

VIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES

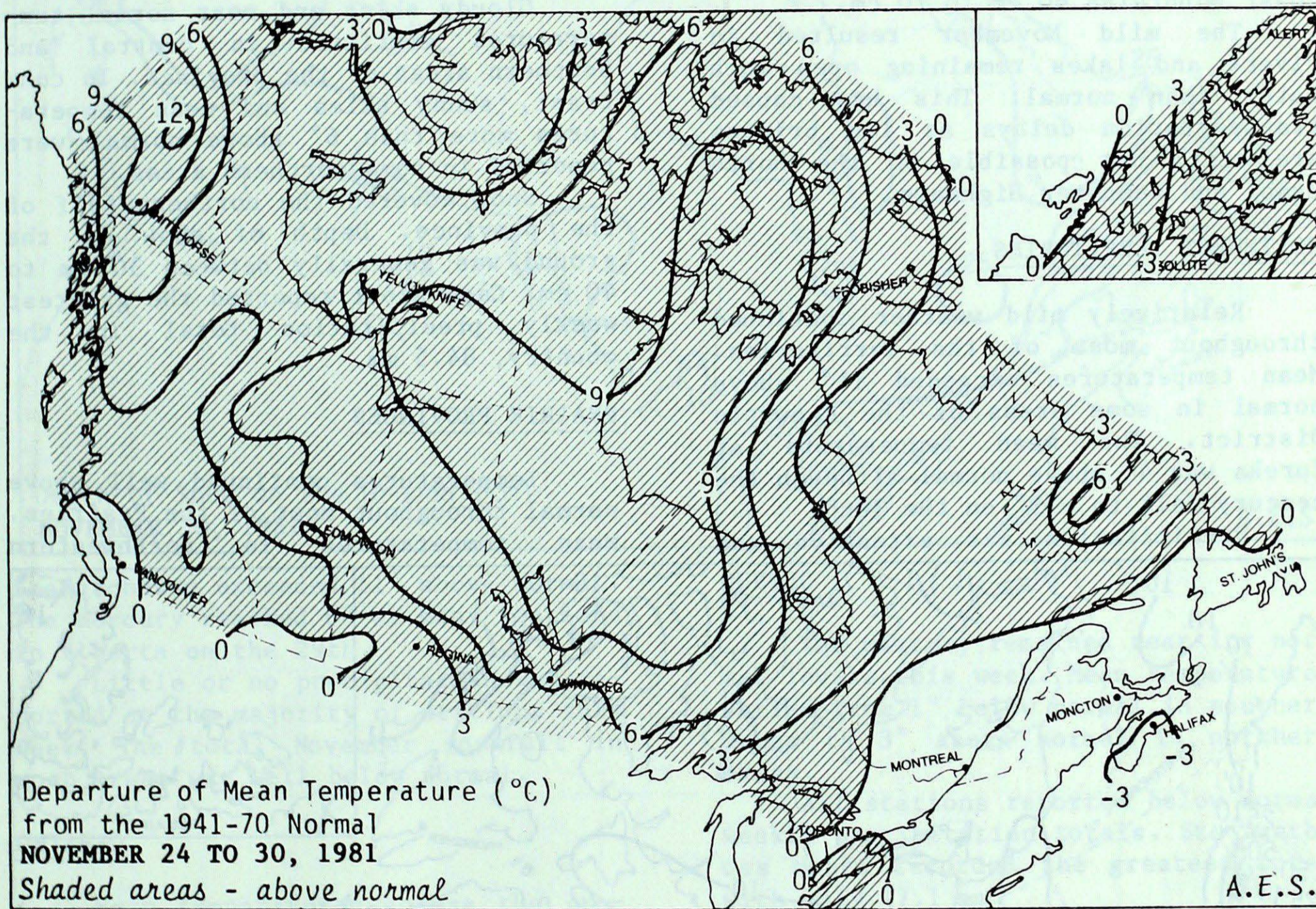
Canada

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

DECEMBER 4, 1981

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VOL.3 NO.48



WEATHER HIGHLIGHTS FOR THE PERIOD - NOVEMBER 24 TO 30, 1981

Storm strikes the Atlantic Provinces

A storm with winds in excess of 90 km/h moved along the eastern seaboard on November 25th and 26th. The Liberian grain carrier Euro Princess was grounded on Sable Island and the 26 crewmen aboard were rescued by Armed Forces helicopters. The ship came close to colliding with the oil rig Rowan Juneau.

The storm brought heavy, record rainfalls to southern Newfoundland on the 26th causing extensive local flooding.

Temperatures varied from 14° at Windsor, Ontario to -39° at Eureka, Northwest Territories. Cape Scott recorded the greatest precipitation total, 84.5 mm.

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 last week of November was again mild, with mean weekly temperatures exceeding 12° above normal in some central areas. The 4° at Watson Lake on the 28th equalled the daily record set in 1969.

Snowfalls were generally light although some areas of the Ogilvie Mountains recorded 20 cm to 30 cm and the Coast Mountains 60 cm to 70 cm.

The mild November resulted in rivers and lakes remaining open much later than normal. This has caused transportation delays as ice bridges are still not possible on the North Canol and Dempster Highways.

NORTHWEST TERRITORIES

Relatively mild weather continued throughout most of the Territories. Mean temperatures exceeded 11° above normal in some areas of the Keewatin District. The mean temperature at Eureka was 4° above normal although the mercury fell to -39° on the 30th.

Precipitation was extensive and

Pond Inlet measured the greatest total, 20.8 mm.

Hudson Bay is now ice covered but with about 60% open water. Ice conditions in the Beaufort Sea are very favourable and the island Tarsuit is still being supplied from McKinley Bay.

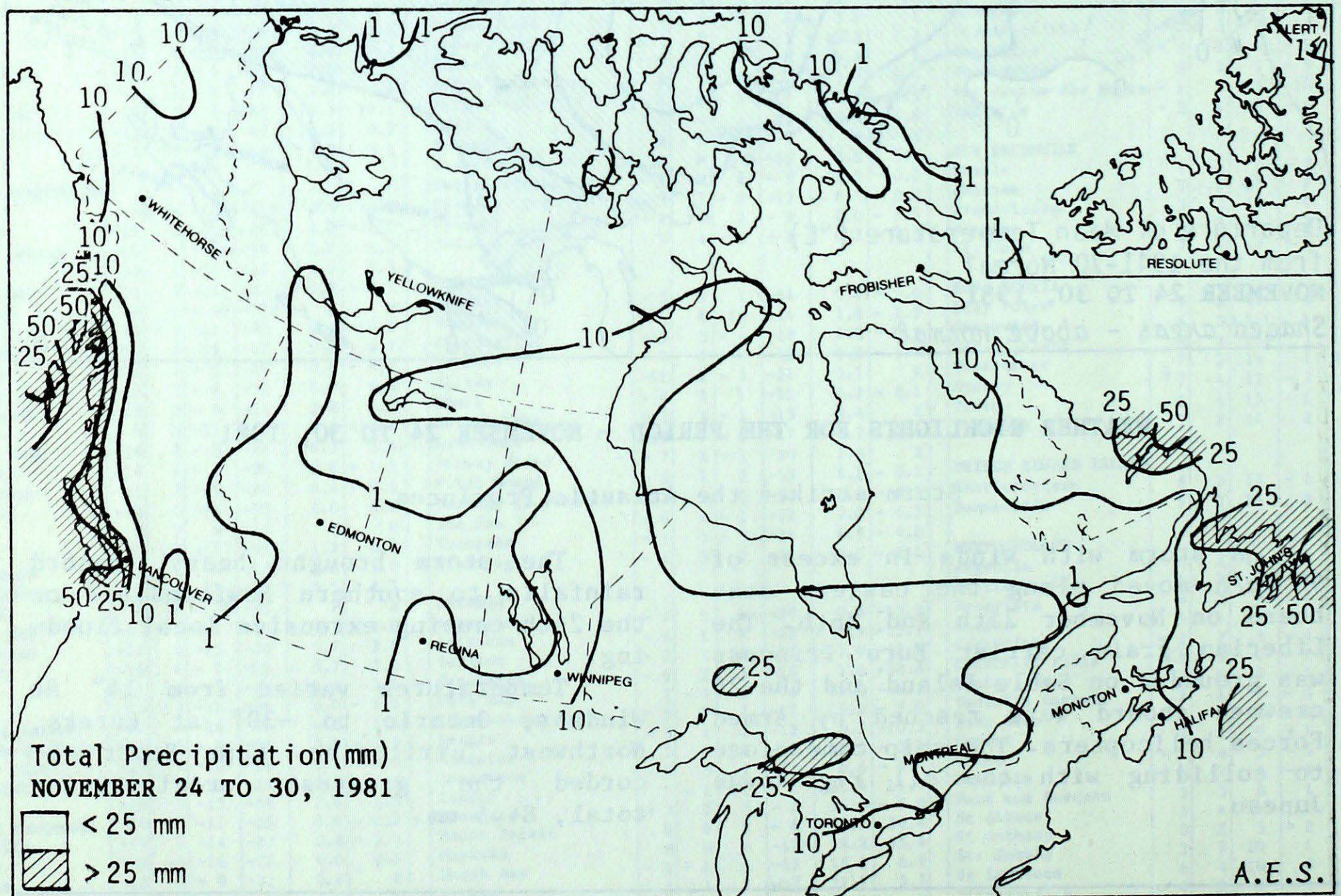
BRITISH COLUMBIA

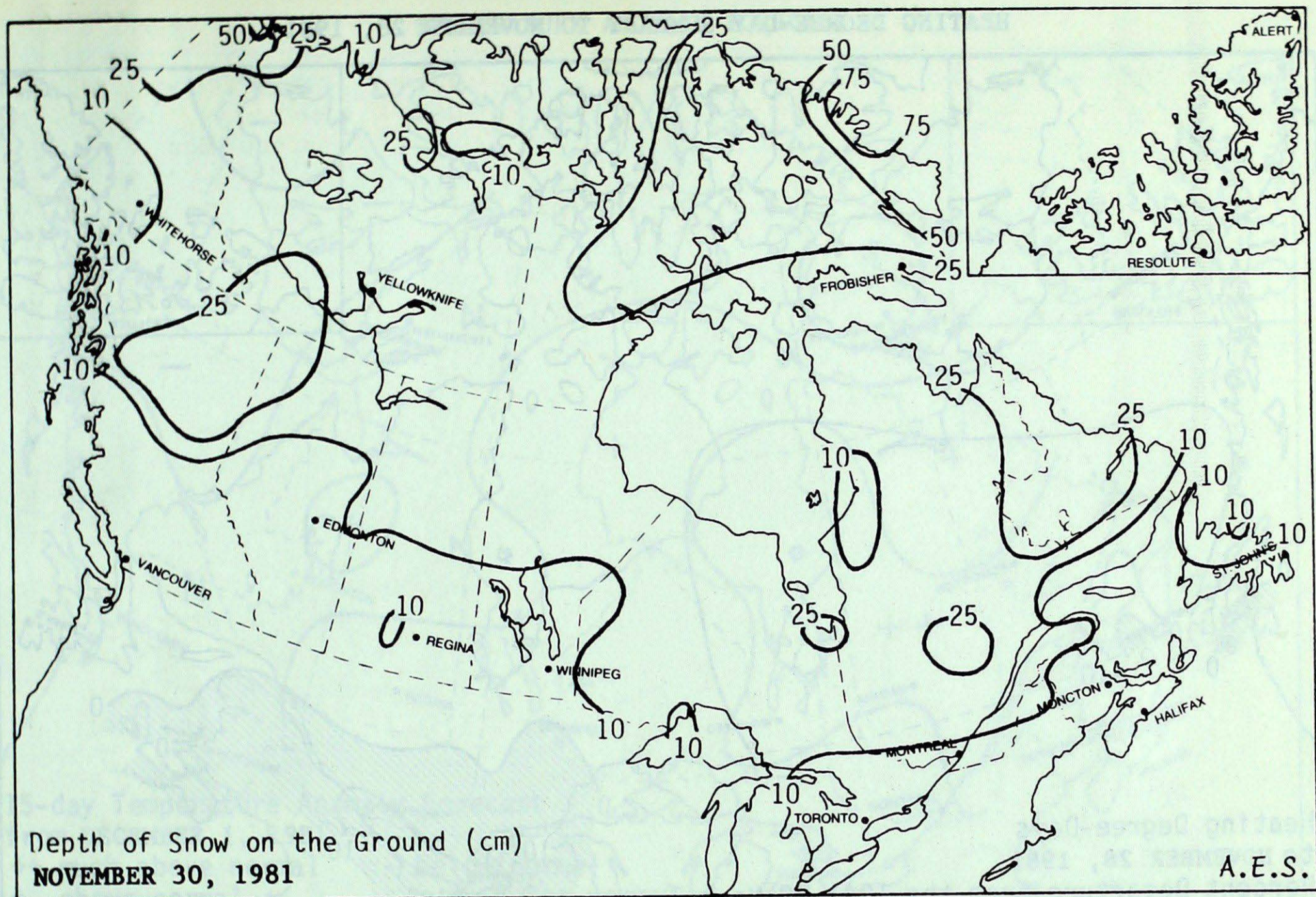
Cloudy skies and near normal temperatures continued in central and southern areas of the province. In contrast, sunny skies and mean temperatures more than 6° above normal were reported in some northern areas.

Snow covered the northern half of the province. Depth of snow on the ground was generally between 30 cm to 40 cm. Cape Scott reported the greatest weekly precipitation total in the country, 84.5 mm.

PRAIRIE PROVINCES

Temperatures continued well above normal throughout most of the Prairies. Mean temperatures in northwestern





Saskatchewan exceeded 11° above normal. The mercury reached 6° at many stations in Alberta on the 29th.

Little or no precipitation was reported at the majority of stations this week. The total November snowfall in most areas was well below normal.

ONTARIO

Mean temperatures across the province varied from near normal in southern Ontario to more than 10° above normal in some areas of northern Ontario. The mercury varied from 14° at Windsor on the 26th to -19° at Kapuskasing and Timmins on the 24th.

Snow dominated the weather in northern Ontario. Moosonee ended the week with 30 cm of snow on the ground. Timmins measured 23 cm and Kapuskasing and Geraldton 22 cm. South of the Lake Simcoe area the precipitation fell as rain keeping southern Ontario generally snow free.

This November was the sunniest (120 hours) in Toronto since 1917 (125 hours).

QUEBEC

The mercury remained near its normal levels this week. Mean temperatures varied from 1° below normal in southern areas to 3° above normal in northern areas.

All stations reported below normal weekly precipitation totals. Ste Agathe des Monts recorded the greatest total with only 17.1 mm.

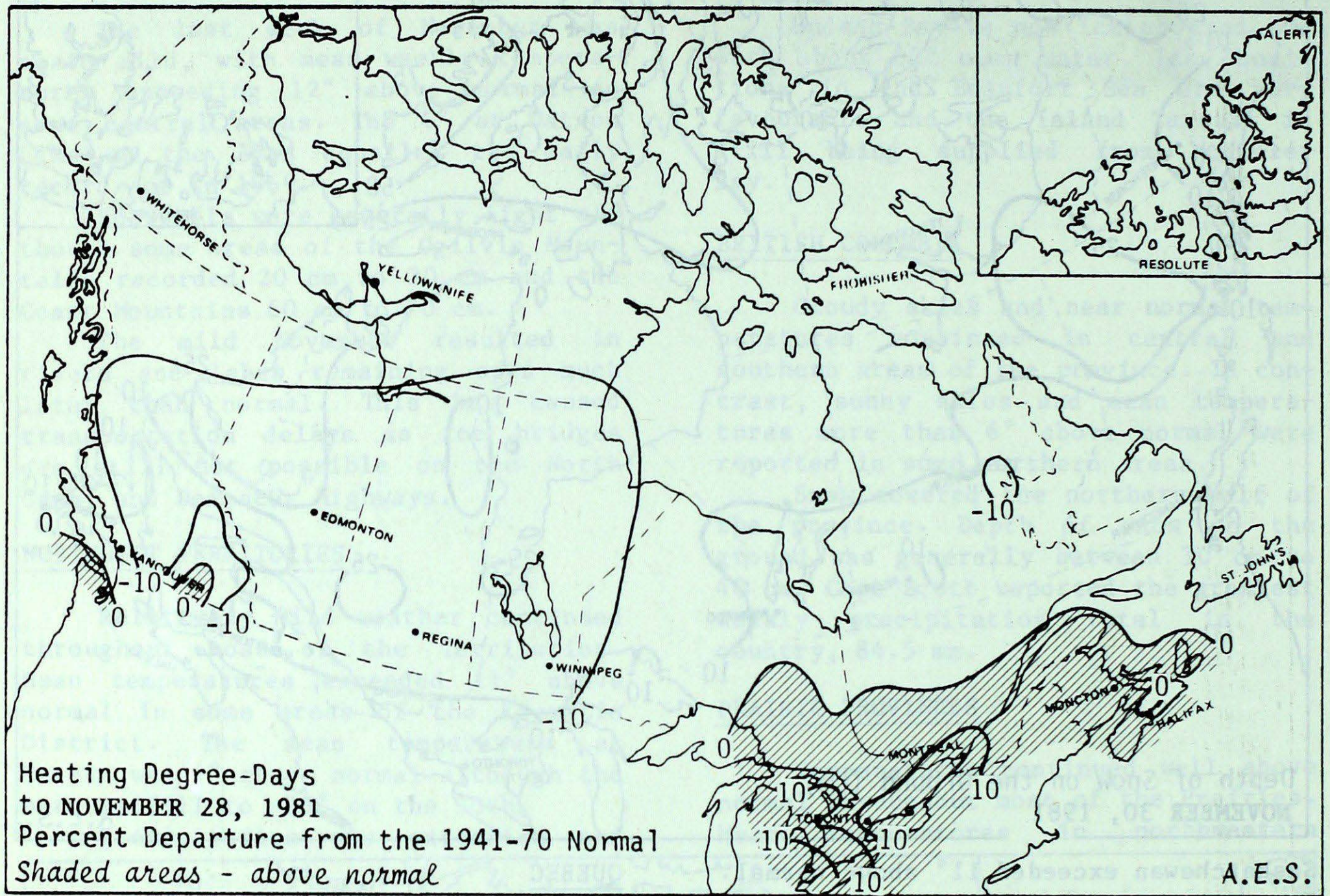
The past two weeks have been dreary for extreme southeastern Quebec. Sherbrooke has recorded only 2.4 hours of sunshine since November 16th.

ATLANTIC PROVINCES

A major storm struck the Atlantic Provinces on November 25th to 26th. Winds in excess of 90 km/h grounded the Liberian grain carrier Euro Princess on the eastern shore of Sable Island. Armed Forces helicopters rescued the 26 crewmen. The ship passed very close to the Rowan Juneau oil rig stationed 6 km off Sable Island.

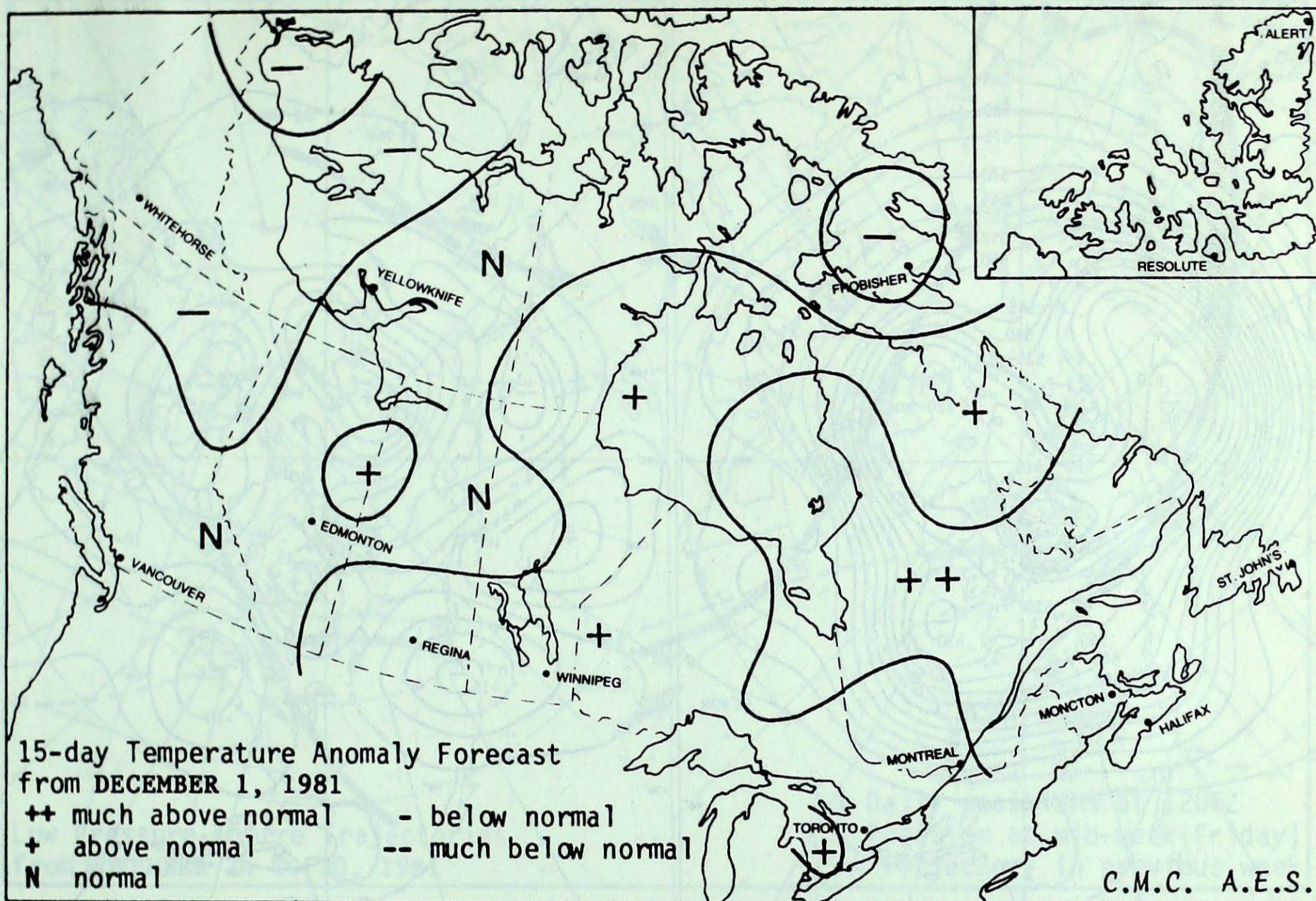
(continued on page 7)

HEATING DEGREE-DAY SUMMARY TO NOVEMBER 28, 1981

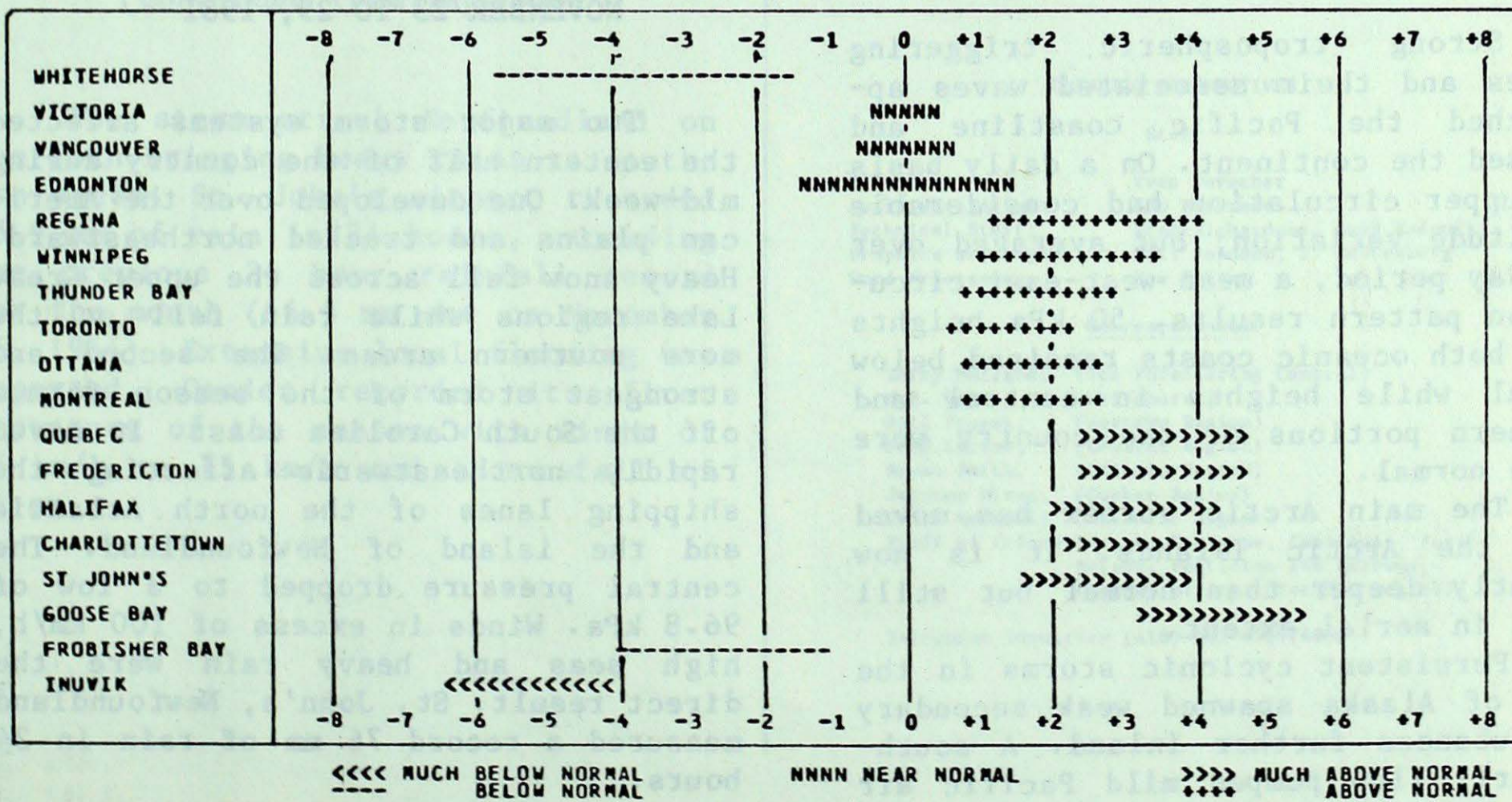


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	1064.5	-120.5	3641.5	-145.5	96
Inuvik	1072.0	-31.0	2694.0	-46.0	98
Whitehorse	635.5	-113.5	1744.0	-150.0	92
Vancouver	284.5	-47.5	700.5	-65.5	91
Edmonton Mun	468.5	-145.5	1085.0	-261.0	81
Calgary	444.5	-126.5	1162.0	-175.0	87
Regina	483.5	-157.5	1105.5	-202.5	85
Winnipeg	466.5	-153.5	1058.5	-151.5	87
Thunder Bay	480.5	-85.5	1214.0	-45.0	96
Windsor	346.5	-28.5	714.0	60.0	109
Toronto	400.0	-2.0	909.0	126.0	116
Ottawa	453.5	-2.5	1005.0	98.0	111
Montreal	445.5	15.5	989.0	157.0	119
Quebec	495.0	8.0	1138.5	97.5	109
Saint John, N.B.	430.5	4.5	1025.0	13.0	101
Halifax	358.5	-0.5	807.0	25.0	103
Charlottetown	392.0	-13.0	896.5	7.5	101
St. John's, Nfld.	384.5	-18.5	1087.5	-25.5	98

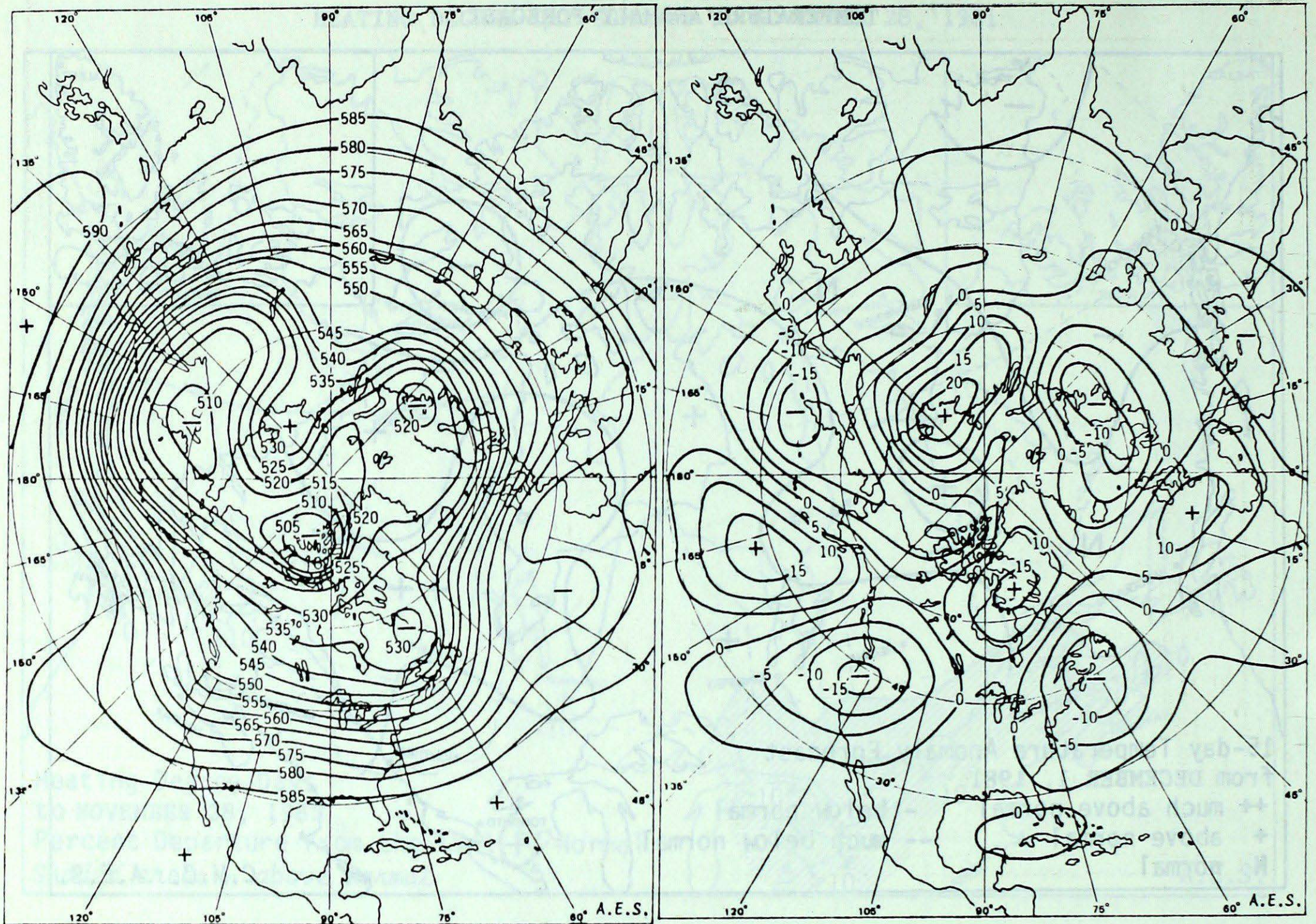
TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR DEC 1 1981 TO DEC 15 1981



ATMOSPHERIC CIRCULATION



7-day Mean 50 kPa Height (dam)
NOVEMBER 23 TO 29, 1981

7-day Mean 50 kPa Height Anomaly
(5 dam intervals)
NOVEMBER 23 TO 29, 1981

Strong tropospheric triggering pulses and their associated waves approached the Pacific coastline and crossed the continent. On a daily basis the upper circulation had considerable amplitude variation; but averaged over a 7 day period, a mean west-east circulation pattern results. 50 kPa heights over both oceanic coasts remained below normal while heights in central and northern portions of the country were above normal.

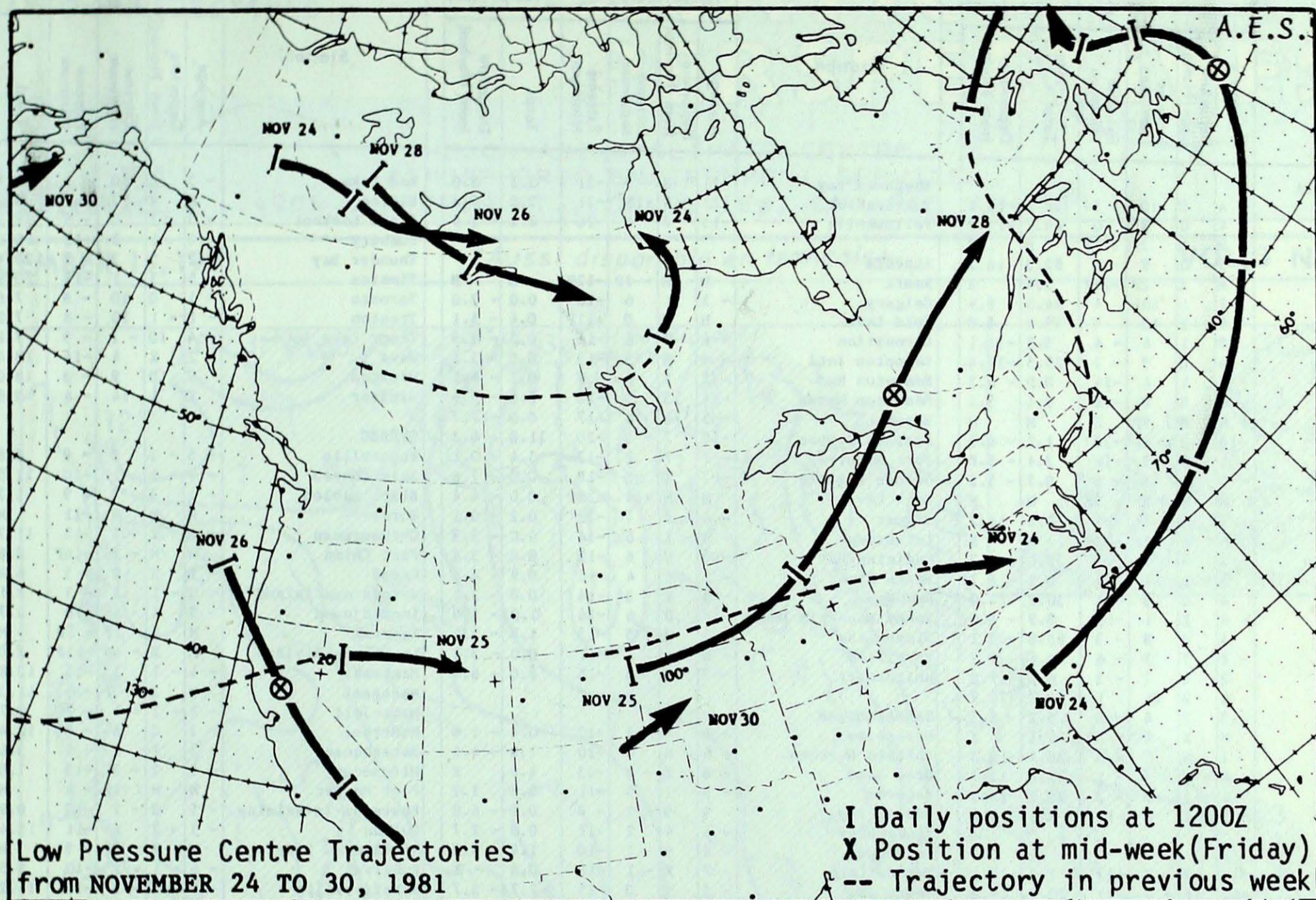
The main Arctic vortex has moved over the Arctic Islands. It is now slightly deeper than normal but still small in aerial extent.

Persistent cyclonic storms in the Gulf of Alaska spawned weak secondary disturbances further inland. A southwesterly flow pumped mild Pacific air into the Yukon and Northwest Territories. As a result temperatures across the Canadian north remained well above normal.

Two major storm systems affected the eastern half of the country during mid-week. One developed over the American plains and tracked northeastward. Heavy snow fell across the upper Great Lake regions while rain fell on the more southern areas. The second and strongest storm of the season formed off the South Carolina coast. It moved rapidly northeastwards affecting the shipping lanes of the north Atlantic and the island of Newfoundland. The central pressure dropped to a low of 96.8 kPa. Winds in excess of 100 km/h, high seas and heavy rain were the direct result. St. John's, Newfoundland measured a record 76 mm of rain in 24 hours.

Andy Radomski

LOW PRESSURE CENTRE TRAJECTORIES



(continued from page 3)

The storm struck Newfoundland on the 26th bringing heavy rains to southern areas. St. John's airport recorded 75.9 mm of rain in 24 hours, exceeding the previous 24 hour rainfall record for the month (64.5 mm set on November 15, 1964). Extensive local flooding was reported. Gander recorded its first snowstorm of the season with winds of 65 km/h to 75 km/h and a snowfall of 21 cm.

CLIMATIC PERSPECTIVES

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TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. DECEMBER 1, 1981

Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
BRITISH COLUMBIA							Shepherd Bay	-21	8	-9	-31	3.1	2.0	Red Lake	-3	8	0	-6	14.6	5.6
Abbotsford	4	0	10	-1	31.2	-16.1	Tuktoyaktuk	-21	4	-15	-31	2.0	0.6	Simcoe	M	M	13P	-7	3.0	-15.3
Alert Bay	4	0	8	0	46.2	-13.2	Yellowknife	-13	7	-4	-26	2.1	-1.9	Sioux Lookout	-3	7	0	-9	18.2	8.1
Blue River	M	X	2P	-5P	M	X	ALBERTA							Sudbury	-4	1	3	-12	15.6	-3.0
Bull Harbour	5	0	9	-1	82.3	16.2	Banff	M	M	-1P	-12P	M	M	Thunder Bay	-2	5	3	-9	20.4	8.4
Burns Lake	M	X	2P	-10P	5.4	X	Calgary	-3	1	6	-16	0.0	-2.0	Timmins	-5	3	1	-19	20.9	-0.9
Cape Scott	7	1	10	4	84.5	9.4	Calgary	-3	1	6	-16	0.0	-2.0	Toronto	1	0	10	-8	7.6	-6.5
Cape St James	8	2	12	4	49.9	5.0	Cold Lake	M	M	0	-11P	0.4	-5.1	Trenton	-1	-1	10	-8	7.2	-13.9
Castlegar	0	1	6	-6	5.3	-11.1	Coronation	-6	3	6	-14	0.0	-2.9	Trout Lake	-4	10	-1	-9	7.8	0.1
Comox	4	0	9	-1	25.5	-32.4	Edmonton Intl	-4	6	5	-13	0.0	-5.1	Wawa	-2	X	4	-14	18.4	X
Cranbrook	-4	1	4	-14	0.0	-6.3	Edmonton Mun	-2	5	6	-9	0.2	-4.1	Warton	0	0	9	-8	18.0	-7.0
Dease Lake	-6	6	0	-16	9.1	3.1	Edmonton Namao	-4	5	5	-10	0.8	-5.6	Windsor	2	1	14	-4	3.8	-7.7
Estevan Point	M	M	9P	2	M	M	Edson	-5	4	6	-17	0.0	-7.7	QUÉBEC						
Fort Nelson	-16	2	-4	-28	1.2	-6.3	Fort Chipewyan	-10	7	-2	-20	11.8	6.7	Bagotville	-5	-1	0	-9	6.8	-13.9
Fort St John	-5	6	3	-16	2.4	-5.8	Fort McMurray	-7	7	2	-13	5.4	-0.1	Baie Comeau	-4	-1	1	-10	11.5	-20.7
Kamloops	0	1	6	-6	0.7	-5.2	Grande Prairie	-7	4	5	-18	0.0	-7.6	Blanc Sablon	-1	3	3	-9	1.2	-29.0
Langara	M	M	9P	3P	M	M	High Level	M	M	-4	-25P	0.0	-4.4	Border	M	M	M	-11	M	M
Lytton	1	1	7	-5	1.6	-14.7	Jasper	-4	3	1	-11	0.2	-10.1	Chibougamau	-8	X	X	-12	11.7	X
Mackenzie	M	X	1P	-12P	M	X	Lethbridge	-3	-1	6	-14	0.0	-5.3	Fort Chimo	M	M	-2	-16P	2.6	-7.9
McInnes Island	6	2	9	3	79.0	0.3	Medicine Hat	-4	0	6	-12	0.0	-3.4	Gaspé	-1	X	2	-5	6.4	X
Penticton	2	1	7	-4	0.2	-6.2	Peace River	-7	6	4	-16	0.9	-4.8	Grindstone Island	0	-1	3	-3	2.1	-23.4
Port Hardy	4	0	8	-1	50.2	-14.0	Red Deer	-5	2	5	-14	0.0	-3.1	Inoucdjouac	-9	1	-1	-18	3.7	-4.7
Prince George	-4	2	1	-11	8.9	-4.6	Rocky Mountain House	-6	0	6	-16	1.0	-1.5	Koartak	M	X	-2P	-7P	M	X
Prince Rupert	-4	2	8	-3	85.8	-3.1	Slave Lake	-5	7	5	-13	1.8	-5.1	La Grande Rivière	M	X	-4P	-11P	2.0	X
Quesnel	-2	3	3	-6	6.4	-3.2	Vermilion	-6	4	2	-12	0.0	-3.1	Maniwaki	-4	-1	3	-15	12.8	-4.8
Revelstoke	2	4	7	-3	6.0	-17.8	Whitecourt	-7	3	3	-16	0.0	-6.4	Matagami	M	X	-3P	-16	11.3	X
Sandspit	6	2	11	1	24.3	-29.7	SASKATCHEWAN							Mont-Joli	-3	-1	-1	-7	9.7	-13.0
Smithers	-3	2	4	-6	5.2	-8.3	Broadview	-6	4	-1	-12	0.4	-1.6	Montréal	-1	0	6	-8	12.4	-9.2
Stewart	M	X	4	-3P	52.1	X	Buffalo Narrows	-6	8	0	-10	1.8	-4.6	Natashquan	-3	1	3	-9	3.6	-23.5
Terrace	1	4	5	-3	36.4	-19.5	Cree Lake	-8	X	-1	-13	4.6	X	Nitchecon	-9	2	-3	-15	1.3	-11.5
Vancouver	4	-1	9	-1	51.4	11.7	Estevan	-5	1	0	-11	5.8	1.2	Port Menier	M	M	1P	-6	M	M
Victoria	4	-1	8	-2	20.9	-14.5	Hudson Bay	-4	9	2	-8	0.0	-6.8	Poste-de-la-Baleine	-5	3	-1	-10	0.2	-15.9
Williams Lake	-5	2	0	-10	2.8	-4.6	Kindersley	-6	4	2	-12	0.0	-2.7	Québec	-5	-2	1	-11	15.4	-9.1
YUKON							La Ronge	-6	9	-1	-10	1.4	-4.8	Rivière du Loup	M	M	-2P	-9	M	M
Burwash	-10	7	2	-23	1.2	-4.2	Meadow Lake	-7	X	-1	-18	0.0	X	Roberval	-6	-1	-2	-10	9.0	-14.4
Dawson	-12	11	-5	-23	20.7	15.8	Moose Jaw	-5	1	0	-15	2.7	-2.7	Schefferville	-9	3	-3	-15	11.2	-2.9
Komakuk Beach	-22	1	-15	-31	1.0	-0.2	Nipawin	-4	X	2	-8	0.0	X	Sept-Îles	-5	1	2	-11	0.2	-33.7
Mayo	-9	13	-1	-18	10.5	6.2	North Battleford	-5	5	3	-14	0.0	-4.0	Sherbrooke	-4	-2	4	-11	16.0	-1.6
Shingle Point	-22	3	-11	-32	7.0	6.4	Prince Albert	-4	8	3	-9	0.0	-5.1	Ste Agathe des Monts	-5	0	2	-12	17.1	-9.6
Watson Lake	-14	5	4	-24	2.5	-7.5	Regina	-6	2	-1	-15	2.5	-1.4	Val d'Or	-7	0	-1	-15	15.0	-7.4
Whitehorse	-4	9	6	-18	3.2	-2.8	Rockglen	M	X	-2P	-16P	M	X	NEW BRUNSWICK						
NORTHWEST TERRITORIES							Saskatoon	-4	6	4	-10	0.2	-4.2	Charlo	-3	2	1	-6	3.6	-22.5
Alert	-23	4	-9	-33	0.6	-0.8	Saskatoon	-7	-1	0	-16	0.2	-3.0	Chatham	-2	0	3	-6	3.0	-26.4
Baker Lake	-17	8	-8	-30	5.6	3.5	Swift Current	-7	11	-1	-14	10.9	6.1	Fredericton	-2	-1	5	-9	3.4	-26.3
Broughton Island	-14	4	-10	-22	0.0	-3.1	Uranium City	-7	11	-1	-14	10.9	6.1	Moncton	-2	-2	2	-9	6.1	-20.4
Byron Bay	M	M	-10P	-33	3.1	2.5	Wynyard	-5	7	0	-10	1.3	-2.9	Saint Jean	-2	-2	4	-6	2.6	-41.9
Cambridge Bay	-26	1	-8	-37	2.4	1.2	Yorkton	-4	7	4	-10	0.0	-6.5	NOVA SCOTIA						
Cape Dorset	M	X	-3P	-19P	3.4	X	MANITOBA							Eddy Point	1	X	4	-3	17.6	X
Cape Dyer	-20	-2	-8	-37	0.2	-17.5	Bissett	-3	9	0	-11	3.2	-4.8	Greenwood	0	-2	5	-5	5.8	-25.7
Cape Hooper	-14	5	-10	-18	1.2	-2.1	Brandon	-4	6	2	-9	0.5	-4.1	Sable Island	4	-2	8	-1	48.4	14.0
Cape Parry	-21	3	-12	-27	0.2	-0.9	Churchill	-8	9	-3	-15	12.6	4.5	Shearwater	0	-3	6	-6	2.0	-40.7
Cape Young	-24	0	-15	-35	5.0	4.7	Dauphin	-4	6	5	-13	0.0	-8.5	Sydney	1	-2	4	-3	20.0	-22.5
Clinton Point	-22	0	-10	-31	1.3	0.3	Gillam	-7	X	-3	-13	11.6	X	Truro	M	M	3P	-6	M	M
Clyde	-15	5	-8	-23	0.4	-4.1	Gimli	-2	7	1	-7	0.3	-9.5	Yarmouth	0	-3	7	-3	4.2	-32.0
Contwoyto Lake	M	M	-9	-33P	4.8	0.7	Island Lake	M	X	-1P	-6	M	X	PRINCE EDWARD ISLAND						
Coppermine	-21	2	-10	-31	2.8	0.5	Lynn Lake	-9	11	-2	-19	0.0	-4.6	Charlottetown	-1	-2	2	-4	12.5	-20.1
Coral Harbour	-10	11	-4	-25	11.8	8.8	Norway House	-4	X	-1	-12	2.9	X	Summerside	0	-1	3	-4	2.8	-24.8
Dewar Lakes	-16	6	-11	-23	16.6	16.2	Pilot Mound	-5	4	-2	-12	6.9	0.4	NEWFOUNDLAND						
Ennadai	M	M	M	-20	M	M	Portage la Prairie	-3	5	1	-9	0.0	-9.2	Argentia	4	X	7	0	66.1	X
Eureka	-28	4	-11	-39	2.4	2.0	The Pas	-4	9	1	-9	1.0	-5.7	Battle Harbour	-1	1	2	-7	18.2	-2.6
Fort Reliance	-11	10	-6	-18	2.1	-2.0	Thompson	-8	11	-3	-15	3.8	-1.9	Bonavista	2	-1	5	-3	27.9	6.5
Fort Simpson	-18	5	-11	-28	0.4	-5.2	Winnipeg	-3	6	0	-8	2.3	-4.8	Burgeo	1	-1	5	-4	16.8	-49.0
Fort Smith	-10	8	-2	-18	3.8	-2.0	ONTARIO							Cartwright	-1	3	2	-4	53.2	33.4
Frobisher Bay	-12	4	-4	-23	4.3	-3.6	Armstrong	-3	9	1	-8	18.6	4.8	Churchill Falls	-7	7	-3	-14	3.8	-16.3
Gladman Point	-23	6	-12	-32	0.4	-0.4	Atikokan	-3	8	2	-11	18.9	15.5	Comfort Cove	0	1	4	-5	32.8	-2.1
Hall Beach	-15	11	-6	-29	6.7	4.2	Earlton	-5	1	1	-14	25.6	7.9	Daniel's Harbour	-1	-1	2	-4	26.8	-0.5
Hay River	-12	5	1	-22	1.6	-5.5	Geraldton	-4	7	1	-16	26.2	17.2	Deer Lake	M	M	4	-2P	M	M
Inuvik	-24	4	-16	-34	7.4	3.5	Gore Bay	0	1	5	-9	13.8	-6.4	Gander	-1	-1	3	-4	38.2	11.7
Jenny Lind Island	-23	5	-9	-33	4.6	3.7	Kapuskasing	-5	4	1	-19	23.6	2.9	Goose	-3	3	0	-7	11.7	-8.5
Lady Franklin Point	-23	1	-11	-30	2.0	1.5	Kenora	-3	6	0	-7	15.4	6.1	Hopedale	M	M	1P	-6P	M	M
Longstaff Bluff	-15	7	-8	-28	7.1	7.1	Kingston	0	0	9	-7	11.0	-11.6	Port aux Basques	2	-1	4	-1	12.2	-33.1
Mackar Inlet	-16	10	-8	-29	4.2	3.4	Lansdowne	-4	9	-1	-10	19.6	11.6	St Albans	1	0	4	-5	14.0</	