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VOL 3 ISS 46 LIMATIC PERSPECTIVES

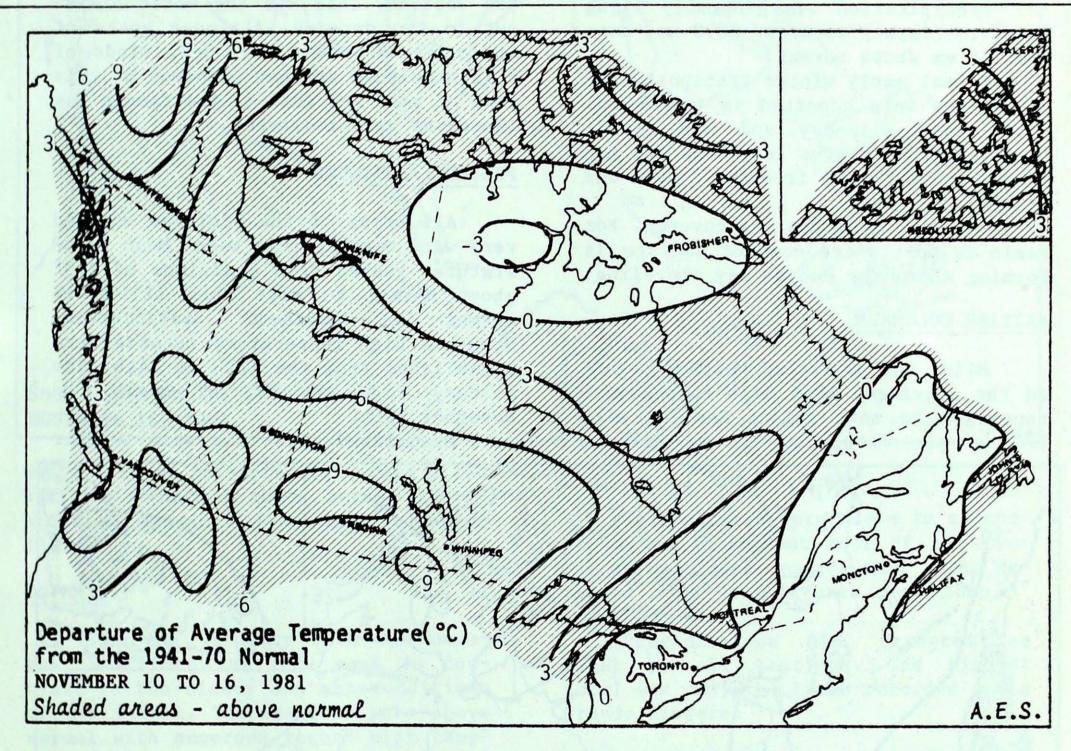
# SPECTIVES

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

**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 of -34° at varied from a minimum Eureka, Northwest Territories, to a maximum of 20° at Regina, Saskatchewan. Cape Scott, British Columbia recorded 132.1 mm of precipitation. 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.

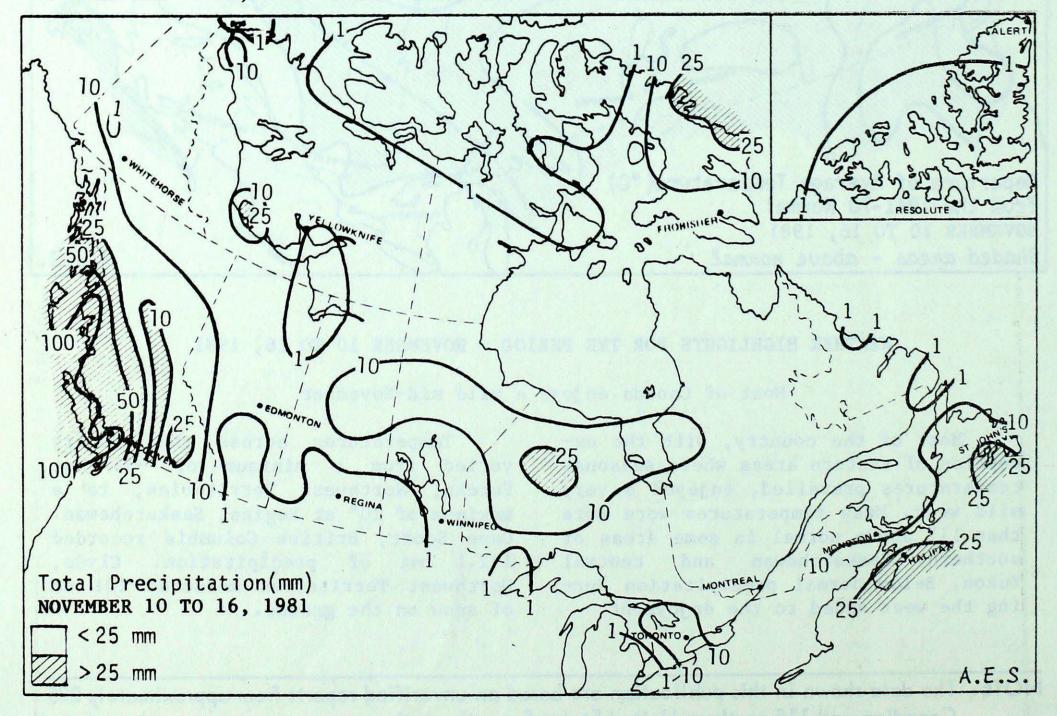
The majority of stations reported above normal precipitation totals for the week. Up to 50 cm of snow was reported in the southern mountains and passes.

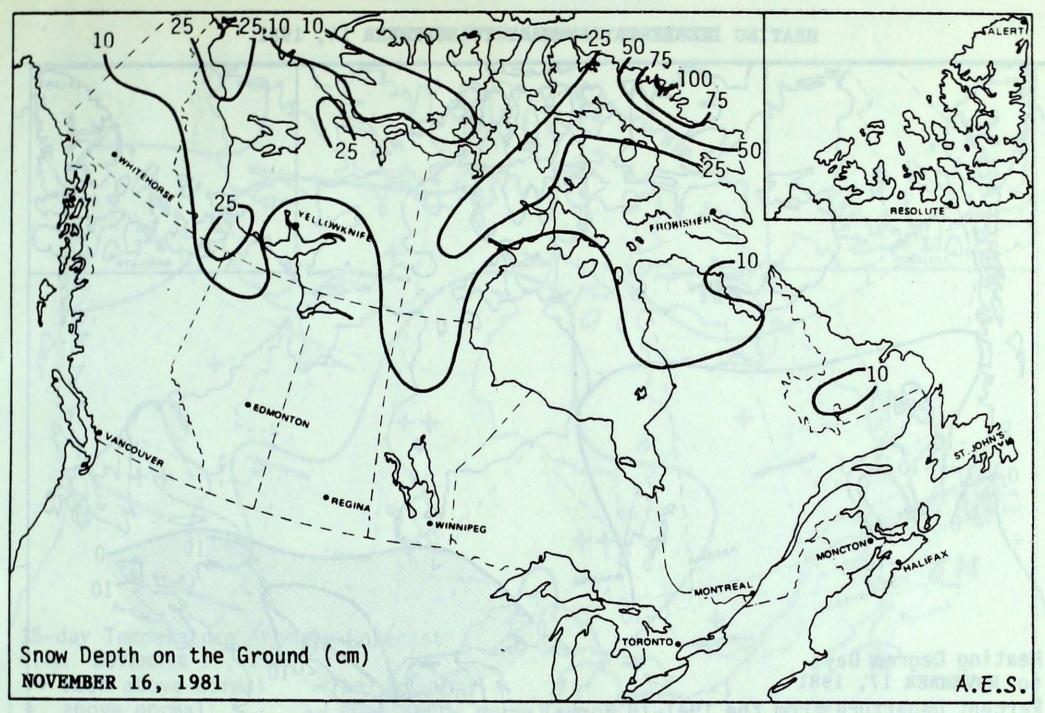
Thousands of homes in southwestern areas were left without electric power as a result of gale-force winds during the weekend. This was the worst black-out in two decades. Although gusts of up to 90 km/h were recorded, winds of this magnitude are not uncommon at this time of year and most of the damage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

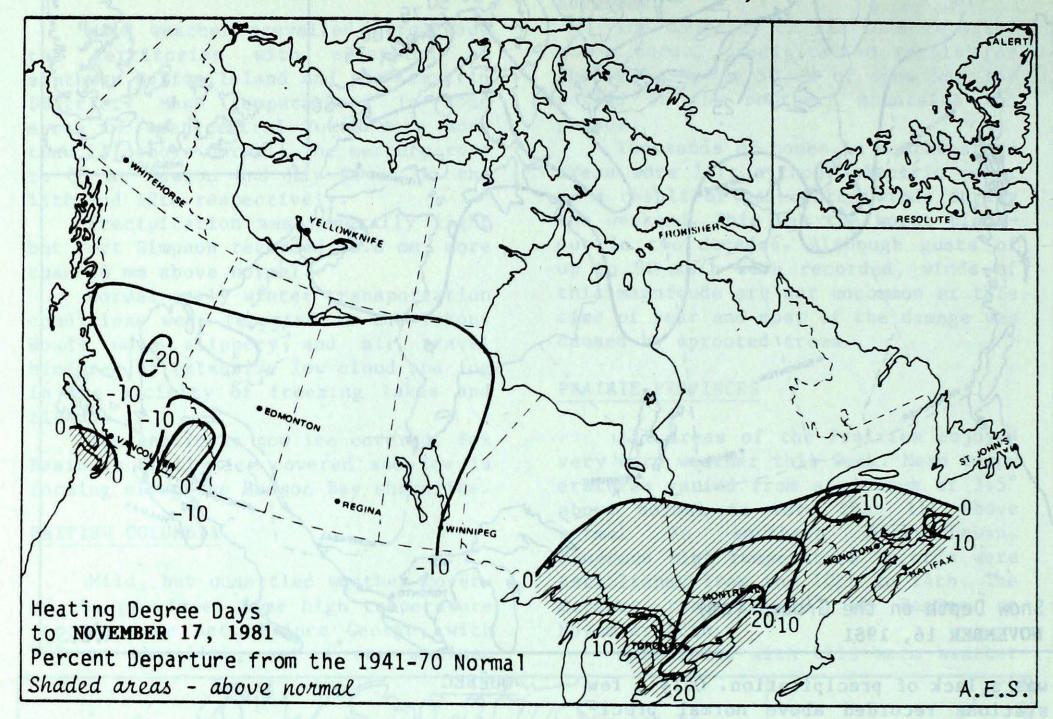
Precipitation was reported as light by all stations. The highest total was only the 14 mm recorded at La Grande Riviere.

### 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.

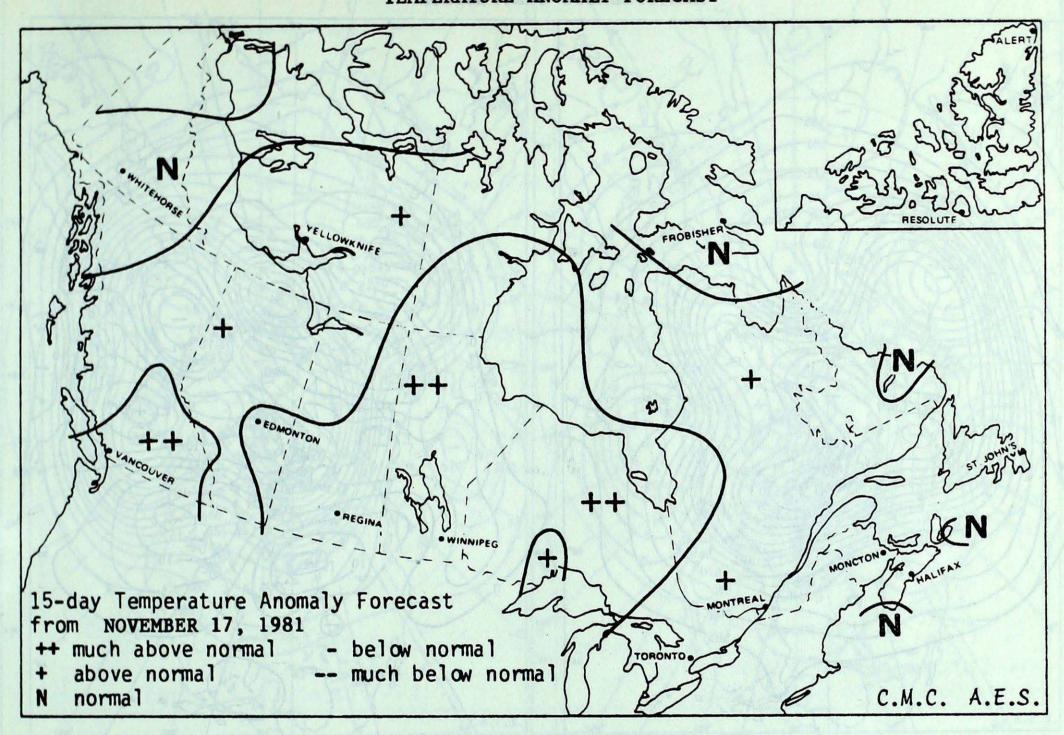
Precipitation was relatively light. Only Sable Island and St. Lawrence reported above normal weekly totals with 30.3 mm and 46.8 mm respectively.

HEATING DEGREE-DAY SUMMARY TO NOVEMBER 14, 1981

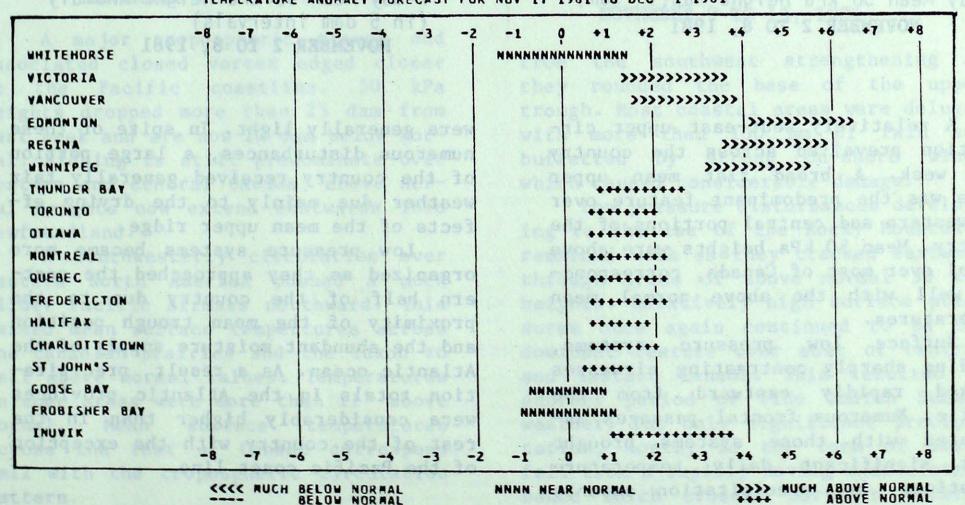


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	501.0	-65.0	3078.0	-90.0	97
Inuvik	506.0	-11.0	2128.0	-26.0	99
Whitehorse	297.0	-48.0	1405.5	-84.5	94
Vancouver	126.0	-28.0	542.0	-46.0	92
Edmonton 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

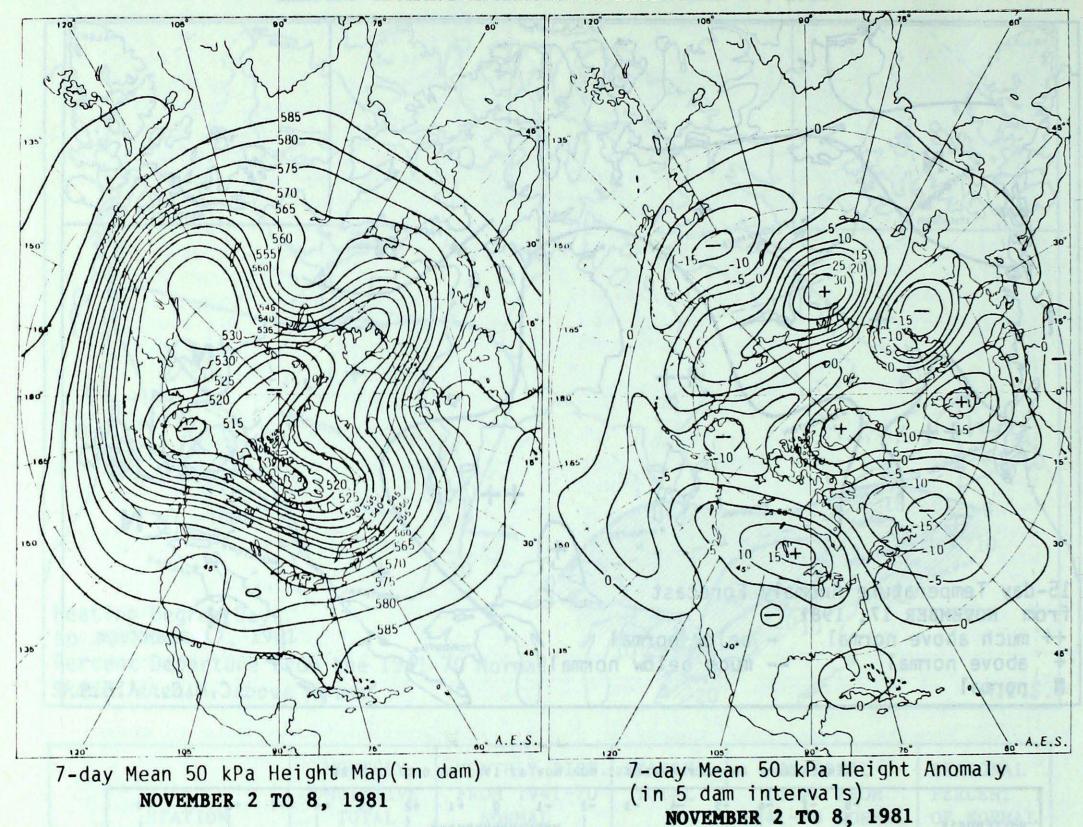
### TEMPERATURE ANOMALY FORECAST



### TEMPERATURE ANOMALY FORECAST FOR NOV 17 1981 TO DEC 1 1981



### ATMOSPHEREIC CIRCULATION



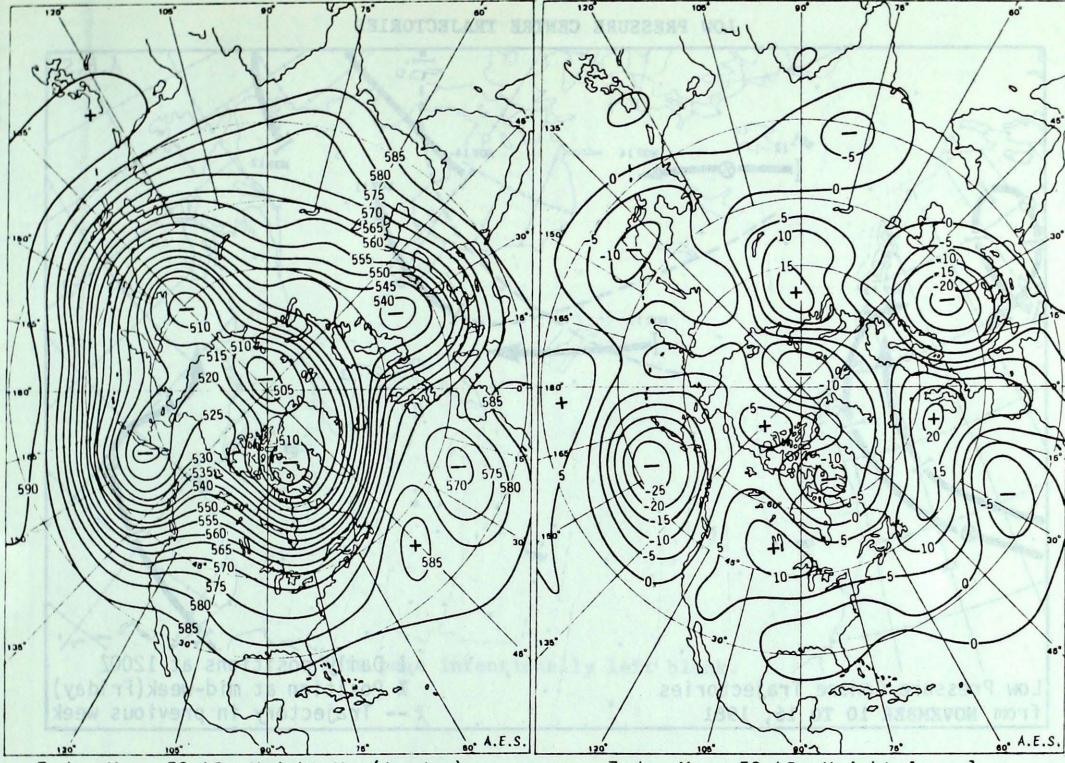
A relatively west-east upper circulation prevailed across the country this week. A broad flat mean upper ridge was the predominant feature over the western and central portions of the country. Mean 50 kPa heights were above normal over most of Canada, corresponding well with the above normal mean temperatures.

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.

### ATMOSPHEREIC CIRCULATION



7-day Mean 50 kPa Height Map(in dam)
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 tempertures 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

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

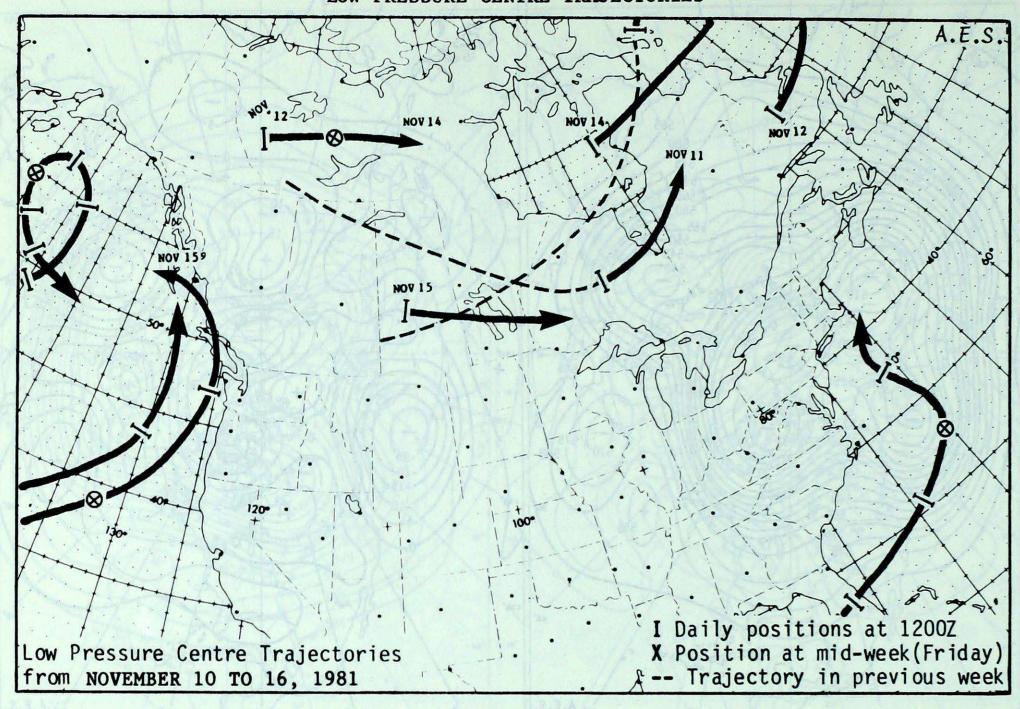
from the southwest strengthening as they rounded the base of the upper trough. Most coastal areas were deluged with more than 100 mm of rain and buffetted by strong on-shore winds which caused considerable damage.

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 distrubance which crossed northern Ontario and then reformed over Labrador early in the period.

Andy Radomski

### LOW PRESSURE CENTRE TRAJECTORIES

ACTUSTIC CIRCULATION



# CLIMATIC PERSPECTIVES

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# TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 06Q0 G.M.T. NOVEMBER 17, 1981

	Temperature (°C) Precip. (mm					
Station	Average	Departure from Normal	Extreme Maximum	Extreme	Total	Departure from Normal
BRITISH COLUMBIA Abbotsford Alert Bay Blue River Bull Harbour Burns Lake Cape Scott Cape Scott Cape St James Castlegar Comox Cranbrook Deane Lake Estevan Point Fort Nelson Fort St John Kamloops Langara Lytton Mackenzle McInnes Island Penticton Port Hardy Prince George Prince Rupert Quesnel Revelstoke Sandspit Smithers Stewart Terrace Vancouver Victoria Williams Lake	TO 7 M 8 M 8 9 6 9 3 4 M 10 - 2 8 M 7 7 M 8 4 6 6 5 5 7 2 2 M 2 9 9 9 M 10 10 10 10 10 10 10 10 10 10 10 10 10	4 2 X 1 X 1 3 3 3 3 5 M 2 5 5 M 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2	17 14 7P 13 12P 14 14 12 14 13 8 10P 0 10 17 11 13 12P 13 12 14 17 14 17 11 11 12 8 8 15 14	4 2 0 1 - 4P 4 5 1 5 - 7 -17 4 -22 -14 1 4P 0 - 7P 5 - 1 1 - 4 - 1 3 - 4 1P 0 2 4 - 4P	104.5 69.5 M 100.2 M 132.1 79.7 40.5 118.0 11.6 5.4 M 5.5 10.9 9.9 56.2 53.1 13.4 102.8 9.4 91.1 13.5 126.6 9.8 27.2 54.4 6.5 39.0 53.4 60.8 62.1	60.3 29.6 X 50.4 X 53.4 41.7 15.9 77.1 2.4 - 1.0 M - 0.5 2.8 4.9 19.2 36.2 X 47.4 1.8 44.3 0.4 85.9 0.4 - 0.2 17.9 - 3.4 X 29.3 29.2 34.0 2.1
PUKON Burwash Tuwson Komakuk Beach Mayo Shingle Point Watson Lake Whitehorse	- 7 - 4 - 4 - 10	1 11 M 12 12 M 1 M 1 M 1 M 1 M 1 M 1 M 1	8 - 7 10 1 - 8 4	-21 -10 -24P -10 -28P -19 -11	1.4	- 2.0 6.5 - 4.2 - 1.5 - 5.9
NORTHWEST TERRITORIE Alert Baker lake Broughton Island Byron Bay Cambridge Bay Cape Dorset Cape Dorset Cape Dyer Cape Hooper Cape Parry Cape Young Clinton Point Clyde Contwoyto Lake Coppermine Coral Harbour Dewar Lakes Ennadal Eureka Fort Reliance Fort Simpson Fort Smith Frobisher Bay Cladman Point Hall Beach Hay River Inuvik Jenny Lind Island Lady Franklin Point Longstaff Bluff Mackar Inlet Mould Bay Nicholson Peninsula Norman Wells Pelly Bay Pond Inlet Port Burwell Resolute Sachs Harbour	-2:	- 3	1 - 3 1 - 5 1 - 9 1 - 14 1 - 7 6 - 3 1 - 13 1 - 11 1 - 8 1 - 7 1 - 13 3 - 3 5 - 4 1 - 17 1 - 11 1 - 18 1 - 17 1 - 11 1 - 8 1 - 17 1 - 11 1 - 15 1 - 15	-29 -28 -20P -28P -29P -17 -29P -19P -29P -21 -26 -27P -25E -26E -25 -34E -17 -23 -17 -23 -29E -26P -27P -26P -27P -28 -29P -30 -28 -29P -30 -28 -26P	0.6 0.0 3.6 30.2 12.2 1.4 0.0 0.4 28.2 10.7 3.1 1.0 12.0 0.0 6.2 33.8 0.6 3.5 0.0 0.0 11.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2.5 15.5 - 0.9 - 2.2 X 16.8 1.8 - 0.7 - 3.1 - 2.8 24.5 7.7 - 1.0 - 2.3 9.8 M M O - 0.5 26.7 - 8.0 0 - 3.6 0 - 3.7 - 10.8 7.6 - 10.8 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6

ION DATA FOR THE WEEK ENDING 0600 G.M.T. NOVE							
	Temperature (°C) Precip. (mm)						
Station	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal	
Shepherd Bay Tuktoyaktuk Yellowknife	M M - 8	М М 5	-16 - 9 2	-32P -22P -22	0.0 0.0 1.0	- 2.1 - 1.3 - 5.6	
ALBERTA Banff Calgary Cold Lake Coronation Edmonton Intl Edmonton Mun Edmonton Namao Edmon Fort Chipewyan Fort McMurray Grande Prairie High Level Jamper Lethbridge Medicine Hat Peace River Red Deer Rocky Mountain House Slave Lake Vermilion Whitecourt	M 4 1 2 1 3 2 - 1 M M - 2 - 6 3 7 8 - 3 2 1 0 2 0	M 7 7 7 7 7 7 7 7 8 3 M M 5 5 5 7 8 9 6 6 6 5 4 8 8 7	12P 18 11 17 15 15 14 9 7P 9 10 8 15 19 19 9 18 19 8 14	- 5 - 9 - 5 - 9 - 5 - 7 - 9 -12 - 8P - 9 -12 - 4 - 3 -14 - 7 - 7 - 8	M 0.6 1.8 1.0 3.0 0.2 0.3 2.6 0.0 0.5 3.5 6.2 12.2 0.8 1.6 4.3 0.0 0.4 2.8 1.2 5.8	0.3 - 5.4 - 6.5 - 5.4 - 4.0 7.3 - 5.2 - 3.8 - 2.5 - 5.2 - 6.7 - 0.8 - 4.0	
SASKATCHEWAN Brondview Buffalo Narrows Cree Lake Estevan Hudson Bay Kindersley La Ronge Meadow Lake Moose Jaw Nipawin North Battleford Prince Albert Regina Rockglen Saskatoon Swift Current Uranlum City Wynyard Yorkton	5 0 - 3 5 3 4 0 0 6 2 2 2 5 M 4 6 6 - 7 4 4	55 XX 88 89 100 88 XX 99 XX 88 88 99 XX 99 44 100	7 5 17 12 18 7 10 18 10 13 13 20 17F 16 18 2	- 3 - 6 -10 - 6 - 4 - 3 - 6 - 8 - 3 - 6 - 5 - 6 - 5 - 1 - 3 - 5 - 14 - 3 - 3	0.00 12.22 1.88 0.00 2.33 2.22 10.22 3.44 0.33 6.66 0.88 10.00 0.44 M. M	8.3 x - 5.8 - 4.1 - 3.2 5.8 x - 6.6 x - 4.5 - 4.5 - 4.4 x - 2.9 - 12.0 - 4.0 - 2.9 - 12.0 - 4.0	
MANITOBA Bissett Brandon Churchill Dauphin Gillam Gimli Island Lake Lynn Lake Norway House Pilot Mound Portage la Prairie The Pas Thompson Winnipeg	44 - 77 - 55 - 77 - 4 - 1 - 5 - 22 - 66 50 0 - 64	8 4 4 5 1 C 8 8 6 7 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	15 17 17 13 13 7 3 6 6 17 19 10 2	- 2 - 6 -17 - 6 -21 - 2 - 9 -16 -14 - 3 - 4 - 7 -21 - 5	3.7 0.0 1.8 0.0 9.0 1.8 12.4 20.3 4.7 0.0 1.0 2.5 10.4 3.4	3 - 5.8 3 - 4.6 3 - 4.6 3 - 5.8 6 - 6.3 6 - 6.3 6 - 6.3 7 - 5.8 7 - 5.8 8 - 6.3 8 - 6.3 9 - 6.3 1 - 6.3	7 6 7 7 7
ONTARIO Armstrong Atikokan Earlton Geraldton Gore Bay Kapuskasing Kenora Kingston Lanadowne London Moosonee Mount Forest Muskoka North Bay Ottawa Petawawa Pickle Lake	1 5 - 1 1 3 0 5 4 0 3 0 4 2 1 2 0	6 6 6 4 8 1 1 6 - 1 4 2 0 0 2	16 10 11 13 12 11 10 10 16 12 15 16 14 12	-15 -3 -18 -17 -8 -16 -2 -7 -13 -6 -13 -6 -11 -14 -8 -12 -15	19.8 0.8 4.1 15.2 5.2 6.0 9.8 3.5 30.6 0.8 7.2 5.2 36.1 8.0 1.8 0.2	1 - 7.8 -10.6 - 0.4 2 -16.4 -13.1 0.9 -15.8 21.8 -17.6 - 8.1 -20.2 12.9 -14.8 -16.2	

DUN 17 , 1301	JII. X	_					
	Te	m	per	oture	Precip. (mm)		
Station'	Average	0.000	from Normal	Extreme	Extreme Minimum	Total	Departure from Normal
ed Lake Imcoe Ioux Lookout Iduhury Ihunder Bay Immins Ioronto Irenton Irout Lake Iawa Viarton		3 4 0 4 1 3 2 2 M 3 5	8 M 8 0 6 2 - 1 - 2 6 X - 1 0	14P 12 11 14 14 16 13 8 14P	- 5 - 3 - 6 -13 - 5 -18 - 6 - 8 -14 - 9P - 7 - 2	5.4 2.6 3.7 24.4 5.4 25.4	- 2.4 -14.7 - 8.3 -17.9 8.8 -13.7 13.4 X
QUÉBEC Bagotville Baie Comeau Blanc Sablon Border Chibougamau Fort Chimo Gaspé Grindstone Island Inoucdjouac Koartak La Grande Rivière Maniwaki Matagami Mont-Joli Montréal Natashquan Nitchecun Port Menier Poste-de-la-Baleine Québec Rivière du Loup Roberval Schefferville Sept-Iles Sherbrooke Ste Agathe des Monts Val d'Or		2 1 1 M 3 8 1 3 6 M 4 0 1 1 1 3 5 M 2 1 M 2 7 2 0 0 1	- 2 - 2 - 1	6 4 M 9 2 8 7 1 1 - 5F 4 11 12 9 9 5 3 3 3 3	-13 -12 -12 -6 -6 -11 -18 -10 -12 -9 -6 -11 -15 -10 -12 -13	14.0 2.3 5.4 1.7 1.8 7.8 4.6 2.6 2.6 2.6 2.2 2.2	-22.1 -16.5 M X 2.8 X -16.8 1.3 X -17.6 -15.1 -22.4 -10.1 M -6.3 -22.1 M -7.2 -23.4 -22.3 -23.4
NEW BRUNSWICK Charlo Chatham Fredericton Moncton Saint Jean	-	2 0 0	- :	1 4 2 8 1 9	- 7 - 8 - 9 - 8	2.0 3.6 10.7 6.6	-19.8
NOVA SCOTIA Eddy Point Greenwood Sable Island Shearwater Sydney Truro Yarmouth		5 3 9 5 4 M 5	-	x 9 1 9 1 15 0 11 1 8 4 100 0 11	- 3 - 8 2 - 5 - 5 - 5 - 6	30.3 31.1 10.4	3 - 6.3 2.5 1 - 3.9 8 -26.1
PRINCE EDWARD ISLAND Charlottetown Summerside	D	3 2	1	9 7	- 5 - 5	3.8	3 -24.2
NEWPOUNDLAND Argentia Battle Harbour Bonavista Burgeo Cartwright Churchill Falls Comfort Cove Daniel's Harbour Deer Lake Gander Goose Hopedale Port aux Basques St Albans St Anthony St Jean's St Lawrence Stephenville Wabush Lake		60443611M2433424626		7 61 11 5 6 7 7 11 4 14 11 8	- 9 -16 - 6 - 5	5.4 13.2 2.6	-23.5 -18.7 -31.6 -19.8 -16.6 -13.6 -7.5 -11.3 -1.1 -12.3 -13.0 -25.5 -22.1 X -28.5 13.4 - 8.9