



Environment  
Canada

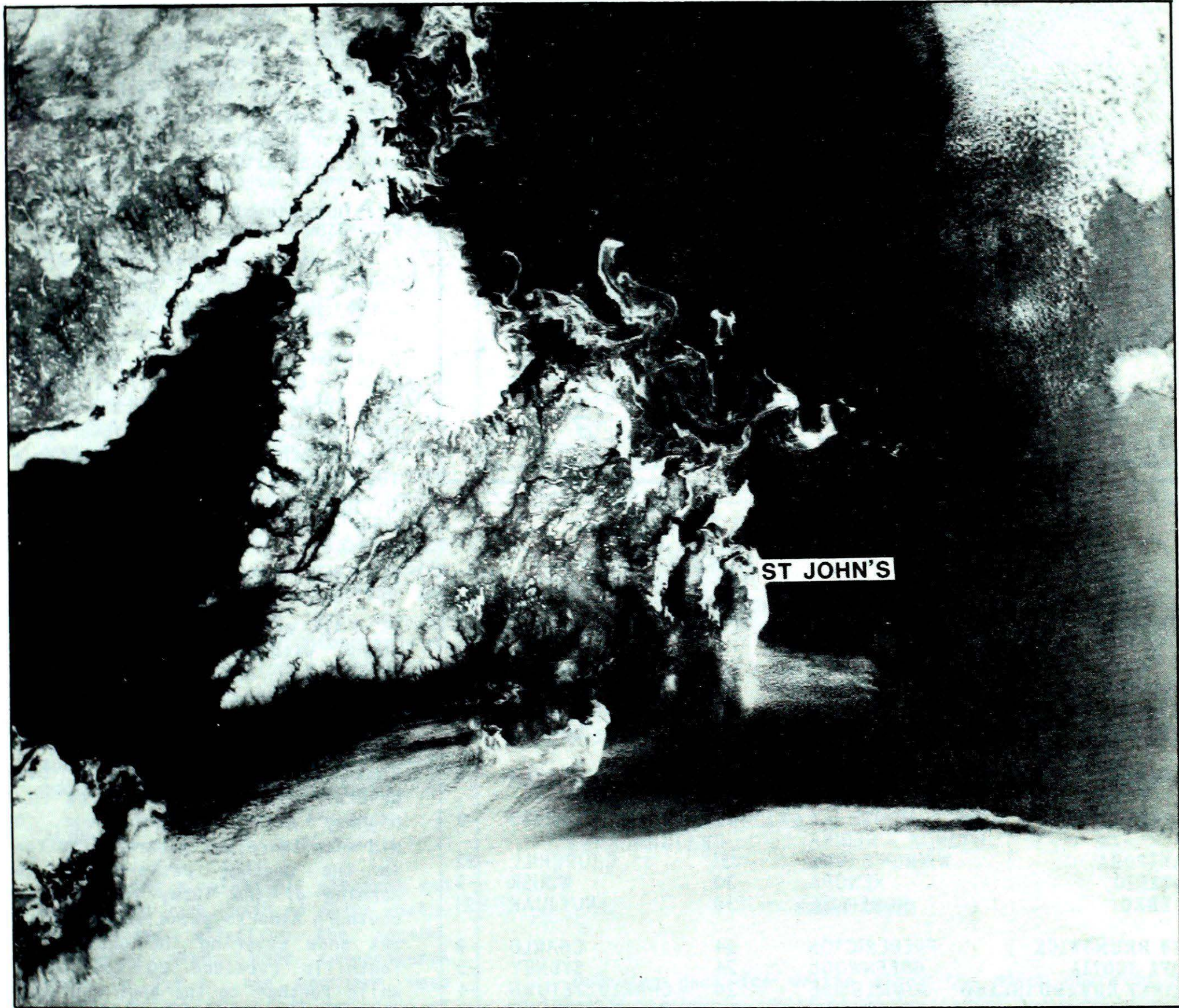
Environnement  
Canada

# Climatic Perspectives

A weekly review of Canadian climate

April 14 to 20, 1987

Vol.9 NO.16



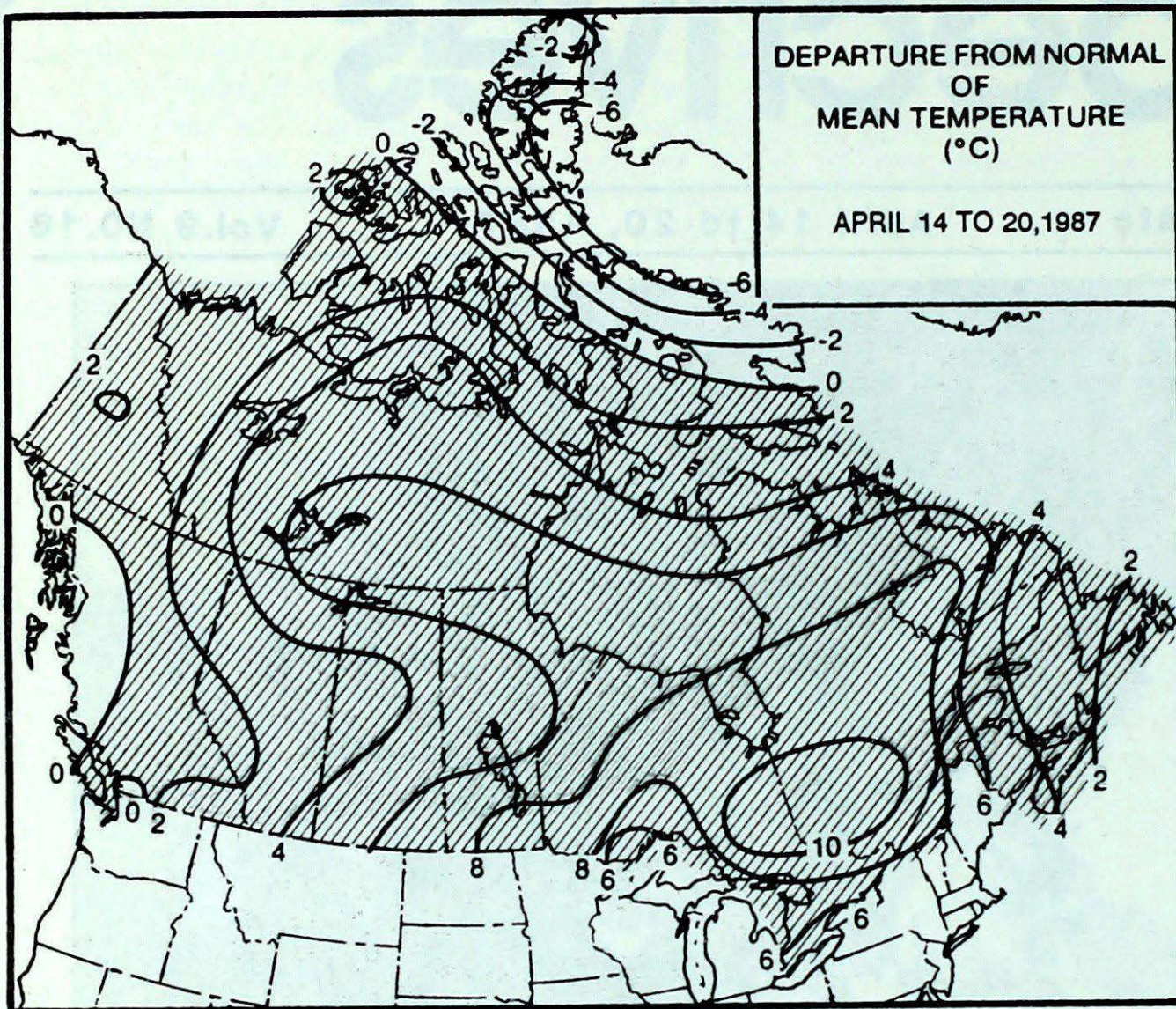
This striking photograph of Newfoundland taken by NOAA 10 on April 14, 1987, shows areas of ice still present along the Labrador coastline and off the east coast of Newfoundland. For more details see page 3.

- **Heavy wet snow southern Alberta**
- **Record warmth central and eastern Canada**
  - Early blossoms in southern Ontario

Canada



# TEMPERATURE



## WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM	
BRITISH COLUMBIA	PENTICTON	23	DEASE LAKE	-10
YUKON TERRITORY	DAWSON	9	KOMAKUK BEACH A	-27
NORTHWEST TERRITORIES	FORT SMITH	13	EUREKA	-40
	HAY RIVER			
ALBERTA	MEDICINE HAT	20	RED DEER	-10
SASKATCHEWAN	MOOSE JAW	23	EASTEND CYPRESS	-5
	REGINA			
MANITOBA	WINNIPEG INT'L	31	CHURCHILL	-22
ONTARIO	KENORA	30	WINISK	-9
QUEBEC	ROBERVAL	30	INUKJUAK	-21
NEW BRUNSWICK	FREDERICTON	24	CHARLO	-8
NOVA SCOTIA	GREENWOOD	24	SYDNEY	-5
PRINCE EDWARD ISLAND	SUMMERSIDE	20	CHARLOTTETOWN	-4
NEWFOUNDLAND	DEER LAKE	16	BATTLE HARBOUR	-12

## ACROSS THE NATION

WARMEST MEAN TEMPERATURE	16	MONTREAL INT'L	QUE
		WINNIPEG INT'L	MAN
COOLEST MEAN TEMPERATURE	-33	EUREKA	NWT

## ACROSS THE COUNTRY...

### Yukon and Northwest Territories

Over the past few weeks, the storm track has shifted northward, and lies across the Northwest Territories. Temperatures moderated somewhat over the western Arctic, but remained bitterly cold in the east. Strong winds, snow and blowing snow affected most of the southern Arctic. Blizzard warnings were in effect for Keewatin and Baffin Island, where snowfalls were substantial.

### British Columbia

It was a variable week, with a large portion of the province experiencing a mainly sunny, but cool Easter weekend. Heaviest precipitation fell along the north coast and in the Fraser Valley. Locally heavy showers and thunderstorms with hail developed over the lower mainland. Fresh snow fell in a number of lower mountain regions of the south. In the Peace River District, fields were being prepared for seeding.

### Prairies

All areas started out dry and sunny, with only widely scattered showers reported. Very strong winds, gusting in excess of 100 Km/h swept across the southwest on the 16th and 17th, causing blowing dust in Saskatchewan and blowing over several tractor trailer units on a highway west of Lethbridge. By mid-week there was a marked contrast in the weather pattern. On the morning of the 18th, residents of southern Alberta awoke to see heavy, wet snow covering the ground. The foothills received 20 to 30 cm, while further to the east and south of Edmonton, falls of up to 15 cm were more common. In Manitoba, record warm weather arrived for the Easter weekend, with maximum readings in the south soaring to the low thirties. A cold frontal passage on Sunday produced scattered showers and thunderstorms. Farmers north of Calgary are being plagued by the worst infestation of field mice in more than forty years. The mild winter and the inability to complete the grain harvest, due to an early winter snowfall, is the cause.



**Ontario**

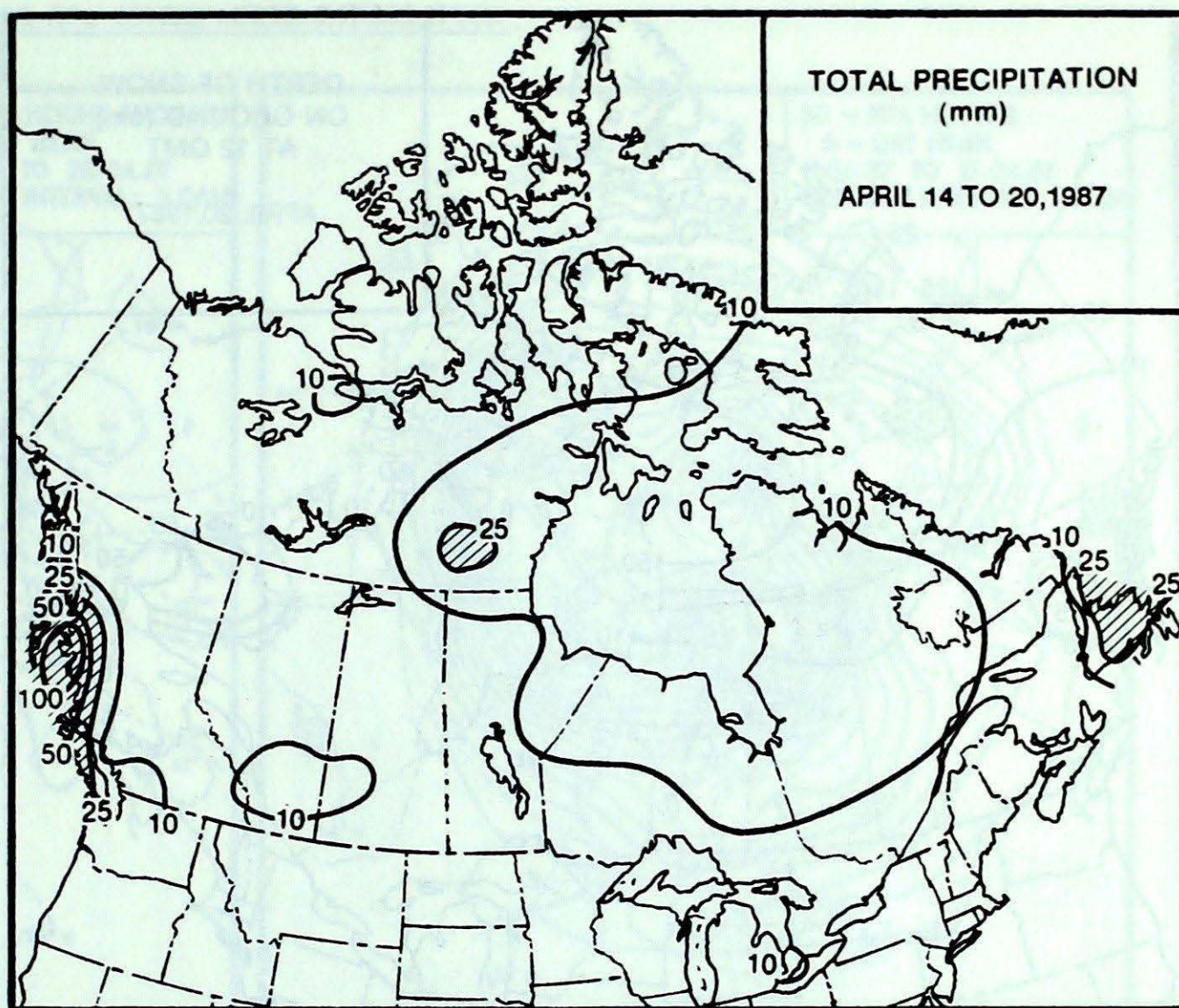
The whole province enjoyed perfect weather during the Easter holiday weekend, with sunny skies and very warm temperatures. Daytime readings in southern and central Ontario soared to the record mid-to high twenties both Easter Sunday and Monday. In northwestern Ontario, away from the Great Lakes, the mercury hit 30°C, significantly increasing the forest fire hazard. In Southern Ontario, buds on many of the trees have opened up into leaf, and fruit trees have started to bloom three to four weeks early. Should a heavy frost occur in southern Ontario within the next month, as is still possible, there could be irreparable damage to this years' fruit crop.

**Quebec**

Record breaking warm weather covered the southern half of the province over the weekend. During the latter half of the period as many as 93 daily high temperature records were broken at 19 locations. The mercury reached 30°C at Roberval on the 20th. Monthly temperature records were also broken at Sept-Iles and Baie Comeau on the 19th and at Quebec, Bagotville and Chibougamau on April 20. Except for northern and eastern portions of the province precipitation was light, increasing the threat of forest fires. As of April 21, 156 forest fires have consumed a total of 696 hectares.

**Atlantic**

It was a relatively pleasant and dry spring week, with no major weather systems affecting the region. Northerly winds kept temperatures cool in P.E.I. and northern Nova Scotia during the first two days of the period. Freezing precipitation fell at Sydney on the 14th. An area of high pressure produced fine weather over the Easter weekend, with a light southerly flow allowing daytime highs to soar into the twenties, breaking a number of daily temperature records. In Newfoundland, showers occurred on the 15th and 18th, with variable sky conditions in between. Temperatures were very mild most of the week, with the mercury climbing into the teens over the holiday weekend.

**HEAVIEST WEEKLY PRECIPITATION (mm)**

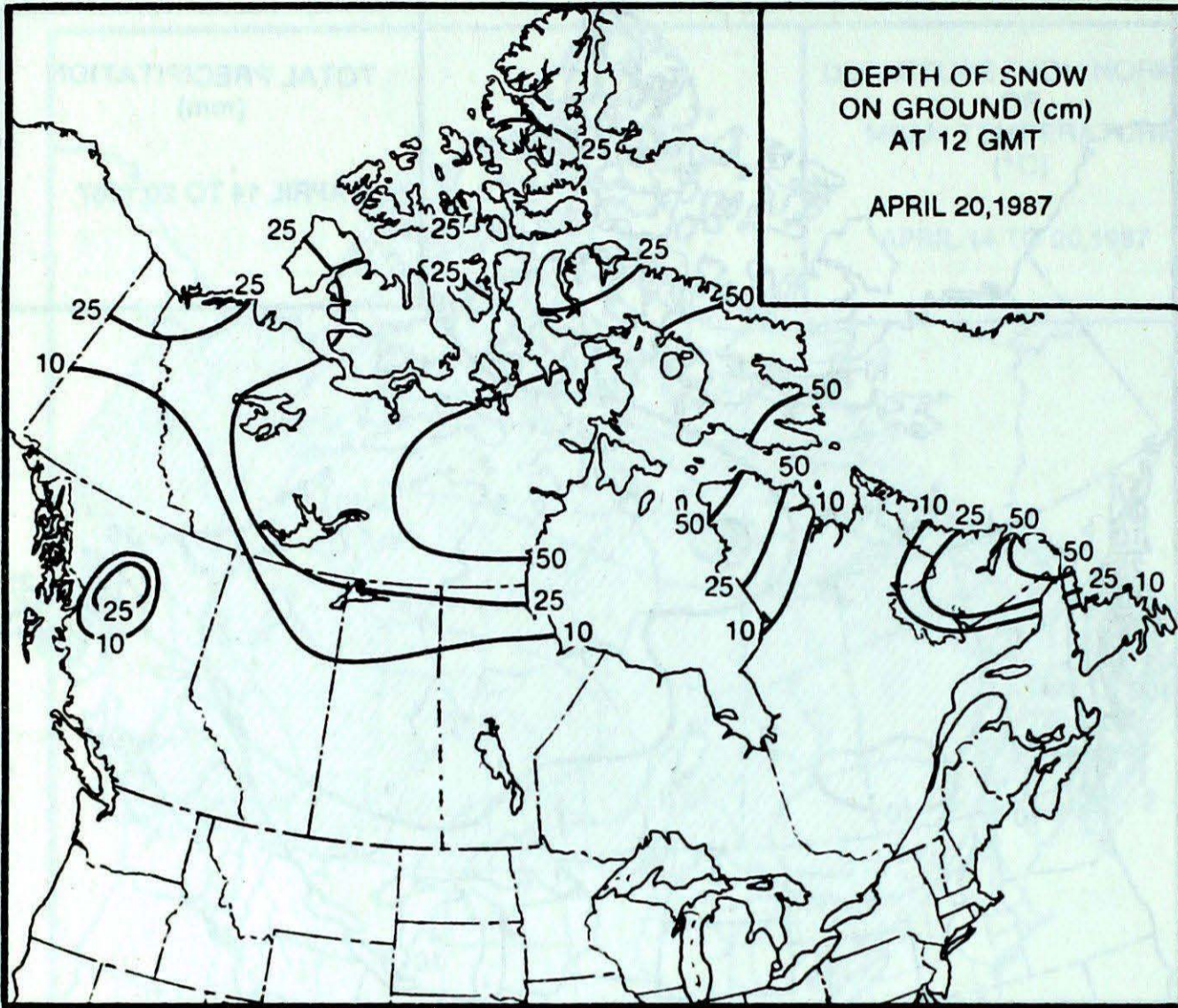
BRITISH COLUMBIA	HOPE	108
YUKON TERRITORY	BURWASH	9
NORTHWEST TERRITORIES	ENNADAI LAKE	46
ALBERTA	RED DEER	15
SASKATCHEWAN	KINDERSLEY	12
MANITOBA	ISLAND LAKE	27
ONTARIO	MOOSONEE	21
QUEBEC	KUUJJIARAPIK	23
NEW BRUNSWICK	SAINT JOHN	9
NOVA SCOTIA	SABLE ISLAND	16
PRINCE EDWARD ISLAND	SUMMERSIDE	1
NEWFOUNDLAND	BURGEO	45

**FRONT COVER**

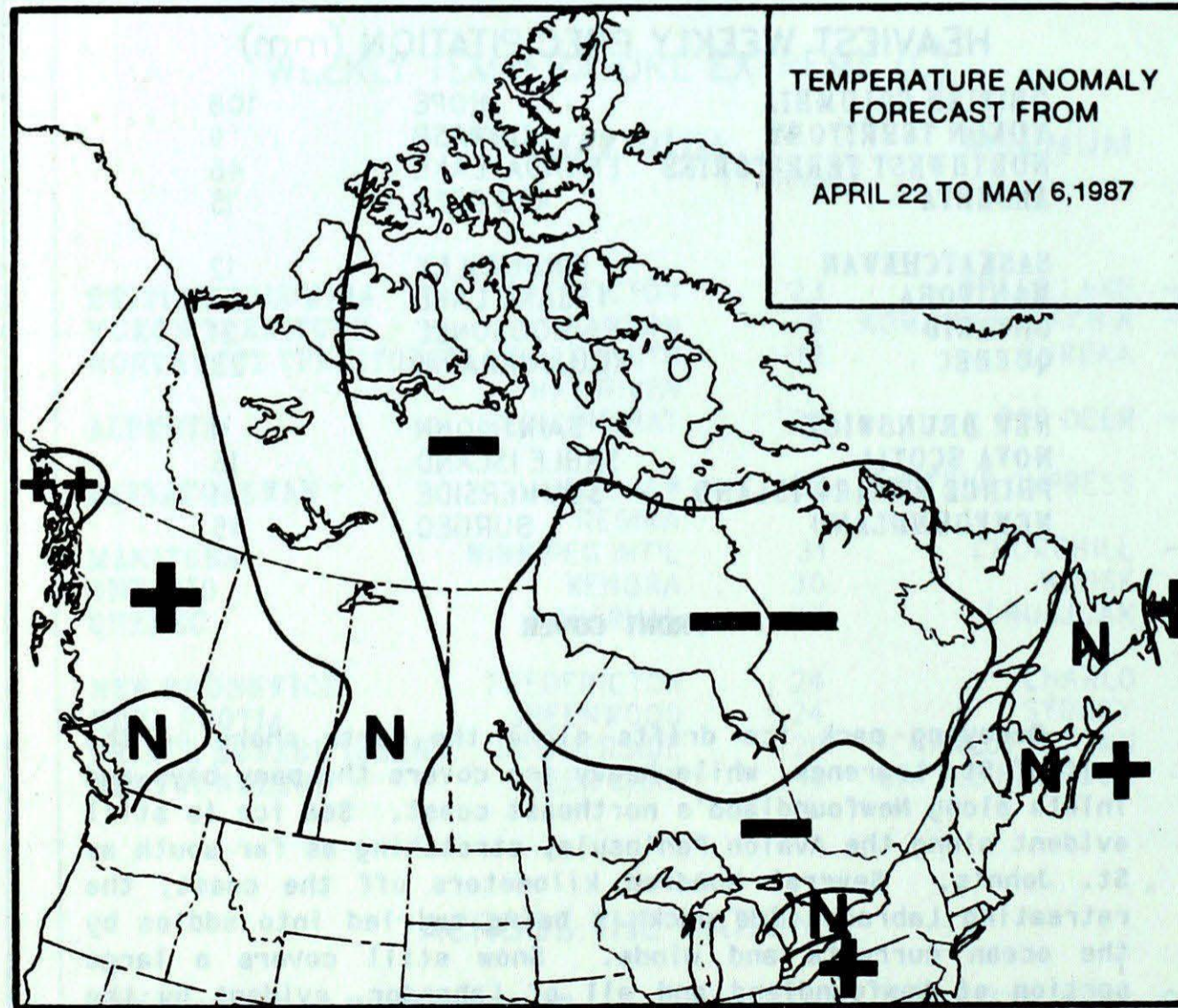
Decaying pack ice drifts along the north shore of the Gulf of St. Lawrence, while heavy ice covers the many bays and inlets along Newfoundland's northeast coast. Sea ice is still evident along the Avalon Peninsula, stretching as far south as St. John's. Several hundred kilometers off the coast, the retreating Labrador ice pack is being swirled into eddies by the ocean currents and winds. Snow still covers a large portion of Newfoundland and all of Labrador, evident by the lighter shading in the photograph. The thick cloud deck just south of the Island produced rain the following day.



# FORECAST



DEPTH OF SNOW  
ON GROUND (cm)  
AT 12 GMT  
APRIL 20, 1987



TEMPERATURE ANOMALY  
FORECAST FROM  
APRIL 22 TO MAY 6, 1987

**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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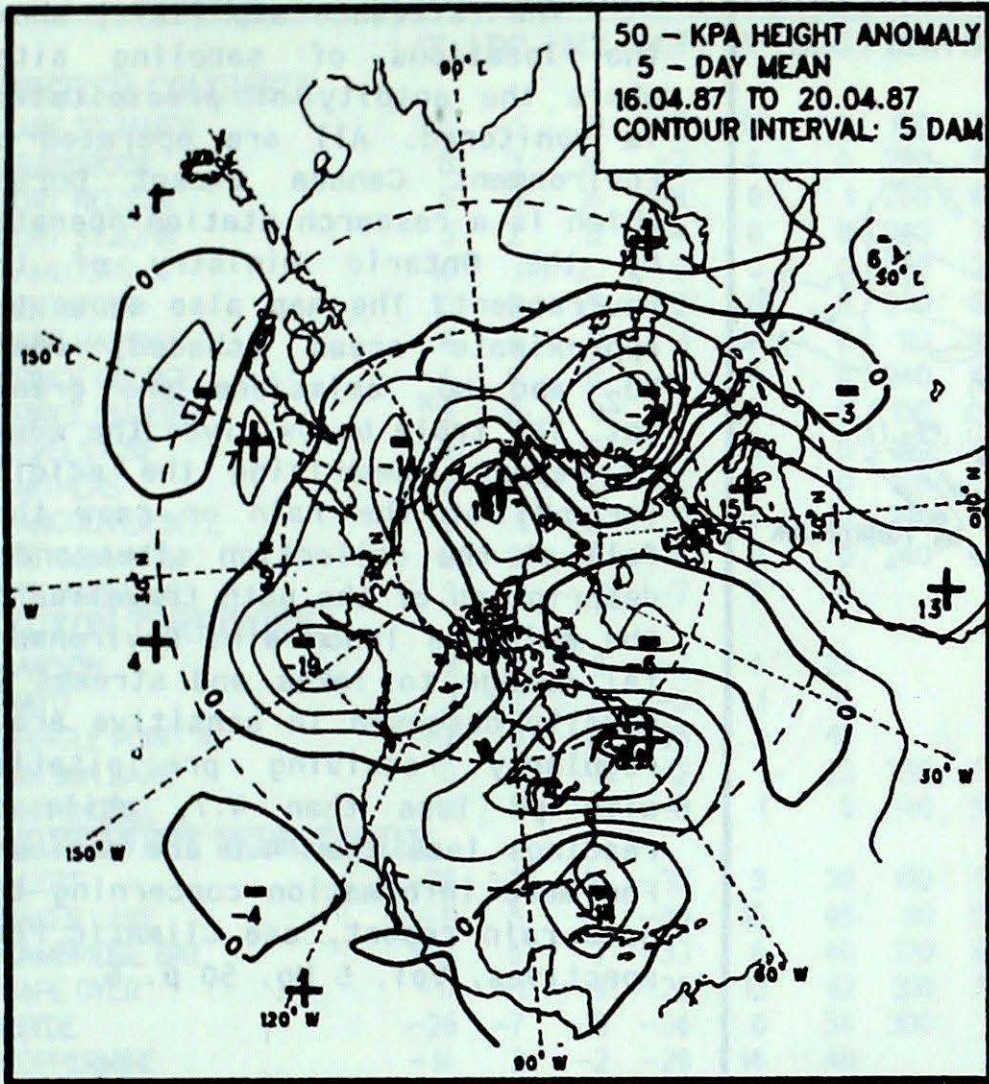
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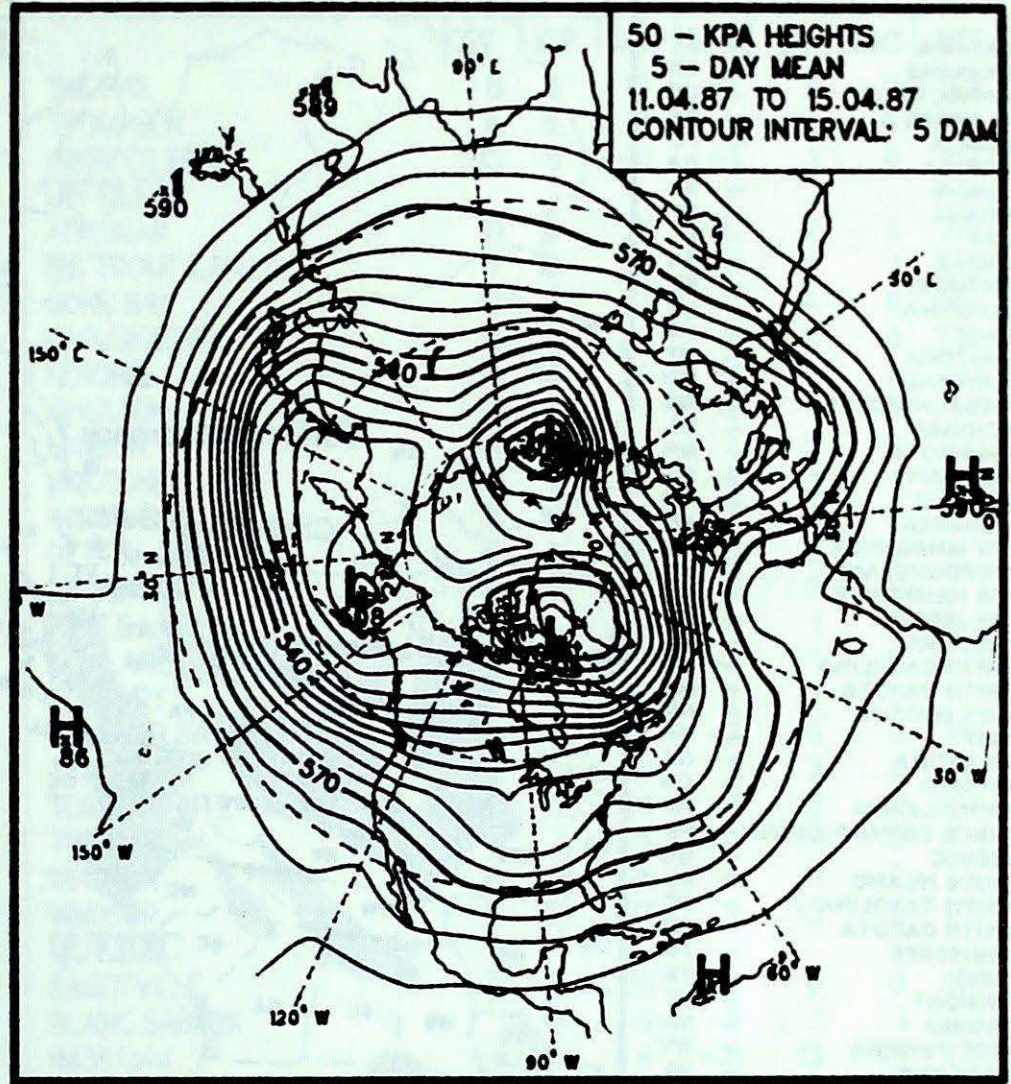


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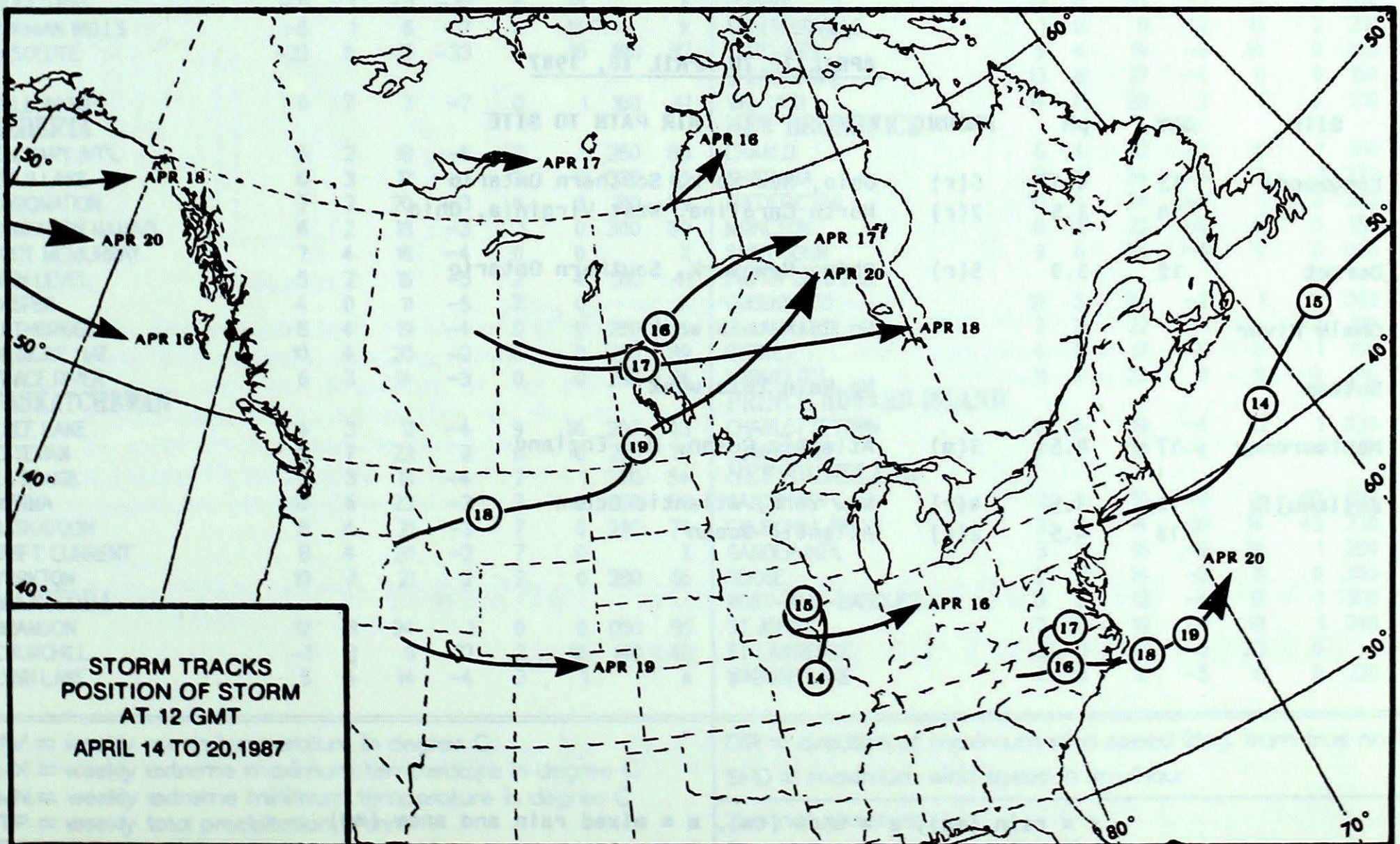
## 50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)  
April 11 to 15, 1987



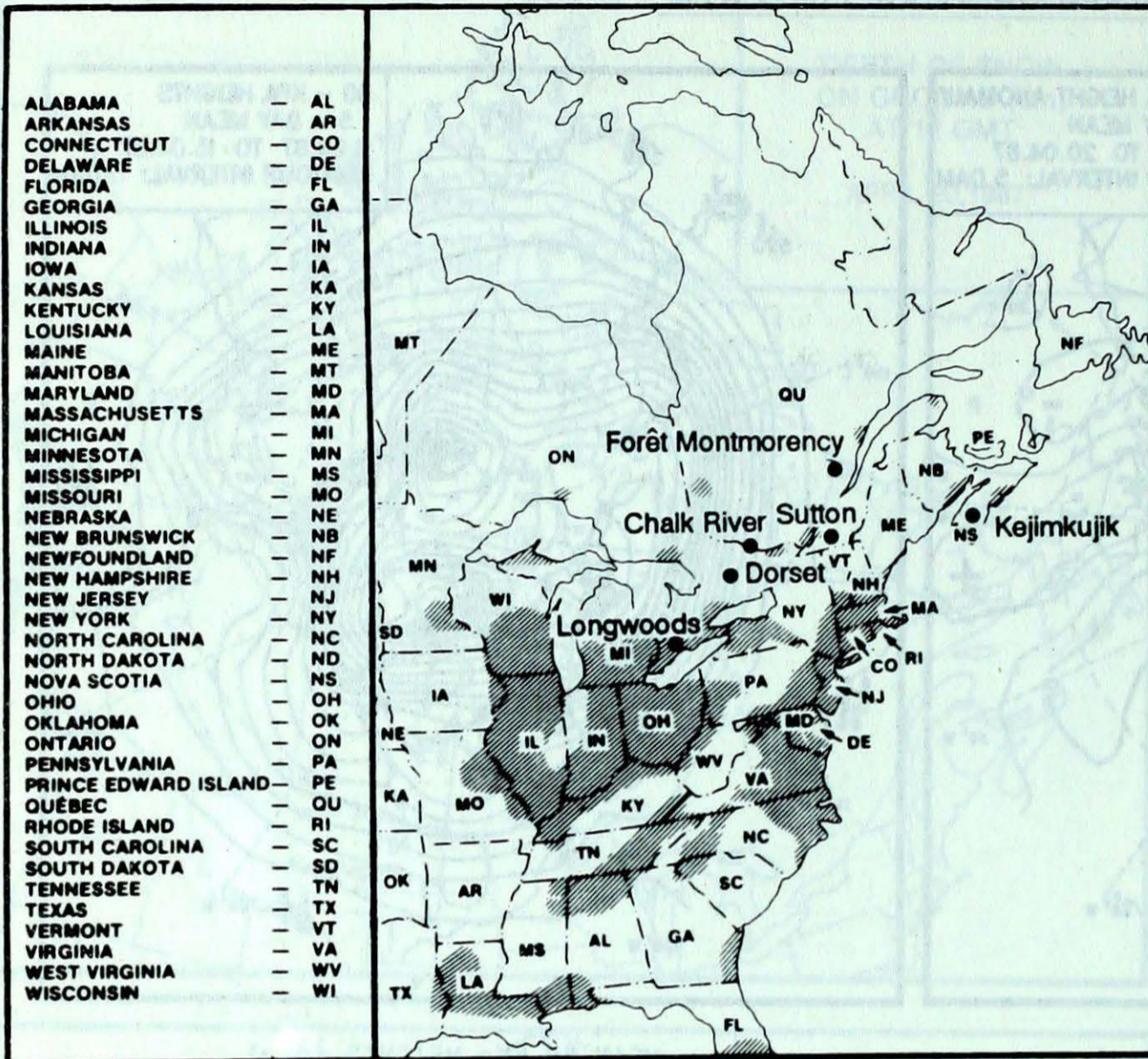
MEAN 50 KPa HEIGHTS (dam)  
April 11 to 15, 1987





# ACID RAIN

## 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<sub>2</sub> and NO<sub>x</sub> 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.

### APRIL 12 TO APRIL 18, 1987

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	12	4.1	6(r)	Ohio, New York, Southern Ontario
	14	3.5	2(r)	North Carolina, West Virginia, Ohio
Dorset	12	3.9	5(r)	Ohio, New York, Southern Ontario
Chalk River				No Rain this week
Sutton				No Rain this week
Montmorency	17	4.5	3(m)	Atlantic Ocean, New England
Kejimikujik	12	3.5	4(r)	New York, Atlantic Ocean
	18	4.5	2(r)	Atlantic Ocean

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



## TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT APRIL 21, 1987

STATION	TEMPERATURE				PRECIP.		WIND MX		STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD		AV	DP	MX	MN	TP	SOG	DIR	SPD
<b>BRITISH COLUMBIA</b>									THE PAS	8	8	19	-4	7	0	160	59
CAPE ST. JAMES	6	-1	10	2	41	0	190	111	THOMPSON	6	5	17	-4	11	4	010	50
CRANBROOK	8	3	16	-2	4	0	200	56	WINNIPEG INT'L	13	8	31	-1	1	0	150	67
FORT NELSON	5	3	16	-6	0	1	250	63	<b>ONTARIO</b>								
FORT ST. JOHN	5	2	12	-4	0	0	240	76	ATIKOKAN	10	6	27	-4	2	0	270	48
KAMLOOPS	10	1	20	0	0	0	260	70	BIG TROUT LAKE	7	10	20	-5	14	1	220	85
PENTICTON	10	2	23	-2	0	0	240	63	GORE BAY	12	7	22	3	4	0	060	41
PORT HARDY	6	0	11	1	57	0	110	48	KAPUSKASING	13	11	29	0	11	0	320	63
PRINCE GEORGE	4	0	12	-7	4	0	240	69	KENORA	14	10	30	2	0	0	160	46
PRINCE RUPERT	5	0	9	-2	124	0	150	104	KINGSTON	13	6	27	4	1	0	X	X
REVELSTOKE	8	2	16	-2	9	0	160	65	LONDON	14	7	27	7	5	0	110	41
SMITHERS	4	0	10	-6	1	0	140	59	MOOSONEE	9	9	25	-4	21	1	300	57
VANCOUVER INT'L	9	1	15	3	14	0	280	43	NORTH BAY	15	10	27	7	1	0	120	43
VICTORIA INT'L	8	0	15	0	11	0	240	44	OTTAWA INT'L	15	8	28	0	0	0	X	X
WILLIAMS LAKE	3	-1	11	-7	0	0	X	X	PETAWAWA	14	9	27	-1	0	*	X	X
<b>YUKON TERRITORY</b>									PICKLE LAKE	*		29	*	1	0	290	57
DAWSON	2	3	9	-7	4	23	*	*	RED LAKE	11	7	27	-3	1	0	330	56
MAYO	2	2	8	-5	1	4	X	X	SUDBURY	15	10	28	4	2	0	X	X
SHINGLE POINT A	-17	0	-12	-25	3	42	*	*	THUNDER BAY	9	6	27	-3	0	0	190	56
WATSON LAKE	0	0	7	-12	1	22	230	56	TIMMINS	13	10	29	2	3	0	210	56
WHITEHORSE	1	1	6	-8	1	0	140	54	TORONTO INT'L	13	6	24	5	3	0	090	52
<b>NORTHWEST TERRITORIES</b>									TRENTON	14	7	25	3	1P	0	X	X
ALERT	-26	-2	-21	-32	3	30	190	59	WIARTON	14	8	26	4	1	0	X	X
BAKER LAKE	-11	5	-1	-30	16	95	110	50	WINDSOR	15	5	27	8	13	0	120	37
CAMBRIDGE BAY	-16	5	-7	-33	6	40	120	63	<b>QUEBEC</b>								
CAPE DYER	-17	-1	-9	-26	13	62	310	52	BAGOTVILLE	12	8	26	-4	0	0	070	50
CLYDE	-26	-7	-13	-36	0	34	300	31	BLANC SABLON	1	3	9	-9	1	1	X	X
COPPERMINE	-14	3	-2	-29	14	48	*	*	INUKJUAK	-4	6	4	-21	13	45	270	61
CORAL HARBOUR	-12	4	-2	-27	17	72	X	X	KUUVUJUAQ	-3	6	6	-18	5	7	270	80
EUREKA	-33	-6	-27	-40	1	14	*	*	KUUVUJARAPIK	1	6	14	-15	23	10	110	61
FORT SMITH	5	6	13	-3	2	15	X	X	MANIWAKI	14	9	29	-3	0	0	*	*
IQUALUIT	-11	4	0	-25	14	39	310	83	MONT JOLI	9	7	22	-5	3	0	210	56
HALL BEACH	-20	1	-9	-35	1P	*	080	44	MONTREAL INT'L	16	9	28	0	0	0	120	37
INUVIK	-12	2	-3	-19	5	40	X	X	NATASHQUAN	3	3	14	-7	7	0	310	61
MOULD BAY	-21	3	-11	-32	6	38	X	X	QUEBEC	13	8	27	-2	0	0	080	39
NORMAN WELLS	-5	1	6	-17	0	14	X	X	SCHEFFERVILLE	1	8	11	-12	10	2	310	59
RESOLUTE	-22	0	-15	-33	0	18	100	87	SEPT-ILES	5	4	19	-6	14	0	300	63
YELLOWKNIFE	0	7	7	-7	0	1	160	41	SHERBROOKE	13	8	27	-4	0	0	150	35
<b>ALBERTA</b>									VAL D'OR	14	11	28	2	1	0	210	50
CALGARY INT'L	5	2	18	-6	13	1	260	83	<b>NEW BRUNSWICK</b>								
COLD LAKE	6	3	17	-3	3	0	320	65	CHARLO	6	4	22	-8	0	1	100	48
CORONATION	7	3	20	-3	6	0	310	89	CHATHAM	8	4	24	-5	0	1	230	46
EDMONTON NAMAQ	6	2	18	-3	1	0	300	80	FREDERICTON	10	5	24	-3	1	0	200	43
FORT MCMURRAY	7	4	16	-4	0	0	X	X	MONCTON	8	4	22	-4	0	0	180	54
HIGH LEVEL	5	2	15	-5	2	4	310	41	SAINT JOHN	9	6	23	-4	9	0	040	44
JASPER	4	0	11	-5	7	0	X	X	<b>NOVA SCOTIA</b>								
LETHBRIDGE	8	4	19	-4	0	0	260	109	GREENWOOD	10	5	24	-2	1	0	040	57
MEDICINE HAT	10	4	20	-2	10	0	270	89	SHEARWATER	7	3	22	-1	4	0	100	52
PEACE RIVER	6	3	14	-3	0	0	260	74	SYDNEY	4	2	17	-5	6	1	100	50
<b>SASKATCHEWAN</b>									YARMOUTH	11	6	20	0	9	0	010	54
CREE LAKE	4	3	11	-4	9	14	200	43	<b>PRINCE EDWARD ISLAND</b>								
ESTEVAN	12	7	23	2	0	0	270	78	CHARLOTTETOWN	6	4	19	-4	0	1	030	37
LA RONGE	5	3	15	-4	7	1	270	54	SUMMERSIDE	7	4	20	-4	1	1	020	35
REGINA	10	6	23	-3	7	0	250	80	<b>NEWFOUNDLAND</b>								
SASKATOON	8	4	21	-3	7	0	290	74	CARTWRIGHT	2	5	10	-9	3	50	210	46
SWIFT CURRENT	8	4	20	-2	7	0	X	X	CHURCHILL FALLS	3	9	14	-10	14	43	230	52
YORKTON	10	7	21	2	7	0	280	65	GANDER INT'L	3	2	16	-9	26	1	280	102
<b>MANITOBA</b>									GOOSE	5	7	14	-8	8	0	300	52
BRANDON	12	8	24	1	0	0	050	85	PORT-AUX-BASQUES	3	2	13	-4	17	1	300	74
CHURCHILL	-1	8	9	-22	3	16	140	48	ST JOHN'S	2	0	12	-7	18	1	240	72
LYNN LAKE	5	4	14	-4	2	1	*	*	ST LAWRENCE	2	1	13	-5	33	0	X	X
									WABUSH LAKE	4	10	16	-5	15	0	220	59

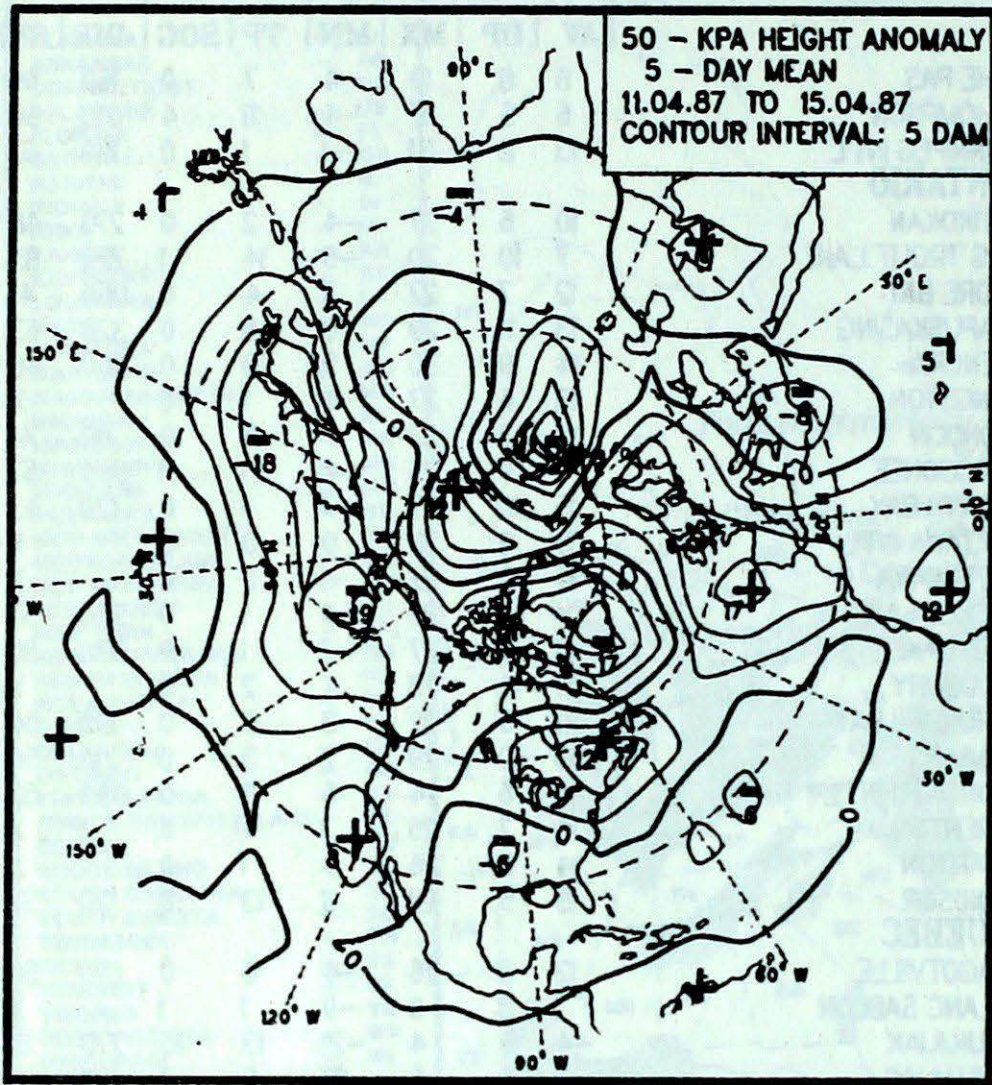
AV = weekly mean temperature in degree C  
 MX = weekly extreme maximum temperature in degree C  
 MN = weekly extreme minimum temperature in degree C  
 TP = weekly total precipitation in mm  
 DP = departure of mean temperature from normal in degree C  
 SOG = snow depth on ground in cm, last day of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

DIR = direction of maximum wind speed (deg. from true north)  
 SPD = maximum wind speed in km/hour  
 X = not observed  
 P = value based on less than 7 days  
 \* = missing

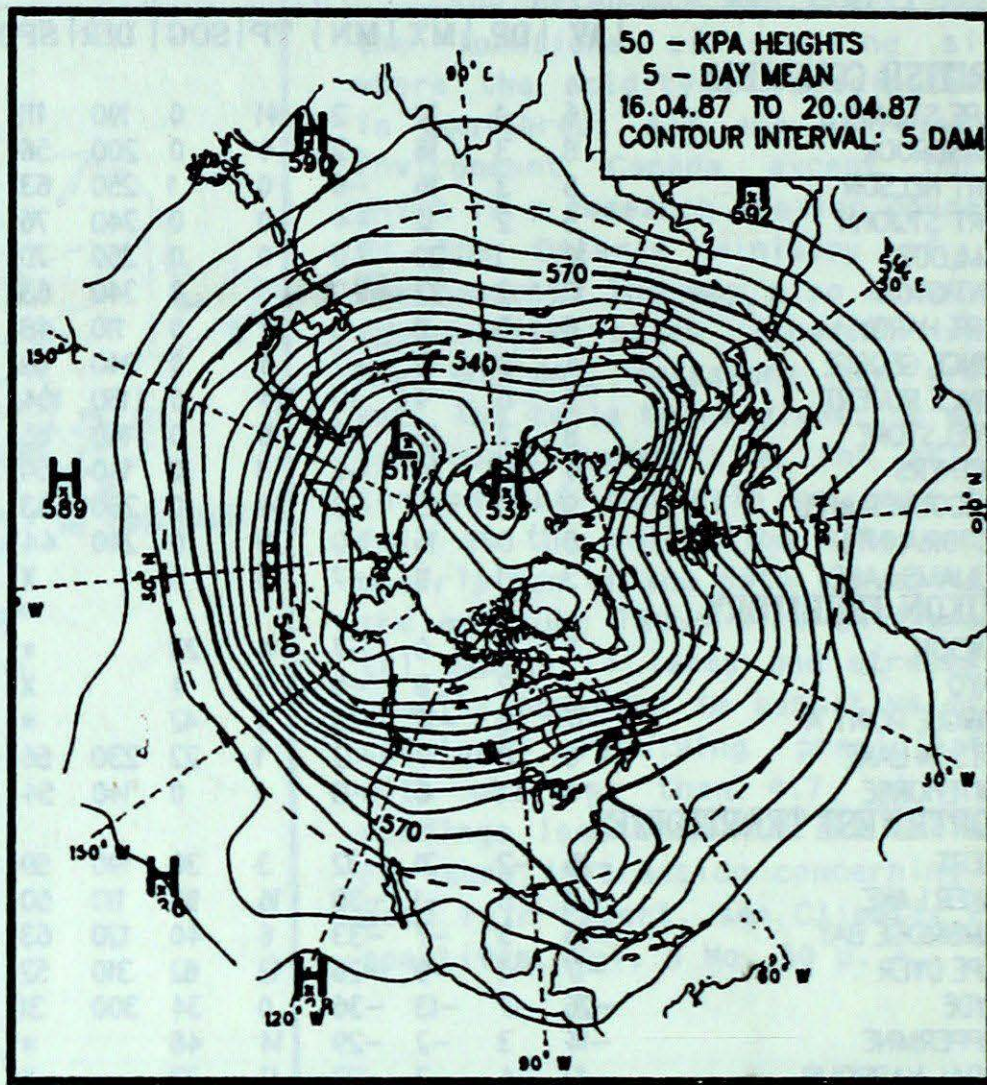


# CIRCULATION

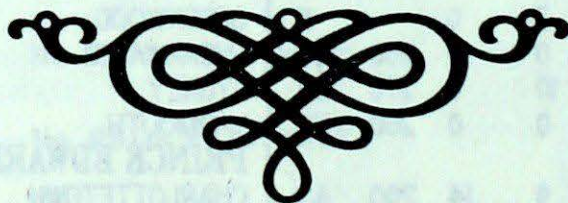
## 50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)  
April 16 to April 20, 1987



MEAN 50 KPa HEIGHTS (dam)  
April 16 to April 20, 1987



ATMOSPHERIC ENVIRONMENT SERVICE UNIT

<p>50 - KPa HEIGHT ANOMALY 5 - DAY MEAN 11.04.87 TO 15.04.87 CONTOUR INTERVAL: 5 DAM</p>	<p>50 - KPa HEIGHTS 5 - DAY MEAN 16.04.87 TO 20.04.87 CONTOUR INTERVAL: 5 DAM</p>
<p>MEAN 50 KPa HEIGHT ANOMALY (dam) April 16 to April 20, 1987</p>	<p>MEAN 50 KPa HEIGHTS (dam) April 16 to April 20, 1987</p>