Climatic Perspectives

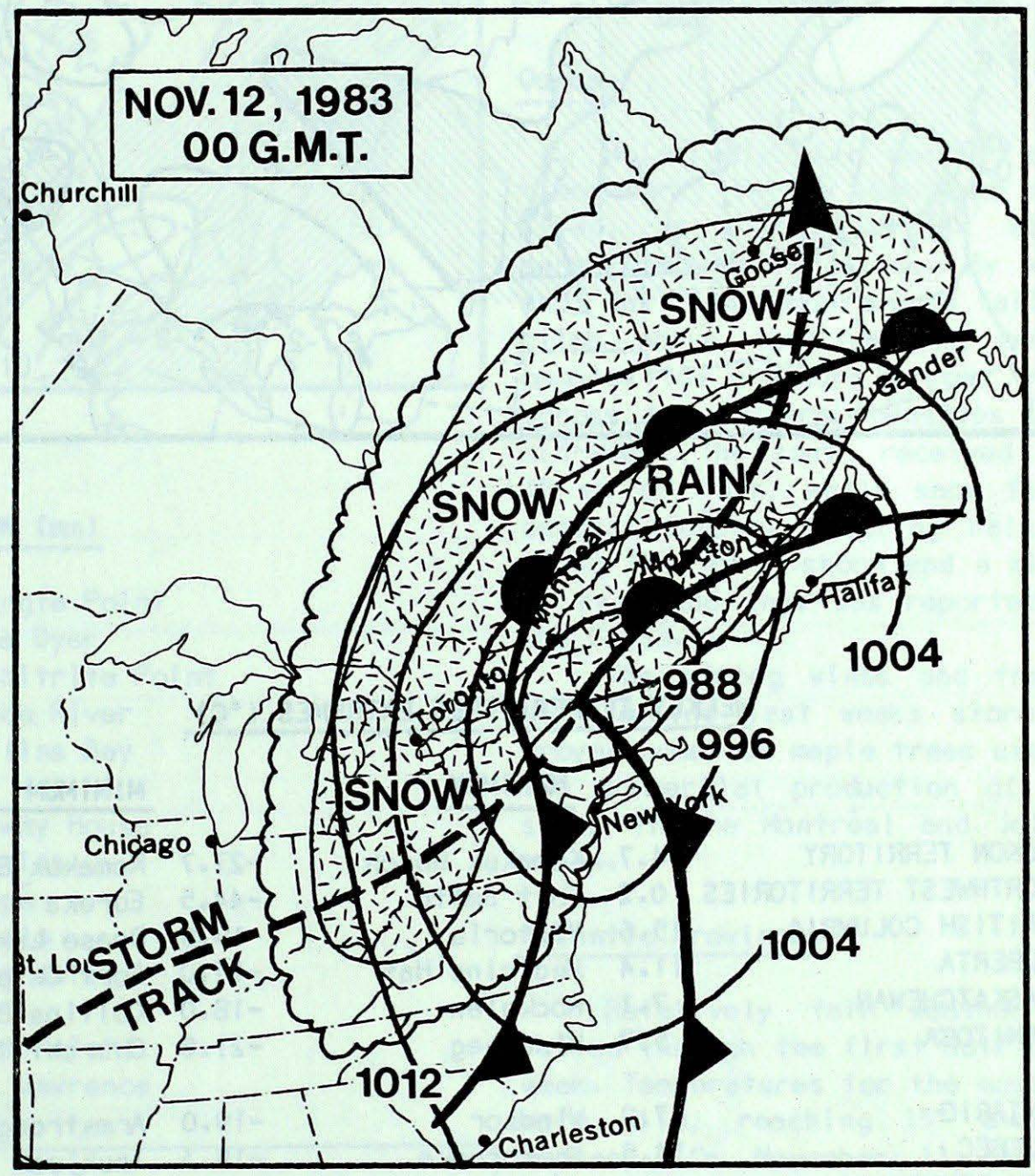
A WEEKLY REVIEW OF CANADIAN CLIMATE

NOVEMBER 18,1983 (Aussi disponible en français) VOL.5 NO.46

FOR THE PERIOD NOVEMBER 8-14, 1983

• Second storm in a week affects Eastern Canada

A major storm associated with gale-force winds and heavy precipitation emerged out of the American midwest and tracked eastwards south of the lower Great Lakes towards the Maritimes. In the storm's warm sector, southern regions received 25 to 35 millimetres of rain, while in the much colder air to the north there was a 10 to 25 centimetre snowfall with a band of freezing rain in between. In the wake of this system, plummetting temperatures caused treacherous road conditions. In the Toronto area, where rain changed to snow during the day, there were dozens of traffic accidents. In the Atlantic Provinces, wind gusts reached 100 km/h.



• Heavy rains on the Pacific coast

• Some ski resorts are open in the B.C. central interior

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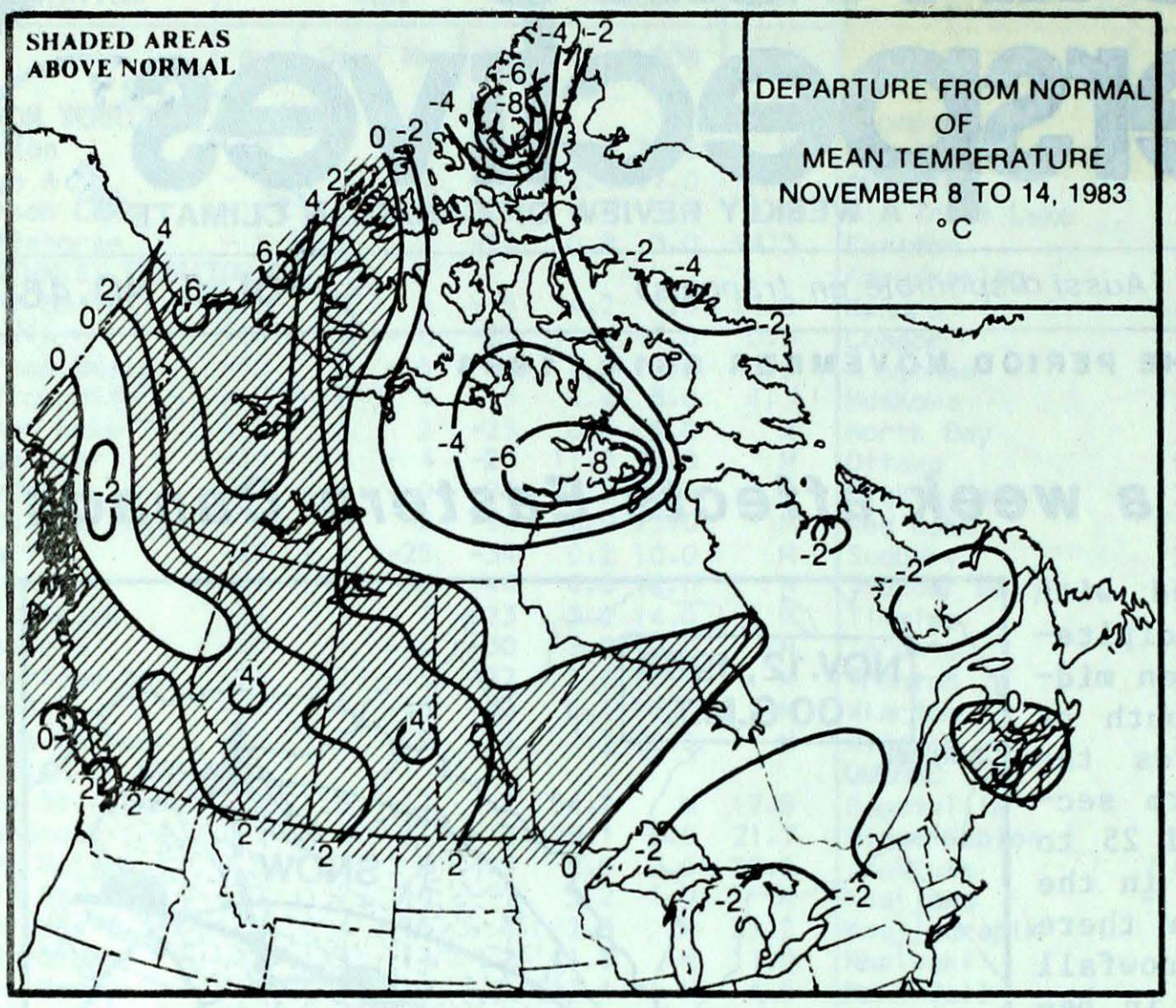
NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.

Canada



WEEKLY TEMPERATURES EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	4.7	Komakuk Beach	-27.7	Komakuk Beach
NORTHWEST TERRITORIES	0.2	Fort Smith	-44.5	Eureka
BRITISH COLUMBIA	15.6	Victoria	-19.6	Dease Lake
ALBERTA	11.4	Medicine Hat	-17.0	Fort Chipewyan
SASKATCHEWAN	7.1	Rockglen	-18.0	Collins Bay
MANITOBA	5.7	Winnipeg	-21.8	Churchill
ONTARIO	17.2	Windsor	-19.0	Armstrong
QUEBEC	14.5	Sherbrooke	-18.3	Inukjuak
NEW BRUNSWICK	14.4	Moncton	-11.4	St. Stephen
NOVA SCOTIA	17.5	Shelbourne	-9.0	Shelbourne
PRINCE EDWARD ISLAND	14.3	Charlottetown	-4.6	Summerside
NEWFOUNDLAND	15.4	Argentia	-19.6	Churchill Falls

ACROSS THE NATION

Warmest mean temperature	9.4	Amphitrite Point, BC
Coolest mean temperature	-38.2	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

Temperatures were generally below normal except in the Mackenzie District. There was little precipitation across the north; only the east coast of Baffin Island received 15 to 45 centimetres of snow. The southern Yukon was plagued by extensive fog and low cloud in valleys and near bodies of open water. Only the larger lakes and rivers still remained open, but extensive shore ice was evident. The Dempster highway ice bridge has opened and can accommodate vehicles up to 4,000 kg.

British Colombia

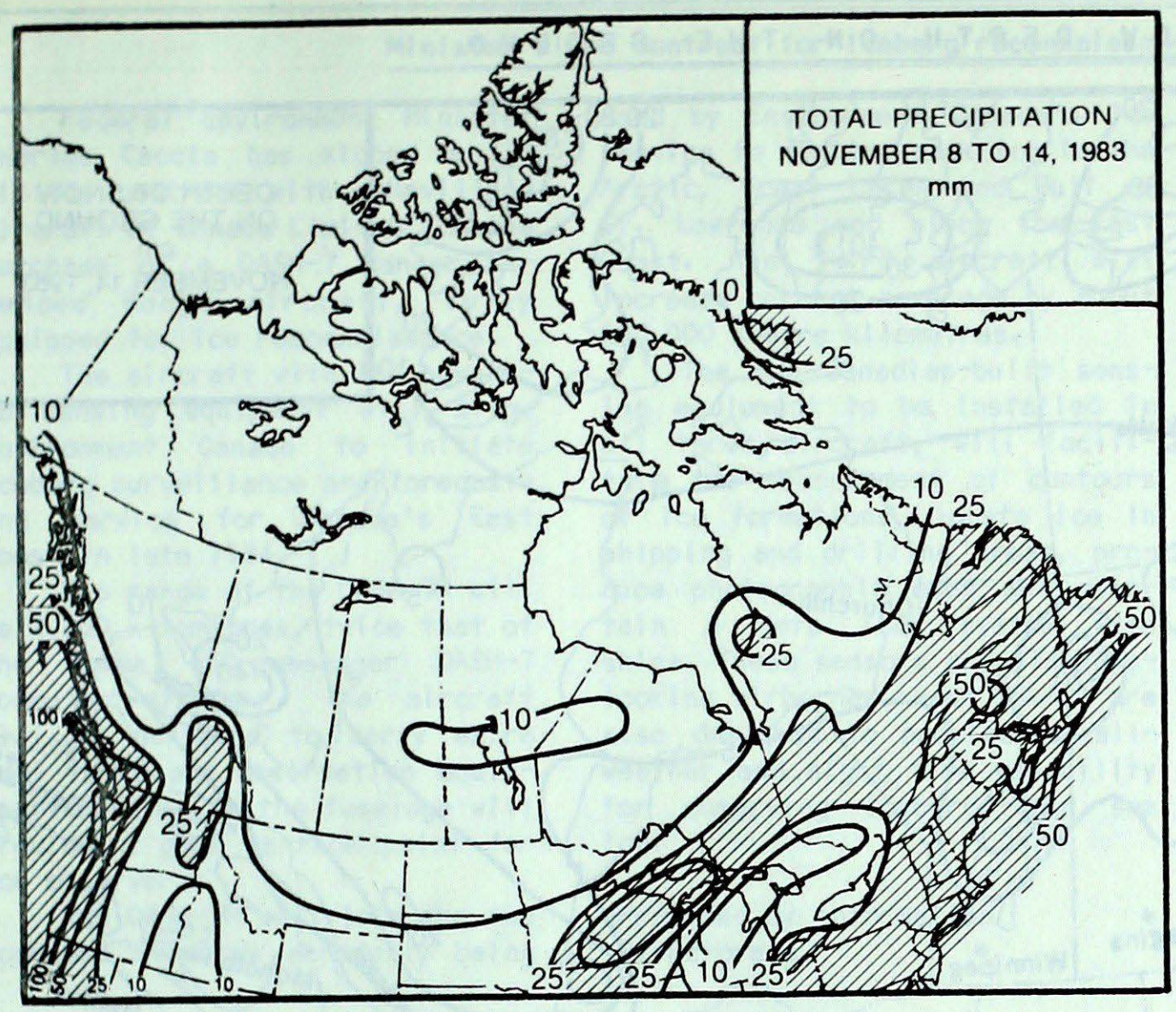
Heavy precipitation fell along the coast and in the southern interior. Many coastal communities received more than 100 mm of rain. Amphitrite Point recorded 194 mm this week, of which 77 mm fell on the last day. Heavy snow fell at higher elevations and many mountain passes in the southern interior were closed due to the work stoppage by provincial snow removal crews. Several mountain ski resorts in the central interior have opened for the season with a 45 cm snow base. In the north, it was relatively mild and dry, but persistant widespread fog and low stratus cloud hampered aviation.

Prairies

Several disturbances deposited light but wide spread snow. Amounts ranged from a trace in the south to 8 cm in the north. In many urban areas, this was the first significant snowfall of the season and the usual accidents and traffic tie-ups resulted. The snow-line now extends across central Alberta southeastwards through the inter-lake district of Manitoba. Snow depths in the north range between 12 and 17 centimetres.

Ontario

Most of the province was cloudy and wet. Cold Arctic air covered the north, while southern Ontario



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	5.0	Shingle Point
NORTHWEST TERRITORIES	44.0	Cape Dyer
BRITISH COLUMBIA	193.9	Amphitrite Point
ALBERTA	10.4	Peace River
SASKATCHEWAN	11.8	Collins Bay
MANITOBA	13.6	Norway House
ONTARIO	35.4	Timmins
QUEBEC	58.4	Gaspé
NEW BRUNSWICK	39.3	Charlo
NOVA SCOTIA	66.8	Shearwater
PRINCE EDWARD ISLAND	32.8	East Point
NEWFOUNDLAND	49.4	St. Lawrence

IN THE PAST

November 6-13, 1969

Sustained freezing precipitation caused $1,500,000 damage to hydro lines between Québec City and the new Manicouagan River power generators. Thirty towers in a transmission line under construction failed in the storm.

November 7-13, 1913

One of the most severe Great Lakes storms on record swept the area with winds of 80 to 95 km/h and occasionally to 125 km/h over Lakes Erie and Ontario. At least 8 large ships were lost and more than 200 seamen were drowned.

remained mild until the weekend. A vigorous storm crossed the Lower Great Lakes on November 11, generating gale force winds, heavy snow in the north and a mixture of rain and snow in the south. Heaviest snowfall occurred in the Timmins - Wawa area, where 20 to 30 centimetres was reported. Areas to the lee of Lake Huron and Georgian Bay received 10 to 20 centimetres. Rapidly falling temperatures in the south on November 11, contributed to icy conditions and a rash of traffic accidents. On November 13, the minimum temperature at Muskoka dropped to -17°, surpassing the previous record of -11° set in 1939.

Québec

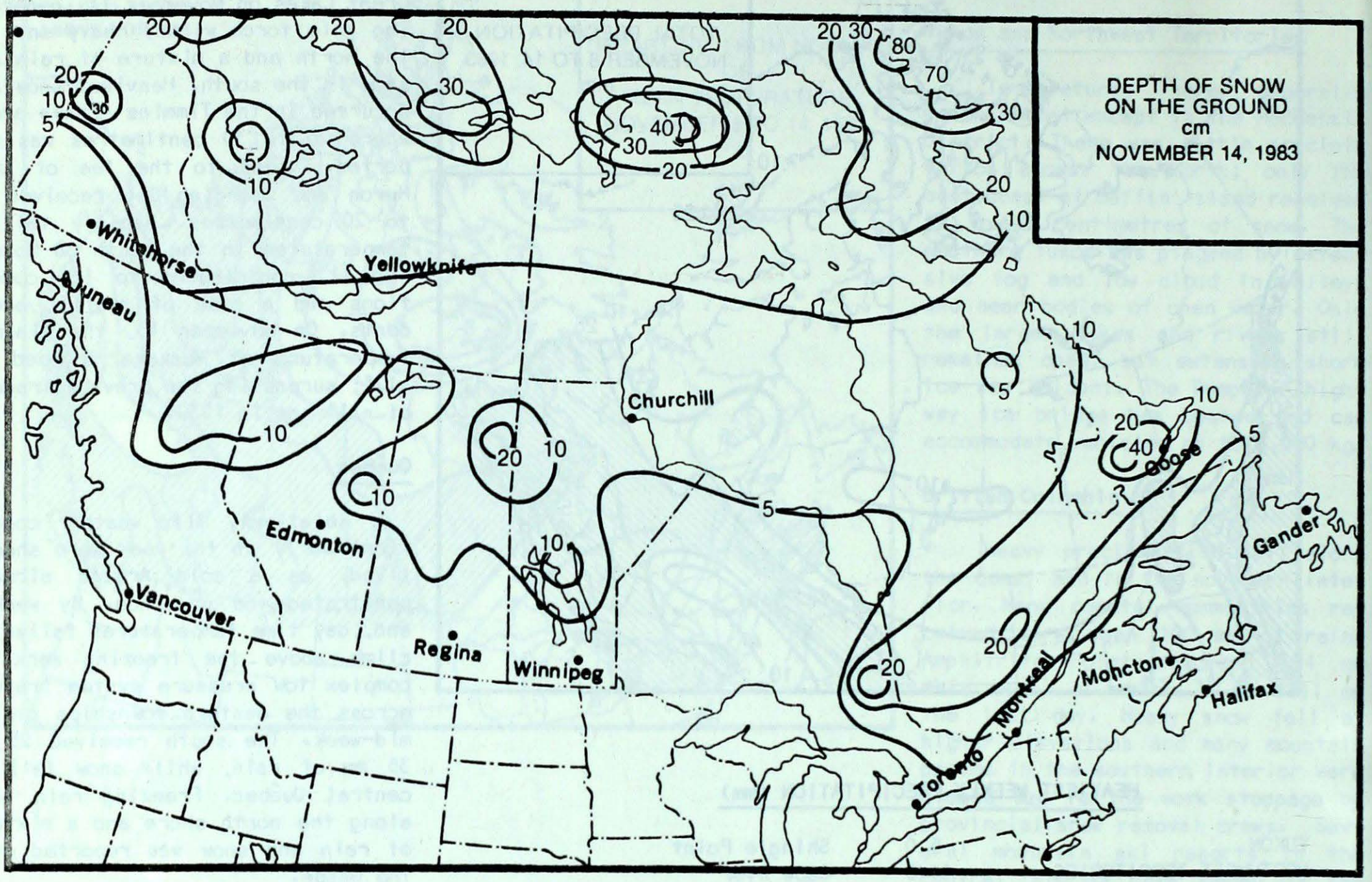
Relatively mild weather conditions early in the week were short-lived, as a cold Arctic airmass penetrated the province. By week's end, day time temperatures failed to climb above the freezing mark. A complex low pressure system tracked across the eastern townships during mid-week. The south received 25 to 35 mm of rain, while snow fell in central Québec. Freezing rain fell along the north shore and a mixture of rain and snow was reported over the Gaspé.

The strong winds and freezing rain during last weeks storm destroyed numerous maple trees used for the commercial production of maple syrup in the Montréal and Joliette areas.

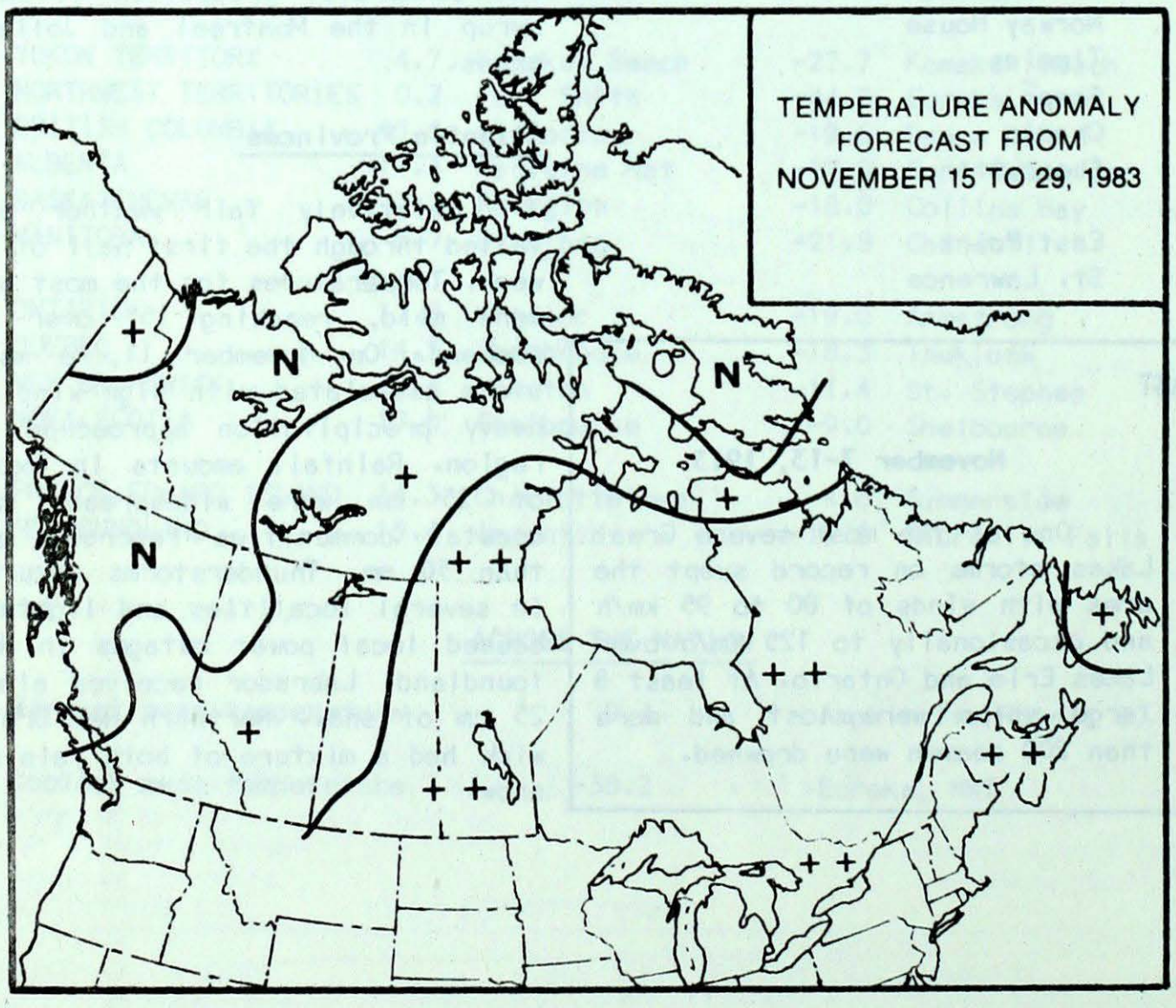
Atlantic Provinces

Relatively fair weather prevailed through the first half of the week. Temperatures for the most part were mild, reaching 15° over the weekend. On November 11, a major storm associated with high wind and heavy precipitation approached the region. Rainfall amounts in excess of 25 mm were widespread; many coastal communities recorded more than 50 mm. Thunderstorms occurred in several localities and lightning caused local power outages in Newfoundland. Labrador received almost 25 cm of snow. Northern New Brunswick had a mixture of both rain and snow.

SNOW DEPTH ON THE GROUND



TEMPERATURE ANOMALY FORECAST



Temperature Anomaly Forecast

The temperature anomaly forecast, for each of the 70 Canadian stations, is prepared by searching historical weather maps to find cases similar to the present one. The principle used is that a prediction for the next 15 days may be based on what is known to have actually happened during 15-day periods. After the five best cases are selected, the surface temperature anomalies are calculated. This results in five separate forecasts, which are averaged to provide the forecast depicted.

++ much above normal

+ above normal

N normal

- below normal

-- much below normal

Minister signs contract for iceberg reconnaissance aircraft

Federal Environment Minister Charles Caccia has signed a $26 million contract with deHavilland Aircraft of Canada Limited for the purchase of a DASH-7 Ranger Extended Range aircraft, fully equipped for ice reconnaissance.

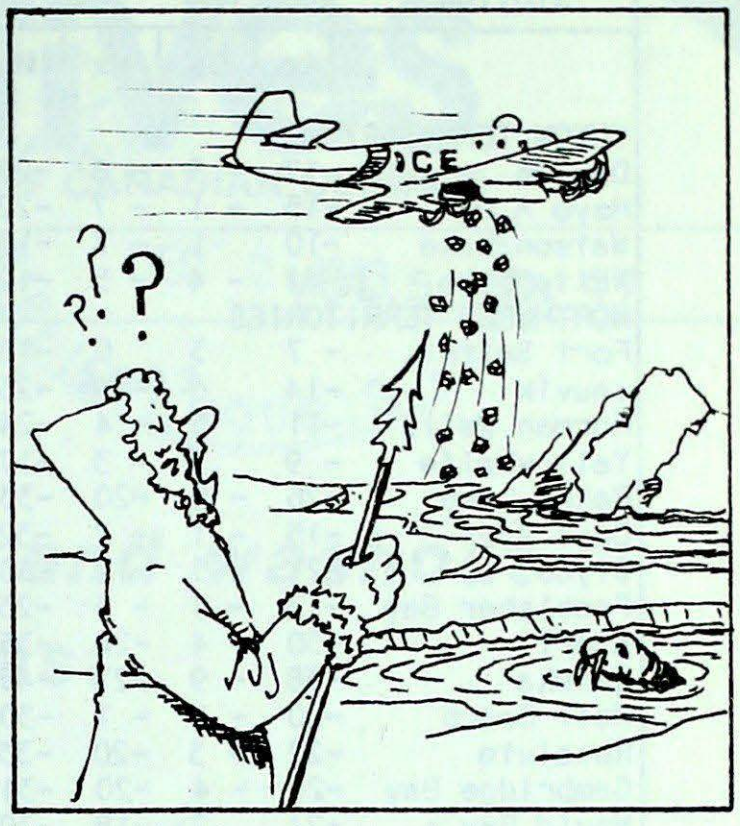
The aircraft with its advanced sensing equipment will allow Environment Canada to initiate iceberg surveillance and forecasting service for Canada's East Coast in late 1984.

The range of the DASH-7R will be 2,200 kilometres, twice that of the normal 50-passenger DASH-7 commuter airliner. The aircraft will be designed to carry extra fuel tanks and observation equipment. Bubbles in the fuselage will provide a good vantage point for ice observers.

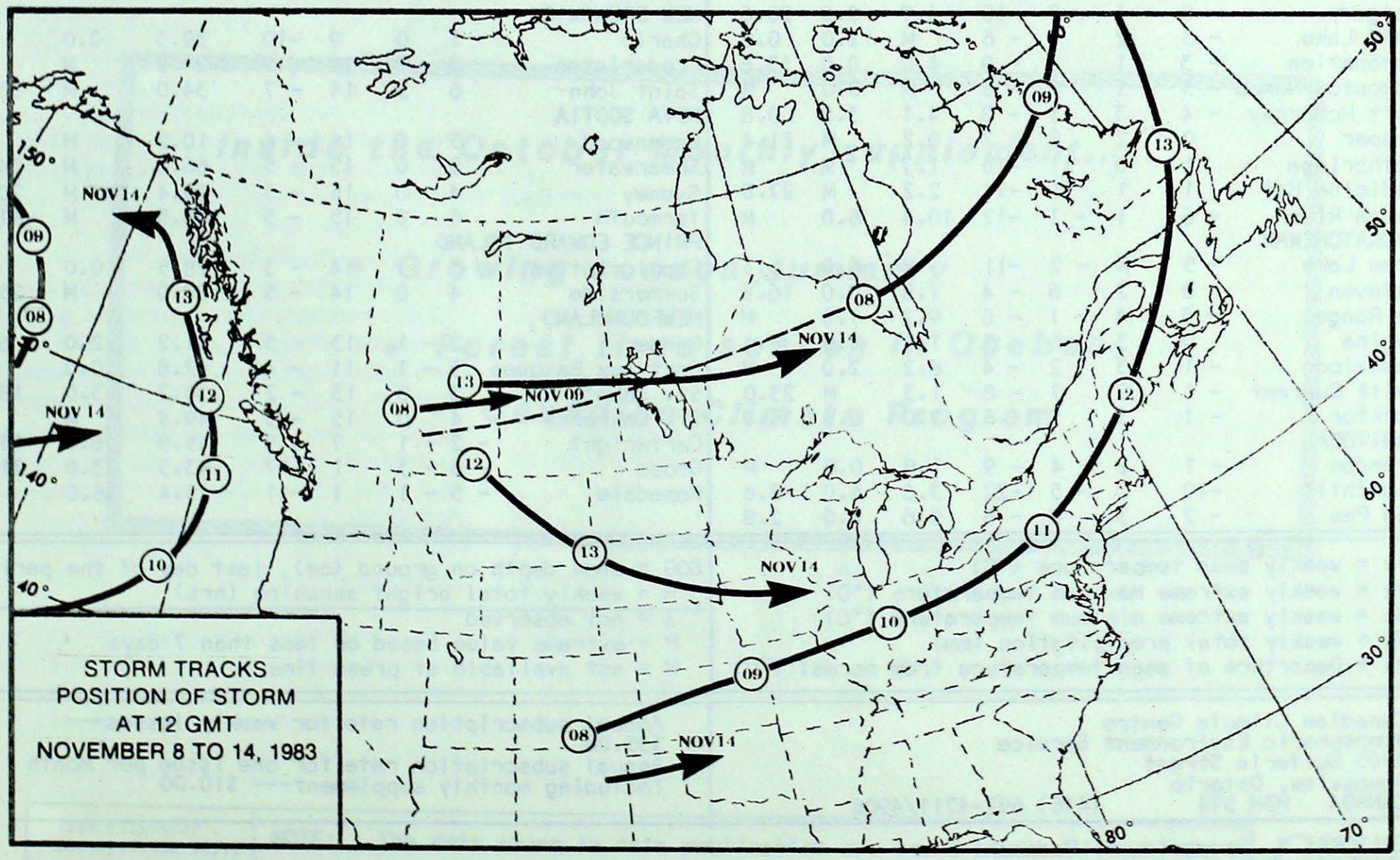
The DASH-7R will join the two Lockheed Electras currently being used by Environment Canada's ice service to monitor pack ice in the Arctic, Great Lakes and Gulf of St. Lawrence and along the East Coast. The third aircraft will increase current coverage by about 500,000 square kilometres.

The new Canadian-built sensing equipment to be installed in all three aircraft, will facilitate the measurement of contours of ice formations, locate ice in shipping and drilling areas, produce photographic maps and maintain a data link system with ships. These sensors and sideways-looking airborned radar (SLAR) are also designed to provide an all-weather and night time capability for observing icebergs and sea ice.

-Provided by Information Directorate



STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT NOVEMBER 15, 1983

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	-17	- 3	- 8	-27	1.0	31.0	M
Mayo A	-15	- 1	- 7	-22	0.2	17.0	M
Watson Lake	-10	1	- 7	-18	3.6	10.0	0.0
Whitehorse	-11	- 4	- 5	-19	0.2	3.0	14.8
NORTHWEST TERRITORIES							
Fort Smith	- 7	3	0	-18	6.9	10.0	2.6
Inuvik	-14	6	- 9	-23	0.0	47.0	14.9
Norman Wells	-11	5	- 4	-24	0.0	4.0	17.5
Yellowknife	- 9	3	- 3	-17	M	12.0	M
Baker Lake	-26	- 8	-20	-33	M	16.0	21.8
Cape Dyer	-15	- 1	- 7	-32	44.0	M	M
Clyde	-21	- 5	-12	-30	M	87.0	M
Frobisher Bay	-13	- 1	- 5	-23	7.5	27.0	16.1
Alert	-30	- 4	-24	-35	0.4	11.0	M
Eureka	-38	- 9	-27	-45	0.0	12.0	M
Hall Beach	-20	- 1	- 7	-30	M	16.0	M
Resolute	-27	- 3	-20	-33	M	9.0	M
Cambridge Bay	-26	- 4	-20	-31	0.4	18.0	1.0
Mould Bay	-24	2	-18	-30	1.2	19.0	M
Sachs Harbour	-14	7	- 8	-20	0.2	20.0	M
BRITISH COLUMBIA							
Cape St. James	8	1	11	5	70.2	M	8.8
Cranbrook	2	2	7	- 4	11.4	M	9.8
Fort Nelson	- 7	3	- 4	-17	0.4	6.0	5.6
Fort St. John	- 7	- 2	- 2	-13	7.3	11.0	M
Kamloops	6	3	14	0	6.2	M	M
Penticton	6	2	11	0	11.0	M	9.9
Port Hardy	7	1	11	0	57.4	M	M
Prince George	0	1	7	- 5	7.1	0.0	6.2
Prince Rupert	6	1	11	- 3	27.0	M	M
Revelstoke	4	2	8	0	38.0	M	M
Smithers	1	1	5	- 5	5.9	0.0	6.5
Vancouver	9	3	15	5	73.0	M	4.4
Victoria	9	2	16	3	47.9	M	11.4
Williams Lake	2	3	9	- 5	2.4	M	9.6
ALBERTA							
Calgary	0	1	9	-10	4.9	0.0	26.6
Cold Lake	- 3	2	1	- 6	M	12.0	0.0
Coronation	- 3	1	3	- 9	4.0	0.0	13.8
Edmonton Namao	- 3	1	6	- 8	M	0.0	M
Fort McMurray	- 4	3	1	- 8	4.1	3.0	0.8
Jasper	0	2	8	- 7	0.2	M	21.4
Lethbridge	1	0	11	-10	1.7	M	M
Medicine Hat	1	1	11	-11	2.2	M	27.8
Peace River	- 6	1	- 1	-12	10.4	6.0	M
SASKATCHEWAN							
Cree Lake	- 5	X	- 2	-11	M	6.0	5.3
Estevan	0	2	6	- 4	1.8	0.0	16.8
La Ronge	- 3	4	- 1	- 6	9.2	7.0	M
Regina	0	3	6	- 5	1.5	0.0	8.4
Saskatoon	- 1	3	2	- 4	6.2	2.0	M
Swift Current	- 1	2	7	- 8	1.3	M	23.0
Yorkton	- 1	3	5	- 6	2.0	0.0	6.0
MANITOBA							
Brandon	- 1	2	4	- 9	1.8	0.0	M
Churchill	-10	0	- 5	-22	3.6	6.0	8.6
The Pas	- 2	3	0	- 6	9.6	4.0	2.8
Thompson	- 9	0	- 1	-17	6.0	6.0	16.3
Winnipeg	- 2	0	6	-11	1.4	0.0	19.0
ONTARIO							
Big Trout Lake	- 5	2	3	-12	13.2	4.0	M
Earlton	- 4	- 3	13	-18	M	8.0	M
Kapuskasing	- 5	- 2	10	-16	13.3	5.0	M
Kenora	- 2	1	3	- 9	2.8	1.0	M
London	3	- 1	16	- 9	28.2	1.0	23.8
Moosonee	- 4	- 1	8	-15	9.4	1.0	16.7
Muskoka	1	- 2	-14	-17	M	4.0	M
North Bay	- 2	- 3	10	-12	4.2	M	14.8
Ottawa	1	- 2	11	- 9	20.7	1.0	21.8
Pickle Lake	- 5	1	6	-13	4.0	2.0	M
Red Lake	- 4	0	3	-14	4.4	2.0	11.6
Sudbury	- 3	- 3	12	-13	6.9	5.0	13.3
Thunder Bay	- 3	- 1	10	-15	5.0	1.0	15.9
Timmins	- 5	- 3	12	-17	35.4	21.0	M
Toronto	3	- 1	16	- 9	15.0	1.0	M
Trenton	1	- 3	13	-13	14.4	3.0	M
Wiarton	2	- 2	13	- 9	22.9	1.0	M
Windsor	4	- 1	17	- 6	33.1	0.0	M
QUEBEC							
Bagotville	- 1	- 1	9	-14	22.0	9.0	M
Blanc-Sablon	- 2	- 2	7	-10	M	M	M
Inukjuak	- 7	0	- 1	-18	7.7	8.0	9.5
Kuujjuaq	- 9	- 2	- 3	-17	0.0	4.0	20.5
Kuujjuarapik	- 4	0	2	-10	29.2	14.0	4.2
Manawaki	- 2	- 3	9	-15	8.2	5.0	17.2
Mont-Joli	0	- 1	9	- 8	33.1	5.0	18.4
Montréal	2	- 2	12	- 8	33.8	2.0	16.5
Natashquan	- 1	- 1	7	-11	31.0	2.0	M
Nitchequon	- 8	- 1	1	-16	4.2	6.0	11.3
Québec	1	0	9	-10	32.3	M	23.9
Schefferville	-10	- 2	1	-18	5.0	6.0	M
Sept-Iles	- 3	- 2	7	-11	30.0	9.0	26.4
Sherbrooke	2	- 1	15	-14	40.2	1.0	M
Val-d'Or	- 4	- 3	10	-15	16.6	11.0	16.5
NEW BRUNSWICK							
Charlo	1	0	9	-10	39.3	0.0	M
Fredericton	2	0	14	- 9	24.9	M	M
Saint John	6	3	14	- 7	34.0	M	33.8
NOVA SCOTIA							
Greenwood	5	0	16	- 6	10.2	M	M
Shearwater	5	0	15	- 5	66.8	M	34.7
Sydney	4	0	15	- 3	29.4	M	20.5
Yarmouth	6	0	15	- 5	36.5	M	41.5
PRINCE EDWARD ISLAND							
Charlottetown	5	1	14	- 3	28.5	0.0	M
Summerside	4	0	14	- 5	20.0	M	25.3
NEWFOUNDLAND							
Gander	2	- 1	13	- 5	31.2	2.0	6.9
Port aux Basques	3	- 1	11	- 4	42.8	0.0	M
St. John's	3	0	13	- 2	30.2	3.0	18.2
St. Lawrence	4	0	15	- 5	49.4	M	M
Cartwright	- 2	- 1	7	- 9	45.9	8.0	15.5
Goose	- 6	- 3	1	-17	43.3	23.0	21.8
Hopedale	- 5	- 1	1	-11	25.4	16.0	M

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

X = not observed
P = extreme value based on less than 7 days
M = not available at press time

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