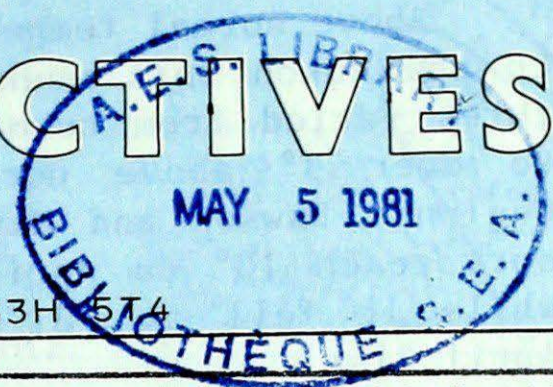


CLIMATIC PERSPECTIVES

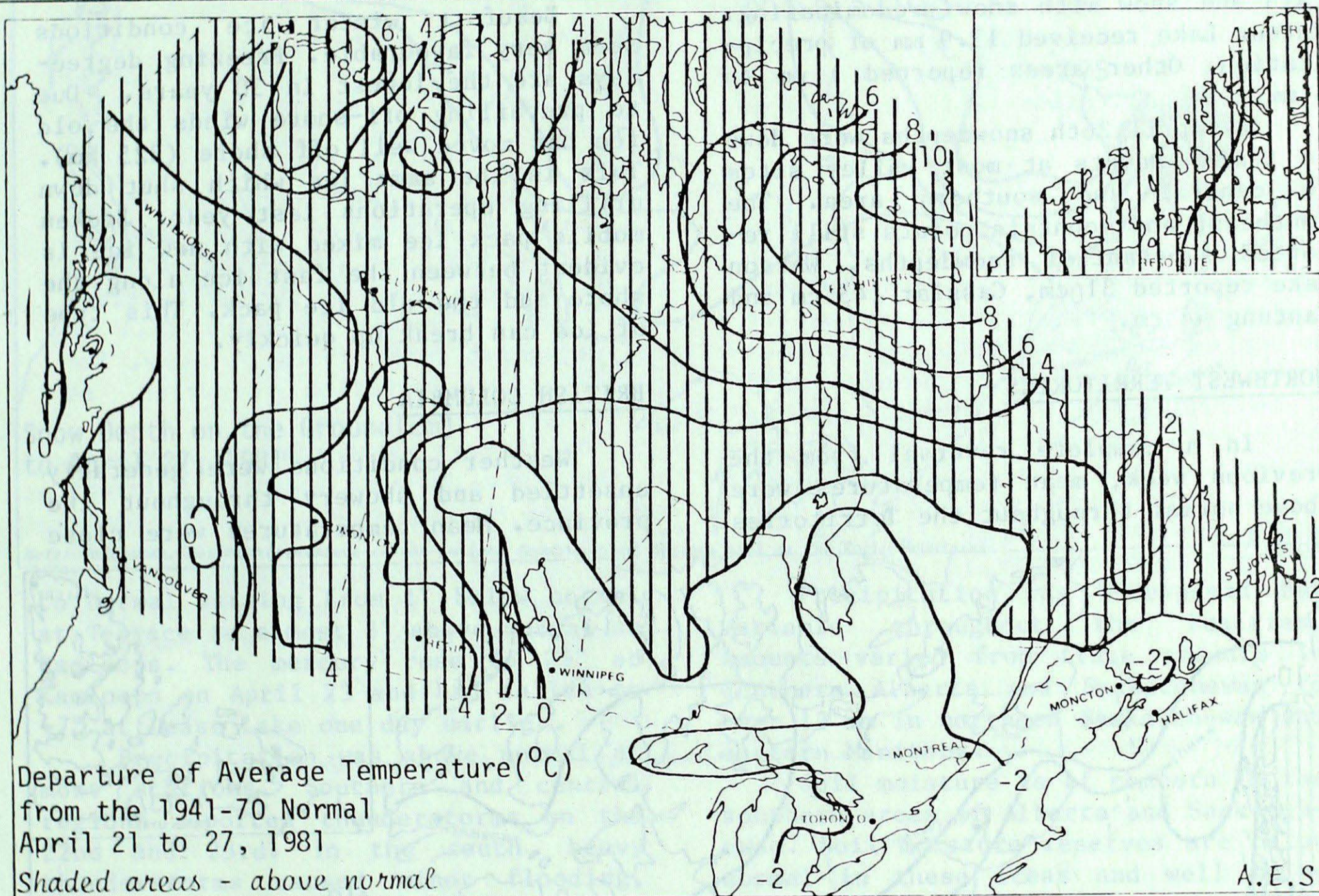
THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4



MAY 1, 1981

(Aussi disponible en français)

VOL.3 NO.17



Departure of Average Temperature ($^{\circ}\text{C}$)
from the 1941-70 Normal
April 21 to 27, 1981
Shaded areas - above normal

WEATHER HIGHLIGHTS FOR THE PERIOD - APRIL 21 TO 27 1981

A surprise spring snowstorm hits the Maritimes.

A surprise snowstorm dropped 15 cm to 25 cm of snow over northeastern Nova Scotia. Sydney recorded 28.4 cm of snow. One death was attributed to the storm, roads were closed and many people left stranded.

Soil moisture conditions across the Prairies continue to be of concern. A lack of snowcover combined with continuous freeze-thaw cycles over the winter has left many areas vulnerable to wind soil erosion.

Ice conditions in the Beaufort Sea look very favourable this year. The accumulated freezing degree-days are the lowest in 30 years and prevailing off-shore winds have pushed the old ice well off shore.

Temperatures across the country varied from 27° at Estevan, Saskatchewan to -30° at Poste-de-la-Baleine, Quebec. The highest weekly precipitation total, 99.1 mm, was measured at Cape Scott, British Columbia.

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON

Above normal temperatures returned to the Yukon this week. Mean temperatures varied from normal in the south to over 3° above normal in central regions. Dawson and Mayo saw the mercury reach 13° on April 25th and 26th while it fell to -31° at Ogilvie on April 21st.

Precipitation was a mixture of rain and snow with snow predominating. Watson Lake received 13.9 mm of precipitation. Other areas reported 1 mm to 3 mm.

By April 26th snowdepths were down to trace amounts at most valley sites in central and southern area. The southeast and mountain points still reported substantial snowdepths. Watson Lake reported 31 cm, Cassiar 145 cm and Cantung 44 cm.

NORTHWEST TERRITORIES

In a complete reversal from the previous week, mean temperatures were above normal throughout the Territories

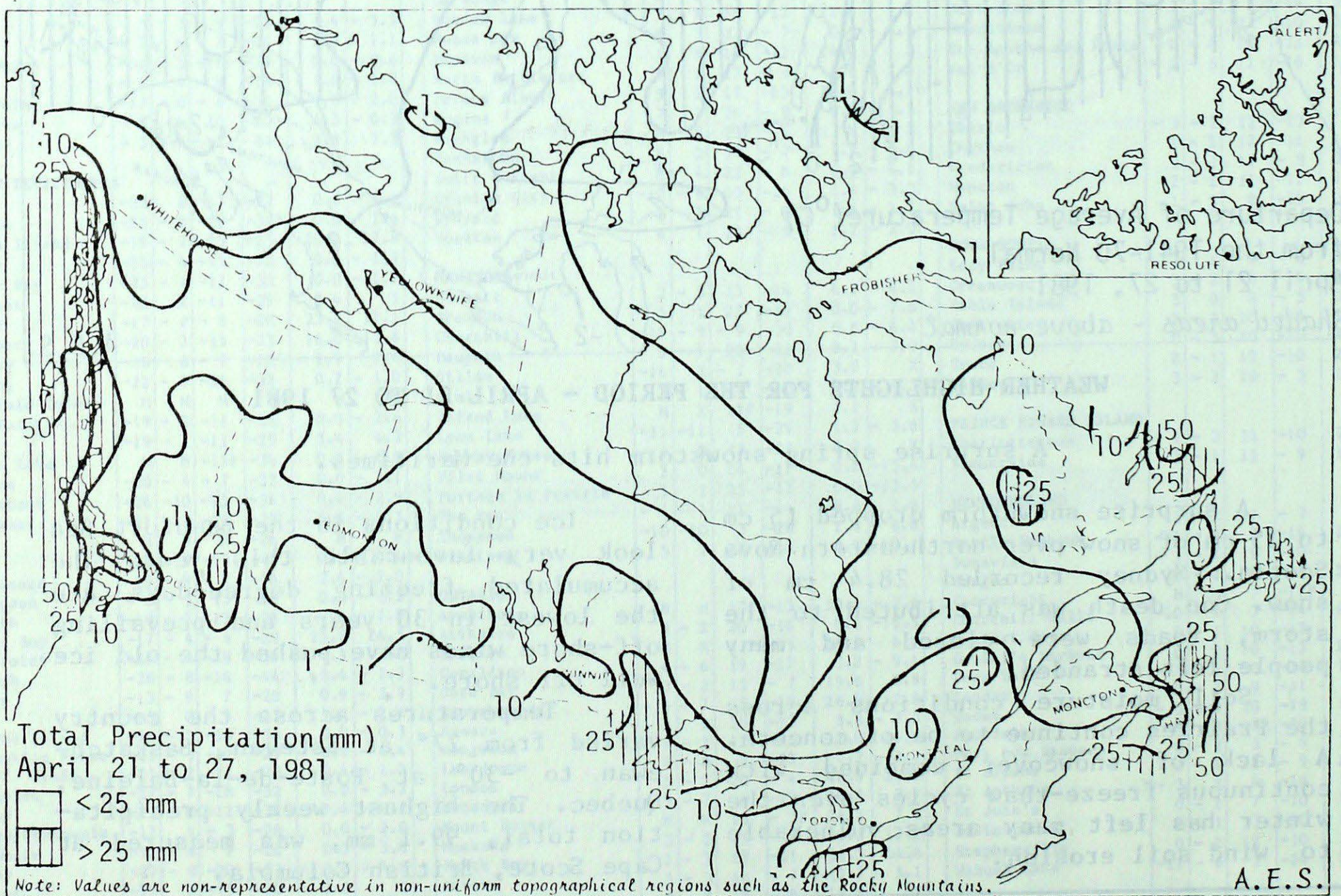
this week. Mean temperatures exceeded 10° above normal in eastern Baffin Island and 8° above normal along some parts of the Beaufort coast. The mercury ranged from 14° at Norman Wells on the 27th to -29° at Hall Beach on the 22nd.

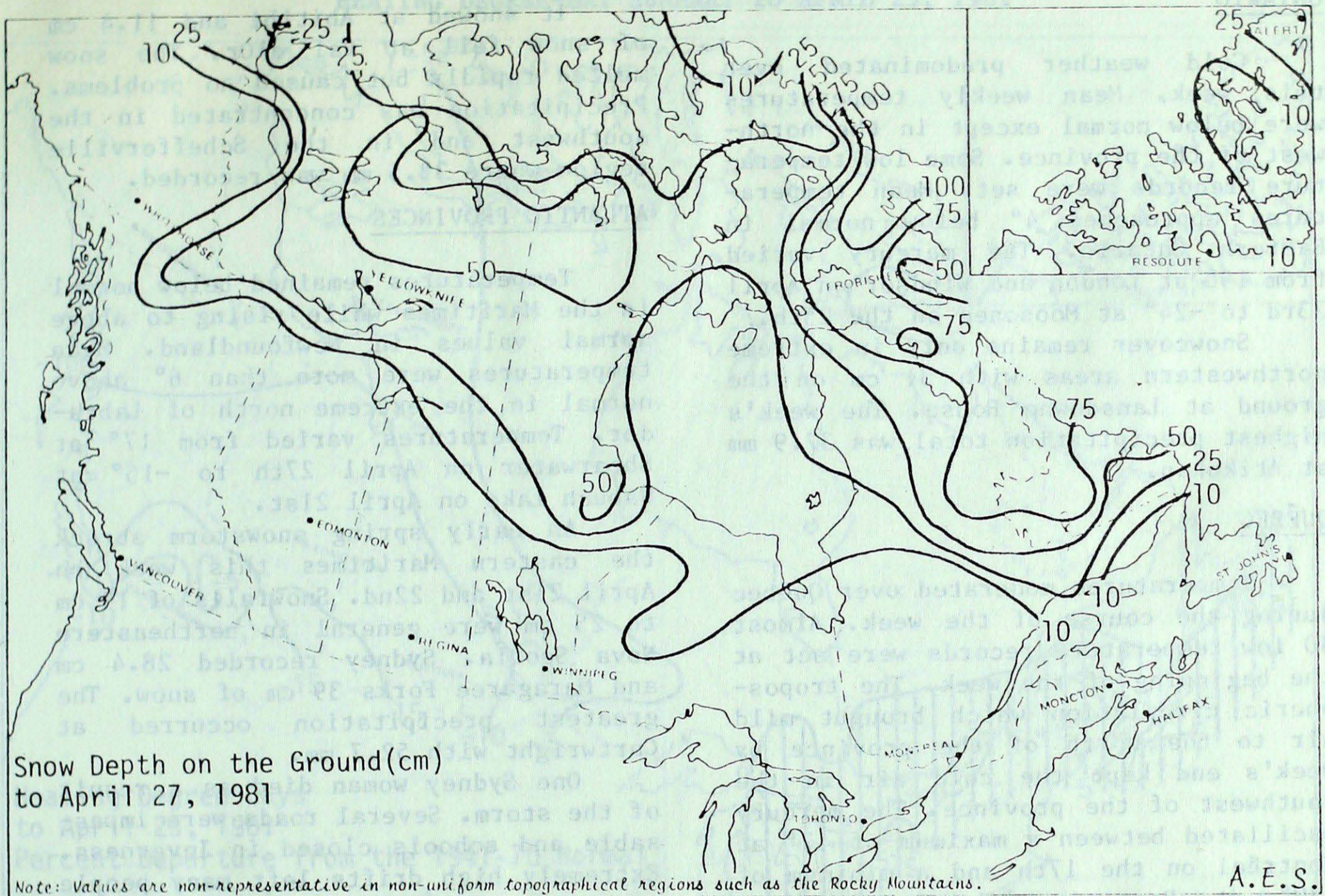
All the significant precipitation occurred in the southern Mackenzie District. Fort Simpson recorded 48.3 mm of precipitation.

Beaufort winter ice conditions seem very favourable. Freezing degree-days are the lowest in 30 years. Due to prevailing off-shore winds the old ice has moved well off shore (325 km). This is the same ice which shut down drilling operations last year. Broken mobile pack ice mixed with new ice is evident between the fast ice along the shore and the old ice pack. This type of ice can break up quickly.

BRITISH COLUMBIA

Weather conditions were generally unsettled and showery throughout the province. Mean temperatures were close





to normal varying from 1° below normal at Terrace to almost 2° above normal at Kamloops. The mercury rose to 25° at Kamloops on April 23 and had fallen to -7° at Dease Lake one day earlier.

Precipitation was above normal at most stations. Southern and central regions reported thunderstorms on the 22nd and 23rd. In the south, heavy thunderstorms caused minor flooding, power outages and washed out some roads in the area of Castlegar and Kelowna. Fort Nelson received 21 cm of snow on April 24th and 25th. The highest weekly precipitation total, 99.1 mm, was recorded at Cape Scott.

Cherries and peaches are now in full bloom in the Okanagan with pears and apples expected shortly.

PRAIRIE PROVINCES

The Prairies returned to an above normal temperature regime this week. Mean temperatures exceeded 5° above normal in southern Saskatchewan. The mercury reached 27° at Estevan on the 24th and fell to -17 at Churchill on the 22nd.

Precipitation was widespread but variable throughout the Prairies. Amounts varied from trace amounts in southern Alberta and Saskatchewan to over 13 mm in northern Saskatchewan and eastern Manitoba.

Soil moisture is of concern in the southern areas of Alberta and Saskatchewan. Soil moisture reserves are below normal in these areas and well below normal in the Medicine Hat region. This year has also been bad for critical soil erosion due to wind. This has been attributed to the lack of snowcover and the continuous freeze-thaw cycles during the winter that broke down the soil.

Winds with gusts up to 107 km/h were associated with a front that moved through southern Alberta and Saskatchewan on April 24th. Blowing soil reduced visibility to less than 0.2 km in some areas of southern Alberta, closing highways and shutting down transportation facilities for several hours.

ONTARIO

Cold weather predominated over this week. Mean weekly temperatures were below normal except in the northwest of the province. Some low temperature records were set. Mean temperatures approached 4° below normal in Eastern Ontario. The mercury varied from 19° at London and Windsor on April 23rd to -24° at Moosonee on the 25th.

Snowcover remains only in extreme northwestern areas with 31 cm on the ground at Lansdowne House. The week's highest precipitation total was 37.9 mm at Atikokan.

QUÉBEC

Temperatures moderated over Québec during the course of the week. Almost 30 low temperature records were set at the beginning of the week. The tropospheric circulation which brought mild air to the north of the province by week's end kept the cold air in the southwest of the province. The mercury oscillated between a maximum of 17° at Montréal on the 17th and a minimum of -30° at Poste-de-la-Baleine on the 21st.

It snowed at Abitibi and 11.4 cm of snow fell at Val d'Or. The snow melted rapidly but caused no problems. Precipitation was concentrated in the southwest and in the Schefferville region where 33.5 mm was recorded.

ATLANTIC PROVINCES

Temperatures remained below normal in the Maritimes while rising to above normal values in Newfoundland. Mean temperatures were more than 6° above normal in the extreme north of Labrador. Temperatures varied from 17° at Shearwater on April 27th to -15° at Wabush Lake on April 21st.

An early spring snowstorm struck the eastern Maritimes this week on April 21st and 22nd. Snowfalls of 15 cm to 25 cm were general in northeastern Nova Scotia. Sydney recorded 28.4 cm and Maragaree Forks 39 cm of snow. The greatest precipitation occurred at Cartwright with 52.7 mm.

One Sydney woman died as a result of the storm. Several roads were impassable and schools closed in Inverness. Extremely high drifts left many people stranded. Much of the problem was due to snow plows having been removed from the available snow removal equipment.

CLIMATIC PERSPECTIVESStaff

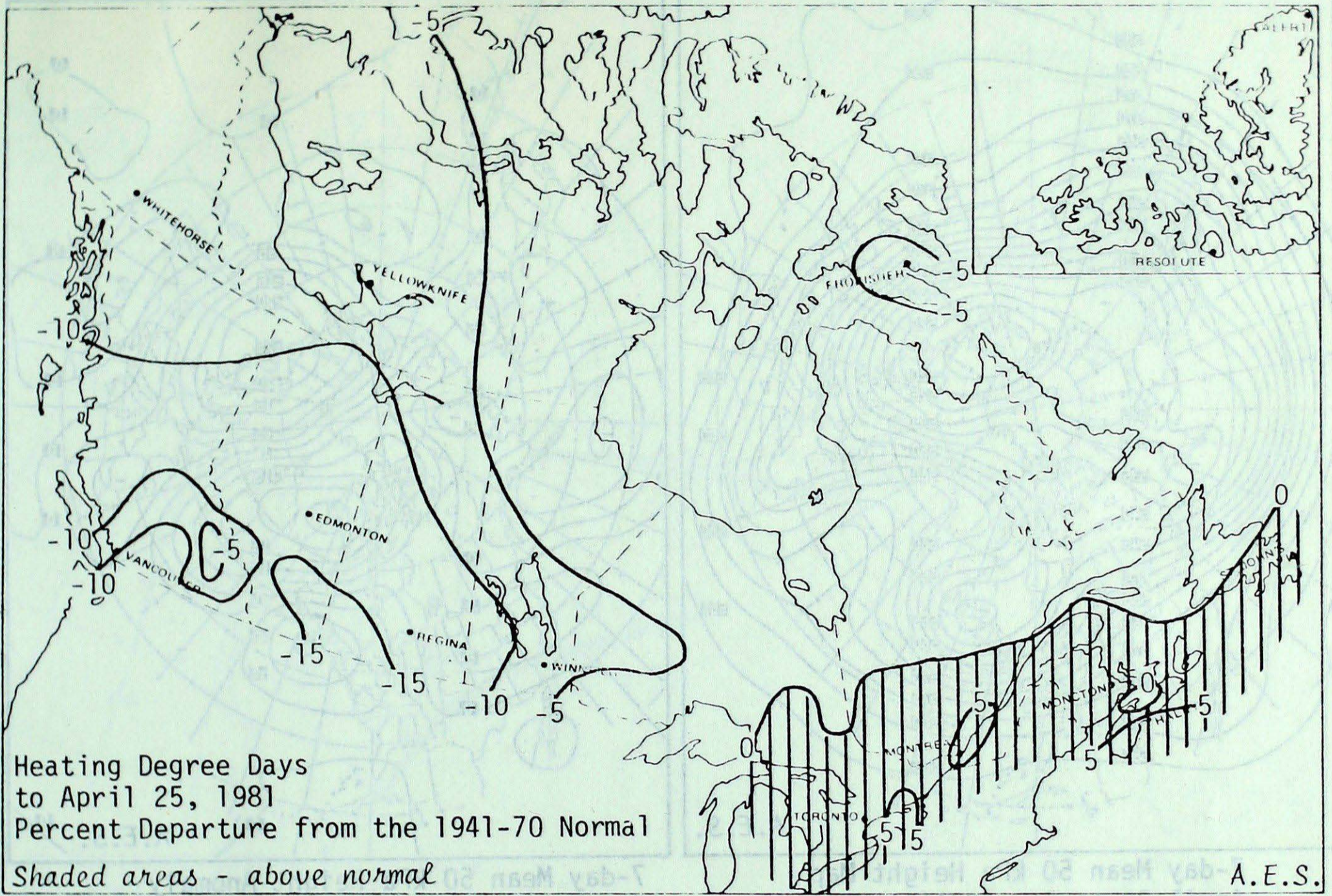
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	Nelson, Penticton and Kelowna
	weather office (Pacific Region)

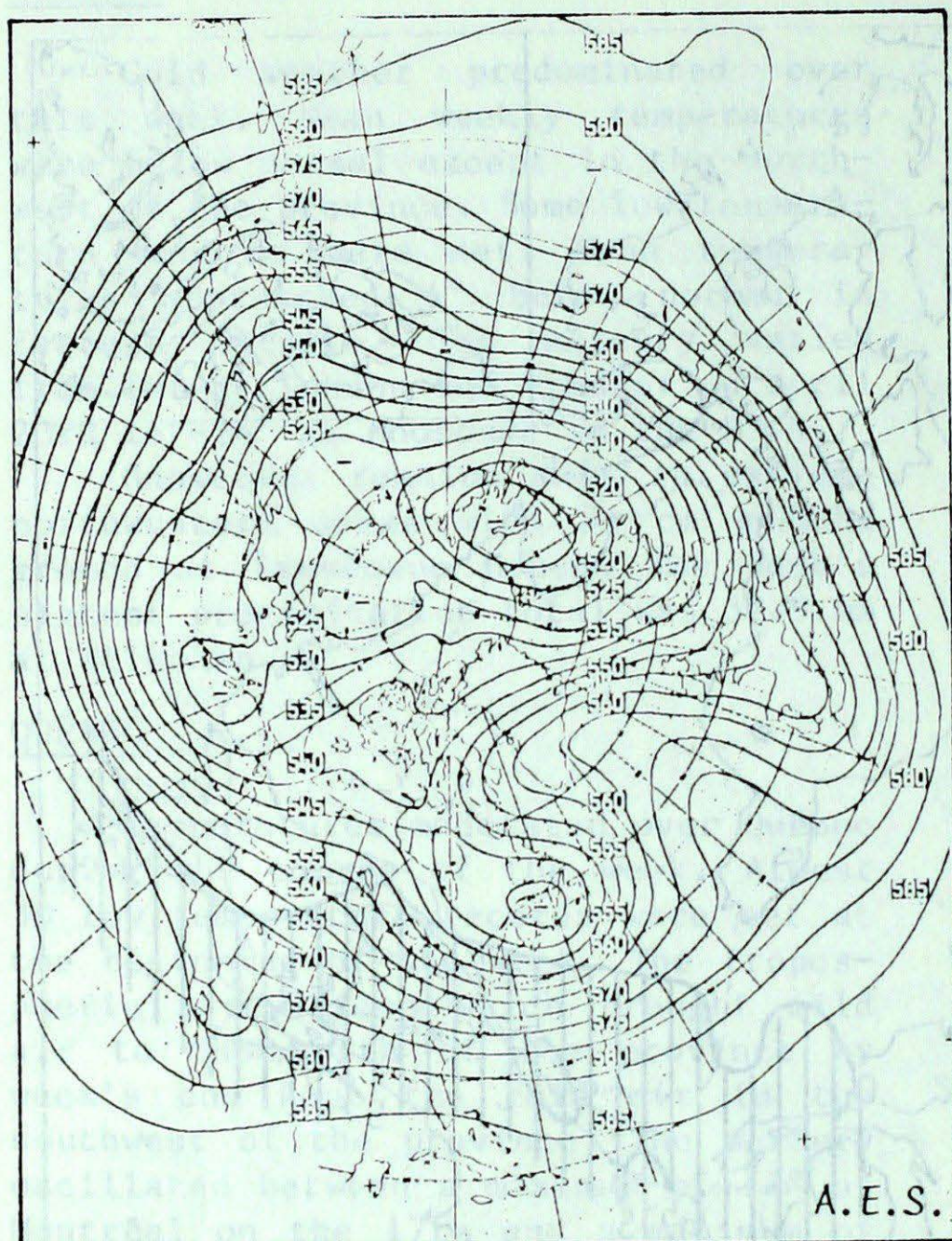
Telephone Inquiries (416) 667-4711/4906

HEATING DEGREE-DAY SUMMARY TO APRIL 25, 1981

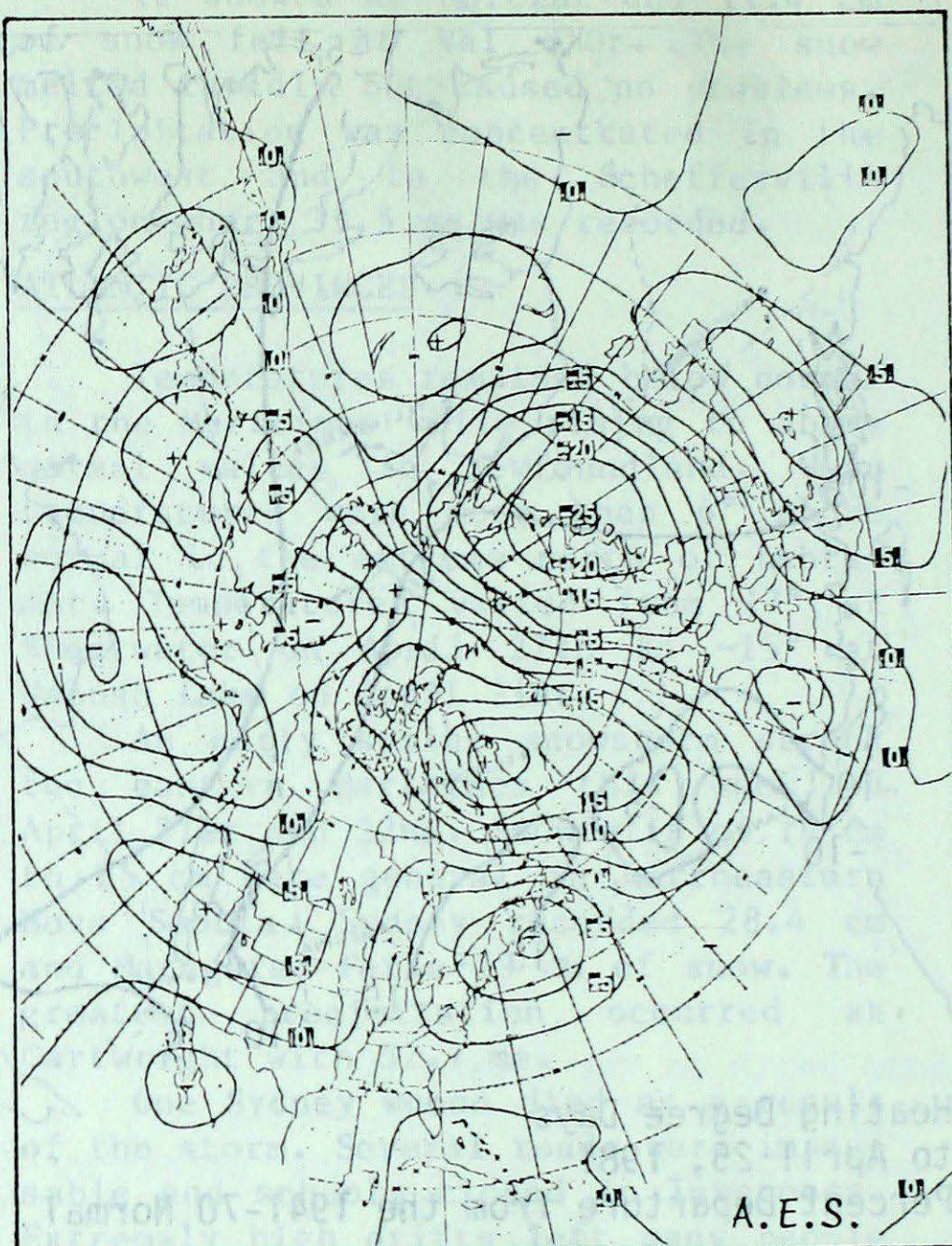


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	1091.5	40.5	10577.0	-353.0	97
Inuvik	792.0	-37.0	8532.0	-677.0	93
Whitehorse	531.5	61.5	5853.0	-444.0	93
Vancouver	240.5	8.5	2498.0	-210.0	92
Edmonton Mun	329.0	-40.0	4401.5	-804.5	85
Calgary	331.0	-48.0	4098.0	-768.0	84
Regina	309.0	-80.0	4767.5	-769.5	86
Winnipeg	354.5	-35.5	5064.5	-461.5	92
Thunder Bay	370.5	-37.5	5086.0	-167.0	97
Windsor	210.5	-48.5	3469.5	85.5	103
Toronto	266.0	-37.0	3954.0	152.0	104
Ottawa	299.5	-25.0	4509.0	108.0	102
Montreal	305.5	-16.5	4492.0	274.0	106
Quebec	361.5	-23.5	4964.0	248.0	105
Saint John, N.B.	365.0	-17.0	4421.0	136.0	103
Halifax	341.0	-17.0	3840.5	189.5	105
Charlottetown	365.0	-35.0	4218.5	83.5	102
St. John's, Nfld.	395.0	-36.0	4177.0	65.0	102

Atmospheric Circulation



7-day Mean 50 kPa Height Map
April 20 to 26, 1981 (in dam)



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) April 20 to 26, 1981

A west-east mean upper circulation continued across most of the country with the exception of eastern Canada where a major upper trough and closed upper vortex predominated. The remnants of the cold Arctic air which had spilled southeastwards earlier still covered southern areas of Ontario, Quebec and the Maritimes. This resulted in both below normal 50 kPa height anomalies and surface temperatures. Weather conditions were unsettled and changeable. A vigorous slow moving low pressure system tracking northeastward south of Nova Scotia early in the period caused heavy snowfalls on Cape Breton Island. Adjacent areas received mostly rain.

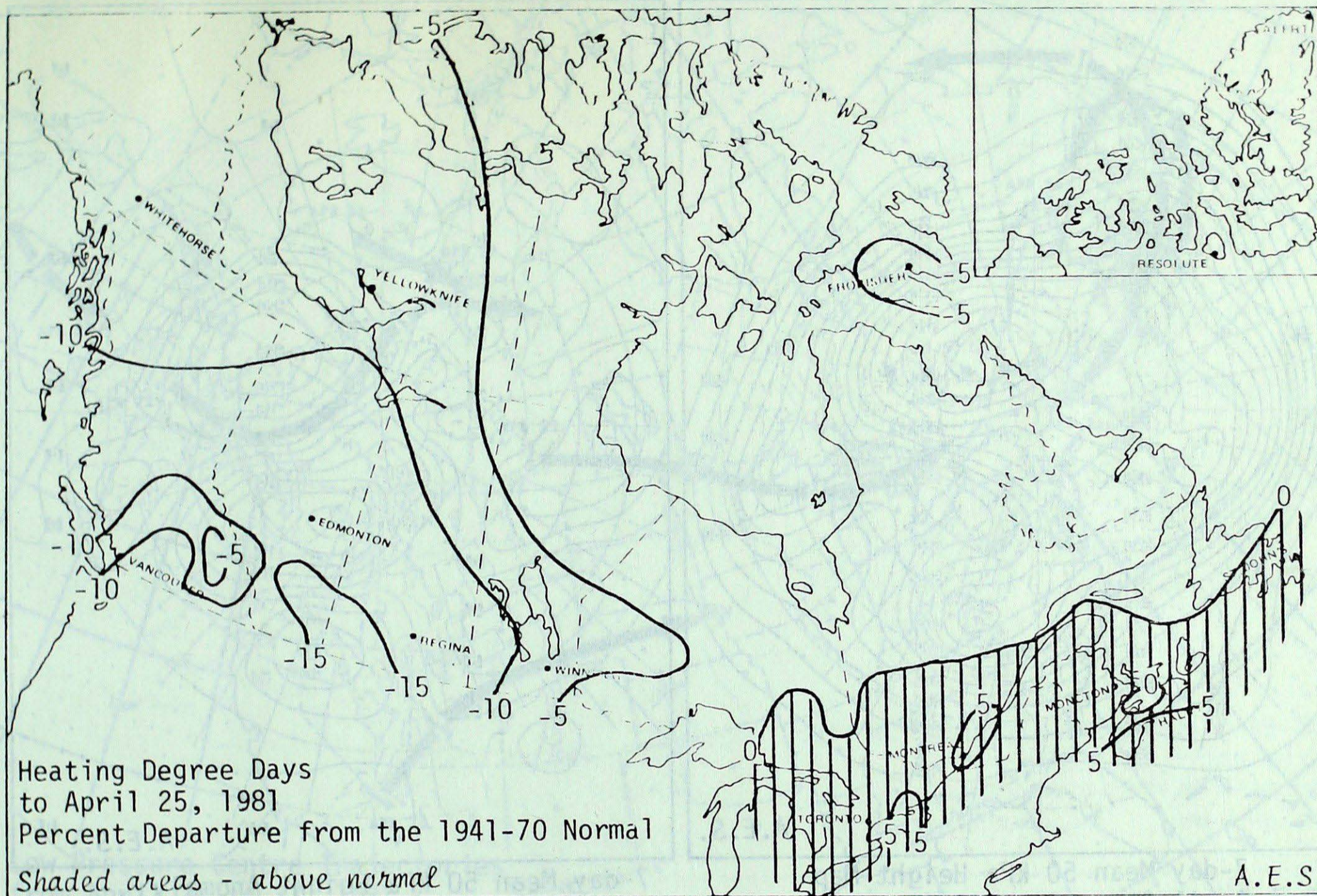
The deep 50 kPa Arctic Vortex which was present over the Arctic Islands for the past few weeks finally dissipated. Very cold air associated

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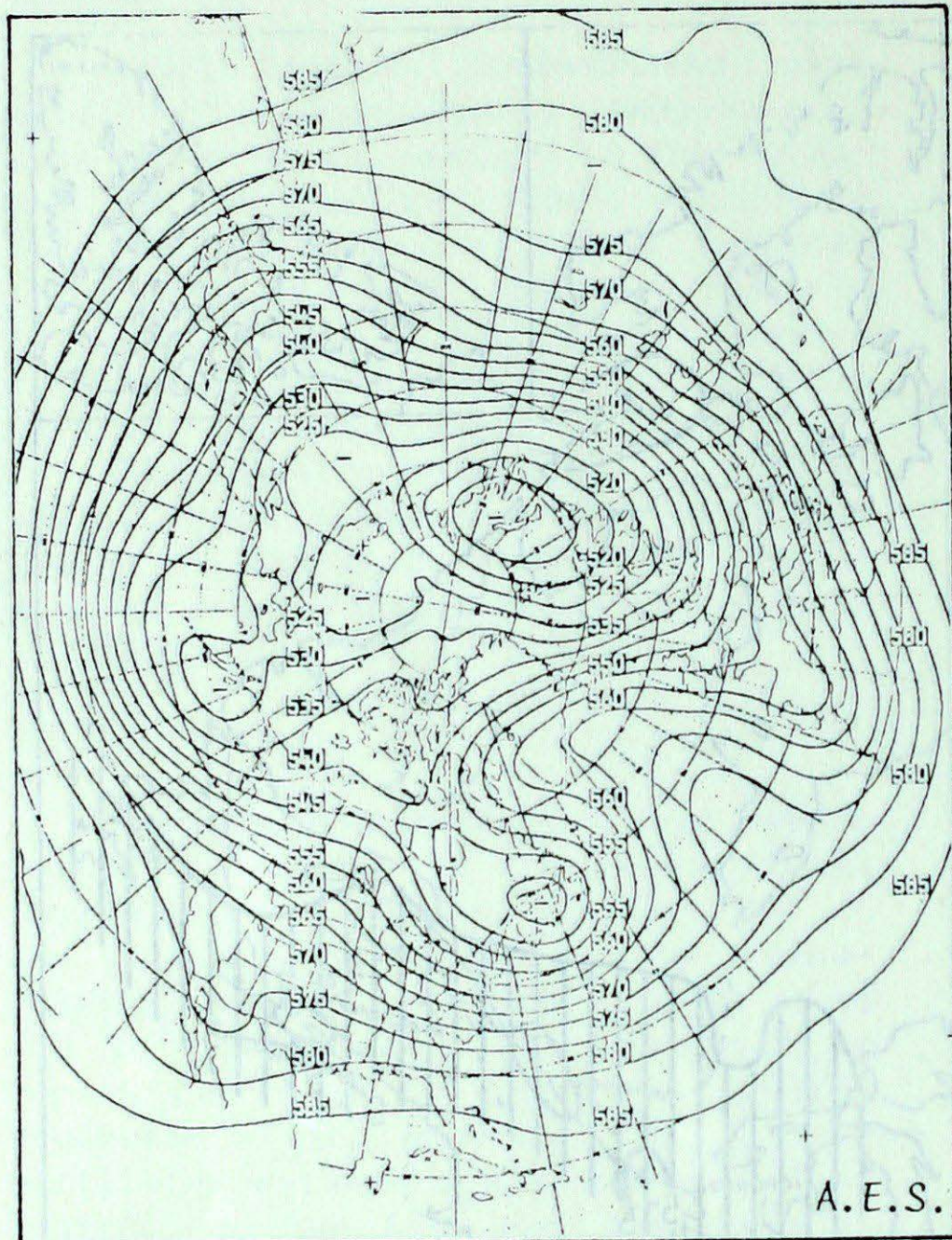
An on-shore circulation permitted a series of atmospheric perturbations to approach the British Columbia coastline and move inland across the Rockies. As a result the weather pattern was unsettled and wet over much of Canada's most western province. A strengthening low pressure system crossing British Columbia on Thursday triggered heavy thunderstorm activity in southern areas Thursday night. Frequent lightning and thunder, not to mention heavy downpours caused numerous power outages and localized flooding.

Andy Radomski

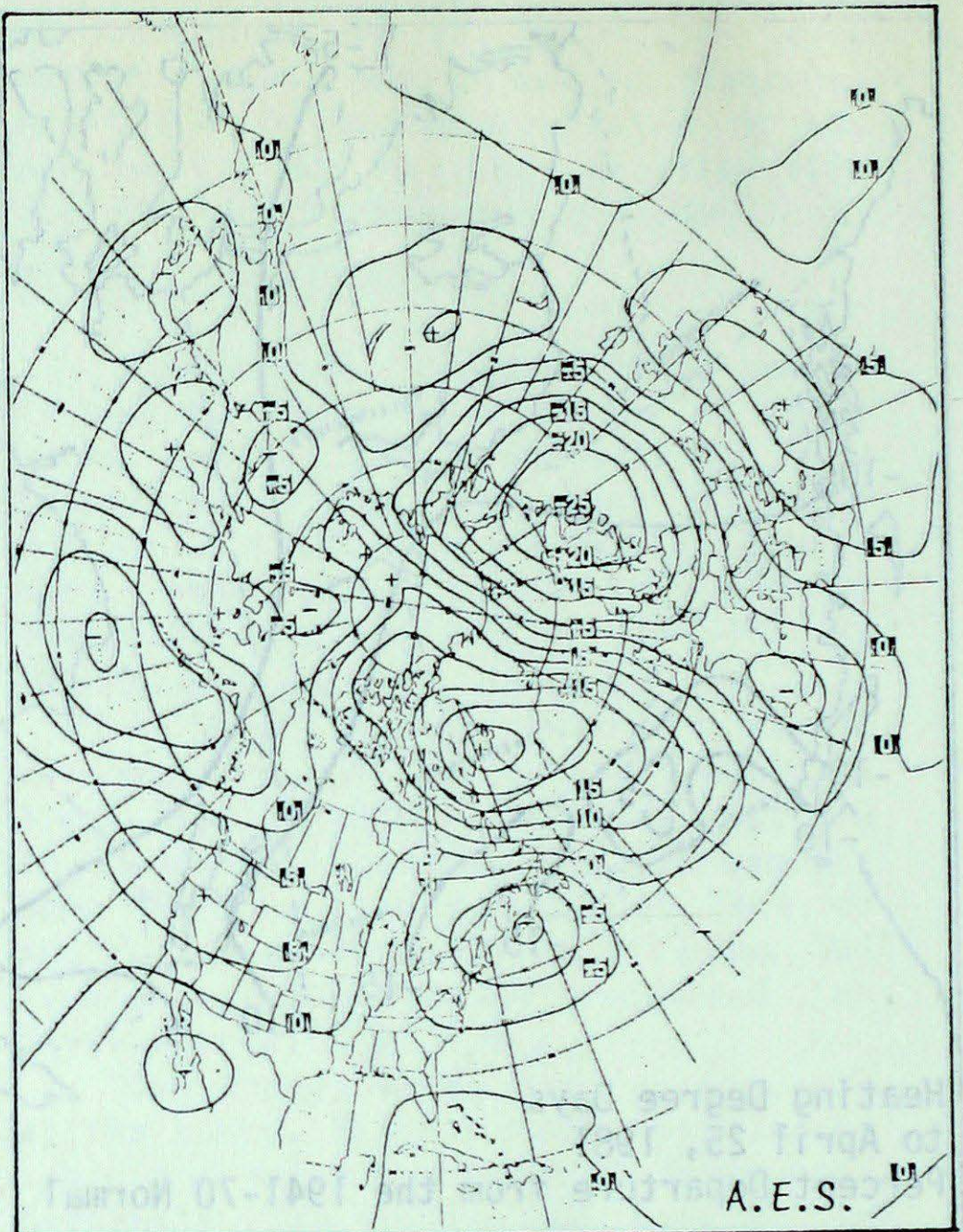
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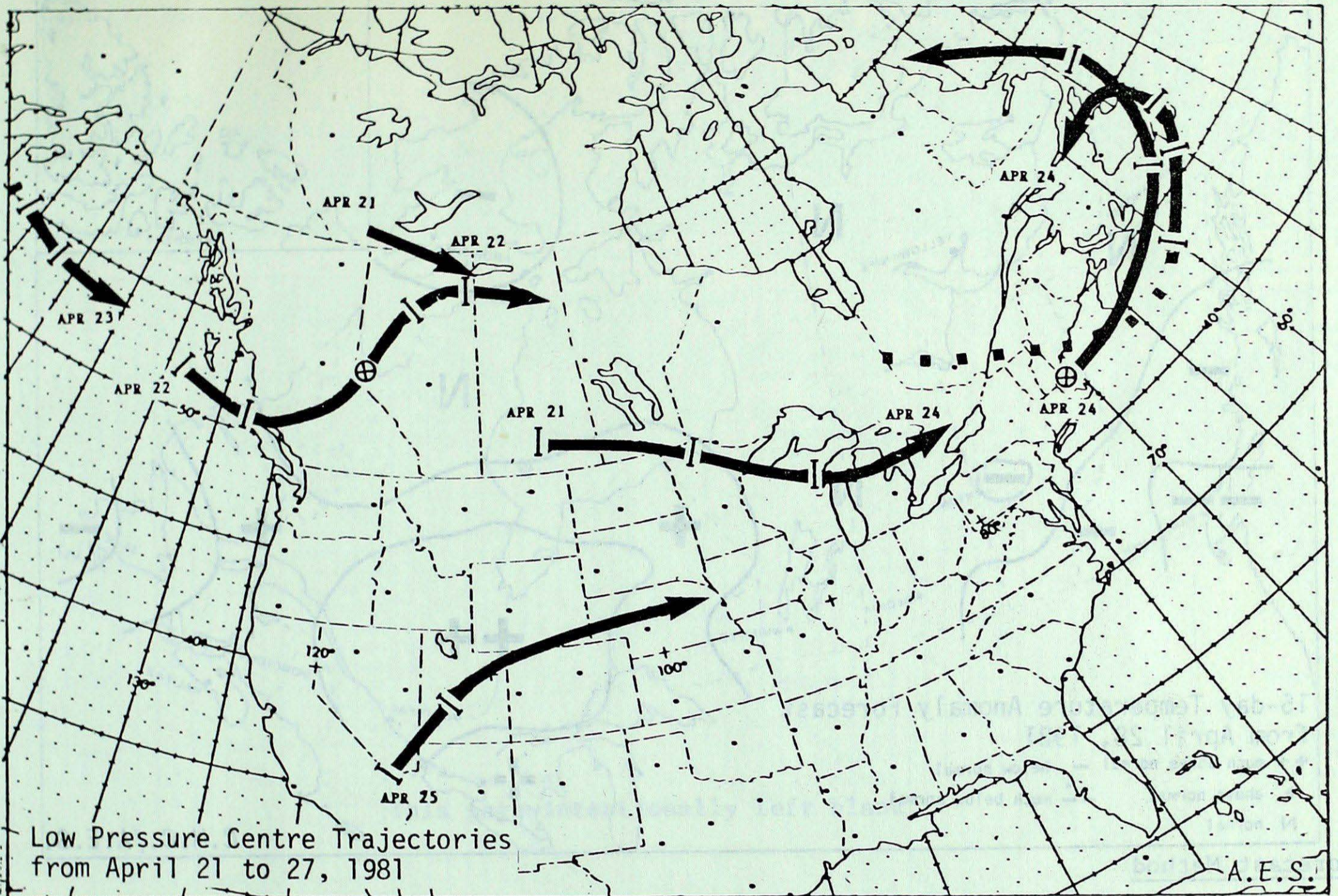
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LOW PRESSURE CENTRE TRAJECTORIES



Low Pressure Centre Trajectories from April 21 to 27, 1981

A.E.S.

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

Each temperature class is designed to contain 50% of the historically observed 15 day means pertinent to specific location and time of year.

Current Temperature Anomaly Forecast

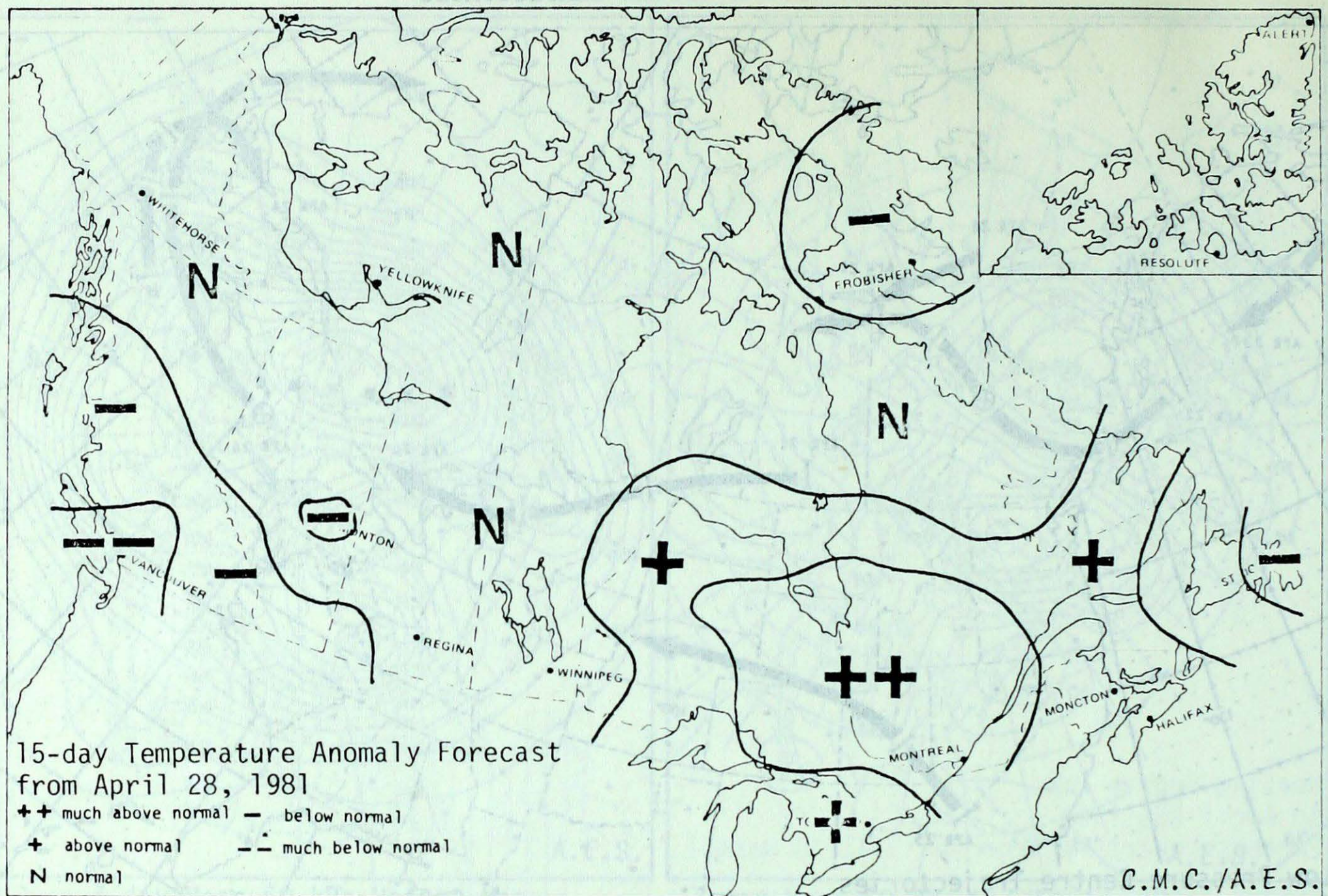
Within 0.5° of Normal
 More than 1.0° below Normal
 More than 1.0° above Normal
 Within 0.5° of Normal
 From 0.5° to 1.7° above Normal
 From 0.6° to 1.9° above Normal
 More than 1.9° above Normal
 More than 1.8° above Normal
 More than 1.5° above Normal
 From 0.4° to 1.5° above Normal
 From 0.4° to 1.2° above Normal
 From 0.7° to 1.8° above Normal
 From 0.4° to 1.5° below Normal
 From 0.6° to 1.9° above Normal
 From 0.8° to 2.8° below Normal
 Within 0.5° of Normal

Near Normal
 Much Below Normal
 Much Below Normal
 Near Normal
 Above Normal
 Above Normal
 Much Above Normal
 Much Above Normal
 Much Above Normal
 Above Normal
 Above Normal
 Above Normal
 Below Normal
 Above Normal
 Below Normal
 Near Normal

Station
 Whitehorse
 Victoria
 Vancouver
 Edmonton
 Regina
 Winnipeg
 Thunder Bay
 Toronto
 Ottawa
 Montreal
 Quebec
 Fredericton
 Halifax
 Charlottetown
 St. John's
 Goose Bay
 Proton Bay
 Inuvik

Note: Anomaly denotes departure from the 1951-77 mean.

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

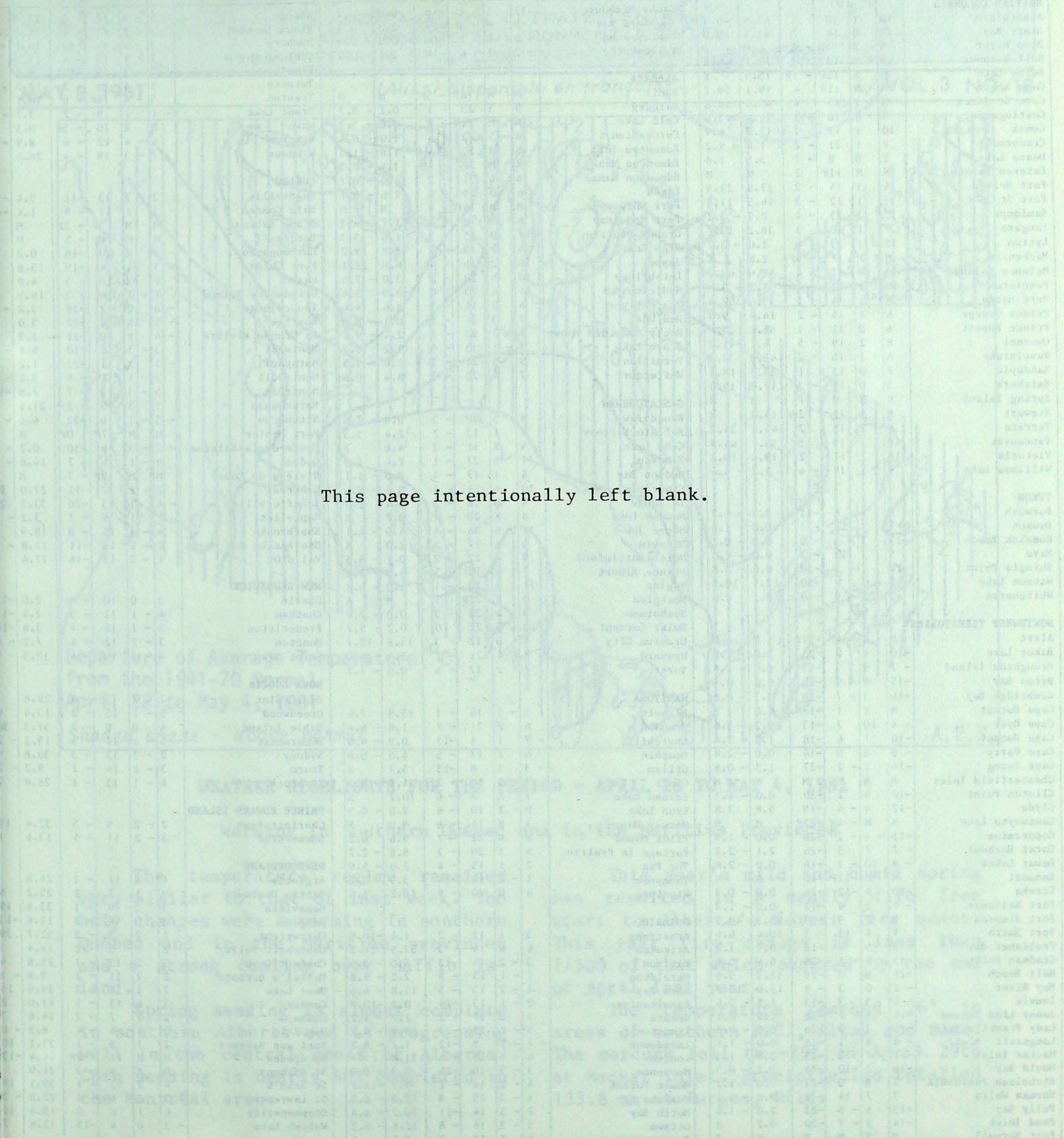
Temperature Scale

Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

<u>Station</u>	<u>Current Temperature Anomaly Forecast</u>	
Whitehorse	Near Normal	Within 0.5° of Normal
Victoria	Much Below Normal	More than 1.0° below Normal
Vancouver	Much Below Normal	More than 1.0° below Normal
Edmonton	Near Normal	Within 0.6° of Normal
Regina	Near Normal	Within 0.7° of Normal
Winnipeg	Near Normal	Within 0.7° of Normal
Thunder Bay	Above Normal	From 0.5° to 1.7° above Normal
Toronto	Above Normal	From 0.6° to 1.9° above Normal
Ottawa	Much Above Normal	More than 1.9° above Normal
Montreal	Much Above Normal	More than 1.8° above Normal
Quebec	Much Above Normal	More than 1.5° above Normal
Fredericton	Above Normal	From 0.4° to 1.5° above Normal
Halifax	Above Normal	From 0.4° to 1.2° above Normal
Charlottetown	Above Normal	From 0.5° to 1.6° above Normal
St. John's	Below Normal	From 0.4° to 1.5° below Normal
Goose Bay	Above Normal	From 0.6° to 1.9° above Normal
Frobisher Bay	Below Normal	From 0.8° to 2.8° below Normal
Inuvik	Near Normal	Within 0.9° of Normal

Note: Anomaly denotes departure from the 1949-73 mean.

SYNOPTIC PERSPECTIVES



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NOTE: The data shown in this publication are based on U.S. Weather Bureau reports from approximately 225 stations and 115 Northern United States Synoptic Stations.

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. APRIL 28, 1981

Table with 3 columns: Station, Temperature (°C), and Precip. (mm). Each column has sub-columns for Average, Departure from Normal, Extreme Maximum, Extreme Minimum, and Total. Rows are grouped by province/territory: BRITISH COLUMBIA, YUKON, NORTHWEST TERRITORIES, SACHS HARBOUR, ALBERTA, SASKATCHEWAN, MANITOBA, ONTARIO, SIMCOE, QUÉBEC, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD ISLAND, and NEWFOUNDLAND.

P = extreme value based on less than 7 days

X = no normal due to short period

M = not available at press time