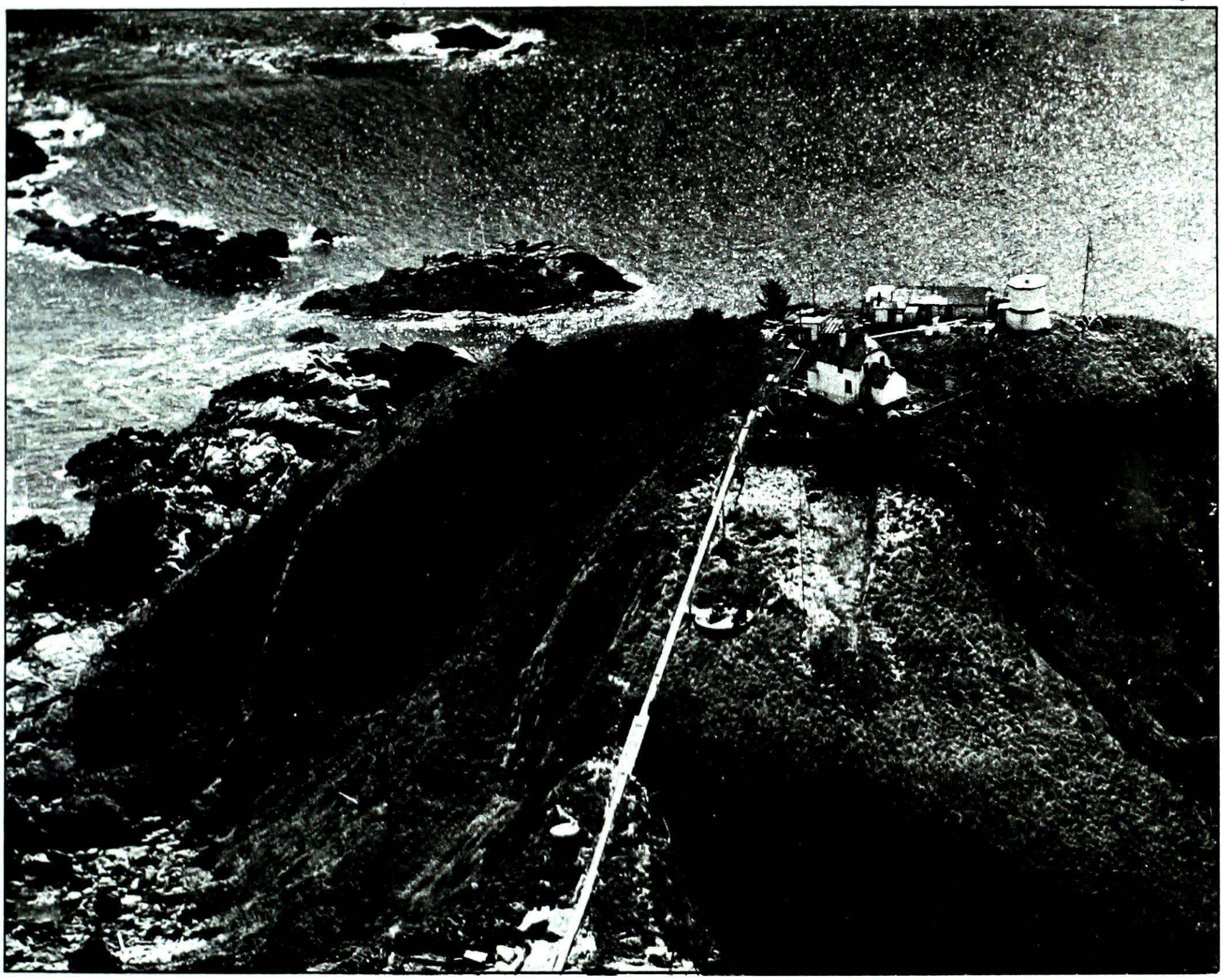
atic ctives

A weekly review of Canadian climate October 29 to November 4, 1985 Vol.7 No.43

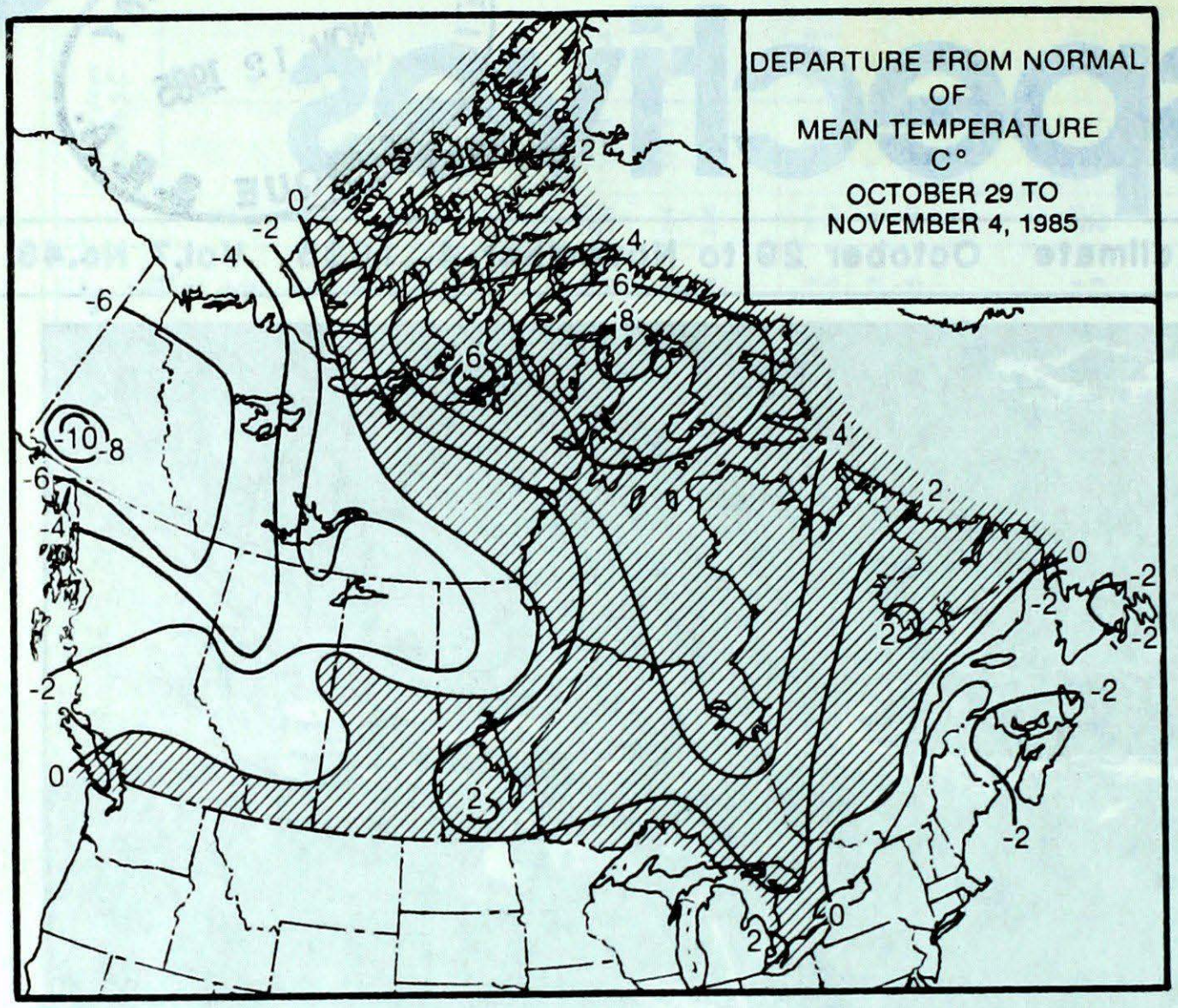


Cape St. James is located at the southern end of the Queen Charlotte Islands. The weather station is perched on a small windswept rock 89 metres above the Pacific Ocean, and it is the most exposed meteorological observing site on west coast. The winds blow constantly, and frequently exceed 100 km/h. During stormy weather it is not unusual to have wind speeds approaching 150 km/h. For more information see page 3.

- ***Skiing begins in Western Canada***
- ***Atlantic storm hampers shipping***
- ***Record rains in Southern Ontario***

Canada

TEMPERATURE



WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM	
BRITISH COLUMBIA	HOPE	15	FORT NELSON	-22
YUKON TERRITORY	TESLIN	-2	BEAVER CREEK	-34
NORTHWEST TERRITORIES	BROUGHTON ISLAND	8	EUREKA	-40
ALBERTA	MEDICINE HAT	17	HIGH LEVEL	-17
SASKATCHEWAN	MOOSE JAW	15	COLLINS BAY	-17
MANITOBA	BRANDON	13	LYNN LAKE	-24
ONTARIO	BRITT	18	ATIKOKAN	-10
QUEBEC	VAL D'OR	15	SCHEFFERVILLE	-15
NEW BRUNSWICK	CHARLO	11	MONCTON	-8
NOVA SCOTIA	GREENWOOD	12	SHELBURNE	-6
PRINCE EDWARD ISLAND	SUMMERSIDE	9	CHARLOTTETOWN	-2
NEWFOUNDLAND	PORT-AUX-BASQUES	12	WABUSH LAKE	-13

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	10	WINDSOR	ONT
COOLEST MEAN TEMPERATURE	-31	EUREKA	NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

An Arctic airmass was poised in the northwest, losing heat at a rapid rate. Minimum temperatures in the high Arctic registered -40°C for the first time this season. Only in the eastern Arctic did maximum temperatures manage to climb above freezing, establishing new daily temperature records. Ice was forming along the shoreline of Great Bear and Great Slave Lakes. All areas are snow covered, and snow depths range up to 40 cm. Wind and gale warnings were issued regularly. Substantial snowfalls occurred in the Keewatin District. At times blowing snow dropped visibilities to near zero. Freezing rain was reported in northern Hudson Bay.

British Columbia

It was a cool and wet week. It was especially cold in the north. Strong westerlies propelled frontal disturbances towards the coast. Hope airport received 165 mm of rain. Snow occurred daily in many parts of the interior. Only the south coast was spared, but coastal ski resorts have already opened for the season. Many southern valleys received a fresh dusting of snow. In the Kootenays wet snow, rain and fog hampered aviation during the weekend and caused traffic problems. The snow pack has increased substantially above 1000 meters.

Prairies

The weather was mild and relatively sunny in the east, but cold and unsettled in the west. In the southern agricultural districts, where it has been dry, the harvest is almost complete. Heavy snowfalls were reported in the Rockies and the foothills. Two ski resorts, Sunshine and Lake Louise, have opened for the season. Snow depths in the mountains ranged upwards from 20 cm. The snow base on the ski runs was reported to be 60 cm. Disturbances deposited 10 to 20 centimetre of fresh snow across the north. At the end of the period an area of snow associated with an advancing Arctic airmass threatened Alberta.

PRECIPITATION

Ontario

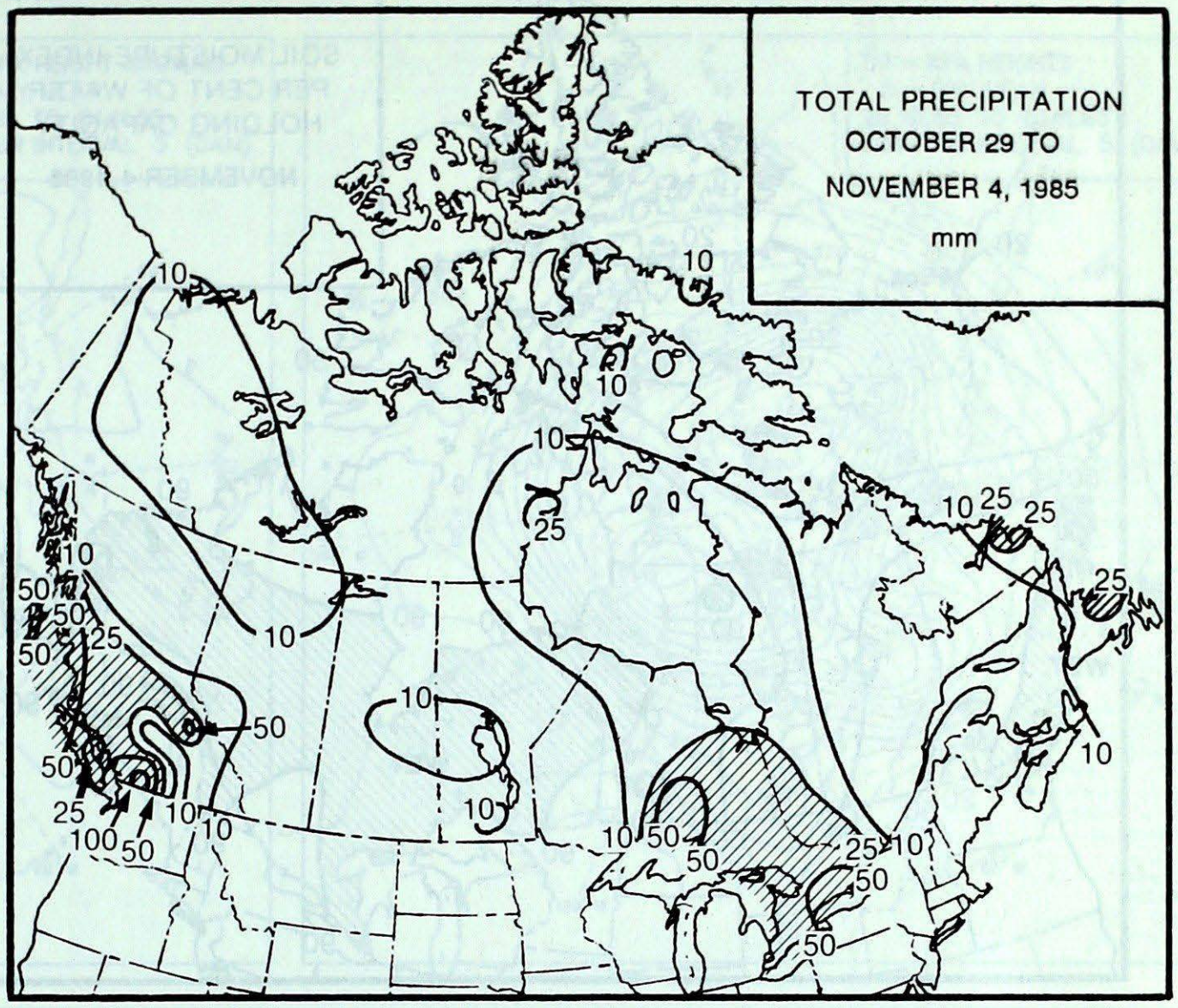
A stationary ridge of high pressure gave pleasant weather until the weekend. Temperatures in southern Ontario climbed into the mid-teens, but remained in the single digits in the north. Moisture from the remnants of hurricane Juan slowly moved up the Mississippi Valley, and reached northern Ontario on November 1, gradually moving eastwards. Heavy rain moved into southern and central Ontario over the weekend. On November 3 and 4, many 24-hour precipitation records were broken. Trenton was deluge with 60 mm of rain on November 4. Cold air flooded into northern Ontario over the weekend, and at some locations the mercury failed to climb above freezing the last two days.

Quebec

Indian summer returned. By the weekend, daytime temperatures in the south recovered to the teens. Except for the last day, there was no measurable precipitation in the southwest; elsewhere, precipitation totalled only a few millimetres. Farmers had an excellent week to complete late autumn field work. Temperatures in the north were relatively mild, hovering several dedegrees above freezing. Most of the snow cover has disappeared. On November 4 a large area of inclement weather approached the province.

Atlantic

The week was cloudy, windy and very cool. There were several low temperature records on October 29. Strong northeast winds during the latter part of the period disrupted marine and ferry traffic in Northumberland Strait. In the Maritimes, precipitation was very light; once again there is concern about wells and streams drying up in New Brunswick. On October 29, winds gusting to 82 km/h caused some damage at Goose Bay. Five to ten centimetres of fresh snow blanketed Labrador and western Newfoundland early in the week. A persistent northeasterly flow over Newfoundland produced overcast skies and drizzle along the windward coastline.



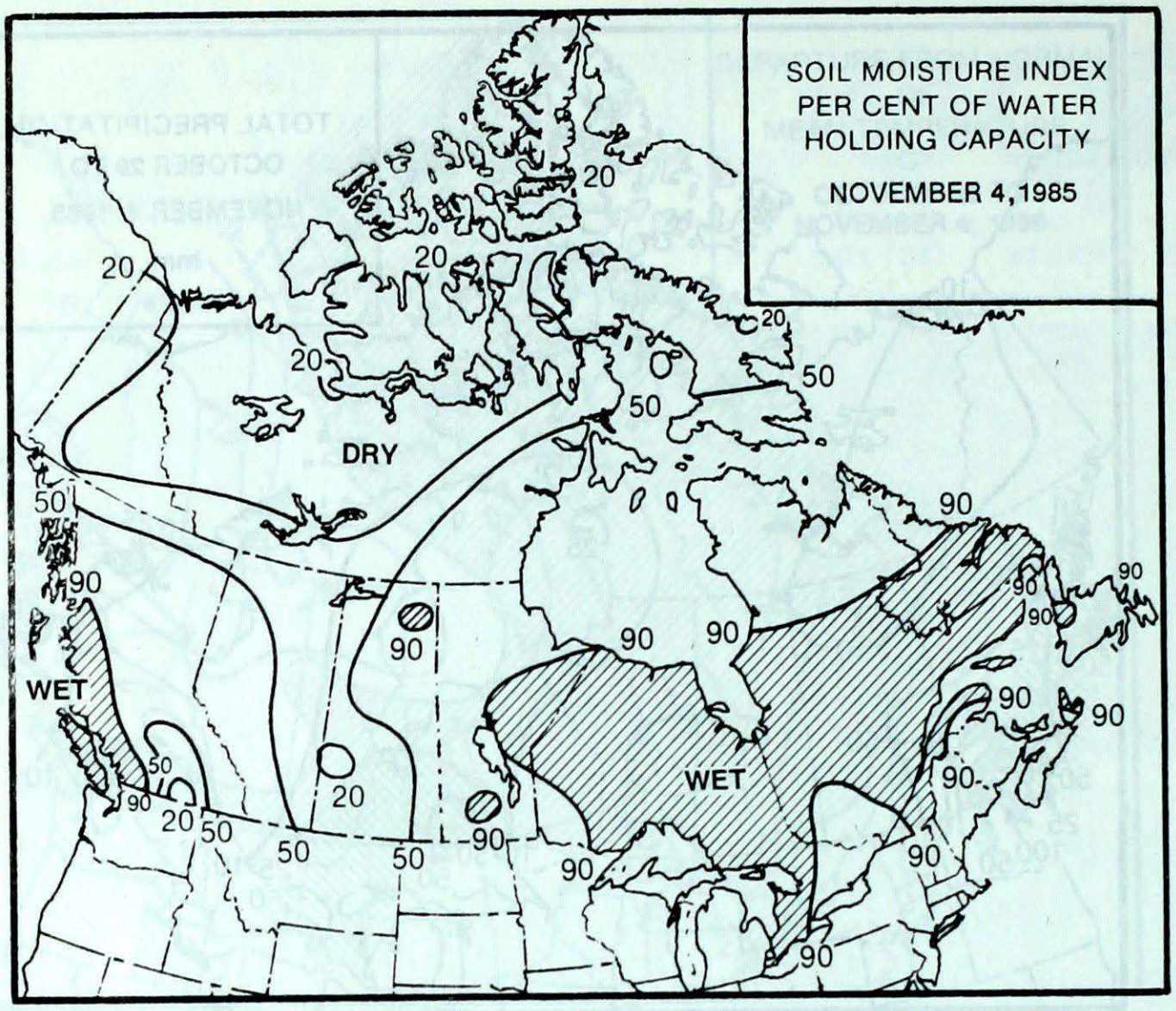
HEAVIEST WEEKLY PRECIPITATION (mm)

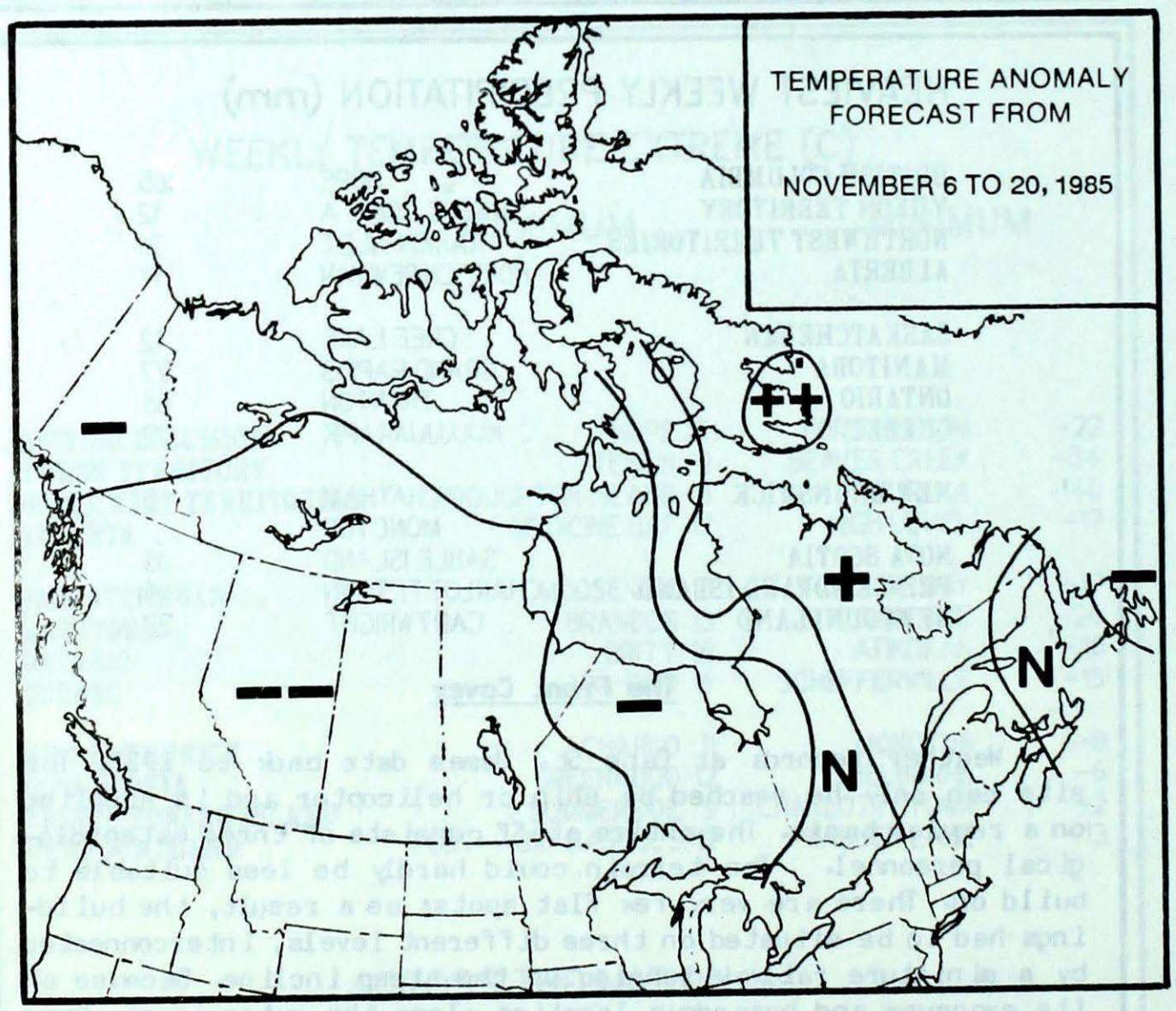
BRITISH COLUMBIA	HOPE	165
YUKON TERRITORY	SHINGLE POINT A	12
NORTHWEST TERRITORIES	RANKIN INLET	31
ALBERTA	FORT CHIPEWYAN	17
SASKATCHEWAN	CREE LAKE	12
MANITOBA	GRAND RAPIDS	77
ONTARIO	TRENTON	65
QUEBEC	KUUJJUARAPIK	22
NEW BRUNSWICK	CHATHAM	3
	MONCTON	
NOVA SCOTIA	SABLE ISLAND	15
PRINCE EDWARD ISLAND	CHARLOTTETOWN	6
NEWFOUNDLAND	CARTWRIGHT	38

The Front Cover

Weather records at Cape St. James date back to 1925. The site can only be reached by ship or helicopter and is supplied on a regular basis. The entire staff consists of three meteorological personnel. The terrain could hardly be less suitable to build on. There are very few flat spots; as a result, the buildings had to be situated on three different levels, interconnected by a miniature railway running up the steep incline. Because of its exposure and hazardous location along the outer coast, Cape St. James is a very important weather station, M.O.T. lighthouse and radio beacon, aiding marine and aviation traffic. Since this picture was taken new buildings have been erected. All are specially anchored and reinforced because of the frequency of hurricane-force winds in the area. During a storm in 1951 the winds were clocked at more than 200 km/h. On October 26, 1985 a wind gust peaked at 190 km/h.

FORECAST





Temperature Anomaly Forecast

This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

++	much above normal
+	above normal
N	normal
-	below normal
--	much below normal

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The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

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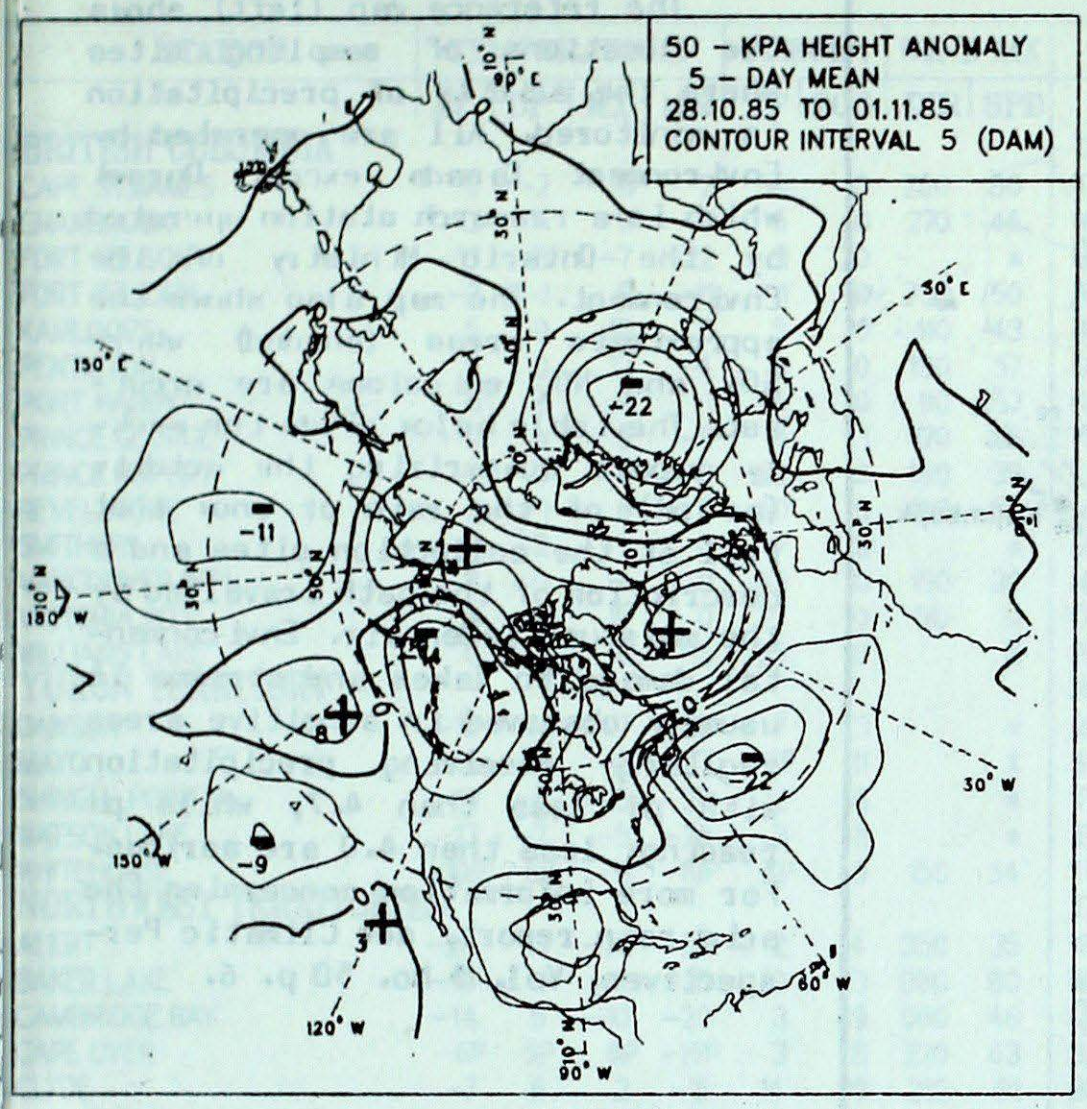
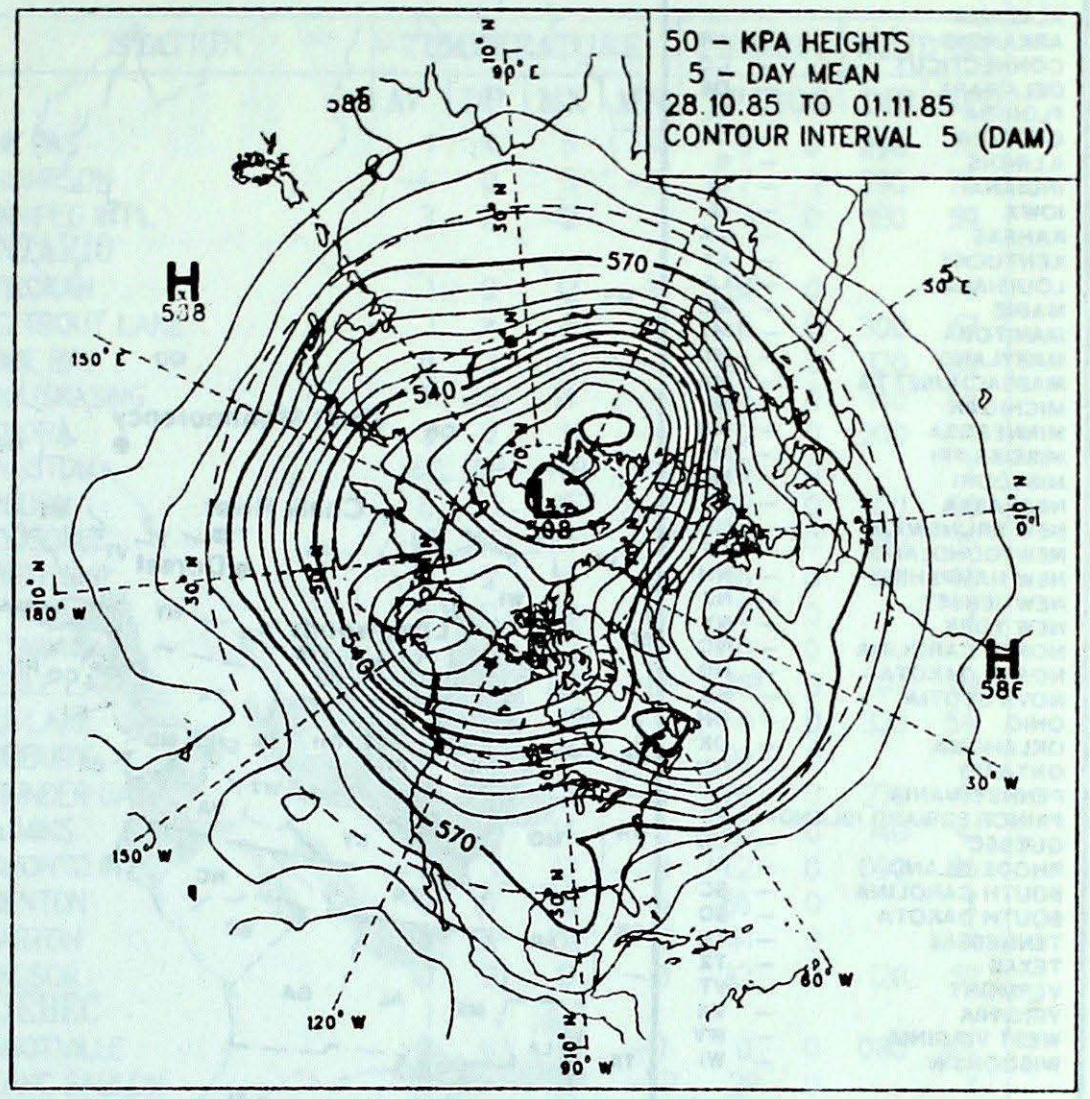
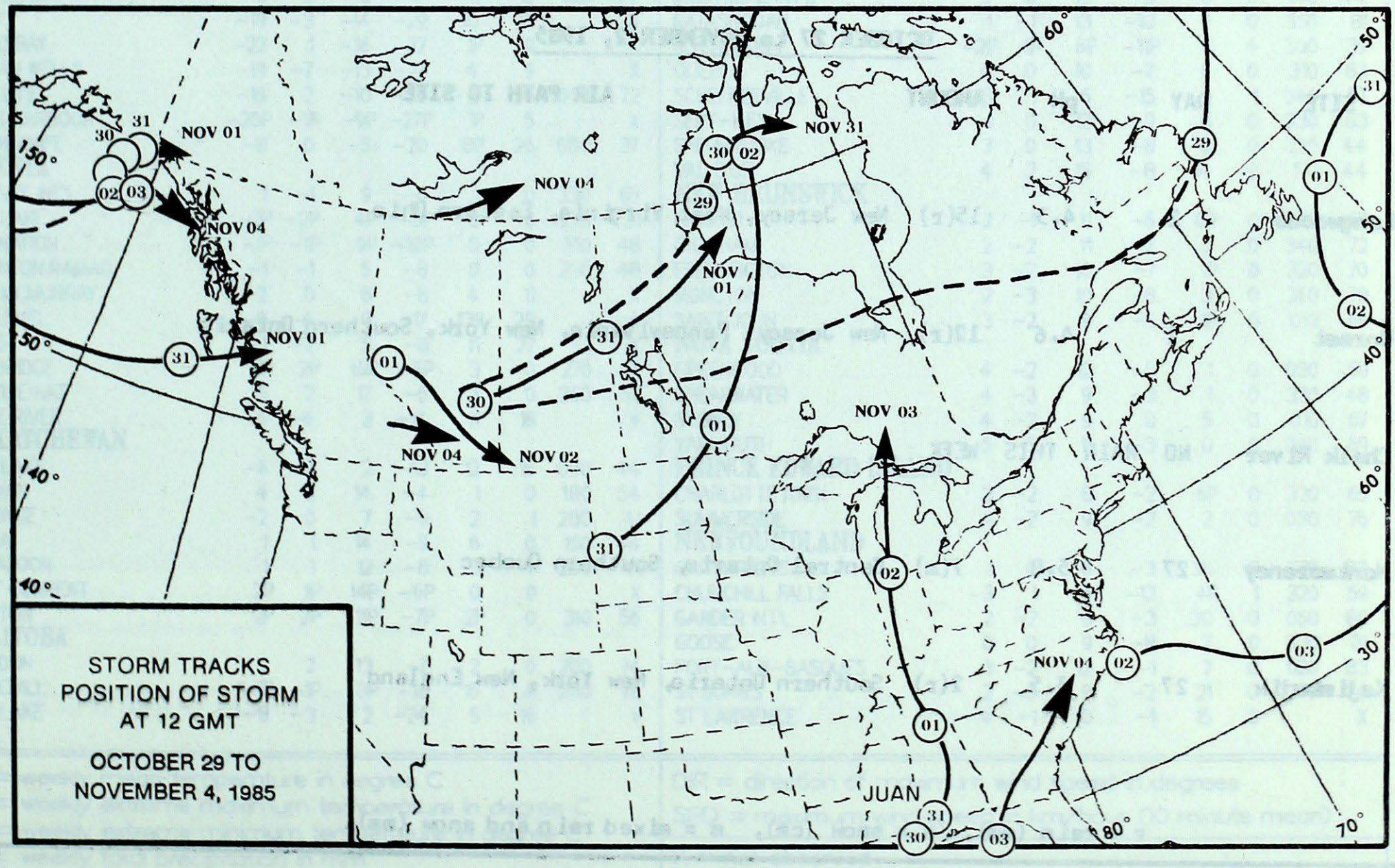
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
October 28 to November 1, 1985

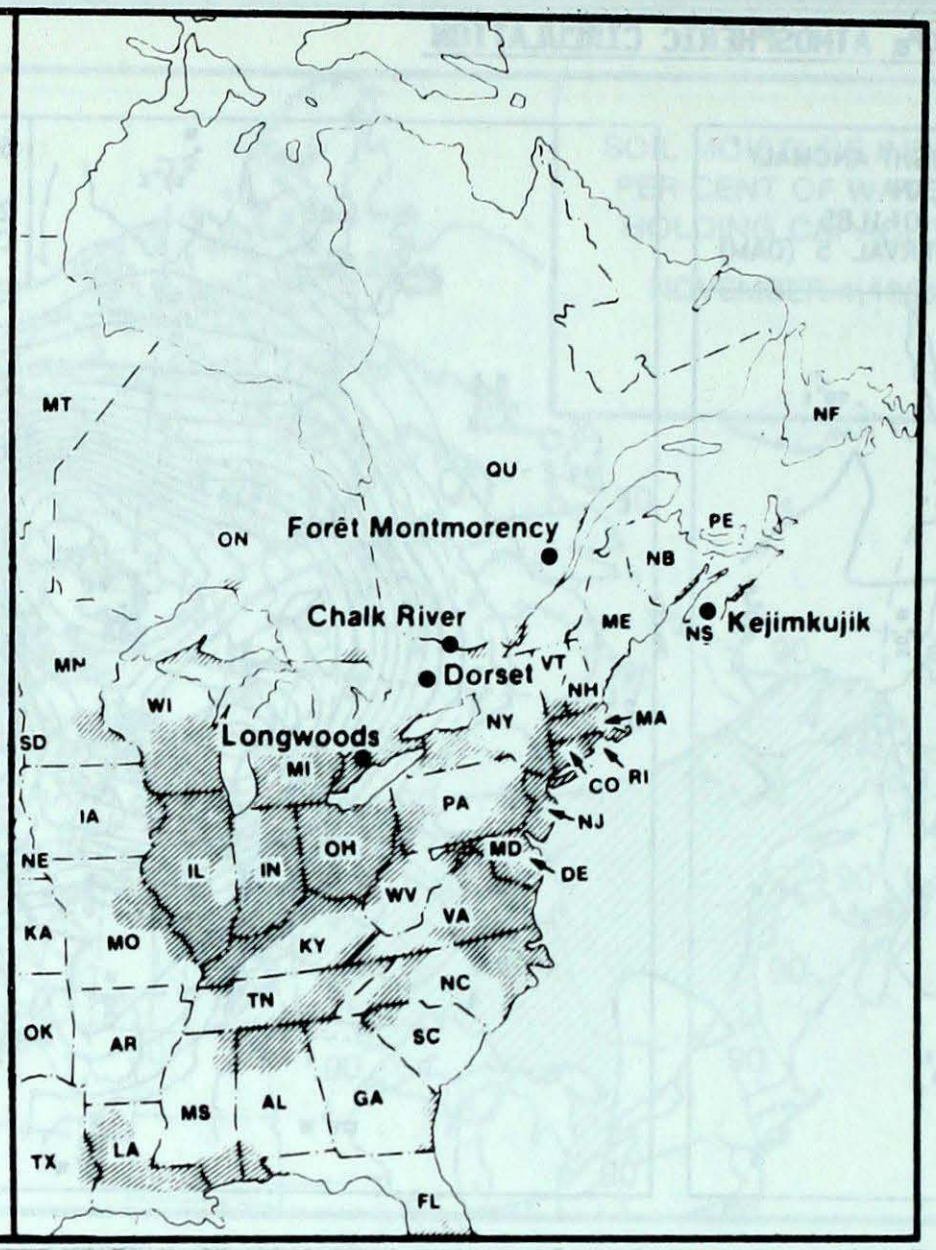


MEAN 50 KPa HEIGHTS (dam)
October 28 to November 1, 1985



ACID RAIN

ALABAMA	—	AL
ARKANSAS	—	AR
CONNECTICUT	—	CO
DELAWARE	—	DE
FLORIDA	—	FL
GEORGIA	—	GA
ILLINOIS	—	IL
INDIANA	—	IN
IOWA	—	IA
KANSAS	—	KA
KENTUCKY	—	KY
LOUISIANA	—	LA
MAINE	—	ME
MANITOBA	—	MT
MARYLAND	—	MD
MASSACHUSETTS	—	MA
MICHIGAN	—	MI
MINNESOTA	—	MN
MISSISSIPPI	—	MS
MISSOURI	—	MO
NEBRASKA	—	NE
NEW BRUNSWICK	—	NB
NEWFOUNDLAND	—	NF
NEW HAMPSHIRE	—	NH
NEW JERSEY	—	NJ
NEW YORK	—	NY
NORTH CAROLINA	—	NC
NORTH DAKOTA	—	ND
NOVA SCOTIA	—	NS
OHIO	—	OH
OKLAHOMA	—	OK
ONTARIO	—	ON
PENNSYLVANIA	—	PA
PRINCE EDWARD ISLAND	—	PE
QUÉBEC	—	QU
RHODE ISLAND	—	RI
SOUTH CAROLINA	—	SC
SOUTH DAKOTA	—	SD
TENNESSEE	—	TN
TEXAS	—	TX
VERMONT	—	VT
VIRGINIA	—	VA
WEST VIRGINIA	—	WV
WISCONSIN	—	WI



ACID RAIN REPORT

The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where SO_2 and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the rain or snow that fell at the collection sites and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

OCTOBER 27 to NOVEMBER 2, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	2	4.3	15(r)	New Jersey, West Virginia, Eastern Ohio
Dorset	2	4.6	12(r)	New Jersey, Pennsylvania, New York, Southern Ontario
Chalk River	NO RAIN THIS WEEK			
Montmorency	27	5.0	7(m)	Central Ontario, Southern Quebec
Kejimkujik	27	3.5	2(r)	Southern Ontario, New York, New England

r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).

STATISTICS

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT NOVEMBER 5,1985

STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD
BRITISH COLUMBIA								
CAPE ST.JAMES	6	−2	11	2	54	0	280	80
CRANBROOK	3	1	11	−5	6	0	270	46
FORT NELSON	−13	−8	−7	−22	3	20		*
FORT ST.JOHN	−2	−1	6	−11	1	0	230	50
KAMLOOPS	5	0	10	0	5	0	110	43
PENTICTON	5	0	12	−4	9	0	180	57
PORT HARDY	6	−1	9	1	96	0	110	52
PRINCE GEORGE	0	*	5	−5	6	1	170	65
PRINCE RUPERT	4	−3	8	−3	82	0	180	39
REVELSTOKE	3	−1	6	0	60	0	190	56
SMITHERS	−1	−2	5	−6	7	3		*
VANCOUVER INT'L	8	0	14	0	63	0	150	39
VICTORIA INT'L	8	0	15	0	27	0	170	31
WILLIAMS LAKE	0	*	6	−5	25	10		X
YUKON TERRITORY								
DAWSON	−16	*	−7	−26	7	13		*
MAYO	−16	−7	−6	−27	6P	11		X
SHINGLE POINT A	−19	−5	−15	−28	12	16		*
WATSON LAKE	−13	−7	−5	−26	3	11		*
WHITEHORSE	−10P	−6P	−3	−19P	4P	9	150	54
NORTHWEST TERRITORIES								
ALERT	−24	1	−14	−32	2	14	350	35
BAKER LAKE	−14	1	−4	−22	19	13	080	80
CAMBRIDGE BAY	−14	5	−10	−20	3	19	060	46
CAPE DYER	−6P	5P	6P	−15P	3	8	220	63
CLYDE	−7	6	2	−15	14	19	210	91
COPPERMINE	−20P	*	−13P	−27P	6	12		*
CORAL HARBOUR	−6P	7P	1P	−18P	21	6		X
EUREKA	−31	−2	−15	−40	3P	16		*
FORT SMITH	−7	−2	−2	−15	4	14		X
FROBISHER BAY	−3	6	5	−14	3	9	140	50
HALL BEACH	−9	9	0	−17	14	15	100	44
INUVIK	−19	−3	−14	−29	10	18		X
MOULD BAY	−22	1	−16	−27	1P	39		X
NORMAN WELLS	−19	−7	−13	−27	4	9		X
RESOLUTE	−19	2	−10	−30	2	30	040	72
SACHS HARBOUR	−20P	−1P	−9P	−27P	1P	5		X
YELLOWKNIFE	−8	0	−5	−20	8P	26	080	37
ALBERTA								
CALGARY INT'L	1	−1	9	−6	1	0	330	65
COLD LAKE	−2P	−2P	4P	−8P	6	6	270	31
CORONATION	−1P	−1P	9P	−10P	0	0	310	48
EDMONTON NAMAO	−1	−1	5	−8	0	0	290	48
FORT MCMURRAY	−2	0	6	−8	4	11		X
HIGH LEVEL	−8	−4	0	−17	13P	29		*
JASPER	−1	−2	5	−8	11	27		X
LETHBRIDGE	5P	2P	16P	−5P	3	0	270	67
MEDICINE HAT	5	2	17	−5	3	0	260	57
PEACE RIVER	−6	−4	3	−14	11	16		*
SASKATCHEWAN								
CREE LAKE	−6	−3	2	−13	12	16	080	44
ESTEVAN	4	3	14	−4	1	0	180	54
LA RONGE	−2	0	7	−9	2	1	280	41
REGINA	1	1	14	−9	6	0	150	44
SASKATOON	1	1	12	−8	3	0	200	41
SWIFT CURRENT	2P	1P	14P	−6P	0	0		X
YORKTON	2P	2P	11P	−7P	2P	0	310	56
MANITOBA								
BRANDON	2	2	13	−7	2	0	200	74
CHURCHILL	−7P	−1P	0P	−18	15	4	280	78
LYNN LAKE	−8	−3	2	−24	5	16		*
THE PAS	1	*	6	−6	3	0	290	70
THOMPSON	−4	0	5	−17	7	1	290	76
WINNIPEG INT'L	3	2	12	−5	7	0	180	59
ONTARIO								
ATIKOKAN	1	0	12	−10	5P	0		*
BIG TROUT LAKE	1	*	8	−9	6	0	300	67
GORE BAY	8	3	15	−3	44	0	120	59
KAPUSKASING	4	3	14	−6	45	0	140	46
KENORA	3	2	11	−4	2	0	200	44
KINGSTON	6P	0P	14P	−4P	10	0		X
LONDON	8	1	15	−2	42	0	100	50
MOOSONEE	5P	5P	15P	−3P	30P	0	150	35
NORTH BAY	5	2	14	−6	26	0	120	48
OTTAWA INT'L	5	0	13	−5	5	0		X
PETAWAWA	4	−1	13	−8	10	0		X
PICKLE LAKE	2P	2P	10P	−8P	11P	0	290	69
RED LAKE	2	2	12	−6	0	0	320	54
SUDBURY	6	2	15	−4	32	0		X
THUNDER BAY	4P	1P	12P	−6P	28	0	270	41
TIMMINS	4	2	14	−8	40	0	140	41
TORONTO INT'L	7	1	13	−3	62	0	090	56
TRENTON	6	0	15	−5	65	0		X
WIARTON	8P	2P	15P	−3P	41	0		X
WINDSOR	10	2	17	3	33	0	120	52
QUEBEC								
BAGOTVILLE	2	0	9	−7	0	0	080	44
BLANC SABLON	3P	*	9P	−5P	2P	0		X
INUKJUAK	1	4	6	−9	15	1	150	65
KUUJJUAQ	−2	2	7	−12	5	0	320	33
KUUJJUARAPIK	3	4	11	−3	22	0	140	61
MANIWAKI	4	0	14	−6	3	0		*
MONT JOLI	2	−1	9	−5	1	0	330	63
MONTREAL INT'L	5	0	13	−5	0	0	240	44
NATASHQUAN	1	−1	13	−10	0	0	350	81
NITCHEQUON	−2P	1P	6P	−11P	3	4	300	39
QUEBEC	4	0	10	−7	0	0	310	63
SCHEFFERVILLE	−3	1	6	−15	3	1	340	57
SEPT−ILES	1	0	12	−9	0	0	330	63
SHERBROOKE	3	0	13	−8	0	0	320	44
VAL D'OR	4	2	15	−8	14	0	170	44
NEW BRUNSWICK								
CHARLO	2	−1	11	−6	0P	0	310	67
CHATHAM	2	−2	11	−7	3	0	340	72
FREDERICTON	3	−2	10	−7	1P	0	320	70
MONCTON	2	−3	10	−8	3	0	360	70
SAINT JOHN	3	−2	9	−5	1P	0	010	69
NOVA SCOTIA								
GREENWOOD	4	−2	12	−3	1	0	030	59
SHEARWATER	4	−3	9	−3	1	0	320	48
SYDNEY	4	−2	9	0	5	0	010	67
YARMOUTH	5	−3	11	−3	0	0	340	69
PRINCE EDWARD ISLAND								
CHARLOTTETOWN	3	−2	8	−2	6P	0	320	65
SUMMERSIDE	4	−2	9	−2	2	0	030	76
NEWFOUNDLAND								
CARTWRIGHT	1	0	6	−3	38	0	320	83
CHURCHILL FALLS	−3	1	6	−12	4P	1	320	59
GANDER INT'L	2	−2	8	−3	30	0	050	80
GOOSE	0	0	9	−8	7	0	330	81
PORT−AUX−BASQUES	3	−2	12	−1	7	0	020	83
ST JOHN'S	2	−3	9	−2	21	0	040	74
ST LAWRENCE	4	−1	10	−1	15	0		X

AV = weekly mean temperature in degree C
MX = weekly extreme maximum temperature in degree C
MN = weekly extreme minimum temperature in degree C
TP = weekly total precipitation in mm
DP = departure of mean temperature from normal in degree C
SOG = snow depth on ground in cm, last day of the period

DIR = direction of maximum wind speed in degrees
SPD = maximum wind speed in km/hour (10 minute mean)

X = not observed
P = value based on less than 7 days
* = missing