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Environment Canada

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Atmospheric Environnement Environment atmosphérique A WEEKLY REVIEW OF CANADIAN CLIMATE

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

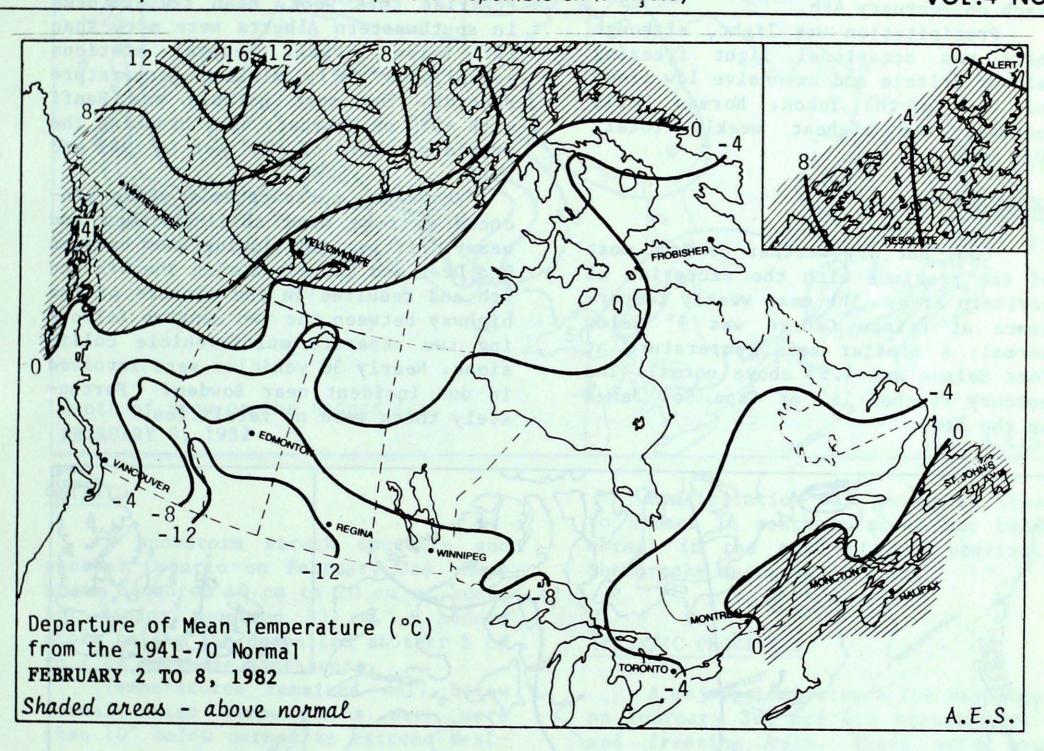
VOL.4 NO. 5

FEB 17 1982

FEBRUARY 12, 1982

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(Aussi disponible en français)



WEATHER HIGHLIGHTS FOR THE PERIOD - FEBRUARY 2-8, 1982

Mild air invades northwestern Canada

In a dramatic turnaround from previous weeks, mean temperatures were well above normal in northwestern areas of the country. Mean temperatures were more than 20° above normal in extreme northern areas of the Yukon and the mercury reached 4° at Komakuk Beach on February 4th.

With the exception of eastern Canada, the rest of the country remained under the influence of a cold airmass.

Temperatures varied from a maximum of 12° at Greenwood, N.S. to a minimum of -48° at Shepherd Bay, N.W.T. Stephenville, Nfld. recorded the highest weekly precipitation total, 78.4 mm.

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

The mild weather which began in the Yukon on February 1st expanded to cover most of the Mackenzie District. Mean weekly temperatures were more than 20° above normal in extreme northern areas of the Yukon. The mercury rose 4° above the freezing point at Komakuk Beach on February 4th.

Precipitation was light, although there was occasional light freezing rain or drizzle and extensive low cloud and fog in the Yukon. Norman Wells recorded the highest weekly total, 10.3 mm.

BRITISH COLUMBIA

CINV. Charles

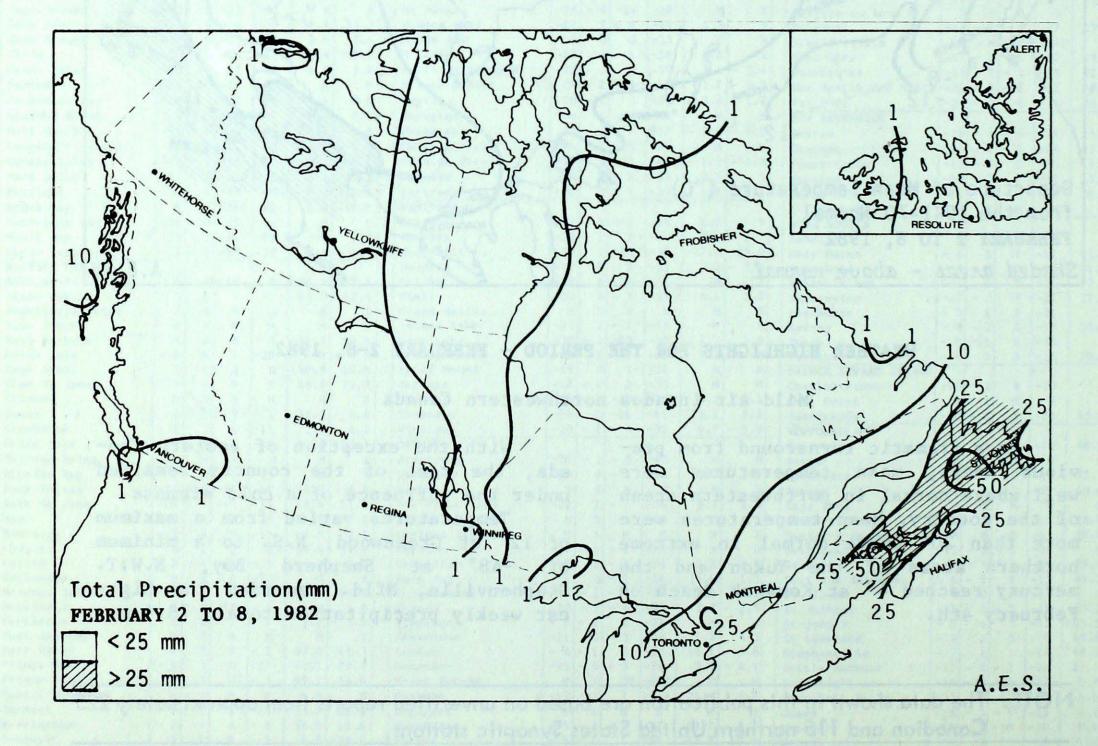
Cool but dry weather covered most of the province with the exception of northern areas. The mean weekly temperature at Prince George was 9° below normal; a similar mean temperature at Fort Nelson was 4.5° above normal. The mercury reached 11° at Cape St. James on the 3rd.

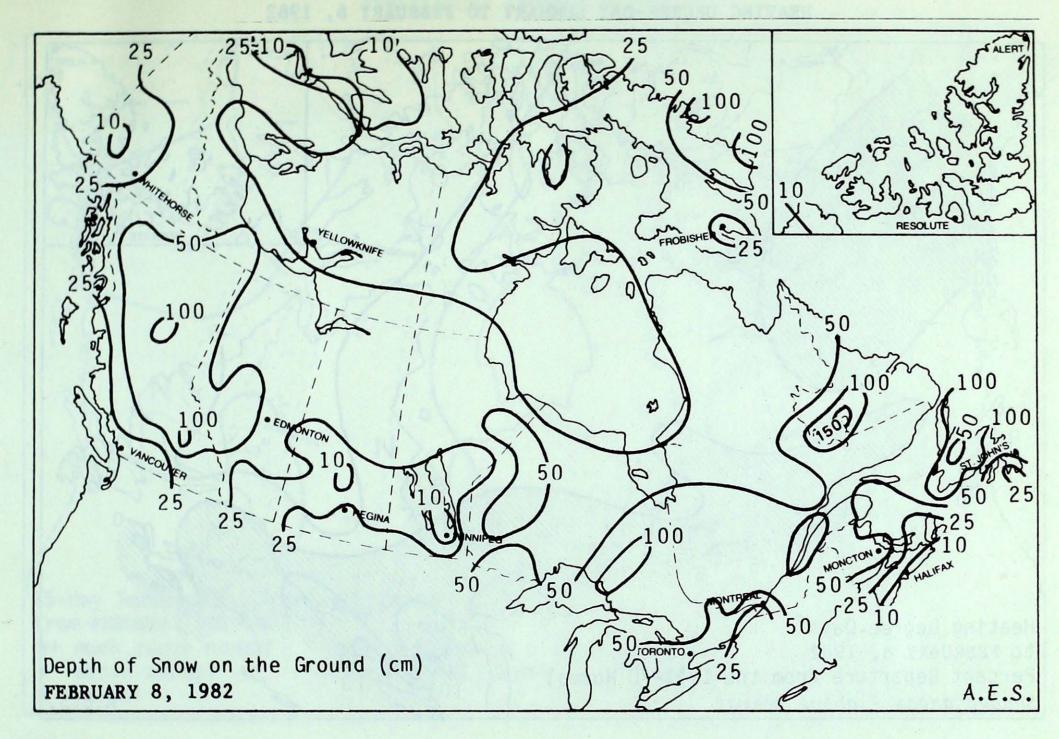
Precipitation was well below normal at the majority of stations. The greatest weekly total was the 19.4 mm recorded at Langara.

PRAIRIE PROVINCES

A very cold airmass dominated the Prairies this week. Mean temperatures in southwestern Alberta were more than 15° below normal. Several stations established daily minimum temperature records. The most notable was Banff with -33° on February 4th, breaking the previous record of -28° set in 1929 and 1916.

Moderate northwesterly winds produced extreme wind chill factors and heavy drifting and blowing snow between Red Deer and Calgary during the 6th and 7th and resulted in the closure of the highway between the two centres following two separate multi-vehicle collisions. Nearly 30 vehicles were involved in one incident near Bowden. Fortunately there were no fatalities.





ONTARIO

A snowstorm struck southern and central Ontario on February 3rd. Most areas measured 10 cm to 20 cm of snow, but London recorded 33 cm. A second storm on the 5th deposited another 5 cm to 7 cm on these same areas.

Temperatures remained well below normal. Mean temperatures were more than 10° below normal in extreme western areas. The mercury rose to 1° at Trenton on the 3rd. The temperature fell to -44° at Armstrong on the 5th.

QUEBEC

Temperatures were close to normal in the southern and eastern areas of the province while mean temperatures were more than 5° below normal in western areas. The mercury rose to 1° at Sherbrooke on the 4th and the temperature fell to -41° at Poste-de-la-Baleine on the same day.

Precipitation was generally close to normal in southern areas but below normal in the rest of the province. Sherbrooke measured 31.1 mm.

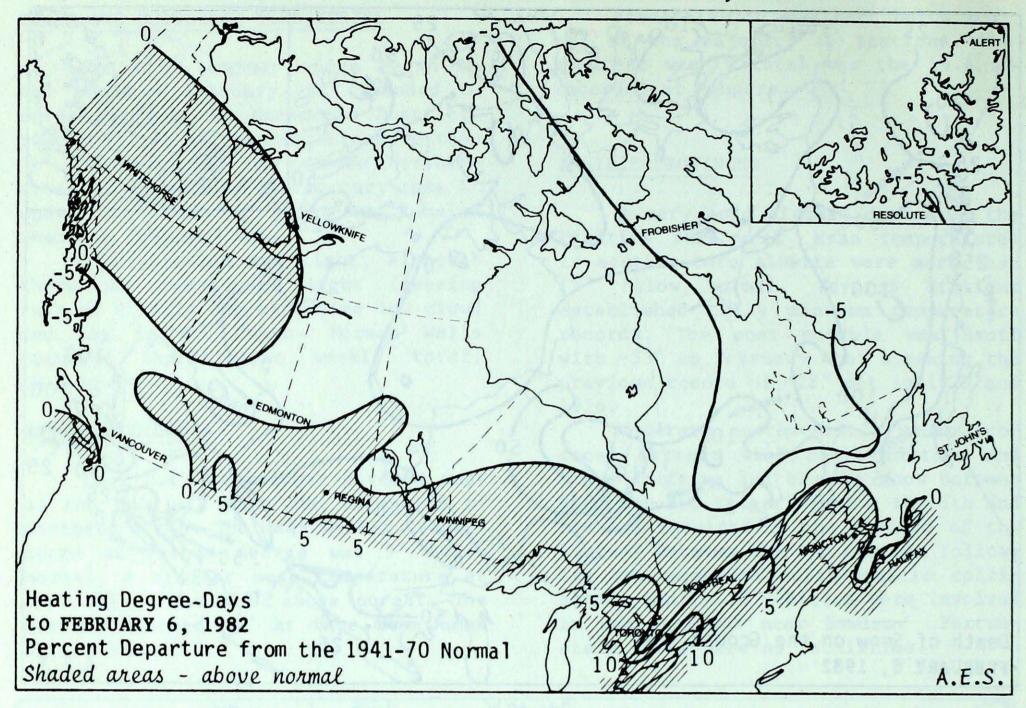
ATLANTIC PROVINCES

A major storm struck the Maritimes on February 3rd and 4th bringing rain and freezing rain. Roads were very hazardous and many schools were closed. Fredericton measured 53.2 mm of precipitation, most of which fell on the 3rd. Only traces of snow are left on the ground in Nova Scotia.

Mild air arriving with the storm pushed the mercury to 12° at Greenwood on February 3rd, the highest reading in the country.

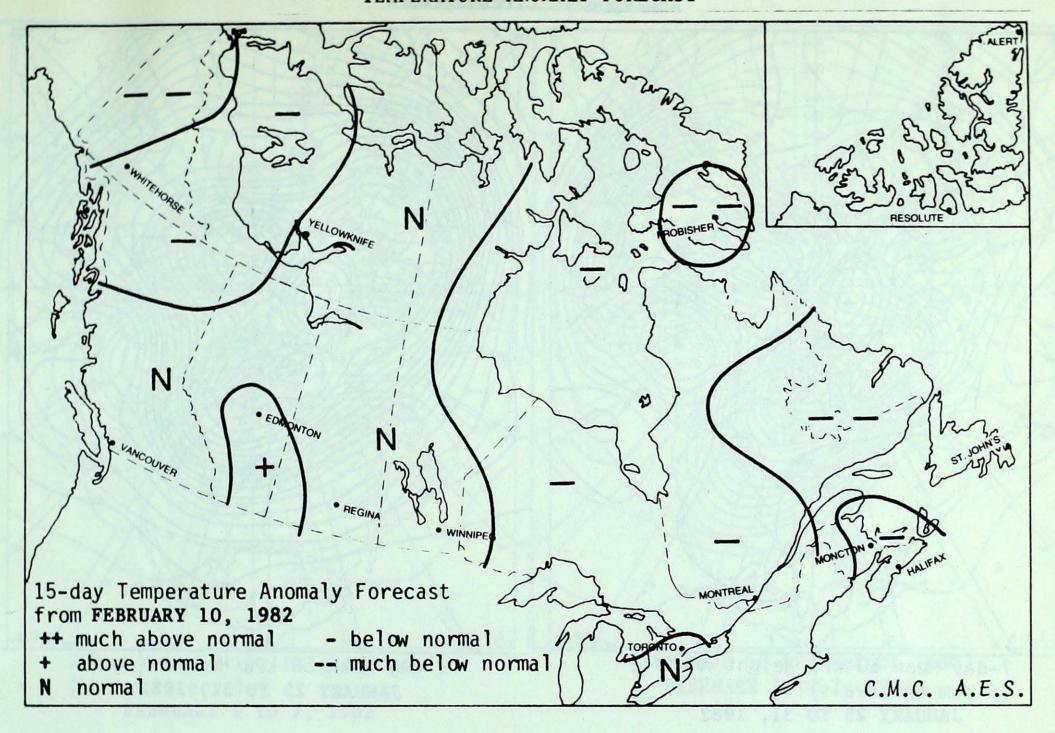


HEATING DEGREE-DAY SUMMARY TO FEBRUARY 6, 1982

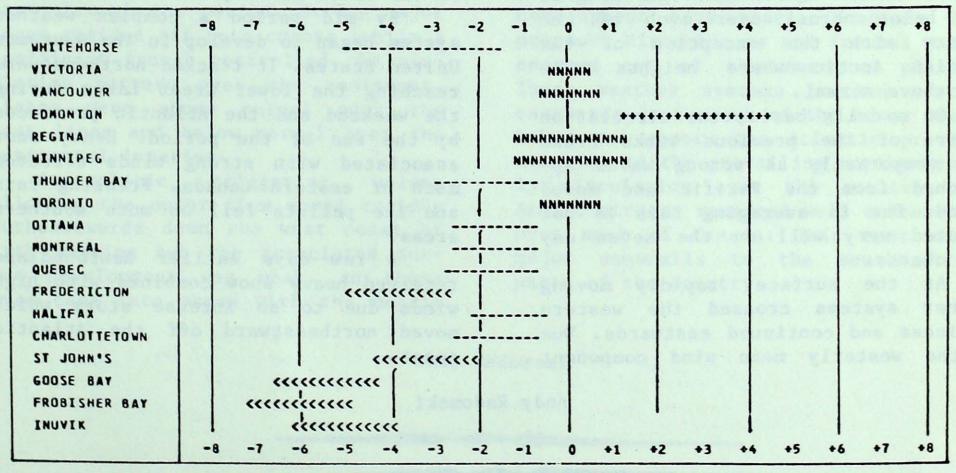


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMA
Resolute	282.5	-29.5	6818.0	-390.0	95
Inuvik	211.0	-83.0	5884.5	-132.5	98
Whitehorse	178.5	-26.5	4564.0	211.0	105
Vancouver	94.0	7.0	1759.0	-44.0	98
Edmonton Mun	209.0	29.0	3401.5	-82.5	98
Calgary	192.5	24.5	3329.0	84.0	103
Regina	263.0	56.0	3756.5	132.5	104
Winnipeg	259.5	42.5	3661.0	71.0	102
Thunder Bay	245.0	47.0	3568.0	151.0	104
Windsor	172.0	34.0	2362.0	225.0	111
Toronto	176.5	26.5	2641.5	250.5	110
Ottawa	179.5	5.5	2976.5	157.5	106
Montreal	170.5	-1.5	2916.0	241.0	109
Quebec	178.5	-4.5	3160.5	148.5	105
Saint John, N.B.	131.5	-30.5	2750.0	46.0	102
Halifax	110.5	-27.5	2252.0	31.0	101
Charlottetown	131.5	-29.5	2511.5	-13.5	99
St. John's, Nfld.	124.0	-20.0	2481.0	-81.0	97

TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR FEB 10 1982 TO FEB 24 1982

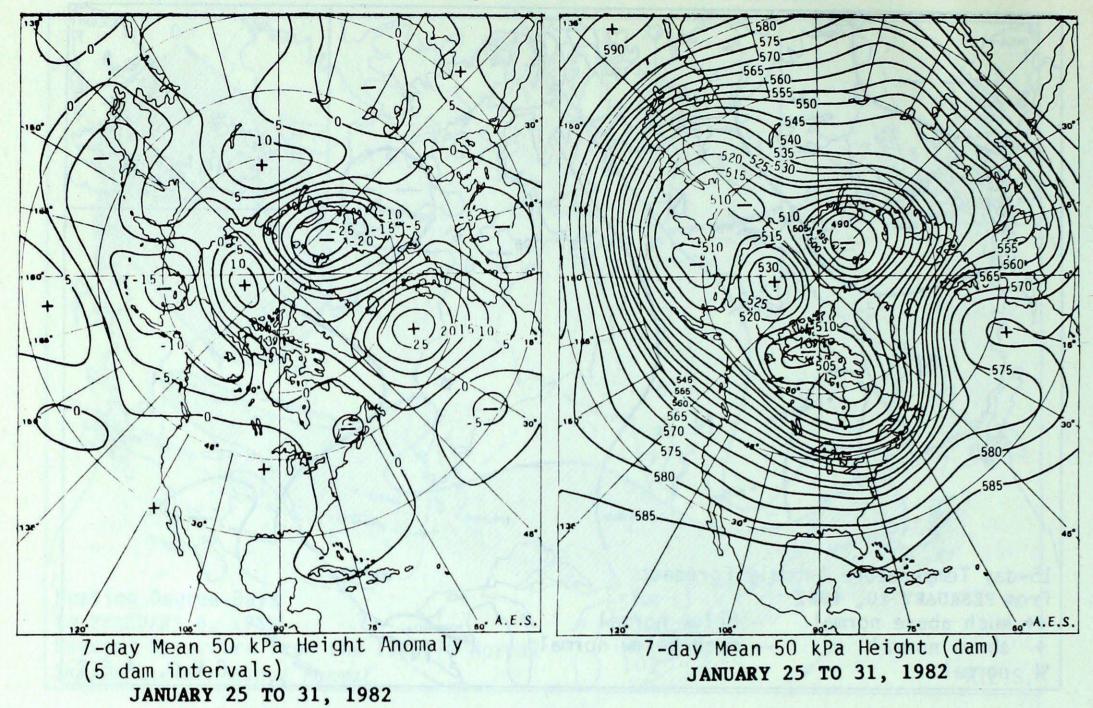


CCCC MUCH BELOW NORMAL BELOW NORMAL

NNNN NEAR NORMAL

>>>> MUCH ABOVE NORMAL ABOVE NORMAL

Atmospheric Circulation



The mean upper vortex remained over northern Canada. 50 kPa heights were below normal over much of the country with the exception of the Canadian Arctic where heights were much above normal.

On a daily basis, the circulation pattern of the previous weeks broke down temporarily as strong waves approached from the Pacific and moved inland. Due to averaging this is not depicted very well on the seven day mean charts.

At the surface, rapidly moving weather systems crossed the western provinces and continued eastwards. Due to the westerly mean wind component

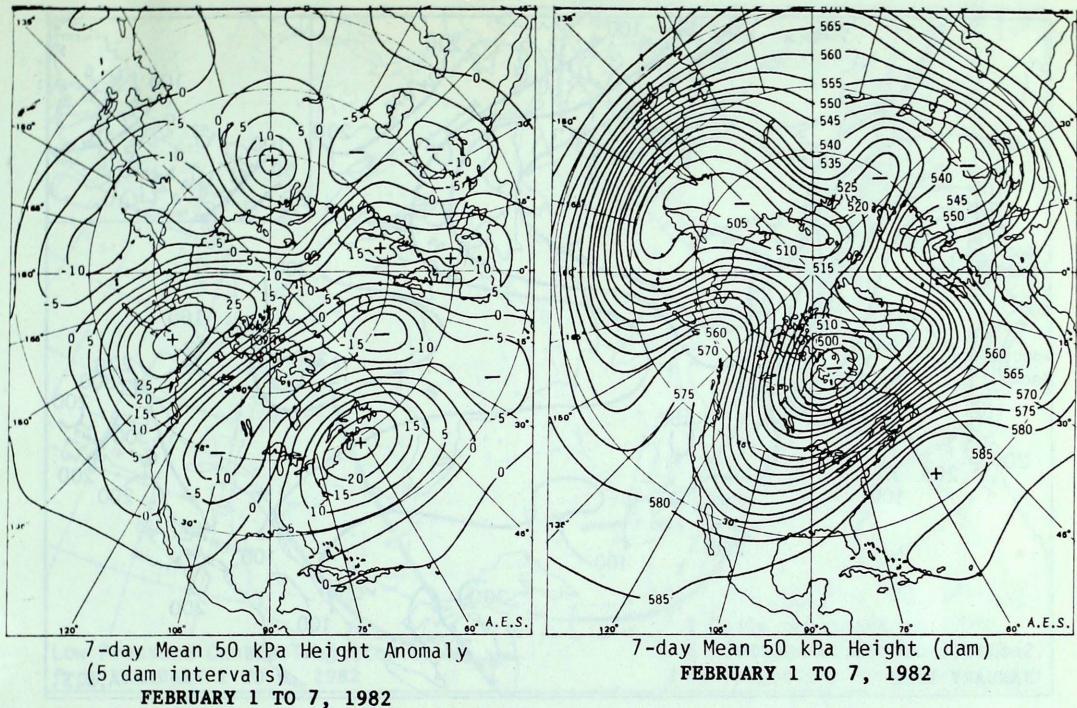
very cold Arctic air did not penetrate as far south as in previous weeks.

By mid period a complex weather system began to develop in the southern United States. It tracked northeastward reaching the lower Great Lakes during the weekend and the Atlantic provinces by the end of the period. Heavy snow associated with strong winds affected much of eastern Canada. Freezing rain and ice pellets fell on more southern areas.

A few days earlier Newfoundland received heavy snow combined with high winds due to an intense storm which moved northeastward off the Atlantic coast.

Andy Radomski

Atmospheric Circulation



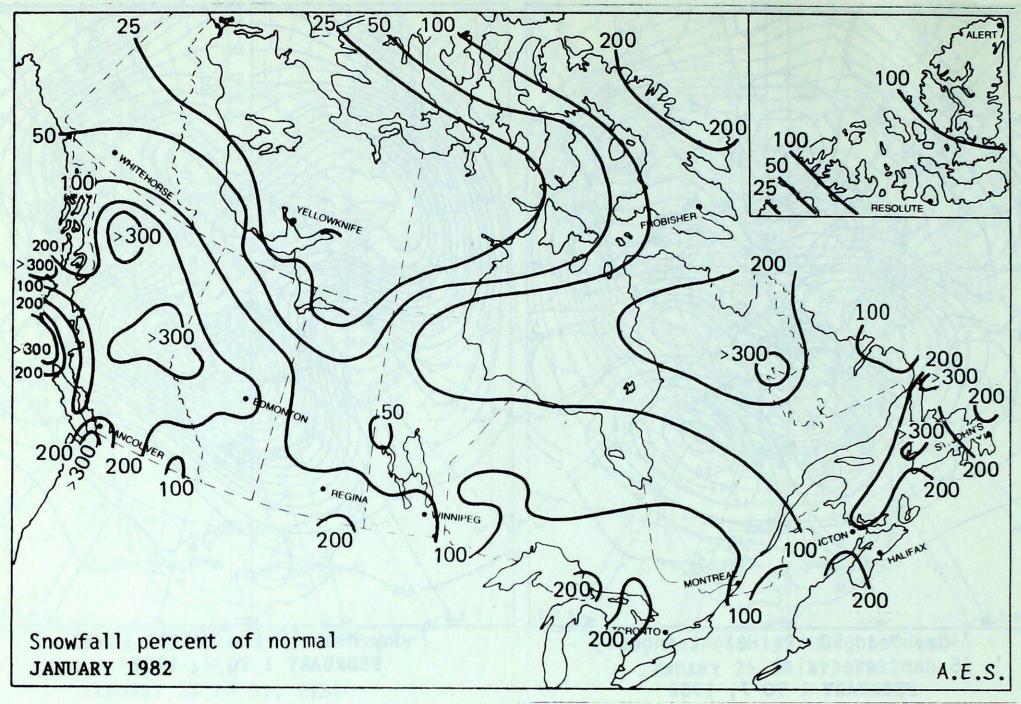
The atmospheric circulation over North America remained relatively constant through the period. Strong major ridges resided off both coasts, while a significant trough controlled the circulation pattern over the continent. Heights were above normal over the coast lines and below normal over the continental interior.

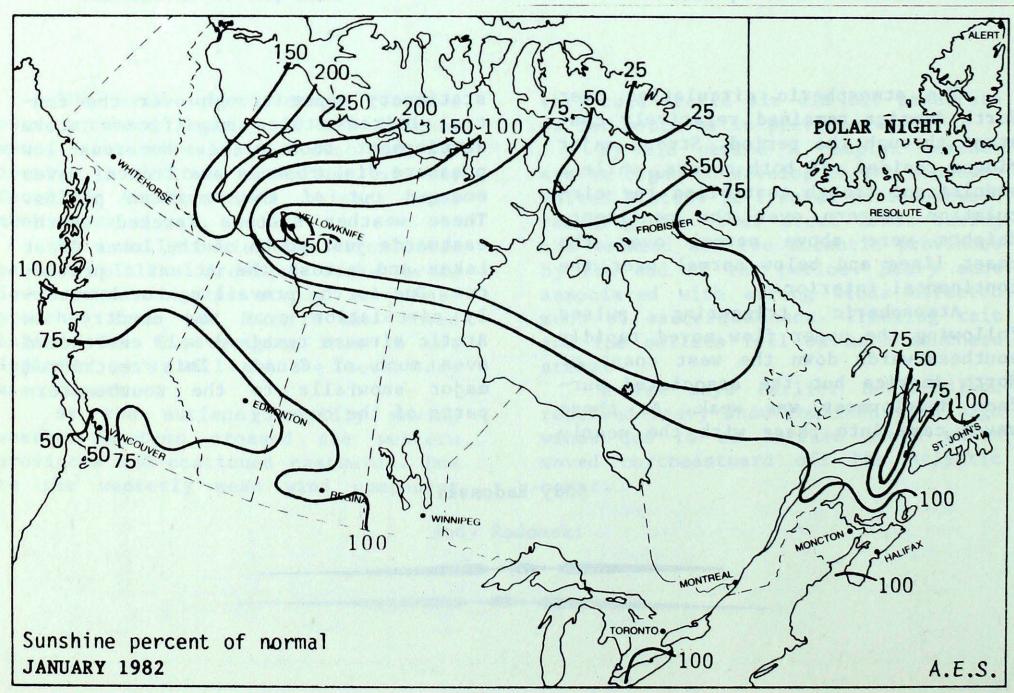
Atmospheric triggering pulses following the upper flow moved rapidly southeastwards down the west coast of North America but the associated surface development was weak. As these waves came into phase with the nearly

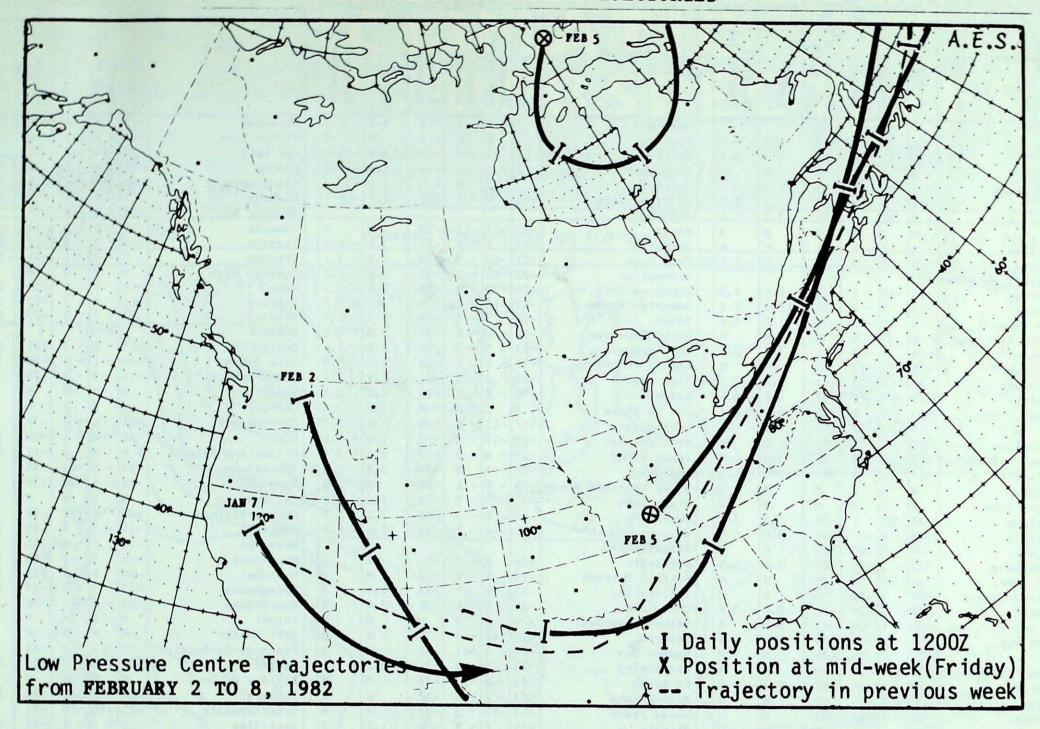
stationary upper trough over the central United States significant storm development took place. Numerous low pressure disturbances and frontal waves emerged out of the American plains. These weather systems tracked northeastwards just south of the lower Great Lakes and across the Atlantic provinces. Due to the prevailing northwesterly circulation over the country, an Arctic airmass remained well entrenched over much of Canada. This restricted major snowfalls to the southeastern parts of the country.

Andy Radomski

SEASONAL MAPS







CLIMATIC PERSPECTIVES

Staff

Editor: Yves Durocher
Assistant Editor: Bob Paterson

Technical Staff: Fred Richardson, Andy Radomski Graphics and Layout: Velma MacDonald, J. Rautenberg Word Processing: Una Ellis

Correspondents

Terry Mullane, (Ice Forecasting Central)

H.E. Wahl, (Whitehorse)
Bill Prusak, (Western Region)
Fred Luciow, (Central Region)
Bryan Smith, (Ontario Region)
Jacques Miron, (Quebec Region)
Frank Amirault (Atlantic Region)

Staff of Prince George, Kamloops, Castlegar, Fort
Nelson, Penticton and Kelowna
weather office (Pacific Region)

Telephone Inquiries (416) 667-4711/4906



		16	MPE	RAT	UR	E AI	VD PR	RECIP	IT
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