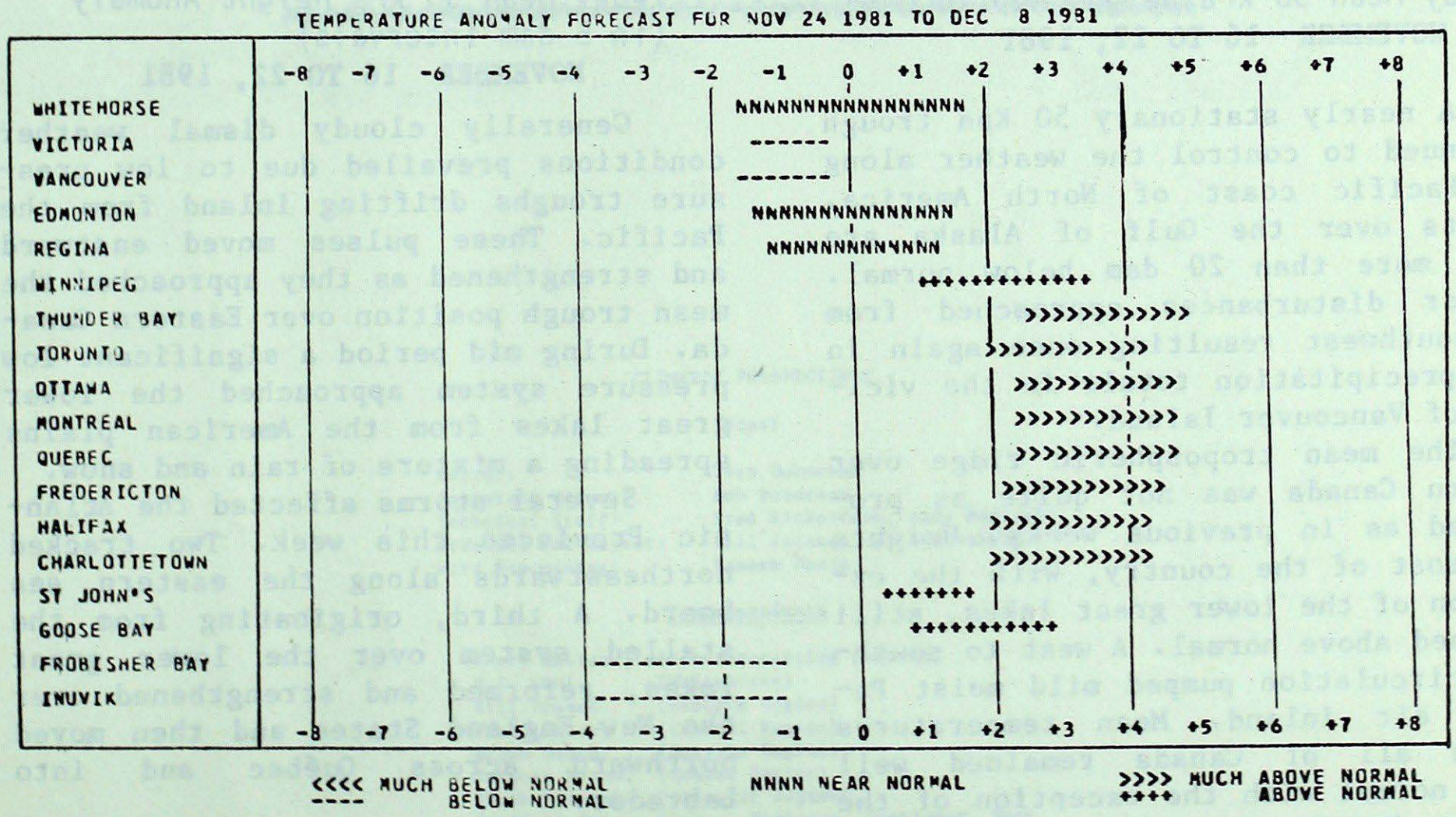


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	758.8	-112.5	3335.5	-137.5	96
Inuvik	769.5	-34.5	2391.5	-49.5	98
Whitehorse	477.5	-61.5	1586.0	-98.0	94
Vancouver	193.0	-48.0	609.0	-66.0	90
Edmonton Mun	320.5	-113.5	937.0	-229.0	80
Calgary	294.0	-116.0	1011.5	-164.5	86
Regina	326.0	-126.0	948.0	-171.0	85
Winnipeg	323.0	-114.0	915.0	-112.0	89
Thunder Bay	334.0	-64.0	1067.5	-23.5	98
Windsor	236.0	-23.0	603.5	65.5	112
Toronto	279.0	0.0	788.0	128.0	119
Ottawa	307.5	-9.5	859.0	91.0	112
Montreal	309.5	11.5	853.0	153.0	122
Quebec	346.5	4.5	990.0	94.0	110
Saint John, N.B.	297.5	-2.5	892.0	6.0	101
Halifax	246.0	-7.0	694.5	18.5	103
Charlottetown	272.0	-14.0	776.5	6.5	101
St. John's, Nfld.	281.0	-11.0	984.0	-18.0	98

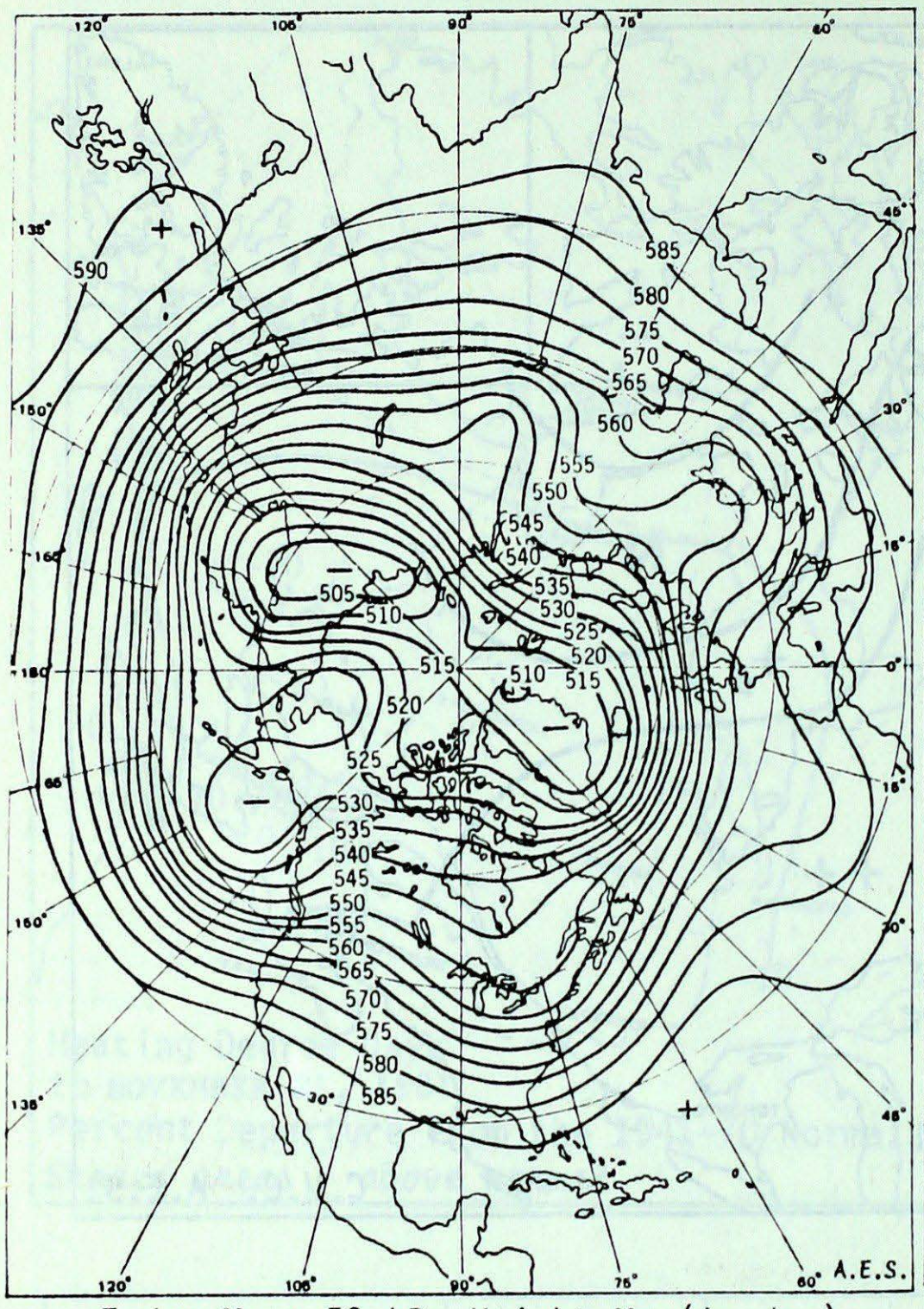
TEMPERATURE ANOMALY FORECAST



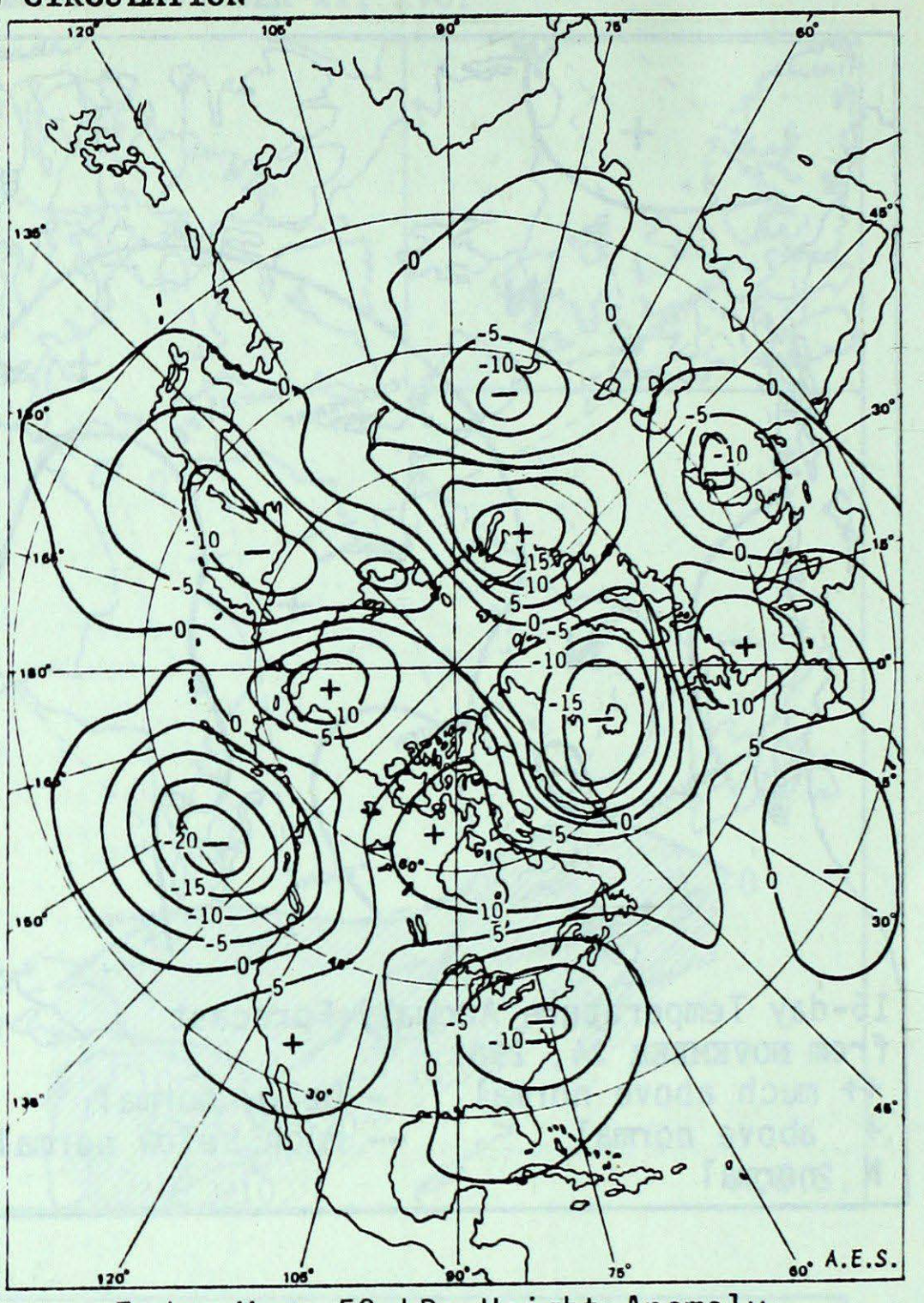
TEMPERATURE ANOMALY FORECAST FOR NOV 24 1981 TO DEC 8 1981



ATMOSPHEREIC CIRCULATION



7-day Mean 50 kPa Height Map(in dam)
NOVEMBER 16 TO 22, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals)
NOVEMBER 16 TO 22, 1981

A nearly stationary 50 Kpa trough continued to control the weather along the Pacific coast of North America. Heights over the Gulf of Alaska are still more than 20 dam below normal. Weather disturbances approached from the southwest resulting once again in high precipitation totals in the vicinity of Vancouver Island.

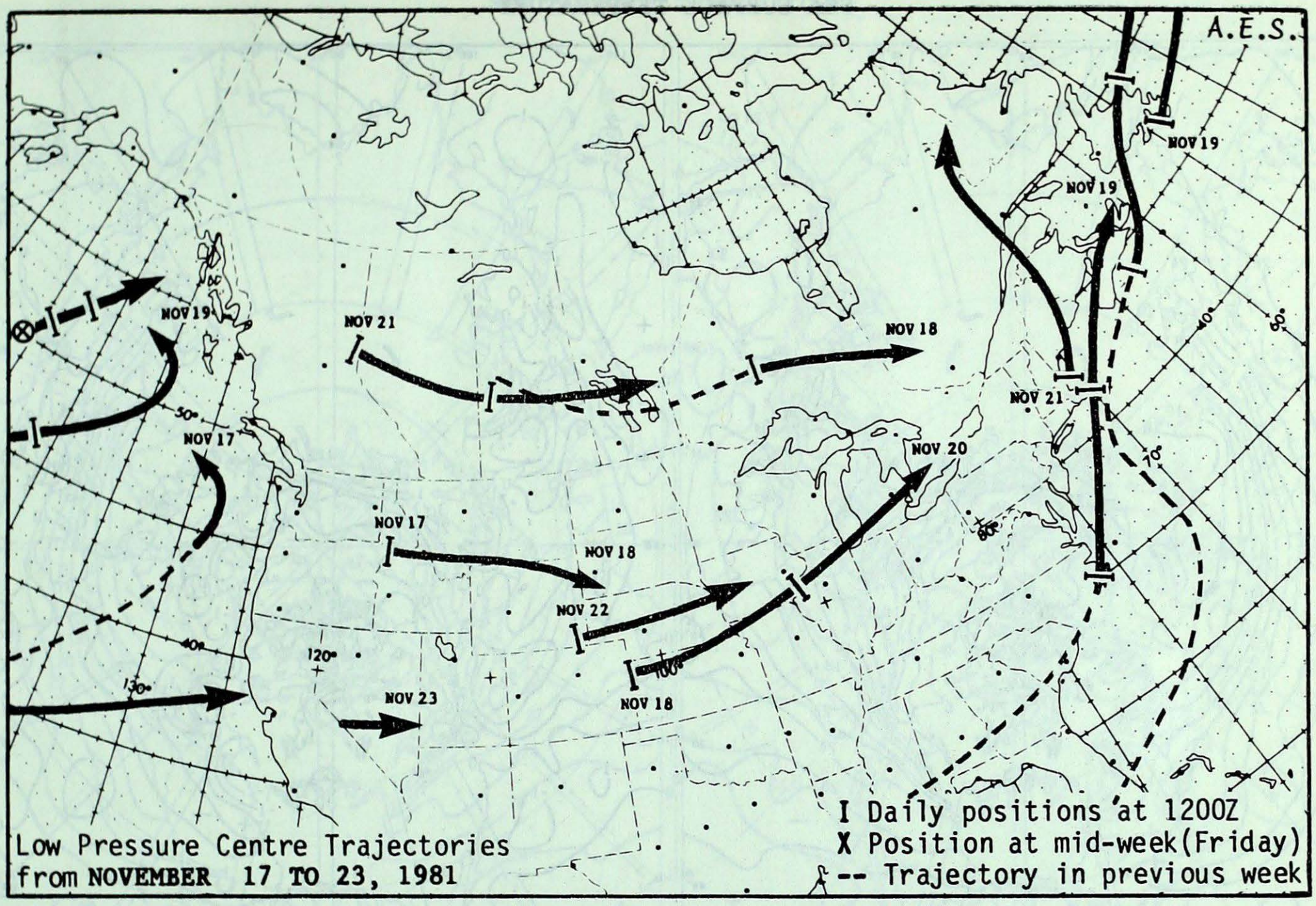
The mean tropospheric ridge over western Canada was not quite as pronounced as in previous weeks. Heights over most of the country, with the exception of the lower great lakes, still remained above normal. A west to southwest circulation pumped mild moist Pacific air inland. Mean temperatures across all of Canada remained well above normal with the exception of the eastern Arctic and parts of the lower great lakes.

Generally cloudy dismal weather conditions prevailed due to low pressure troughs drifting inland from the Pacific. These pulses moved eastward and strengthened as they approached the mean trough position over Eastern Canada. During mid period a significant low pressure system approached the lower great lakes from the American plains spreading a mixture of rain and snow.

Several storms affected the Atlantic Provinces this week. Two tracked northeastwards along the eastern sea board. A third, originating from the stalled system over the lower great lakes, reformed and strengthened over the New England States and then moved northward across Québec and into Labrador.

Andy Radomski

LOW PRESSURE CENTRE TRAJECTORIES



Low Pressure Centre Trajectories
from **NOVEMBER 17 TO 23, 1981**

CLIMATIC PERSPECTIVES

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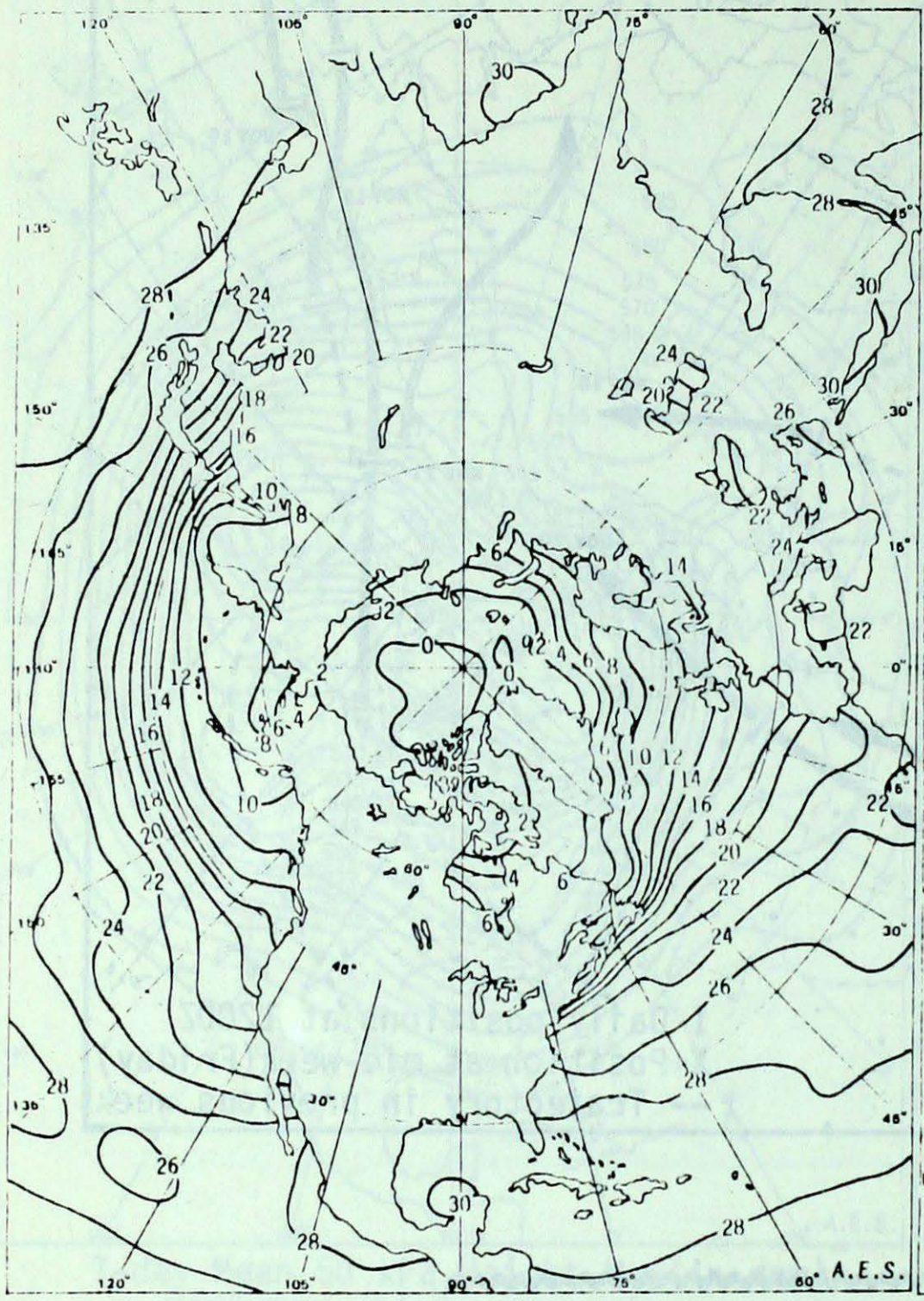
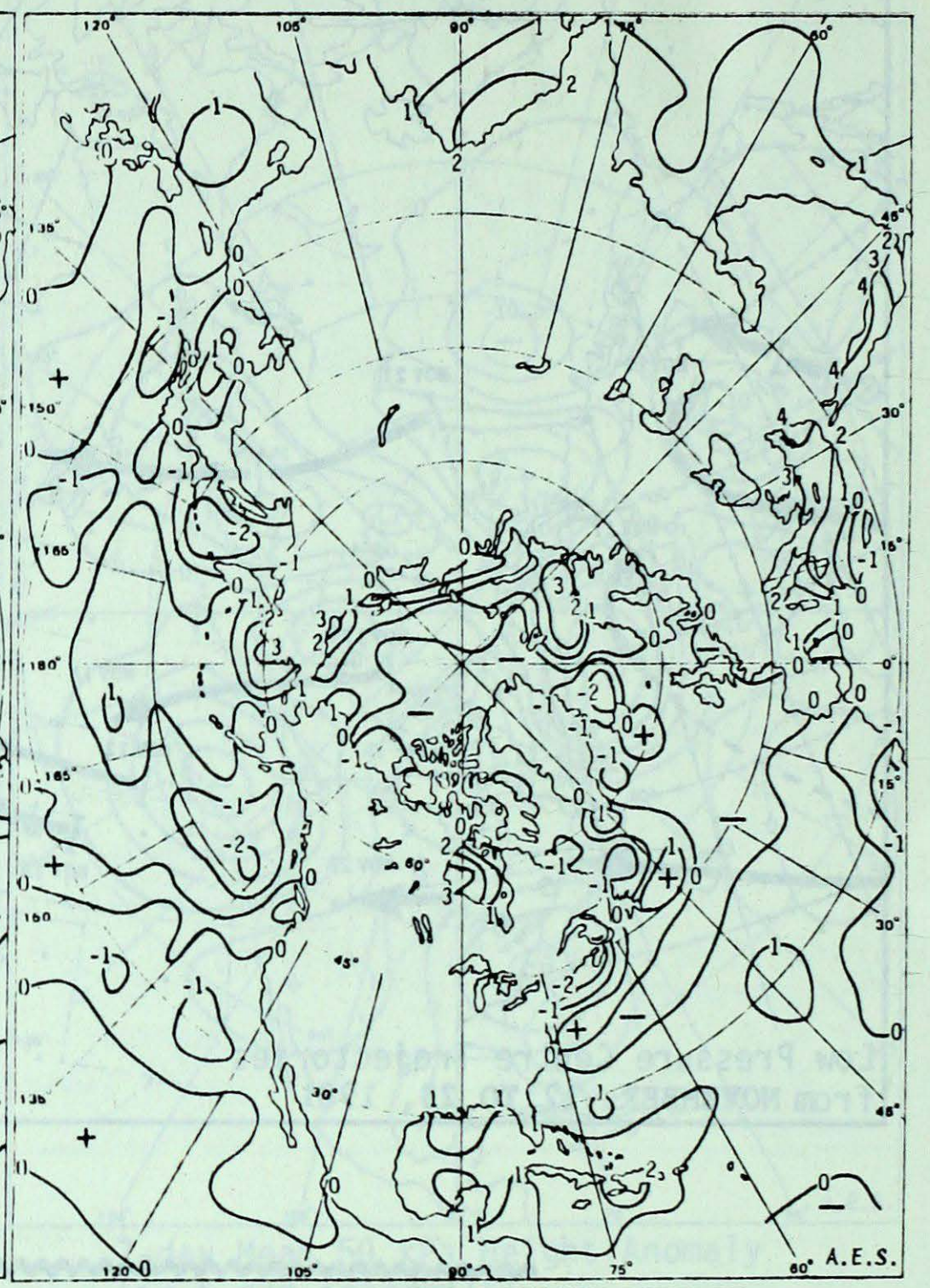
SEA SURFACE TEMPERATURE

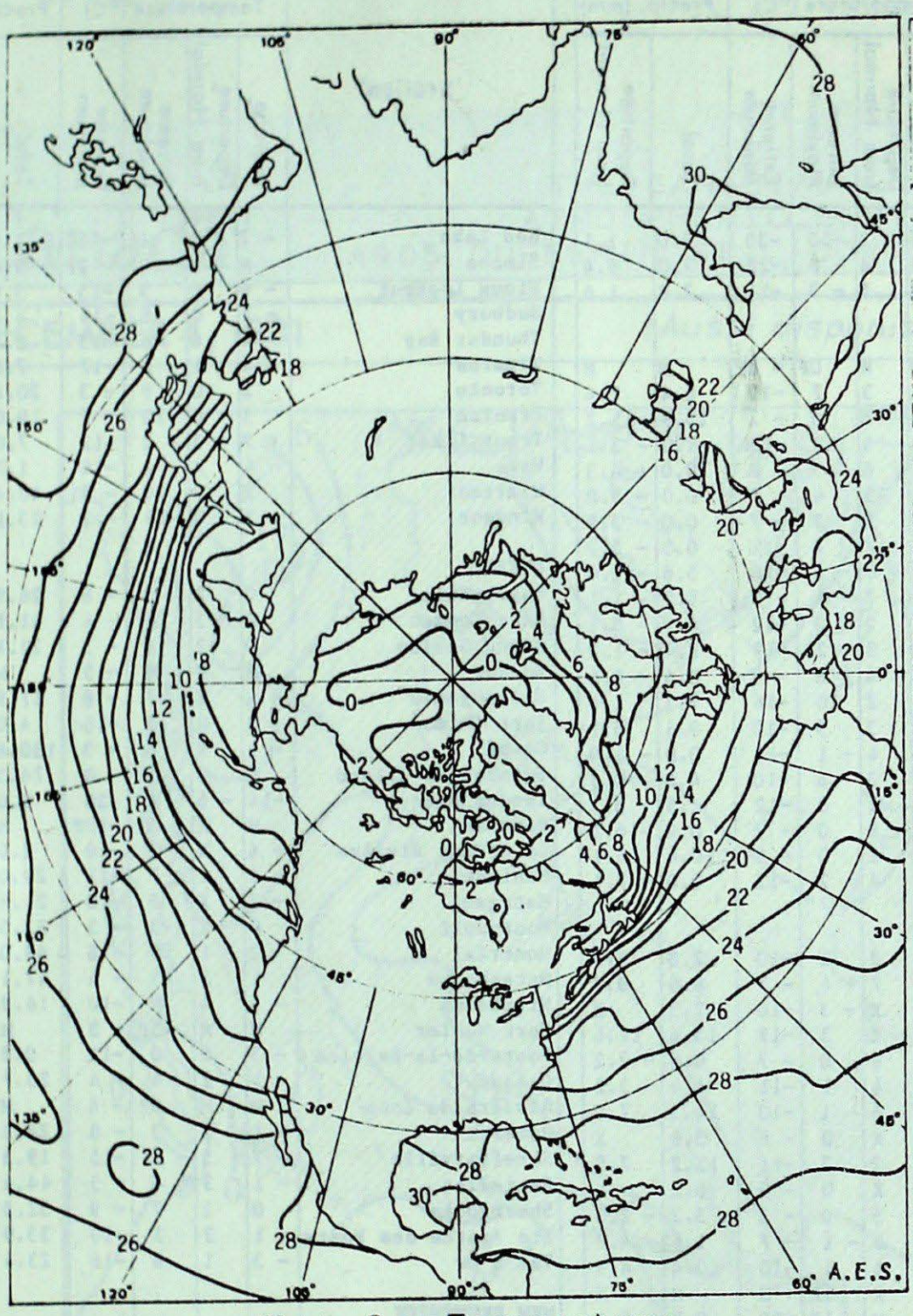


Mean Sea Temperature
OCTOBER 1981

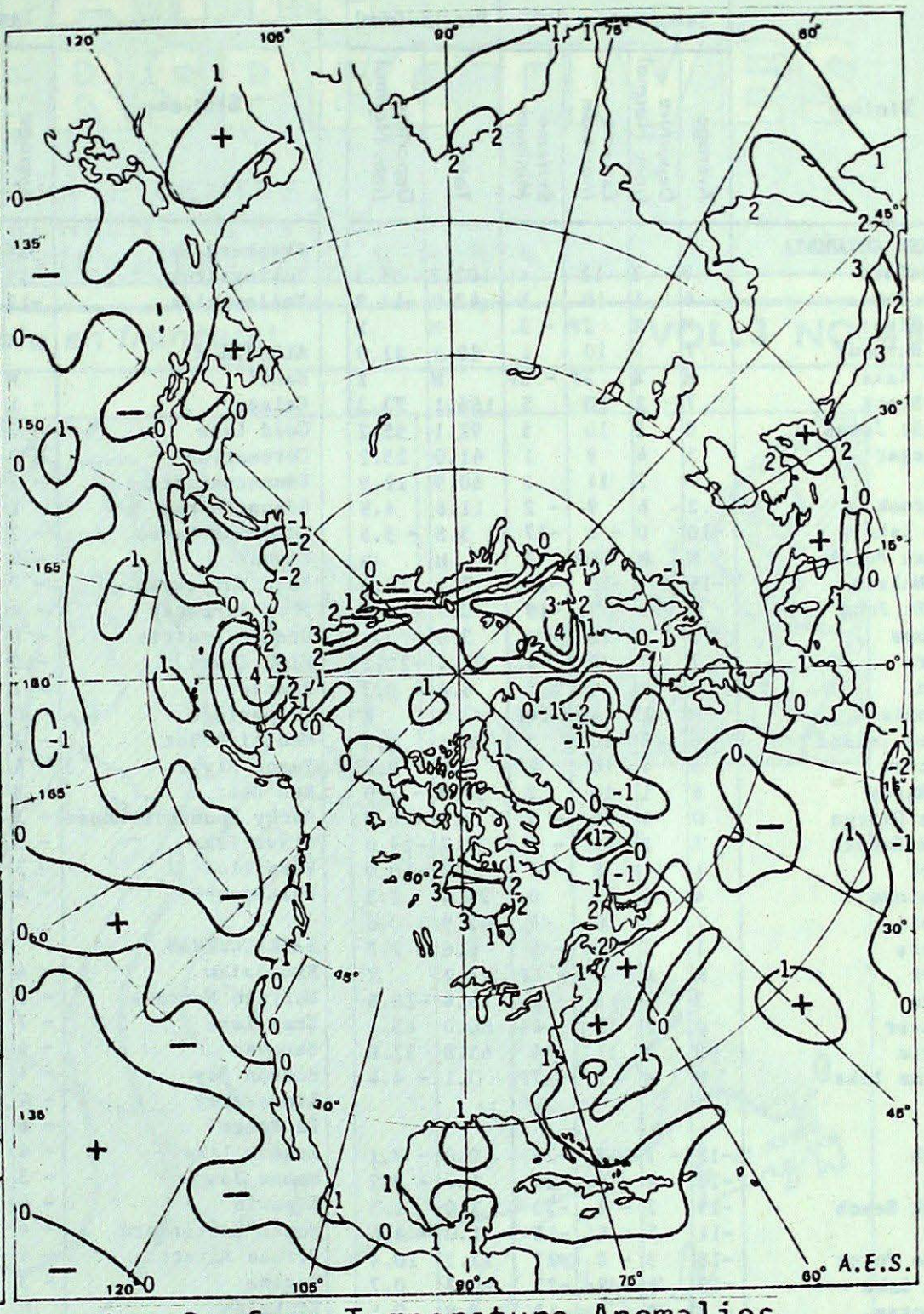


Sea Surface Temperature Anomalies
OCTOBER 1981

SEA SURFACE TEMPERATURE



Mean Sea Temperature
MID-OCTOBER TO MID-NOVEMBER 1981



Sea Surface Temperature Anomalies
MID-OCTOBER TO MID-NOVEMBER 1981

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. NOVEMBER 24, 1981

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
BRITISH COLUMBIA						
Abbotsford	8	3	12	4	102.2	55.3
Alert Bay	6	1	10	1	42.0	-11.9
Blue River	M	X	2P	- 3	M	X
Bull Harbour	7	1	10	1	88.2	21.9
Burns Lake	M	X	2P	- 6P	M	X
Cape Scott	7	2	10	3	166.1	73.3
Cape St James	8	2	10	5	92.1	55.2
Castlegar	5	4	9	1	41.0	25.2
Comox	7	2	11	1	60.9	12.9
Cranbrook	2	6	9	- 2	11.6	4.9
Dease Lake	-10	0	- 6	-17	3.8	- 5.5
Estevan Point	M	M	10P	3	M	M
Fort Nelson	-16	- 1	-10	-26	17.1	10.3
Fort St John	- 9	- 1	2	-19	3.5	- 4.7
Kamloops	5	4	12	- 1	3.0	- 2.1
Langara	7	2	9	4	23.4	-20.2
Lytton	5	6	9	1	6.6	- 8.3
Mackenzie	M	X	4P	-14P	M	X
McInnes Island	8	3	10	5	78.4	4.5
Penticton	6	4	10	2	8.4	2.6
Port Hardy	6	1	10	2	59.9	- 3.9
Prince George	0	5	8	- 5	2.3	-10.7
Prince Rupert	5	2	11	- 2	38.7	-29.3
Quesnel	1	4	8	- 5	3.0	-10.0
Revelstoke	4	6	7	0	24.4	3.3
Sandspit	7	2	10	3	42.9	0.6
Smithers	1	5	6	- 5	6.6	- 7.7
Stewart	M	X	6	- 1P	13.2	X
Terrace	3	4	6	- 2	28.4	-18.6
Vancouver	8	2	12	4	80.0	45.4
Victoria	8	2	11	4	65.8	32.0
Williams Lake	M	M	6	- 7P	3.1	- 4.4
YUKON						
Burwash	-18	- 1	-12	-29	0.9	- 3.1
Dawson	-15	4	- 9	-26	1.4	- 3.2
Komakuk Beach	-19	2	- 6	-30	2.0	1.5
Mayo	-11	7	- 6	-15	1.0	- 4.6
Shingle Point	-18	3	- 8	-27	13.3	10.4
Watson Lake	-13	4	- 8	-23	10.3	0.7
Whitehorse	- 8	3	- 5	-13	4.8	0.1
NORTHWEST TERRITORIES						
Alert	M	M	-17	-31P	0.9	- 0.6
Baker Lake	-21	0	-10	-28	3.6	1.2
Broughton Island	-15	1	-10	-19	0.0	- 6.7
Byron Bay	-20	5	-10	-32	1.0	0.3
Cambridge Bay	-21	4	-11	-33	2.3	- 0.1
Cape Dorset	M	X	- 4P	-17P	M	M
Cape Dyer	-19	- 4	-11	-30	0.0	-14.0
Cape Hooper	-15	2	-12	-17	0.2	- 6.2
Cape Parry	-18	4	- 8	-24	0.8	- 0.7
Cape Young	-19	3	- 9	-32	8.0	6.5
Clinton Point	-18	3	- 9	-25	3.8	2.0
Clyde	M	M	-11	-22P	0.6	- 2.8
Contwoyto Lake	-18	5	- 6	-26	6.3	3.4
Coppermine	-18	4	- 8	-29	2.0	- 1.5
Coral Harbour	14	3	- 9	-26	4.4	- 0.6
Dewar Lakes	-18	0	-13	-23	4.0	2.8
Ennadai	M	M	M	-24	M	M
Eureka	-26	7	-15	-35	1.2	0.8
Fort Reliance	-10	6	- 4	-16	4.6	- 1.0
Fort Simpson	-17	3	-11	-27	8.5	2.3
Fort Smith	M	M	- 3P	-22	M	M
Frobisher Bay	-17	- 5	- 5	-24	0.7	- 9.0
Gladman Point	-22	4	-15	-32	3.7	3.0
Hall Beach	-18	4	- 7	-26	5.7	2.0
Hay River	-11	3	- 4	-16	12.0	3.6
Inuvik	-21	3	-11	-34	3.0	- 1.0
Jenny Lind Island	-22	4	-14	-32	6.0	5.5
Lady Franklin Point	-17	5	- 9	-26	0.0	- 1.4
Longstaff Bluff	-17	2	-10	-26	2.7	0.5
Mackar Inlet	-18	4	-11	-27	3.3	1.9
Mould Bay	-25	3	-13	-34	1.6	1.3
Nicholson Peninsula	-19	3	-11	-25	0.0	- 0.2
Norman Wells	-19	1	-14	-27	0.8	- 3.9
Pelly Bay	-20	4	-16	-27	4.0	0.5
Pond Inlet	-18	X	- 9	-31	2.4	X
Port Burwell	M	X	M	M	M	X
Resolute	-22	4	-13	-32	1.3	0.3
Sachs Harbour	-22	3	-10	-32	1.8	0.3
Shepherd Bay	-24	2	-15	-35	3.0	1.1
Tuktoyaktuk	-19	4	- 8	-28	7.0	6.4
Yellowknife	-12	5	- 3	-21	7.8	1.6
ALBERTA						
Banff	M	M	0P	- 5P	M	M
Calgary	- 1	3	7	-10	6.4	2.4
Cold Lake	- 3	5	0	- 7	15.9	11.2
Coronation	- 3	4	3	-10	1.0	- 3.1
Edmonton Intl	- 2	6	5	- 8	0.0	- 4.3
Edmonton Mun	- 1	5	4	- 7	0.0	- 5.0
Edmonton Namao	- 2	5	3	- 7	0.0	- 5.9
Edson	- 4	7	7	-12	0.0	- 5.2
Fort Chipewyan	- 7	- 7	- 3	-16	5.6	- 1.4
Fort McMurray	- 4	7	- 1	- 8	5.2	- 1.1
Grande Prairie	- 6	2	3	-12	0.0	- 8.1
High Level	-10	3	- 2	-19	8.4	- 1.3
Jasper	- 1	4	6	- 8	0.4	- 8.6
Lethbridge	0	2	10	-16	7.7	1.4
Medicine Hat	- 1	3	9	-10	9.4	5.1
Peace River	- 6	4	- 1	-12	0.8	- 4.9
Red Deer	- 3	3	6	-10	4.8	0.3
Rocky Mountain House	- 3	2	6	-12	1.5	- 5.1
Slave Lake	- 3	8	0	- 7	0.0	- 6.1
Vermilion	- 3	6	0	- 6	10.4	6.1
Whitecourt	- 4	4	2	-12	0.0	- 7.1
SASKATCHEWAN						
Broadview	- 4	3	1	-10	7.8	2.9
Buffalo Narrows	- 5	7	- 1	- 7	8.6	0.9
Cree Lake	- 7	X	- 3	-10	7.3	X
Estevan	- 4	2	3	-12	15.6	11.6
Hudson Bay	- 4	6	0	- 7	0.6	- 7.2
Kindersley	- 4	4	1	-11	1.4	- 3.2
La Ronge	- 6	6	- 1	-10	14.3	7.0
Meadow Lake	- 4	X	0	- 8	5.6	X
Moose Jaw	- 3	2	3	-11	11.2	7.2
Nipawin	- 4	X	0	- 9	0.2	X
North Battleford	- 4	5	0	- 7	3.7	- 2.0
Prince Albert	- 4	5	- 1	- 7	1.6	- 4.3
Regina	- 3	4	1	-10	10.4	4.8
Rockglen	M	X	1P	- 8	M	X
Saskatoon	M	M	1P	-10	0.8	- 5.4
Swift Current	- 3	2	2	- 9	15.5	10.0
Uranium City	- 7	7	- 2	-13	8.4	- 0.6
Wynyard	- 4	4	2	- 9	0.0	- 5.5
Yorkton	- 4	4	- 1	- 8	0.2	- 7.5
MANITOBA						
Bissett	- 5	3	1	-14	0.8	- 7.0
Brandon	- 4	4	10	-14	1.8	- 2.9
Churchill	-10	3	- 4	-19	7.8	- 0.9
Dauphin	- 3	3	2	-12	0.2	- 6.0
Gillam	-11	X	- 5	-21	5.1	X
Gimli	- 4	3	1	-11	0.2	- 8.1
Island Lake	- 7	X	- 1	-15	0.4	X
Lynn Lake	-10	5	- 6	-17	4.2	- 6.4
Norway House	- 7	X	- 1	-20	7.0	X
Pilot Mound	- 5	2	3	-13	6.1	- 0.1
Portage la Prairie	- 3	- 2	2	-12	0.0	- 6.5
The Pas	- 6	4	- 1	-12	2.0	- 4.7
Thompson	-11	3	- 5	-24	4.9	- 4.8
Winnipeg	- 4	3	2	-11	0.0	- 6.1
ONTARIO						
Armstrong	- 7	1	4	-20	0.8	-15.8
Atikokan	- 5	1	4	-18	1.9	-15.1
Earlton	- 2	1	8	-11	3.0	-12.8
Geraldton	- 6	2	5	-18	1.6	-18.8
Gore Bay	1	- 1	9	- 6	18.2	- 6.5
Kapuskasing	- 5	0	7	-17	12.2	- 9.0
Kenora	- 5	1	1	-12	0.7	-10.3
Kingston	3	1	8	- 8	16.5	- 3.4
Lansdowne	- 6	3	2	-11	6.6	- 4.6
London	2	- 1	11	- 5	31.4	11.3
Moosonee	- 3	3	5	- 8	14.0	- 4.0
Mount Forest	0	0	8	- 4	52.2	30.4
Muskoka	M	M	8	-12P	59.2	35.4
North Bay	- 2	- 1	5	-13	28.2	6.9
Ottawa	1	1	7	- 7	22.1	5.7
Petawawa	0	X	8	-13	14.3	X
Pickle Lake	- 7	2	3	-15	2.4	-10.7
Red Lake	- 7	1	1	-16	1.8	- 5.9
Simcoe	M	M	10P	- 2P	9.4	- 9.1
Sioux Lookout	- 6	0	3	-15	3.4	-11.4
Sudbury	- 2	0	8	-14	4.4	-17.8
Thunder Bay	- 4	0	6	-15	0.6	-13.7
Timmins	- 4	1	7	-17	7.1	-18.8
Toronto	2	0	8	- 3	20.8	7.0
Trenton	3	0	10	- 7	19.0	- 0.5
Trout Lake	- 7	3	- 2	-12	7.0	- 3.3
Wawa	- 4	X	4	-14	1.7	X
Wiarton	2	0	10	- 4	40.4	17.5
Windsor	3	0	14	- 2	23.1	9.9
QUÉBEC						
Bagotville	0	2	5	- 6	26.9	8.8
Baie Comeau	0	3	4	- 4	41.1	18.9
Blanc Sablon	0	2	4	- 3	22.1	- 1.3
Border	M	M	M	-15	M	X
Chibougamau	- 2	X	7	- 8	17.9	X
Fort Chimo	- 8	0	0	-18	4.0	- 6.8
Gaspé	- 1	X	6	- 3	130.8	X
Grindstone Island	5	3	9	0	76.5	58.8
Inoucdjouac	-14	- 6	- 4	-20	0.0	- 6.5
Koartak	M	X	- 3P	-10P	M	X
La Grande Rivière	- 4	X	2	-10	2.0	X
Maniwaki	0	1	7	-11	29.0	10.8
Matagami	- 2	X	9	-10	21.4	X
Mont-Joli	0	1	3	- 3	32.5	15.7
Montréal	2	1	9	- 6	48.0	27.7
Natashquan	1	3	5	- 4	47.1	17.1
Nitchecun	- 5	4	2	-10	16.2	2.5
Port Menier	M	M	5P	- 3	M	M
Poste-de-la-Baleine	- 5	0	0	-11	0.8	-14.0
Québec	1	2	4	- 4	25.7	3.6
Rivière du Loup	M	M	0P	- 4	M	M
Roberval	- 1	2	3	- 8	28.2	11.1
Schefferville	- 7	3	- 1	-15	19.3	3.7
Sept-Iles	- 1	3	4	- 5	44.4	21.8
Sherbrooke	0	2	7	- 9	32.5	4.1
Ste Agathe des Monts	- 1	3	3	-10	33.9	8.9
Val d'Or	- 3	1	8	-16	23.4	0.4
NEW BRUNSWICK						
Charlo	1	4	5	- 3	40.7	20.3
Chatham	2	2	10	- 2	75.2	50.7
Fredericton	3	3	12	0	63.1	37.9
Moncton	4	3	14	- 2	91.9	67.9
St. John	3	1	13	- 5	73.2	34.9
NOVA SCOTIA						
Eddy Point	7	X	12	- 1	90.4	X
Greenwood	6	3	16	1	83.3	59.7
Sable Island	M	M	15P	1	14.6	-15.3
Shearwater	7	3	14	1	103.6	75.1
Sydney	7	4	12	- 1	81.9	52.9
Truro	6	4	15	- 1	M	M
Yarmouth	7	2	14	2	87.8	56.7
PRINCE EDWARD ISLAND						
Charlottetown	6	3	13	- 1	122.9	95.8
Summerside	5	3	13	0	88.4	65.7
NEWFOUNDLAND						
Argentia	6	X	10	2	45.4	X
Battle Harbour	1	3	3	- 2	2.6	-16.7
Bonavista	4	2	9	1	40.5	15.8
Burgeo	5	4	9	1	84.7	55.3
Cartwright	- 1	2	3	- 4	3.9	- 9.7
Churchill Falls	- 5	5	0	- 7	15.0	- 4.9
Comfort Cove	2	2	9	- 1	66.6	50.7
Daniel's Harbour	2	1	7	- 3	29.2	11.9
Deer Lake	2	2	7	0	28.9	11.3
Gander	3	2	9	- 1	60.2	37.6
Goose	- 1	4	3	- 6	8.0	- 7.3
Hopedale	- 1	2	2	- 5	10.3	- 2.6
Port aux Basques	5	3	8	1	98.1	56.6
St Albans	5	4	11	1	84.0	53.2
St Anthony	0	X	5	- 2	56.8	X
St. John's	5	3	10	1	58.4	23.4
St Lawrence	6	4	10	0	79.2	58.2
Stephenville	4	2	8	1	42.8	21.2
Wabush Lake	- 5	4	- 1	-10	17.5	- 1.7

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