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CLIMATIC PERSPECTIVES

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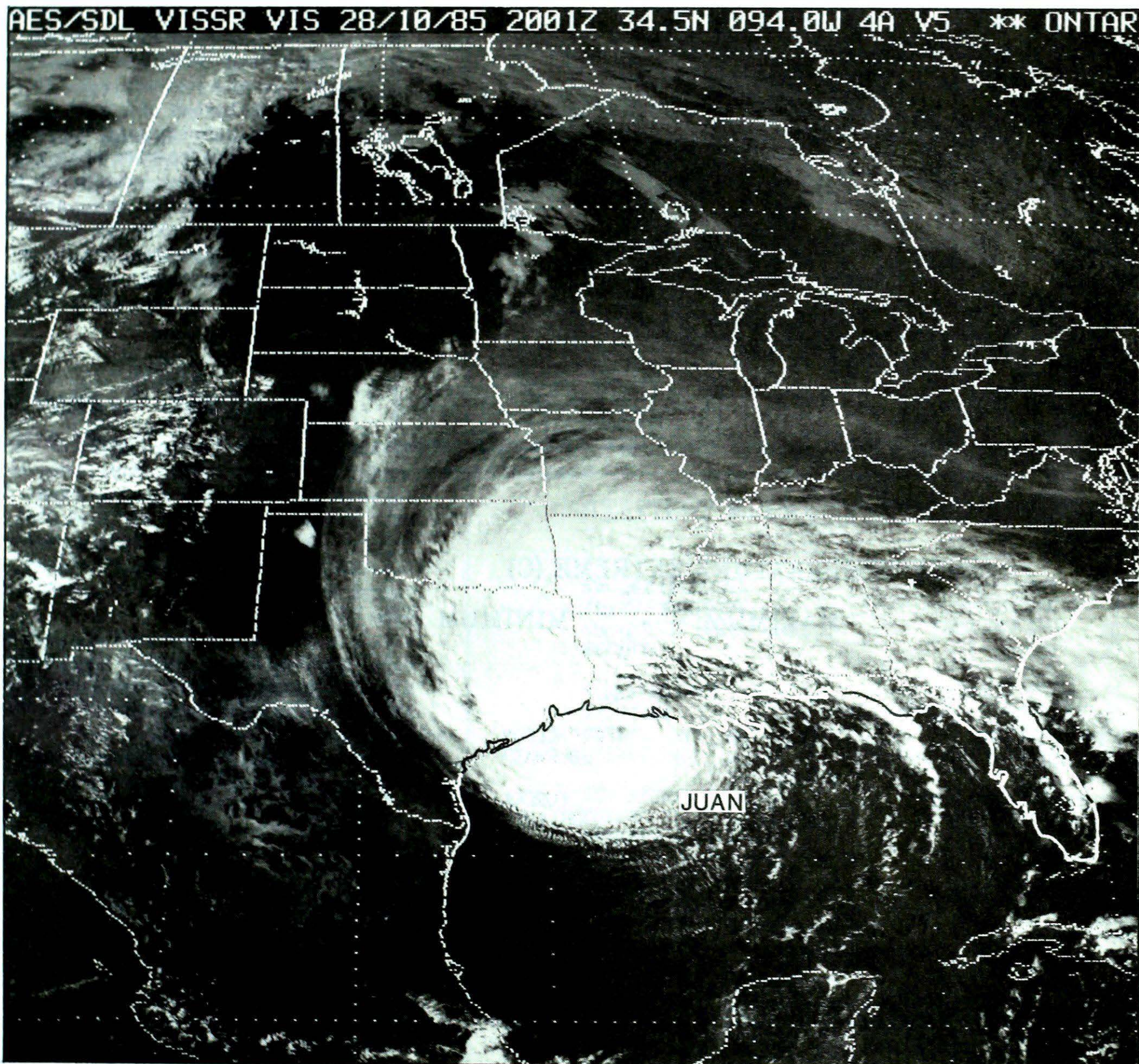
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A weekly review of Canadian climate

October 22 to 28, 1985

Vol.7 No.42

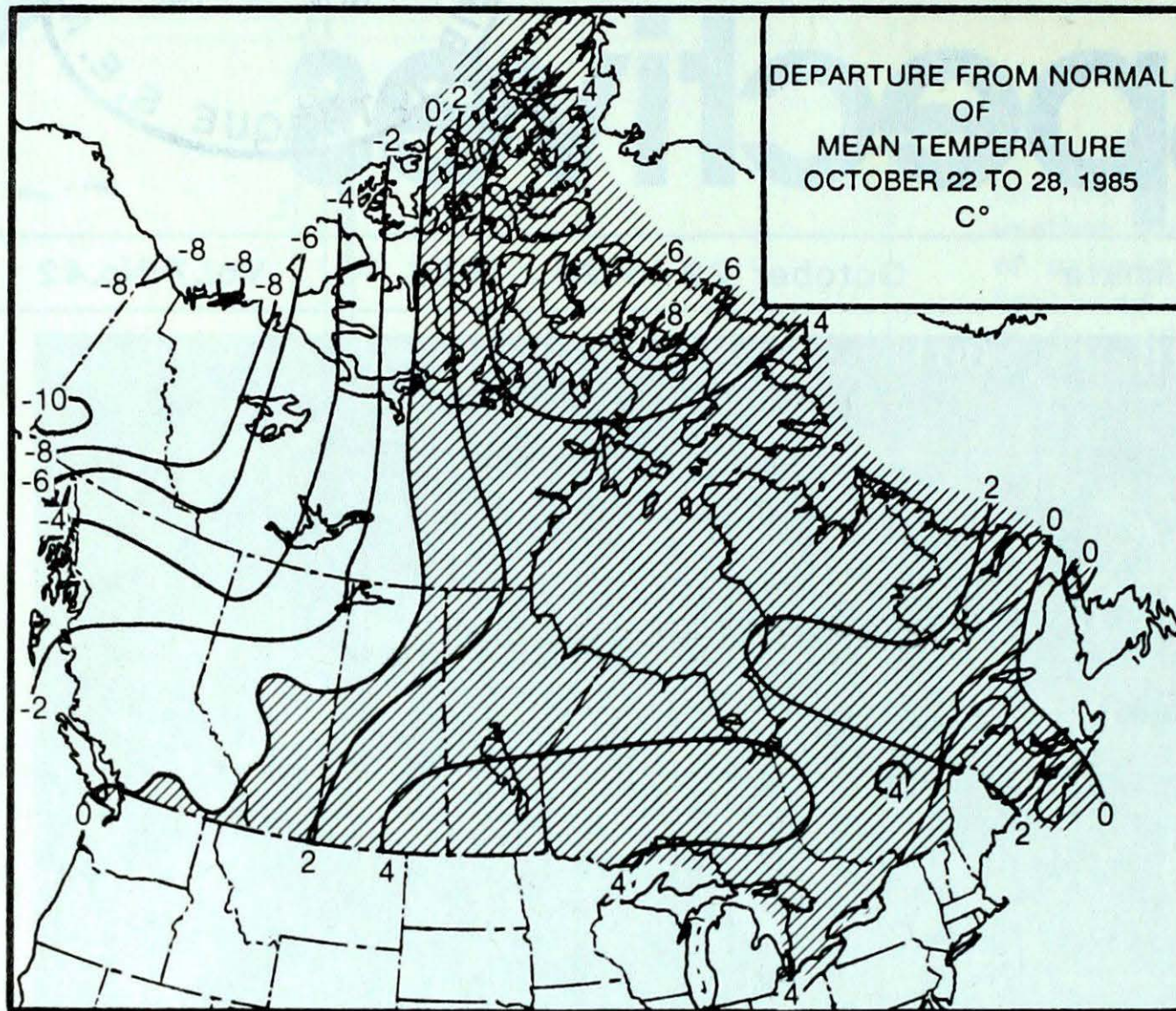


This GOES satellite image of October 28, 1985 taken from 35,800 above the equator shows hurricane Juan just off the Louisiana coast. For more detail see page 3.

- **Blizzards cause damage in the High Arctic**
- **Substantial snowfalls in the B.C. interior**
- **Indian Summer ends over Eastern Canada**

Canada

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

Winter became well established across Canada's north, as only a few locations managed to record above freezing temperatures. A cold Arctic airmass stagnated in the northwest. In the eastern Arctic several new maximum temperature records were established. Wind and gale warnings were issued regularly for the Northwest Territories and Baffin Island. Blizzards occurred in the Arctic. Winds gusting to more than 100 km/h caused structural damage to buildings at Resolute Bay and Grise Fiord. Roofs were blown off a hotel and several houses. Snowfalls of 5 to 10 centimetres were common in most districts. Snowdepths varied up to 40 cm.

British Columbia

A continuing series of Pacific weather systems kept temperatures cool and skies mainly cloudy. Gales occurred frequently along the upper coast. Victoria received more rain this past weekend, 61.6 mm, than during the entire four-month period June to September. Snow fell in the north and the central interior; temperature hovered near freezing. Higher elevations received substantial snowfalls. Upper Hat Creek near Kamloops received 25 cm of new snow. Castlegar received their first measurable snowfall this year. Snow covers the coastal mountains above 1000 metres. In the valleys it was wet and windy.

Prairies

It was a relatively pleasant autumn week. Temperatures in the south managed to reach the low twenties during the early part of the period, but declined steadily as a cold Arctic airmass spilled south eastwards. Harvesting operations proceeded hastily, and were near completion in some agricultural districts. Fall field work has begun. Snow fell in the north amounts ranged between 10 to 1 centimetres. On the morning of October 28, a disturbance gave

WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM	MINIMUM
BRITISH COLUMBIA	PENTICTON 17	FORT NELSON -15
YUKON TERRITORY	TESLIN 0	BURWASH -27
	WATSON LAKE	
NORTHWEST TERRITORIES	CLYDE 7	EUREKA -37
ALBERTA	LETHBRIDGE 21	HIGH LEVEL -15
SASKATCHEWAN	REGINA 22	KINDERSLEY -9
MANITOBA	DAUPHIN 20	GILLAM -12
ONTARIO	WINDSOR 24	GERALDTON -9
QUEBEC	SUTTON JUNCTION 21	BORDER -15
NEW BRUNSWICK	MONCTON 20	ST STEPHEN -4
NOVA SCOTIA	GREENWOOD 19	GREENWOOD -3
PRINCE EDWARD ISLAND	CHARLOTTETOWN 16	CHARLOTTETOWN -1
NEWFOUNDLAND	COMFORT COVE 14	GOOSE -11

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	13	WINDSOR	ONT
COOLEST MEAN TEMPERATURE	-23	MOULD BAY	NWT

Alberta up to 10 centimetres of snow, causing treacherous driving conditions during the rush hour period.

Ontario

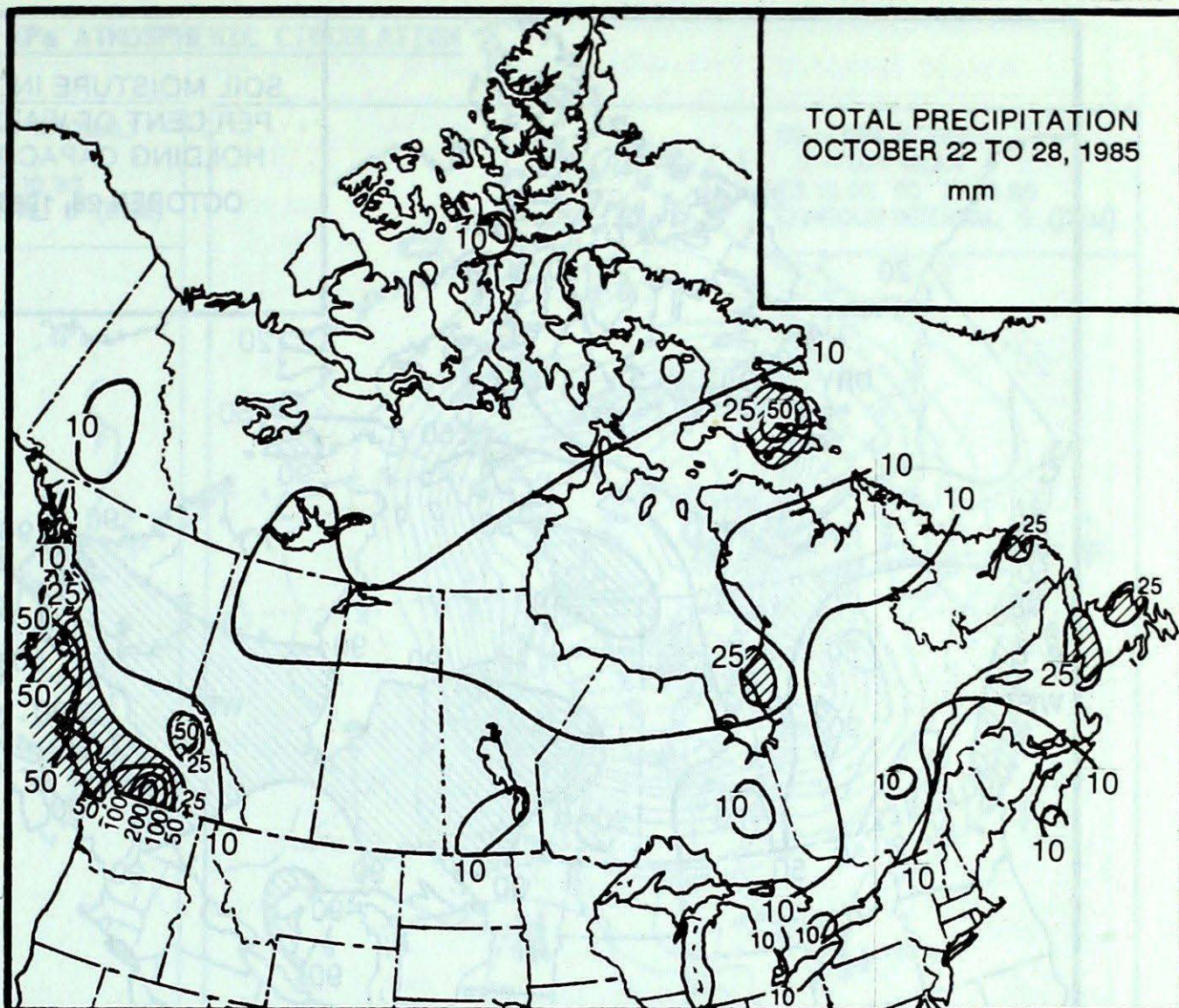
It was pleasant and predominantly sunny. Scattered showers accompanied an influx of milder air during the middle of the week. A cold airmass slipped into north-western Ontario early in the period, dropping daytime temperatures to below freezing by week's end. Elsewhere maximum temperature hovered near the mid-teens. Several daily maximum temperature records were broken in central Ontario.

Quebec

Fine autumn weather slowly gave way to a changeable more showery weather regime, as several frontal disturbance approached the province. In the Eastern Townships, the alfalfa harvest was completed during the last few days of Indian Summer. Between October 22-25, more than a dozen maximum temperature records were broken in the province. Afterwards, much cooler air covered the region, and snow fell as far south as Sept-Îles. The Laurentians received 12 cm of snow; snow flurries fell along the lower St. Lawrence Valley.

Atlantic

In the Maritimes high pressure prevailed, and the week was primarily sunny. Scattered shower activity occurred after mid-week. Daytime temperatures hovered in and around the teens. In Newfoundland it became sunny and milder after the beginning of the week; however, the weekend was cloudy and cool. A minimum temperature of -5°C at Gander on October 23 was a new record. In Labrador, the weather was mostly cloudy. Temperatures fluctuated, but overall were seasonably mild.



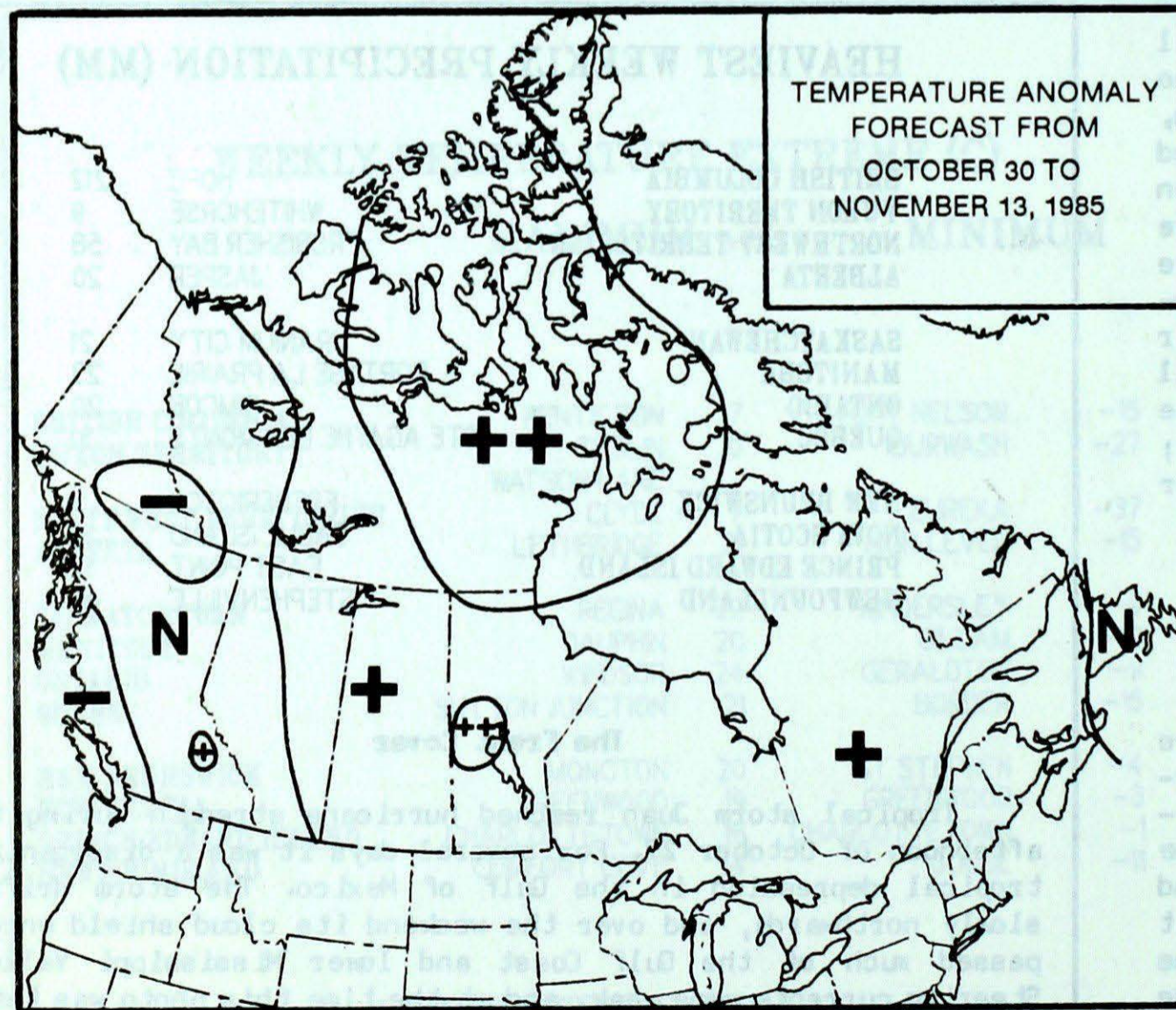
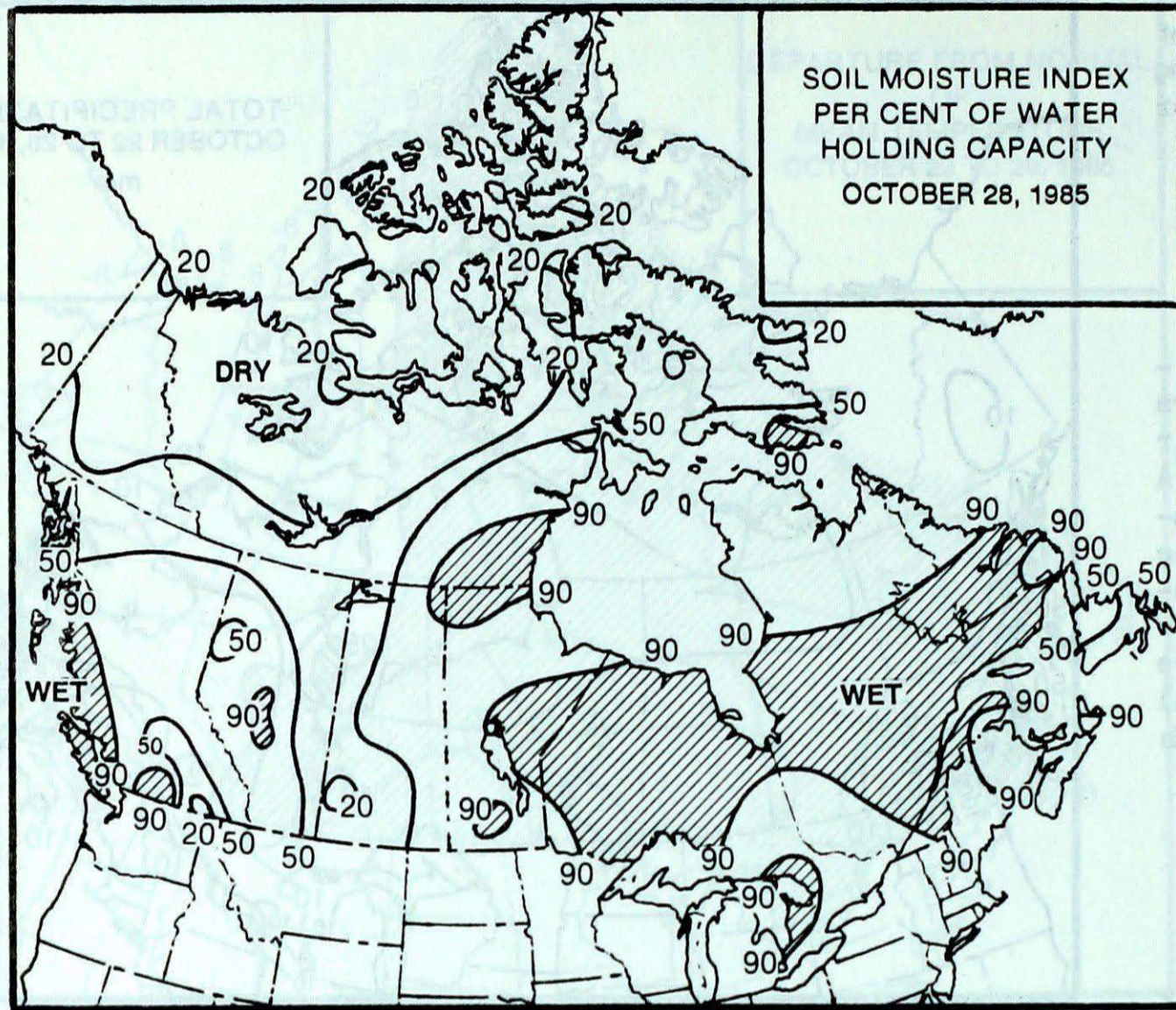
HEAVIEST WEEKLY PRECIPITATION (MM)

BRITISH COLUMBIA	HOPE	212
YUKON TERRITORY	WHITEHORSE	9
NORTHWEST TERRITORIES	FROBISHER BAY	58
ALBERTA	JASPER	20
SASKATCHEWAN	URANIUM CITY	21
MANITOBA	PORTAGE LA PRAIRIE	23
ONTARIO	SIMCOE	20
QUEBEC	STE AGATHE DES MONTS	31
NEW BRUNSWICK	FREDERICTON	5
NOVA SCOTIA	SABLE ISLAND	15
PRINCE EDWARD ISLAND	EAST POINT	12
NEWFOUNDLAND	STEPHENVILLE	45

The Front Cover

Tropical storm Juan reached hurricane strength during the afternoon of October 27. For several days it was a disorganized tropical depression in the Gulf of Mexico. The storm drifted slowly northwards, and over the weekend its cloud shield encompassed much of the Gulf Coast and lower Mississippi Valley. Steering currents were weak, and at the time this photo was taken the hurricane was drifting erratically. The centre of the storm was stationary just south of Lake Charles, Louisiana. Heavy rains, between 200 and 300 millimetres, drenched the region. Maximum sustained winds were 135 km/h over the water and isolated tornadoes occurred in squalls along the coast. Tides were one to two metres above normal along the Louisiana coast.

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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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.

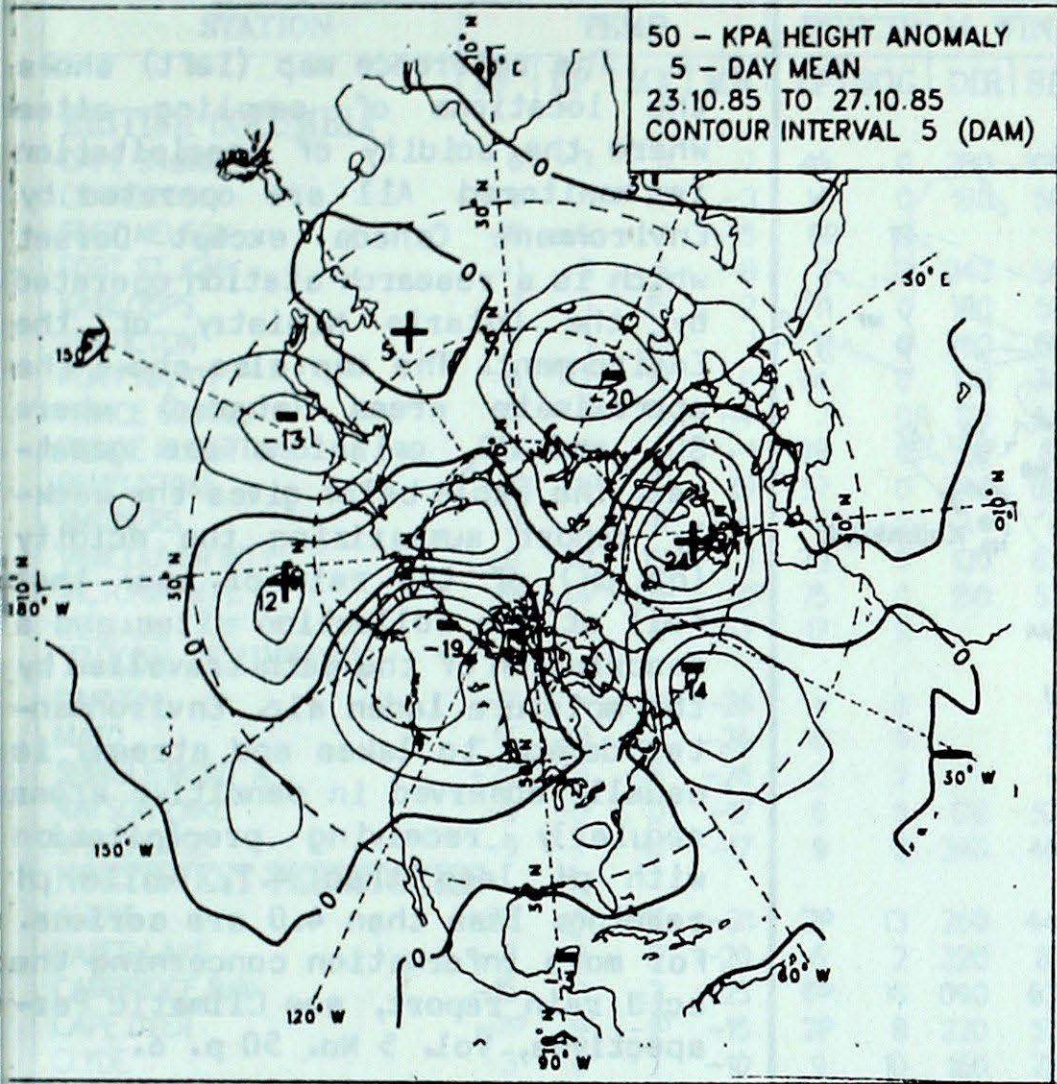
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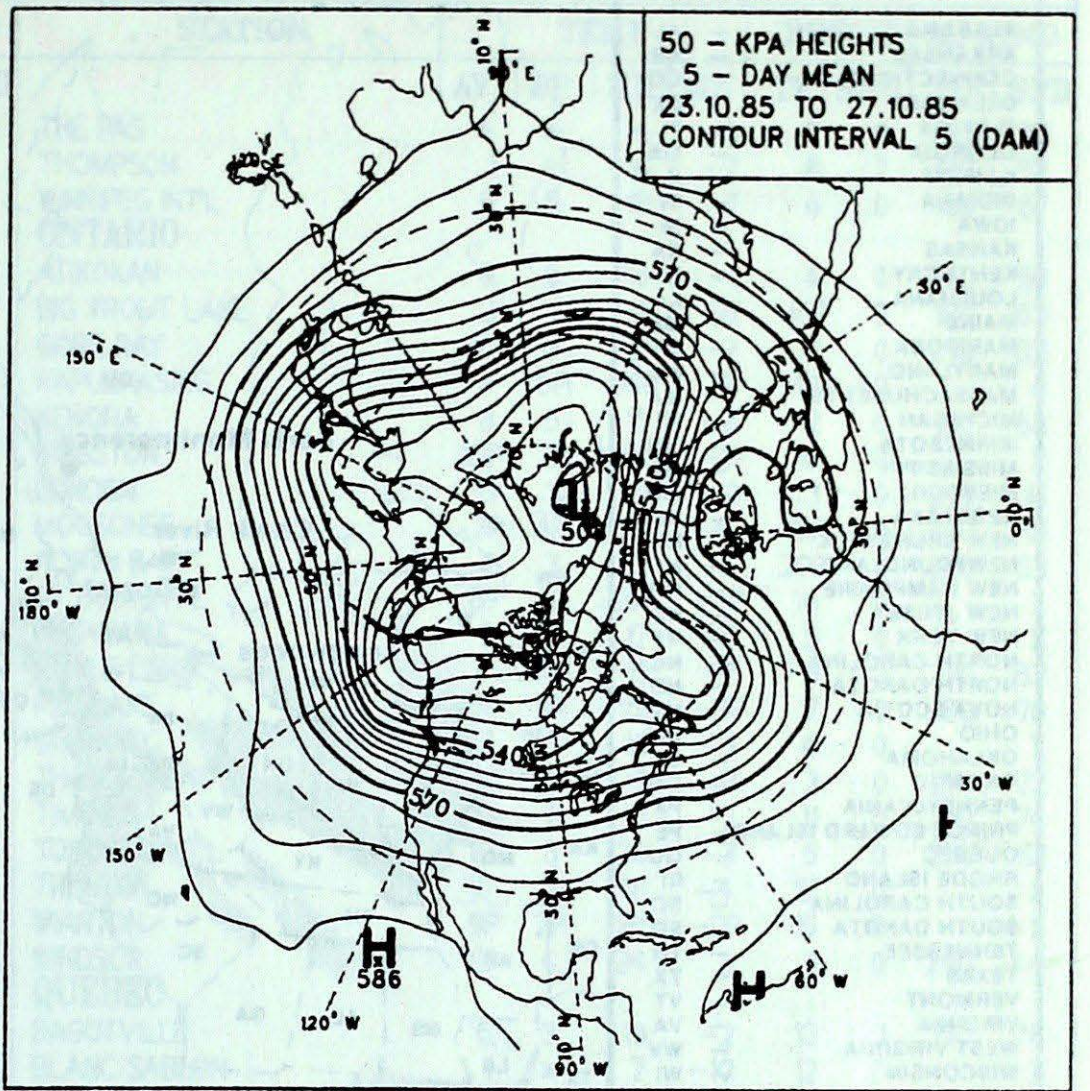
50 KPa ATMOSPHERIC CIRCULATION

50 - KPa HEIGHT ANOMALY
5 - DAY MEAN
23.10.85 TO 27.10.85
CONTOUR INTERVAL 5 (DAM)

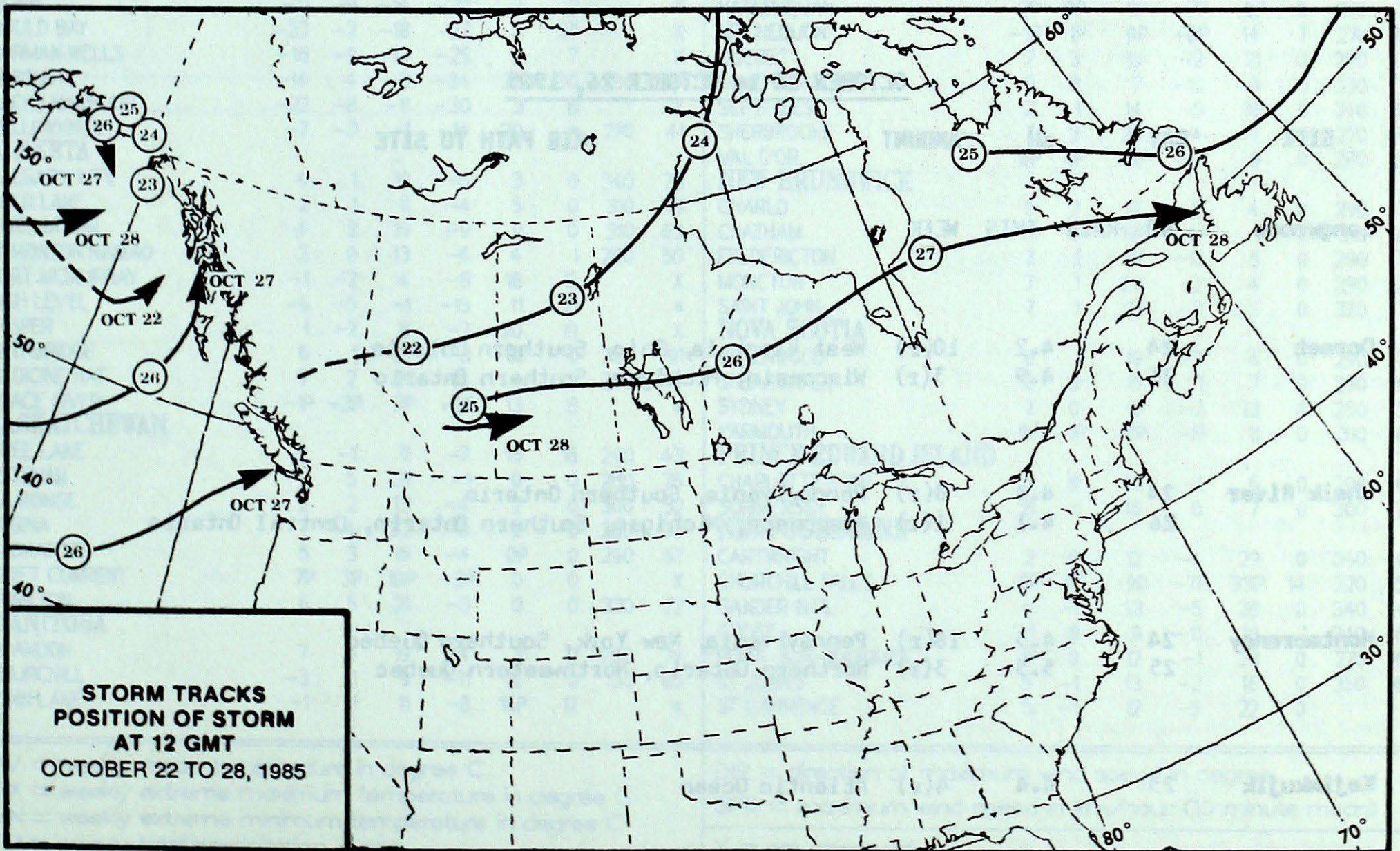


MEAN 50 KPa HEIGHT ANOMALY (dam)
October 23 to October 27, 1985

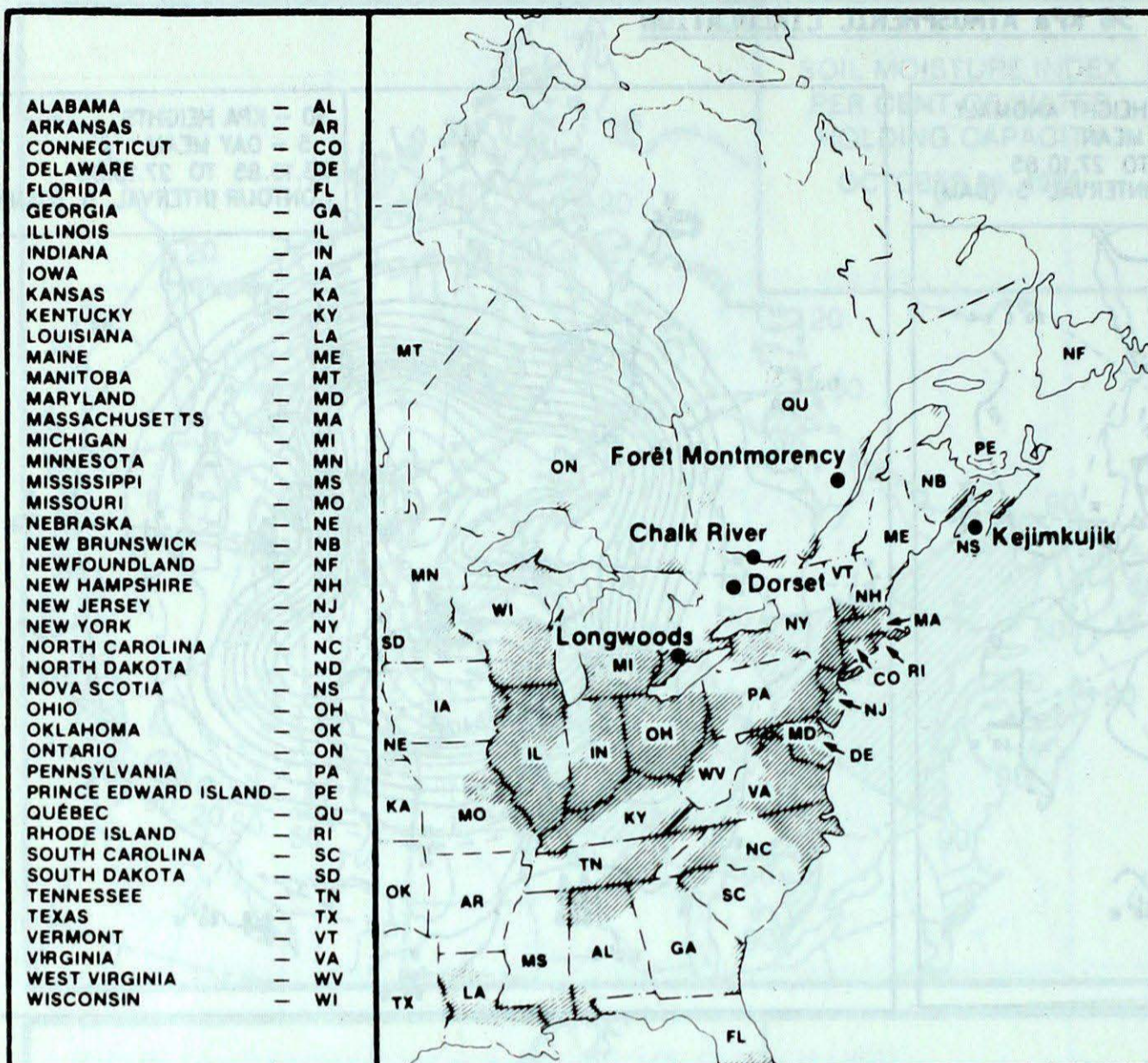
50 - KPa HEIGHTS
5 - DAY MEAN
23.10.85 TO 27.10.85
CONTOUR INTERVAL 5 (DAM)



MEAN 50 KPa HEIGHTS (dam)
October 23 to October 27, 1985



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 SO₂ 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 20 to OCTOBER 26, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	NO	RAIN	THIS	WEEK
Dorset	24	4.2	10(r)	West Virginia, Ohio, Southern Ontario
	26	4.9	3(r)	Wisconsin, Michigan, Southern Ontario
Chalk River	24	4.4	8(r)	Pennsylvania, Southern Ontario
	26	4.1	1(r)	Wisconsin, Michigan, Southern Ontario, Central Ontario
Montmorency	24	4.5	16(r)	Pennsylvania, New York, Southern Quebec
	25	5.5	3(r)	Northern Ontario, Northwestern Quebec
Kejimikujik	25	4.4	4(r)	Atlantic Ocean

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

