

CLIMATIC PERSPECTIVES

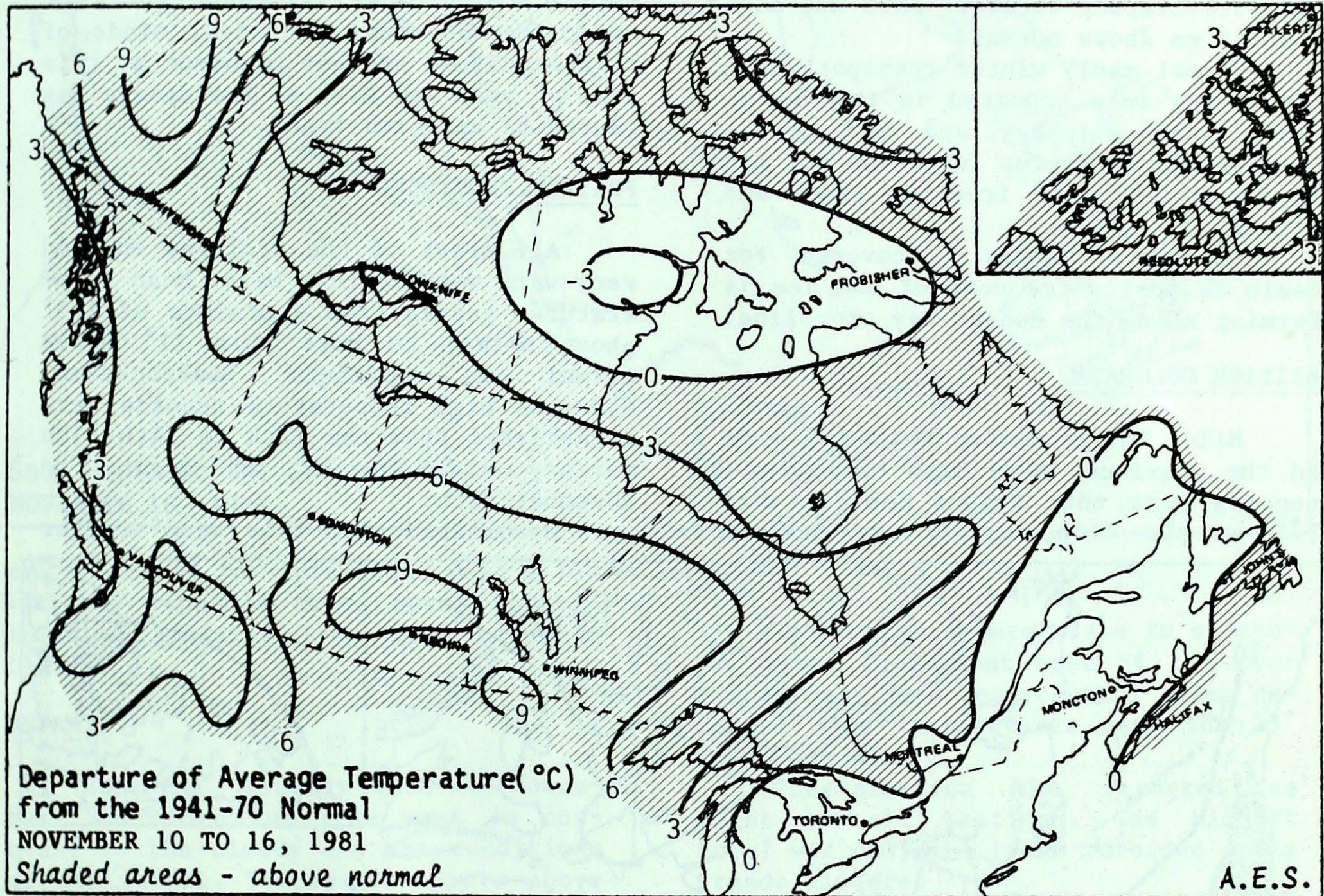
Canada

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

NOVEMBER 20, 1981

(Aussi disponible en français)

VOL.3 NO.46



WEATHER HIGHLIGHTS FOR THE PERIOD - NOVEMBER 10 TO 16, 1981

Most of Canada enjoys a mild mid-November

Most of the country, with the exception of eastern areas where seasonal temperatures prevailed, enjoyed a very mild week. Mean temperatures were more than 11° above normal in some areas of southern Saskatchewan and central Yukon. Below normal precipitation during the week added to the enjoyment.

Temperatures across the country varied from a minimum of -34° at Eureka, Northwest Territories, to a maximum of 20° at Regina, Saskatchewan. Cape Scott, British Columbia recorded 132.1 mm of precipitation. Clyde, Northwest Territories measured 101 cm of snow on the ground.

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

Mild weather prevailed throughout the Territories with exception of southern Baffin Island and the Keewatin District. Mean temperatures in some areas of west-central Yukon were more than 11° above normal. The mercury rose to 8° at Dawson and Hay River on the 11th and 12th respectively.

Precipitation was generally light but Fort Simpson recorded 33.8 mm, more than 26 mm above normal.

Normal early winter transportation conditions were reported in the Yukon. Roads were slippery and air travel hindered by extensive low cloud and fog in the vicinity of freezing lakes and rivers.

The Arctic is now ice covered. Fox Basin is mostly ice covered and ice is forming along the Hudson Bay shoreline.

BRITISH COLUMBIA

Mild, but unsettled weather covered the province. Some high temperature records were set. Prince George, with 17° on the 11th, set a new maximum

temperature record for the month of November.

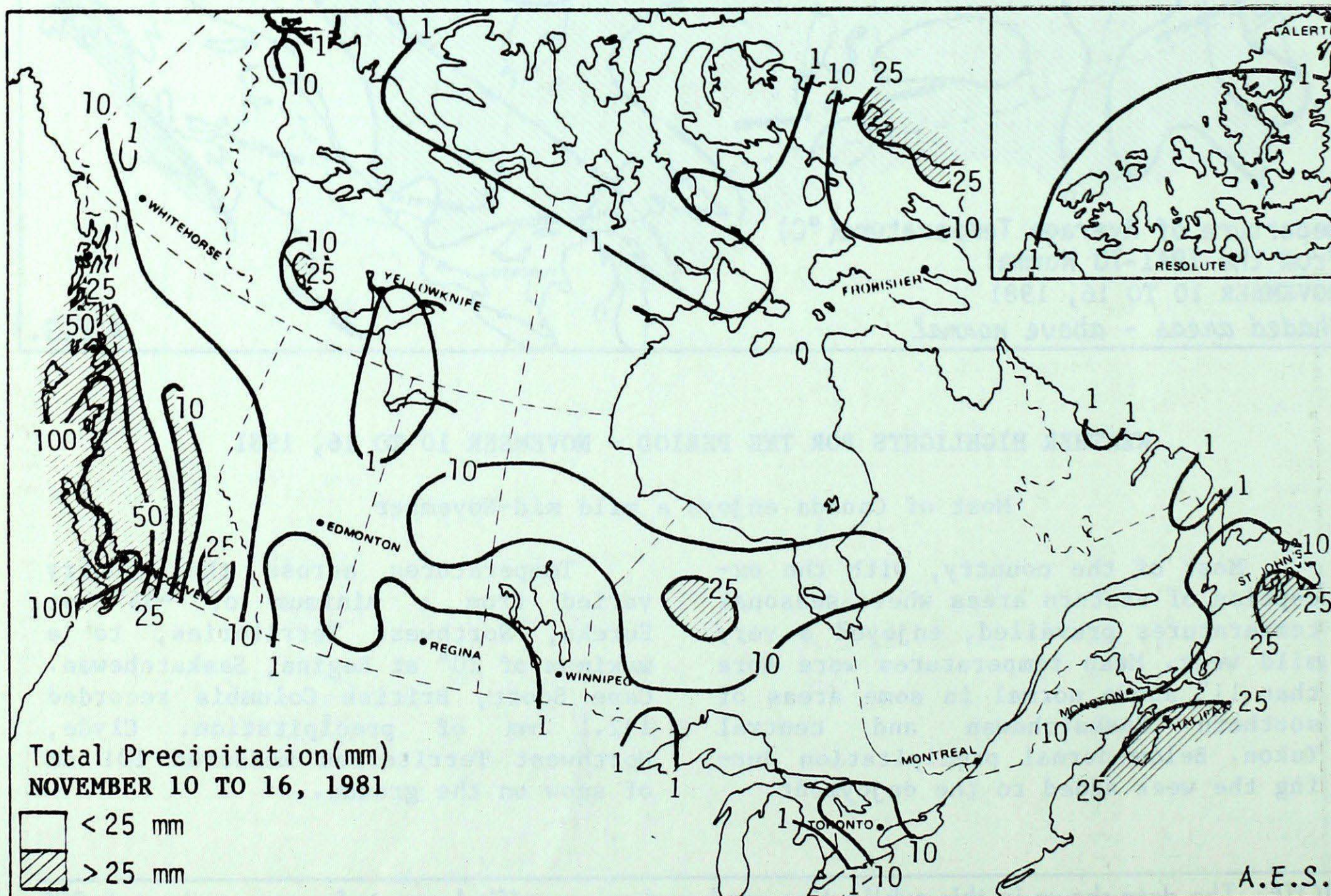
The majority of stations reported above normal precipitation totals for the week. Up to 50 cm of snow was reported in the southern mountains and passes.

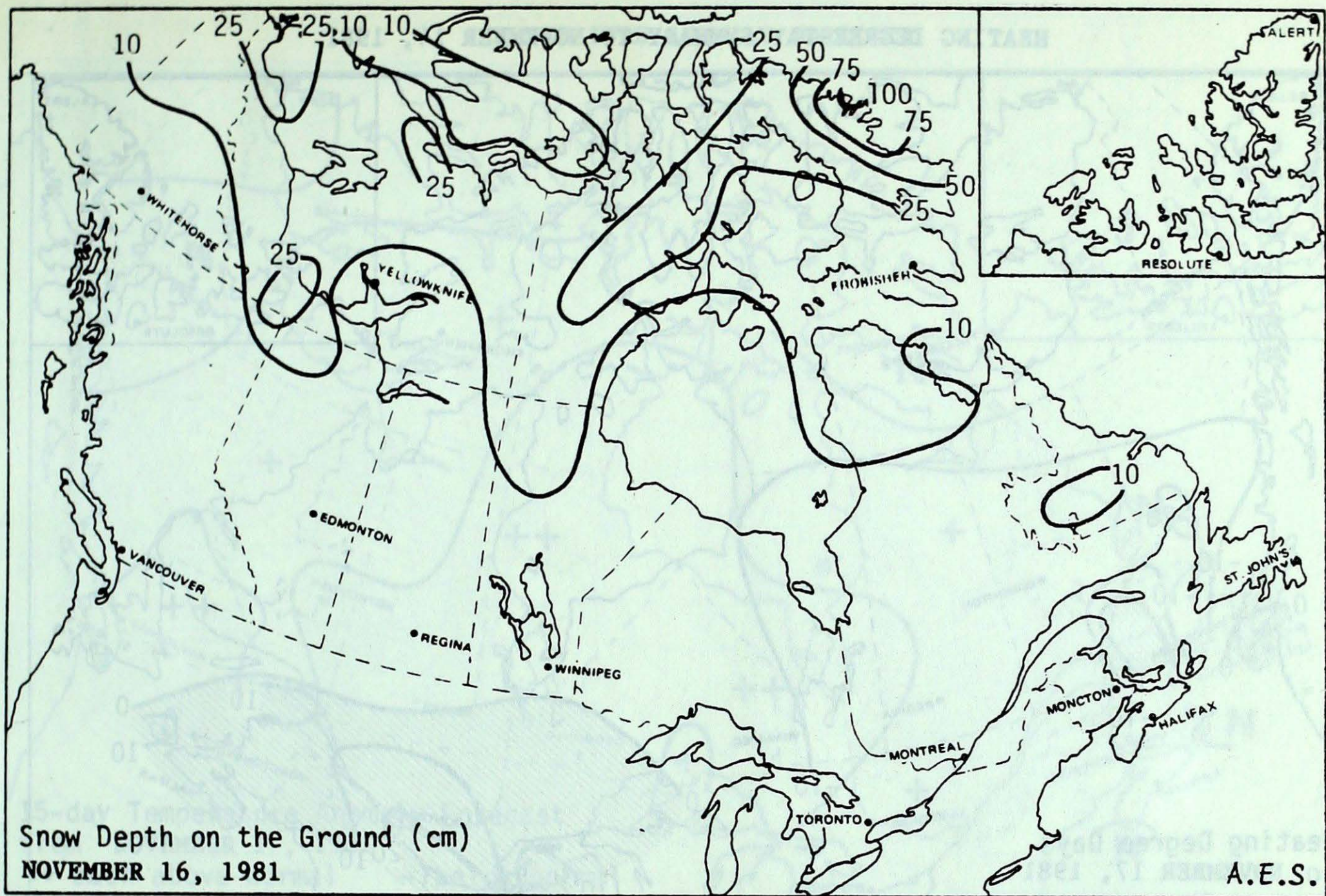
Thousands of homes in southwestern areas were left without electric power as a result of gale-force winds during the weekend. This was the worst black-out in two decades. Although gusts of up to 90 km/h were recorded, winds of this magnitude are not uncommon at this time of year and most of the damage was caused by uprooted trees.

PRAIRIE PROVINCES

All areas of the Prairies enjoyed very warm weather this week. Mean temperatures varied from a minimum of 3.5° above normal to more than 11° above normal in southern Saskatchewan. Numerous high temperature records were established from the 10th to 14th. The mercury rose to 20° at Regina on November 12th.

Associated with this warm weather





was a lack of precipitation. Only a few stations recorded above normal precipitation amounts. Lynn Lake measured 20.3 mm.

ONTARIO

Sunshine, usually rare in November, was plentiful this week in contrast to the cloudy and wet conditions of early fall. Temperatures were above normal with numerous record high temperatures reported. Muskoka reached 15° on November 14th exceeding the former record for the day of 14° set in 1958.

Snow did fall early in the week in northern areas with Armstrong recording 11 cm on the 10th, but by the end of the week there were no reports of snow on the ground from anywhere in the province.

QUÉBEC

Temperatures were close to seasonal values throughout most of the province. Only some west-central areas recorded mean temperatures more than 3° above normal.

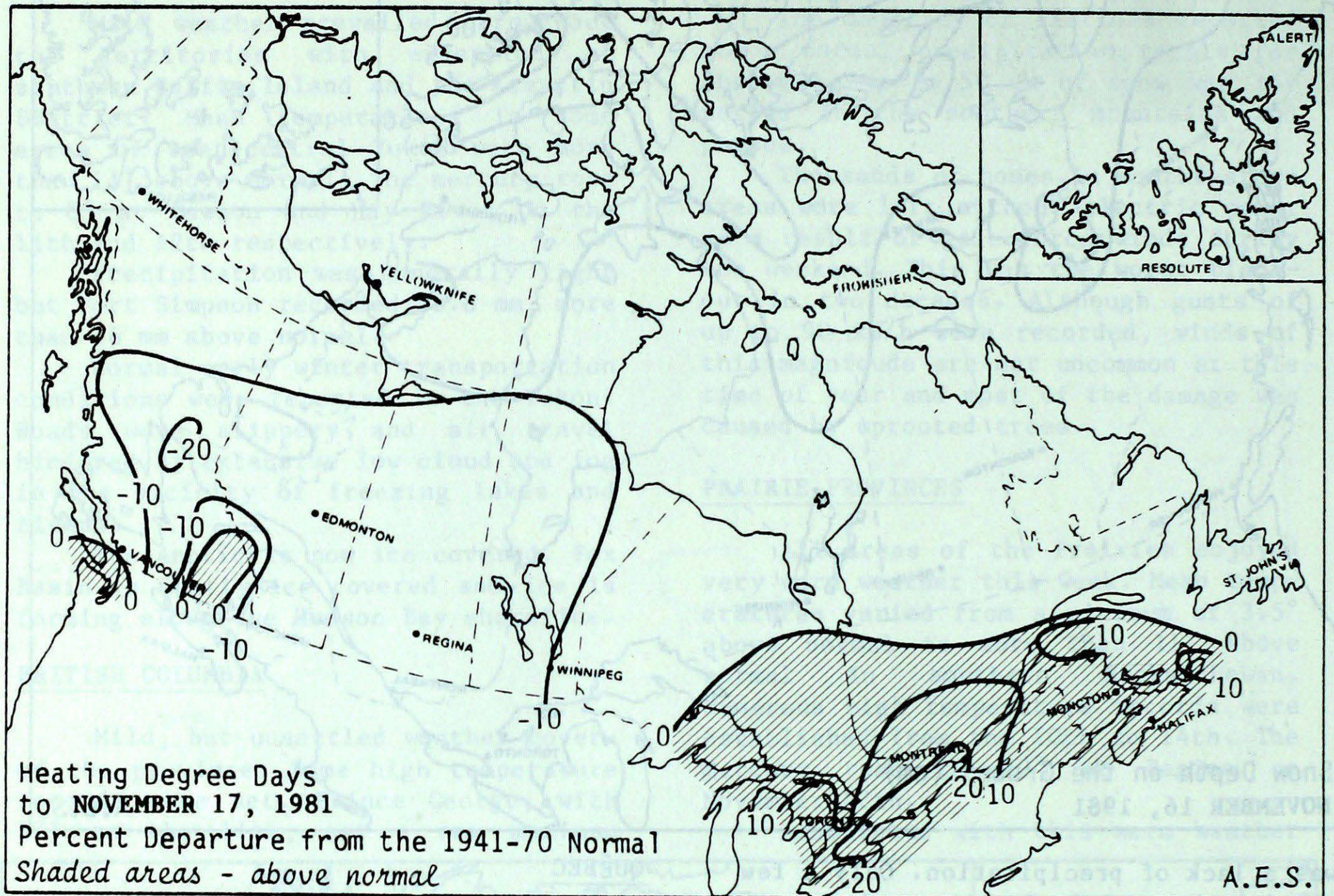
Precipitation was reported as light by all stations. The highest total was only the 14 mm recorded at La Grande Riviere.

ATLANTIC PROVINCES

Mean temperatures were close to or below normal throughout the Atlantic Provinces. An incursion of warm air at the end of the week held temperatures above freezing at the majority of stations.

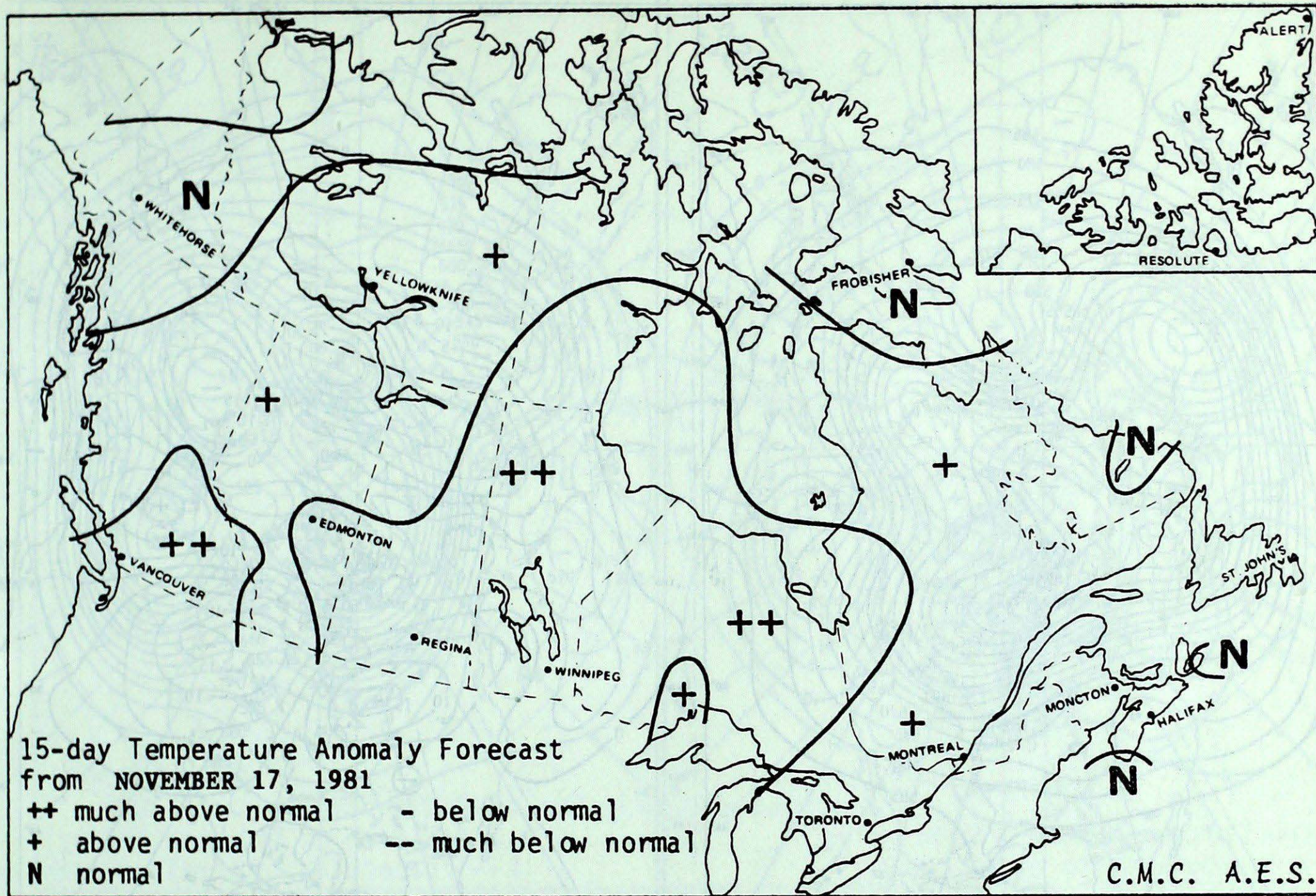
Precipitation was relatively light. Only Sable Island and St. Lawrence reported above normal weekly totals with 30.3 mm and 46.8 mm respectively.

HEATING DEGREE-DAY SUMMARY TO NOVEMBER 14, 1981

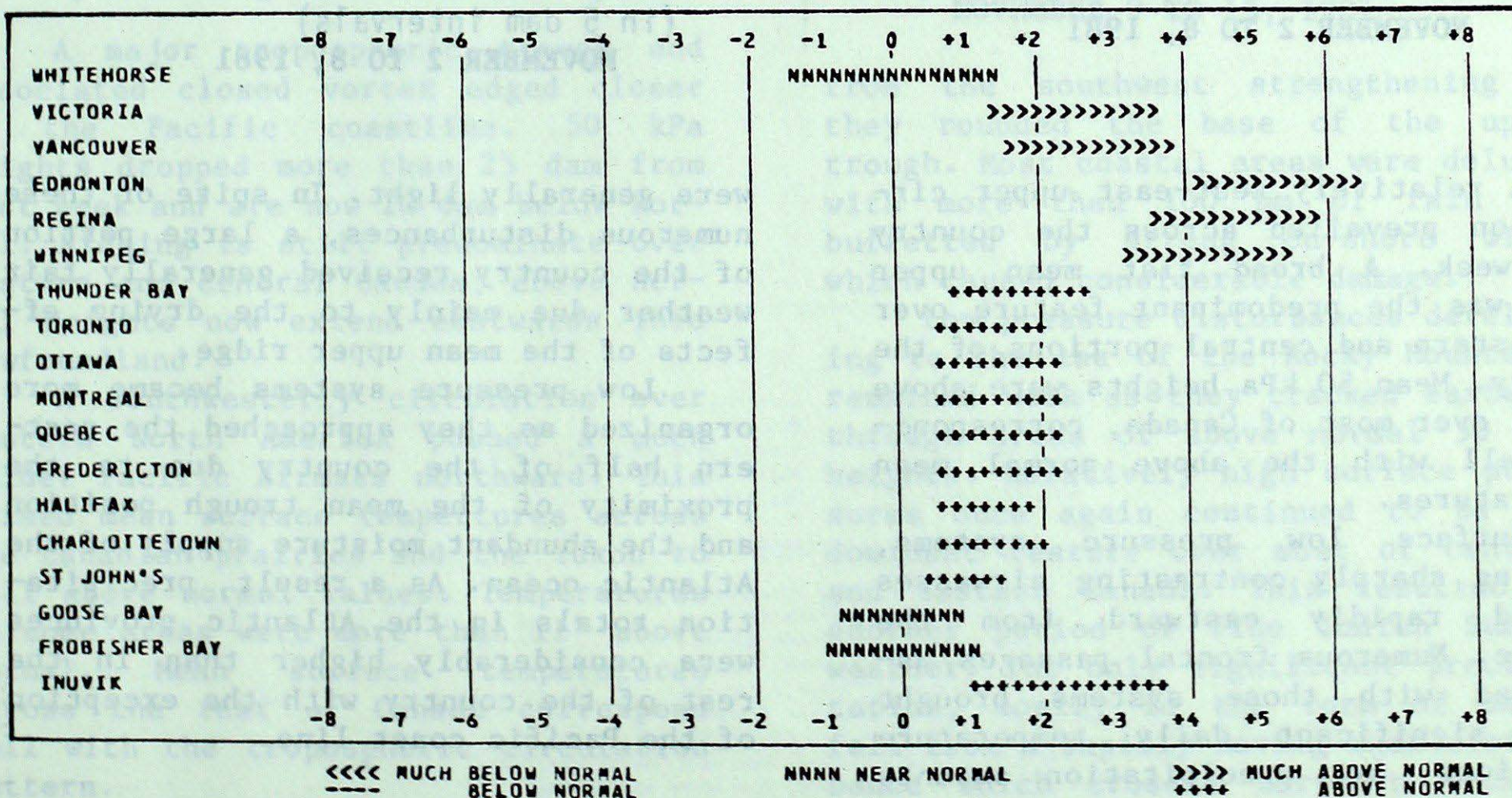


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	501.0	-65.0	3078.0	-90.0	97
Inuvik	506.0	-11.0	2128.0	-26.0	99
Whitehorse	297.0	-48.0	1405.5	-84.5	94
Vancouver	126.0	-28.0	542.0	-46.0	92
Edmonton Mun	191.0	-78.0	807.5	-193.5	81
Calgary	163.0	-96.0	880.5	-144.5	86
Regina	183.5	-96.5	805.5	-141.5	85
Winnipeg	184.0	-88.0	776.0	-86.0	90
Thunder Bay	207.5	-39.5	941.0	1.0	100
Windsor	149.0	-7.0	516.5	81.5	119
Toronto	186.0	14.0	695.0	142.0	126
Ottawa	211.0	16.0	762.5	116.5	118
Montreal	210.5	26.5	754.0	168.0	129
Quebec	235.5	18.5	879.0	108.0	114
Saint John, N.B.	206.0	16.0	800.5	24.5	103
Halifax	173.0	15.0	621.5	40.5	107
Charlottetown	192.0	12.0	696.5	32.5	105
St. John's, Nfld.	187.5	0.5	890.5	-6.5	99

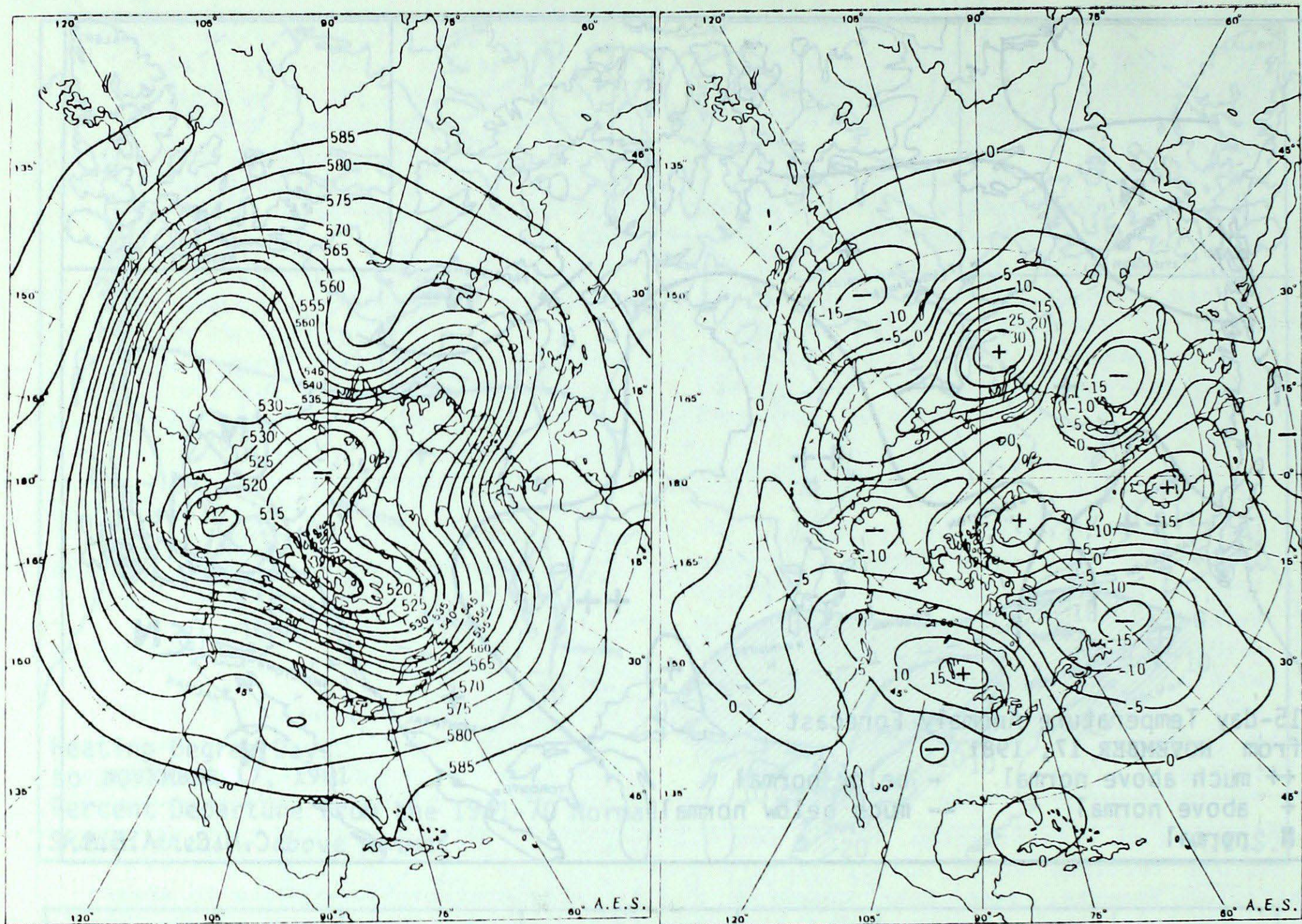
TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR NOV 17 1981 TO DEC 1 1981



ATMOSPHERIC CIRCULATION



7-day Mean 50 kPa Height Map (in dam)
NOVEMBER 2 TO 8, 1981

7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals)
NOVEMBER 2 TO 8, 1981

A relatively west-east upper circulation prevailed across the country this week. A broad flat mean upper ridge was the predominant feature over the western and central portions of the country. Mean 50 kPa heights were above normal over most of Canada, corresponding well with the above normal mean temperatures.

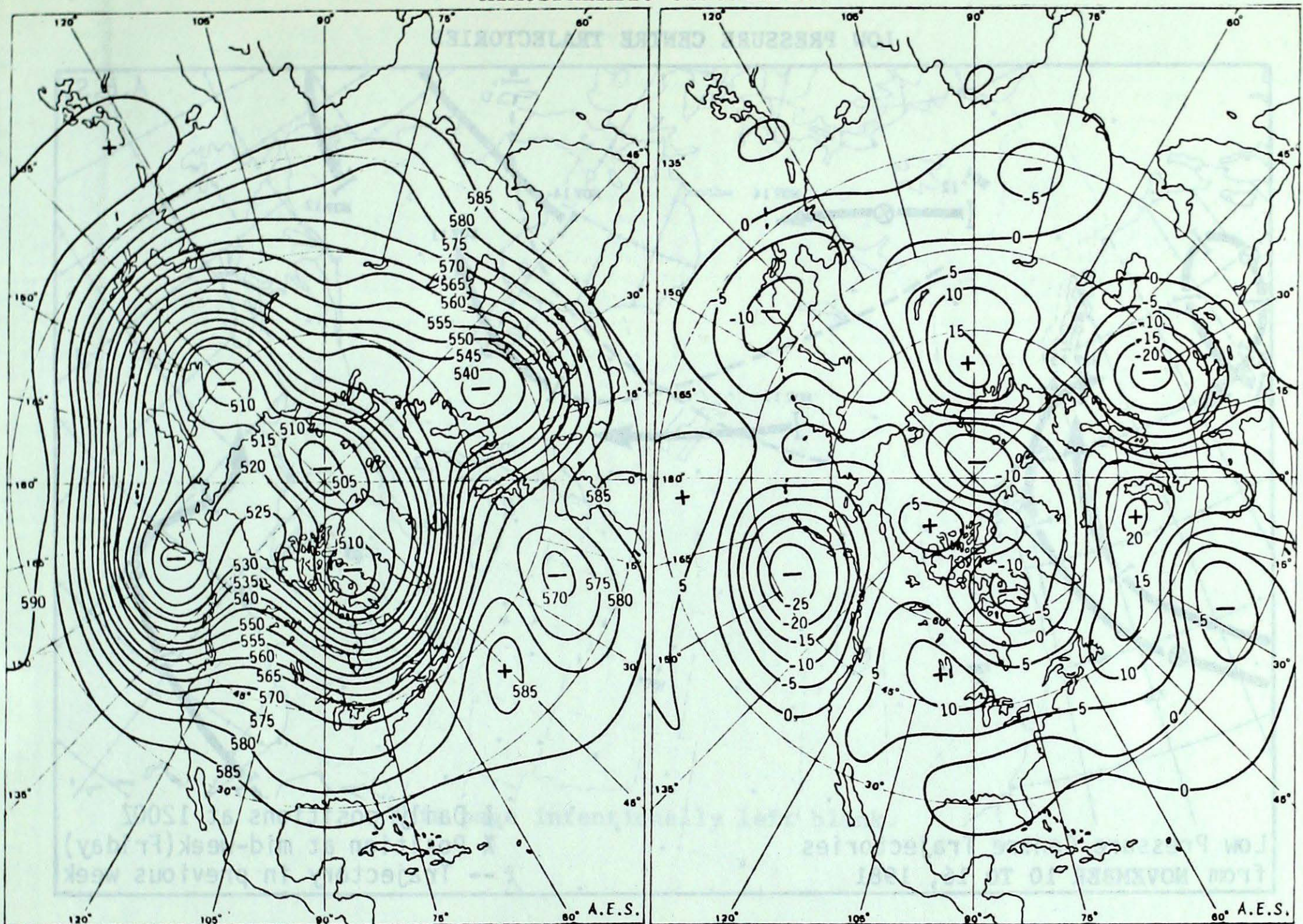
Surface low pressure systems, dividing sharply contrasting airmasses tracked rapidly eastward from the Pacific. Numerous frontal passages associated with those systems brought about significant daily temperature variations, but precipitation amounts

were generally light. In spite of these numerous disturbances, a large portion of the country received generally fair weather due mainly to the drying effects of the mean upper ridge.

Low pressure systems became more organized as they approached the eastern half of the country due to the proximity of the mean trough position and the abundant moisture supply of the Atlantic ocean. As a result, precipitation totals in the Atlantic provinces were considerably higher than in the rest of the country with the exception of the Pacific coast line.

Andy Radomski

ATMOSPHERIC CIRCULATION



7-day Mean 50 kPa Height Map (in dam)
NOVEMBER 9 TO 15, 1981

7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals)
NOVEMBER 9 TO 15, 1981

A major tropospheric trough and associated closed vortex edged closer to the Pacific coastline. 50 kPa heights dropped more than 25 dam from last week and are now 20 dam below normal. Ridging is still predominate over western and central Canada; above normal heights now extend eastwards into Newfoundland.

A southwesterly circulation over western North America pushed a much milder Pacific airmass northward. This raised mean surface temperatures across the Canadian prairies and the Yukon to well above normal values. Temperatures in some areas were more than 11° above normal. Mean surface temperatures across the rest of Canada correspond well with the tropospheric circulation pattern.

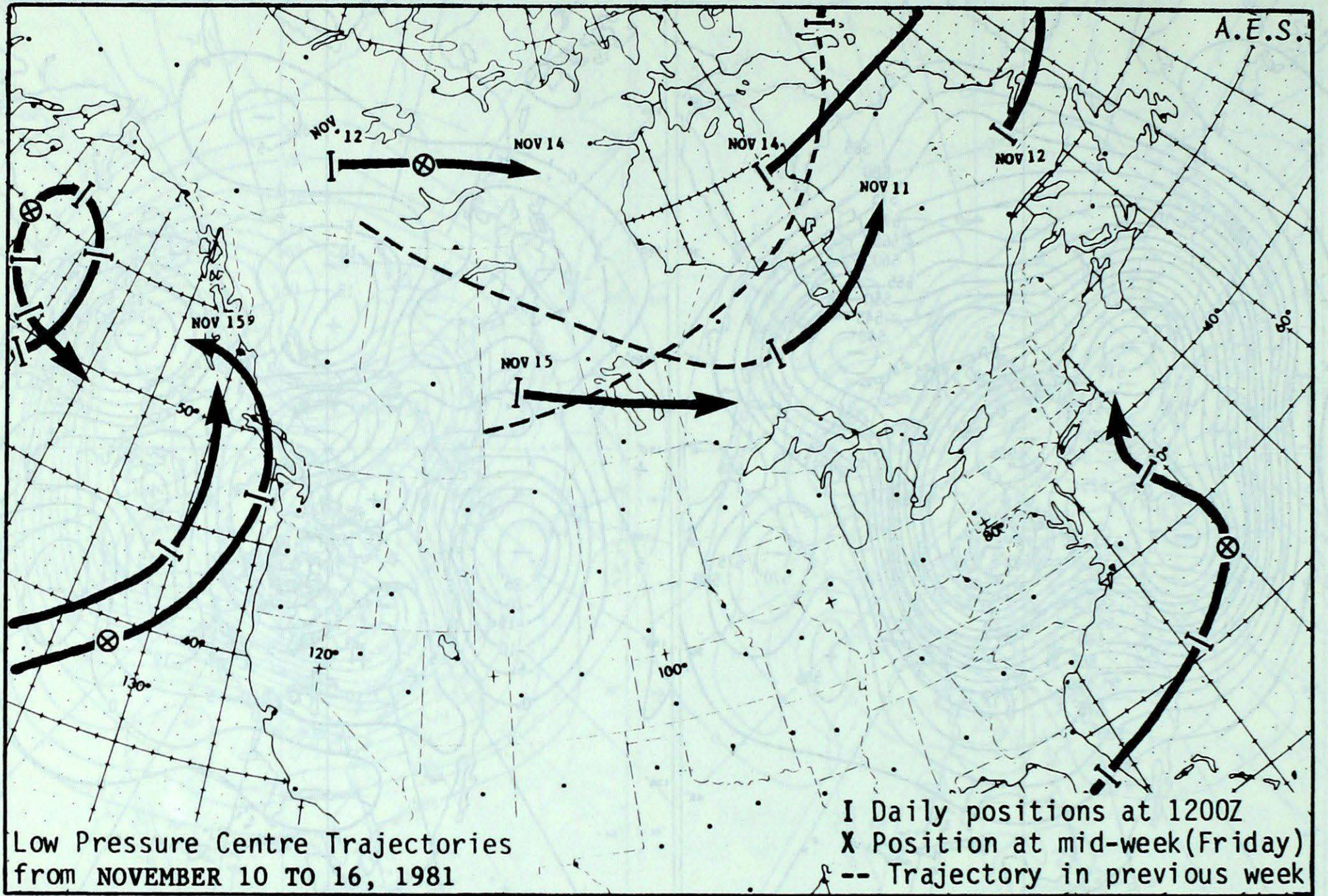
Two major cyclonic storms affected the west coast this week. Both storms approached Oregon and British Columbia

from the southwest strengthening as they rounded the base of the upper trough. Most coastal areas were deluged with more than 100 mm of rain and buffeted by strong on-shore winds which caused considerable damage.

Low pressure disturbances developing to the lea of the Rocky Mountains remained weak as they tracked eastward through areas of above normal 50 kPa heights. Relatively high surface pressures once again continued to be the dominant feature over most of central and eastern Canada. This resulted in another period of fine Indian Summer weather. The only significant precipitation, mostly in the form of snow, fell from a rapidly moving weak disturbance which crossed northern Ontario and then reformed over Labrador early in the period.

Andy Radomski

LOW PRESSURE CENTRE TRAJECTORIES



Low Pressure Centre Trajectories
 from NOVEMBER 10 TO 16, 1981

CLIMATIC PERSPECTIVES

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WEEKLY REVIEW OF CANADIAN CLIMATE

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 27 NOVEMBER 1981

STATION	TEMPERATURE		PRECIPITATION		WIND	HUMIDITY	CLOUDS	VISIBILITY	DEW POINT	SEA LEVEL PRESSURE
	MAX	MIN	AMOUNT	TYPE						
Abbotsford	12	-1	0.0		10-15	65	100	10	5	1013.5
Abuja	15	2	0.0		10-15	65	100	10	5	1013.5
Acadia	10	-5	0.0		10-15	65	100	10	5	1013.5
Adair	12	1	0.0		10-15	65	100	10	5	1013.5
Adairville	11	0	0.0		10-15	65	100	10	5	1013.5
Adrian	13	2	0.0		10-15	65	100	10	5	1013.5
Adrianville	14	3	0.0		10-15	65	100	10	5	1013.5
Adrianville	15	4	0.0		10-15	65	100	10	5	1013.5
Adrianville	16	5	0.0		10-15	65	100	10	5	1013.5
Adrianville	17	6	0.0		10-15	65	100	10	5	1013.5
Adrianville	18	7	0.0		10-15	65	100	10	5	1013.5
Adrianville	19	8	0.0		10-15	65	100	10	5	1013.5
Adrianville	20	9	0.0		10-15	65	100	10	5	1013.5
Adrianville	21	10	0.0		10-15	65	100	10	5	1013.5
Adrianville	22	11	0.0		10-15	65	100	10	5	1013.5
Adrianville	23	12	0.0		10-15	65	100	10	5	1013.5
Adrianville	24	13	0.0		10-15	65	100	10	5	1013.5
Adrianville	25	14	0.0		10-15	65	100	10	5	1013.5
Adrianville	26	15	0.0		10-15	65	100	10	5	1013.5
Adrianville	27	16	0.0		10-15	65	100	10	5	1013.5
Adrianville	28	17	0.0		10-15	65	100	10	5	1013.5
Adrianville	29	18	0.0		10-15	65	100	10	5	1013.5
Adrianville	30	19	0.0		10-15	65	100	10	5	1013.5
Adrianville	31	20	0.0		10-15	65	100	10	5	1013.5
Adrianville	32	21	0.0		10-15	65	100	10	5	1013.5
Adrianville	33	22	0.0		10-15	65	100	10	5	1013.5
Adrianville	34	23	0.0		10-15	65	100	10	5	1013.5
Adrianville	35	24	0.0		10-15	65	100	10	5	1013.5
Adrianville	36	25	0.0		10-15	65	100	10	5	1013.5
Adrianville	37	26	0.0		10-15	65	100	10	5	1013.5
Adrianville	38	27	0.0		10-15	65	100	10	5	1013.5
Adrianville	39	28	0.0		10-15	65	100	10	5	1013.5
Adrianville	40	29	0.0		10-15	65	100	10	5	1013.5
Adrianville	41	30	0.0		10-15	65	100	10	5	1013.5
Adrianville	42	31	0.0		10-15	65	100	10	5	1013.5
Adrianville	43	32	0.0		10-15	65	100	10	5	1013.5
Adrianville	44	33	0.0		10-15	65	100	10	5	1013.5
Adrianville	45	34	0.0		10-15	65	100	10	5	1013.5
Adrianville	46	35	0.0		10-15	65	100	10	5	1013.5
Adrianville	47	36	0.0		10-15	65	100	10	5	1013.5
Adrianville	48	37	0.0		10-15	65	100	10	5	1013.5
Adrianville	49	38	0.0		10-15	65	100	10	5	1013.5
Adrianville	50	39	0.0		10-15	65	100	10	5	1013.5
Adrianville	51	40	0.0		10-15	65	100	10	5	1013.5
Adrianville	52	41	0.0		10-15	65	100	10	5	1013.5
Adrianville	53	42	0.0		10-15	65	100	10	5	1013.5
Adrianville	54	43	0.0		10-15	65	100	10	5	1013.5
Adrianville	55	44	0.0		10-15	65	100	10	5	1013.5
Adrianville	56	45	0.0		10-15	65	100	10	5	1013.5
Adrianville	57	46	0.0		10-15	65	100	10	5	1013.5
Adrianville	58	47	0.0		10-15	65	100	10	5	1013.5
Adrianville	59	48	0.0		10-15	65	100	10	5	1013.5
Adrianville	60	49	0.0		10-15	65	100	10	5	1013.5
Adrianville	61	50	0.0		10-15	65	100	10	5	1013.5
Adrianville	62	51	0.0		10-15	65	100	10	5	1013.5
Adrianville	63	52	0.0		10-15	65	100	10	5	1013.5
Adrianville	64	53	0.0		10-15	65	100	10	5	1013.5
Adrianville	65	54	0.0		10-15	65	100	10	5	1013.5
Adrianville	66	55	0.0		10-15	65	100	10	5	1013.5
Adrianville	67	56	0.0		10-15	65	100	10	5	1013.5
Adrianville	68	57	0.0		10-15	65	100	10	5	1013.5
Adrianville	69	58	0.0		10-15	65	100	10	5	1013.5
Adrianville	70	59	0.0		10-15	65	100	10	5	1013.5
Adrianville	71	60	0.0		10-15	65	100	10	5	1013.5
Adrianville	72	61	0.0		10-15	65	100	10	5	1013.5
Adrianville	73	62	0.0		10-15	65	100	10	5	1013.5
Adrianville	74	63	0.0		10-15	65	100	10	5	1013.5
Adrianville	75	64	0.0		10-15	65	100	10	5	1013.5
Adrianville	76	65	0.0		10-15	65	100	10	5	1013.5
Adrianville	77	66	0.0		10-15	65	100	10	5	1013.5
Adrianville	78	67	0.0		10-15	65	100	10	5	1013.5
Adrianville	79	68	0.0		10-15	65	100	10	5	1013.5
Adrianville	80	69	0.0		10-15	65	100	10	5	1013.5
Adrianville	81	70	0.0		10-15	65	100	10	5	1013.5
Adrianville	82	71	0.0		10-15	65	100	10	5	1013.5
Adrianville	83	72	0.0		10-15	65	100	10	5	1013.5
Adrianville	84	73	0.0		10-15	65	100	10	5	1013.5
Adrianville	85	74	0.0		10-15	65	100	10	5	1013.5
Adrianville	86	75	0.0		10-15	65	100	10	5	1013.5
Adrianville	87	76	0.0		10-15	65	100	10	5	1013.5
Adrianville	88	77	0.0		10-15	65	100	10	5	1013.5
Adrianville	89	78	0.0		10-15	65	100	10	5	1013.5
Adrianville	90	79	0.0		10-15	65	100	10	5	1013.5
Adrianville	91	80	0.0		10-15	65	100	10	5	1013.5
Adrianville	92	81	0.0		10-15	65	100	10	5	1013.5
Adrianville	93	82	0.0		10-15	65	100	10	5	1013.5
Adrianville	94	83	0.0		10-15	65	100	10	5	1013.5
Adrianville	95	84	0.0		10-15	65	100	10	5	1013.5
Adrianville	96	85	0.0		10-15	65	100	10	5	1013.5
Adrianville	97	86	0.0		10-15	65	100	10	5	1013.5
Adrianville	98	87	0.0		10-15	65	100	10	5	1013.5
Adrianville	99	88	0.0		10-15	65	100	10	5	1013.5
Adrianville	100	89	0.0		10-15	65	100	10	5	1013.5

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Departure of Average from the 1941-70 Normals

NOVEMBER 17 TO 23 1981

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TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. NOVEMBER 17, 1981

Table with 3 main columns for British Columbia, Alberta, and Yukon/Northwest Territories, and a large section for Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland. Each station entry includes temperature (Average, Departure from Normal, Extreme Maximum, Extreme Minimum) and precipitation (Total, Departure from Normal) data.

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