

# CLIMATIC PERSPECTIVES

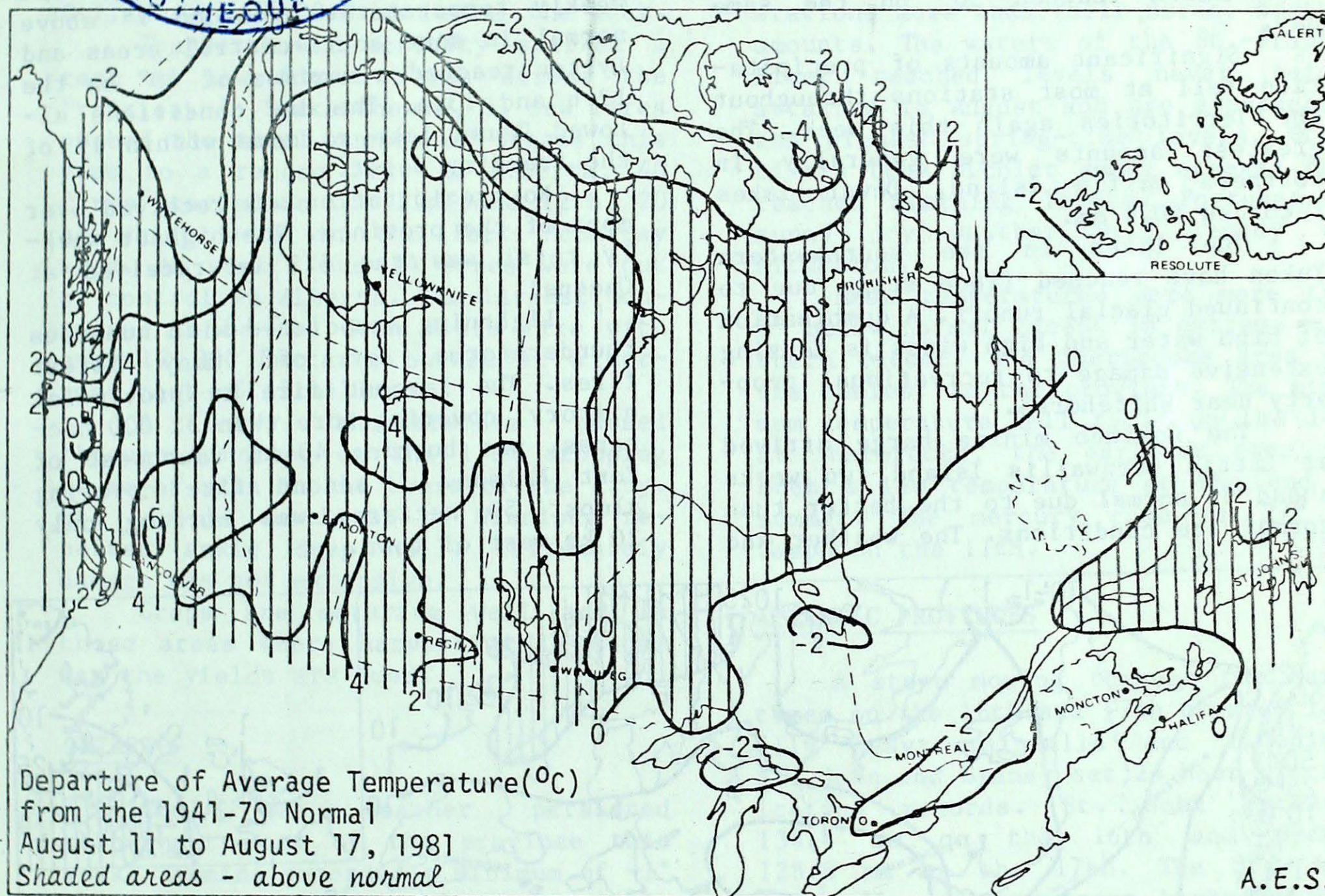
A.E.S. 1981  
 SEP 1 1981  
 4903

THE CANADIAN CLIMATE CENTRE,  
 ATMOSPHERIC ENVIRONMENT SERVICE,  
 4903 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

AUGUST 11, 1981

(Aussi disponible en français)

VOL.3 NO.33



**WEATHER HIGHLIGHTS FOR THE PERIOD - AUGUST 11 - 17, 1981**

Hot and dry in the West, cool and wet in the East

Hot dry weather continued to dominate the West. Numerous lightning induced fires started as the dry conditions held the fire index in the extreme range in many areas. Forty fires were started in Alberta alone, 20 of which were in the Fort McMurray area. The largest was the Swan Hills fire with over 12 000 hectares burned.

The warm sunny conditions are helping the maturing crops. The crops look good and where harvesting is underway yields are good.

Cool and wet conditions prevailed in the East. Many stations received more than 80 mm. Heavy rains in Québec caused the St.-Francis River to flood taking out two bridges and washing out a section of road. Other rivers reached alarming levels. St. John (N.B.) and Sydney set new 24 hour rainfall records with 134.4 mm and 128.8 mm respectively.

Temperatures reached 40° at Lytton, B.C. and fell to -5° at some northern stations. Sydney recorded a weekly precipitation total of 140.2 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

Mean temperatures were above normal over most of the Territories with the exception of the Arctic Archipelago and the central Yukon. Much of the lower Mackenzie District was more than 3° above normal. Frost was general over the northern Yukon. Beaver Creek and Mould Bay fell to -5° on the 17th while Fort Smith reached 30° on the same day.

Significant amounts of precipitation fell at most stations throughout the Territories again this week. The greatest amounts were generally in northern Baffin Island. Dewar Lakes recorded 40.4 mm.

The lakes in the southwestern Yukon have reached flood stage due to continued glacial runoff. A combination of high water and high winds is causing extensive damage to recreational property near Whitehorse.

The Cominco mining barge arrived at Little Cornwallis Island two weeks ahead of normal due to the better than normal ice conditions. The weather and

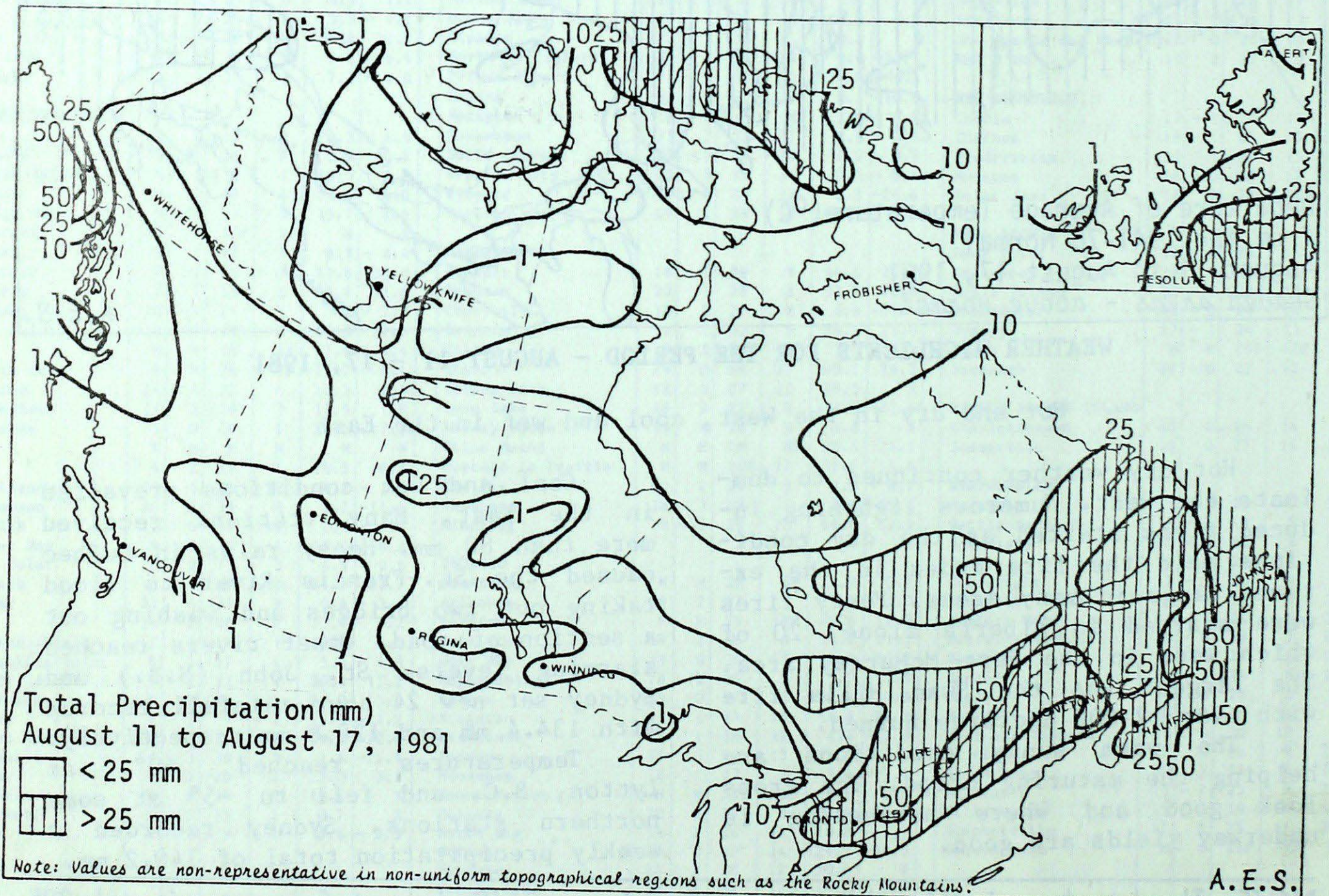
winds have not been favourable in the Beaufort Sea and the edge of the loose pack ice is almost at the drilling sites.

BRITISH COLUMBIA

Very warm dry weather continued to dominate the province this week. Mean weekly temperatures exceeded 7° above normal in some south-central areas and Lytton reached a maximum of 40° on the 12th and 13th. The dry conditions allowed Dease Lake to come within 1° of the freezing point.

No precipitation was received over most of the province. The highest weekly total was the 5.2 mm received at Quesnel.

Lightning associated with numerous thunderstorms set off many forest fires. The largest fire in provincial history, covering more than 32 000 hectares, was burning 40 km southwest of Fort Nelson. A second fire covering almost 50 hectares was burning only 20 km west of town.





## PRAIRIE PROVINCES

Hot dry weather was experienced throughout the Prairies this week. In west-central Alberta mean temperatures exceeded 5° above normal. The mercury reached 35° at Medicine Hat on the 12th.

Precipitation amounts were variable and due mainly to shower and thundershower activity. Both Wynyard and Gillam received 38.8 mm during the week.

Thundershower activity sparked a rash of new forest fires across the Prairies. In Saskatchewan, 31 new fires pushed the total number of blazes this year to a record 759. In Alberta, 40 fires started on the 11th and 12th, 20 of which were in the Fort McMurray area. At week's end 14 fires were out of control in Alberta. The largest continued to be the Swan Hills fire with over 12 000 hectares burned at a current cost of \$3 million.

A heavy thunderstorm passed through Winnipeg on the 17th dropping 60 mm of rain in the heart of the city. St. Adolphe southeast of Winnipeg reported ankle deep hail. Fortunately damage was not extensive.

Crops are maturing well and in those areas where harvesting is under way the yields are good.

## ONTARIO

Cool wet weather persisted throughout most of the province this week. Timmins recorded a minimum of -1° on the morning of the 17th, the earliest late summer below freezing temperature there. The previous earliest was August 23rd, 1951. Windsor and Thunder Bay reached 30° on the 13th and 14th respectively.

Rainfall was again heavy, with 20 mm to 40 mm recorded at many locations. The Mount Hope Airport at Hamilton recorded 88 mm for the week and Trenton recorded 60.2 mm.

The copious rains were beginning to cause problems for farmers. Previous wet conditions in late July and early August had done much to fill out crops, but now fields have become muddy and

the harvesting of some crops, especially potatoes, has been severely hampered.

## QUÉBEC

Heavy rains caused the St.-Francis River to flood, taking out two bridges and washing out a section of road. Rains totaled more than 90 mm at Montréal and Mont-Joli giving both stations more than their normal monthly amounts. The waters of the St.-Francis River reached levels never before attained in August and are approaching the highest spring-time levels. Other rivers (the Nicolet among others) have reached alarming levels. Fortunately, sunny dry weather will remedy the situation.

Mean temperatures were more than 1° below normal except in extreme northern Québec. The Sherbrooke area was the coolest in the province. The minimum temperature fell to 1° on the 14th at Sherbrooke, the earliest ever for such a low temperature at the end of summer. The mercury rose to 27° at Gaspé on the 11th.

## ATLANTIC PROVINCES

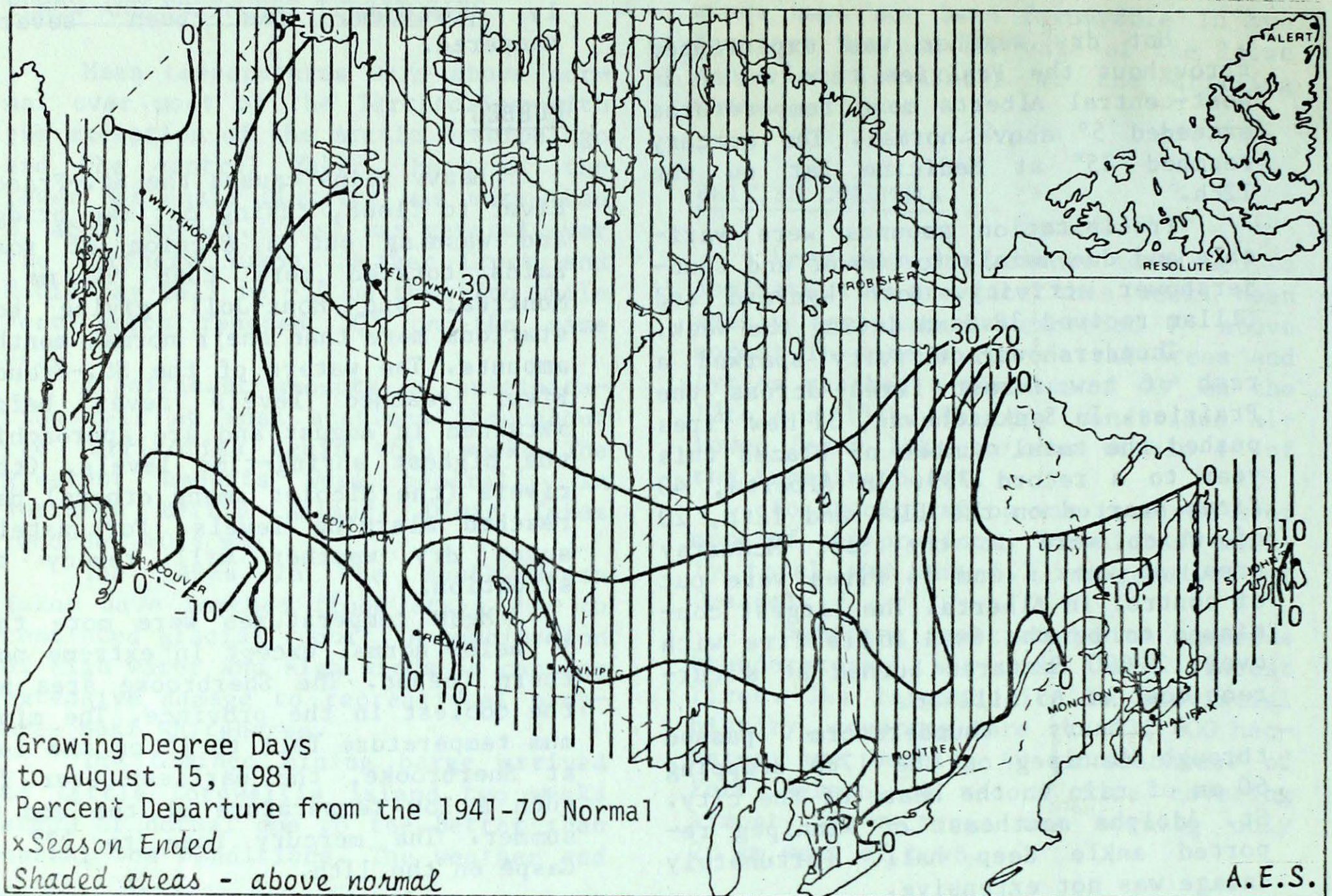
A storm moving through the Maritimes on the 16th and 17th created locally heavy rainfalls and flooding. St. John and Sydney set 24 hour precipitation records. St. John received 134.4 mm on the 16th and Sydney 128.8 mm on the 17th. The St. John River flooded and major highways were washed out near both St. John and Sydney. Sydney recorded a weekly total of 140.2 mm.

Mean temperatures were below normal throughout the Maritimes, but above normal over most of Newfoundland. Mean temperatures in some north coastal areas reached almost 3° above normal. The mercury rose to 29° on the 11th at Chatham, Fredericton and Goose Bay.

The temperature and humidity conditions have produced an excellent grain and corn harvest. The blueberry crop is well above average (the best in at least 10 years).



## GROWING DEGREE-DAY SUMMARY TO AUGUST 15, 1981



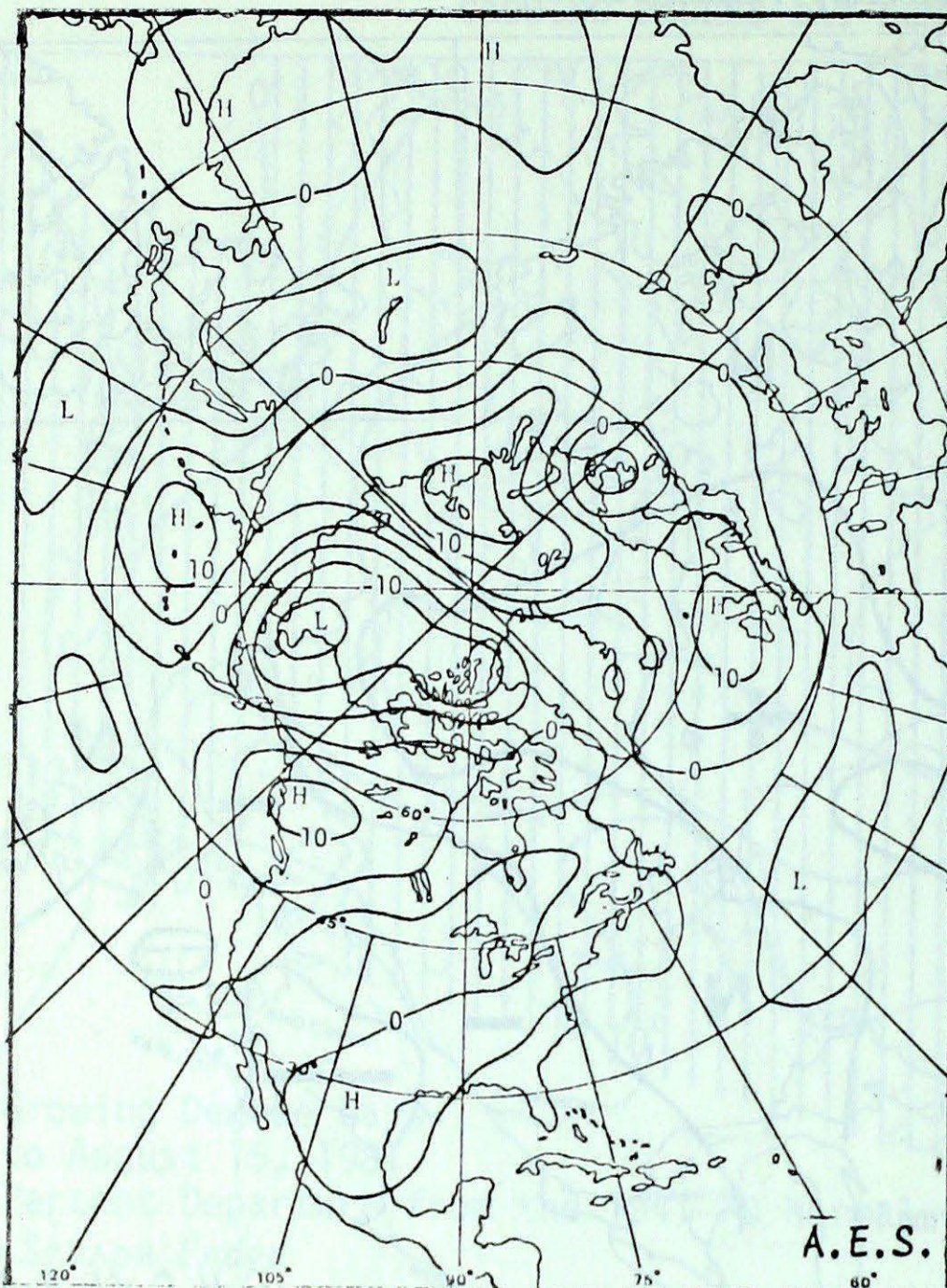
CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse	137.0	14.0	727.5	38.5	106
Penticton	277.0	52.0	1408.5	-43.5	97
Vancouver	224.0	36.0	1343.0	72.0	106
Edmonton	234.0	62.0	1227.0	252.0	126
Calgary	191.5	23.5	951.5	26.5	103
Regina	227.5	22.5	1299.5	157.5	114
Saskatoon	225.5	25.5	1257.5	122.5	111
Winnipeg	213.5	-7.5	1250.0	28.0	102
Thunder Bay	212.5	31.5	1019.5	65.5	107
Windsor	266.0	17.0	1723.5	93.5	106
Toronto	236.5	4.5	1323.0	-85.0	94
Ottawa	228.0	5.0	1386.5	9.5	101
Montreal	219.5	-13.5	1382.5	-34.5	98
Quebec	191.0	-7.0	1171.5	6.5	101
Fredericton	225.0	16.0	1240.0	72.0	106
Halifax	203.5	5.5	1028.5	14.5	101
Charlottetown	206.0	3.0	1099.0	109.0	111
St John's	168.0	0.0	789.5	109.5	116



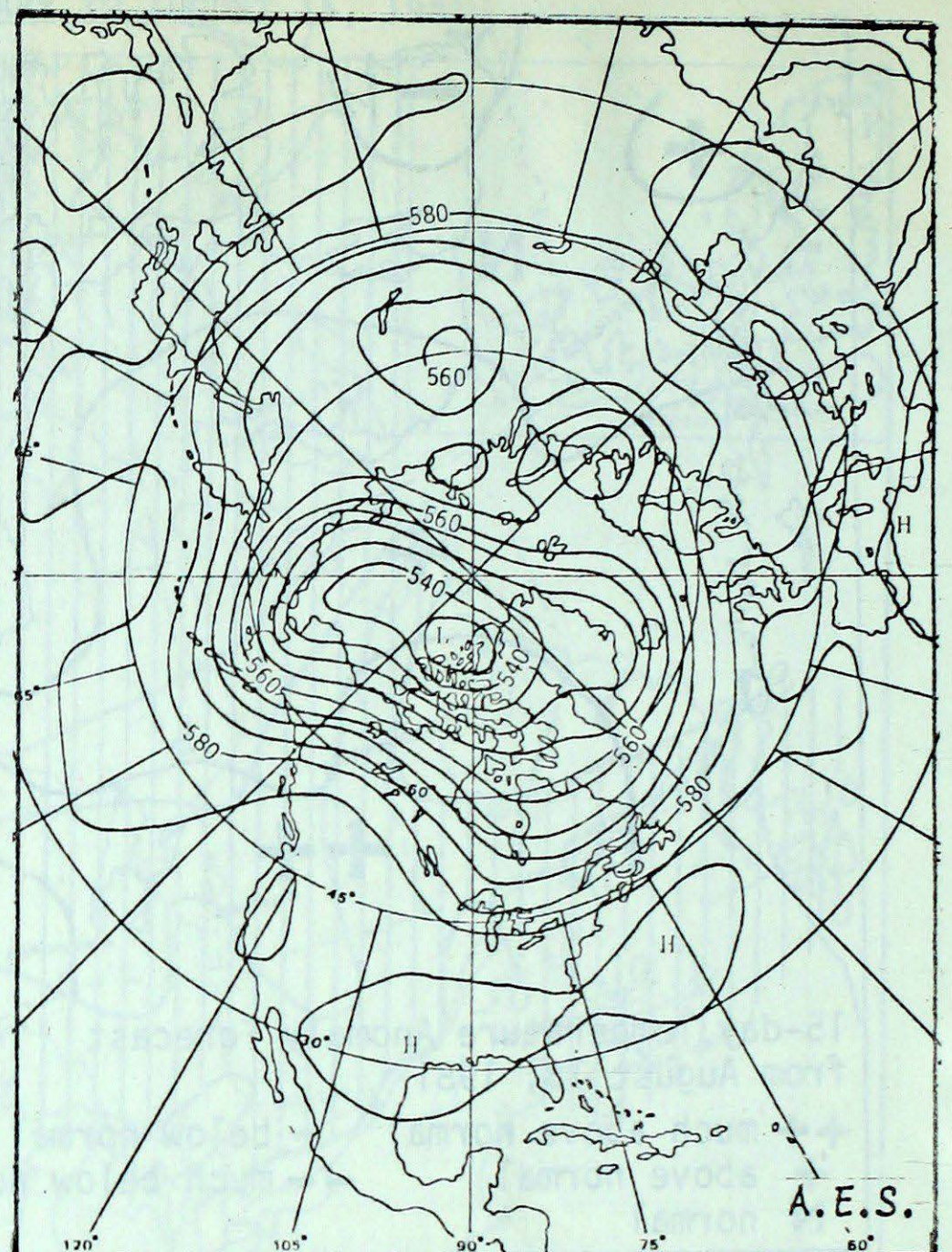




## Atmospheric Circulation



7-day Mean 50 kPa Height Anomaly  
(in 5 dam intervals)  
August 10 to August 16, 1981



7-day Mean 50 kPa Height Map (in dam)  
August 10 to August 16, 1981

The atmospheric circulation across the country resembled that of the previous week. The major ridge which dominated western Canada continued to give sunny and very dry conditions throughout the week.

The eastern half of the country remained under the influence of a broad tropospheric trough. Generally changeable, unsettled weather conditions resulted, a common phenomena with this type of circulation pattern.

A complex low pressure trough crossed the Great Lakes Basin during the weekend. It moved eastward towards

the Atlantic provinces where it became nearly stationary during the latter part of the period. Precipitation amounts in the vicinity of its trajectory were heavy, exceeding 50 mm in most areas. The St. Lawrence valley and the Maritimes received the heaviest precipitation. Parts of Cape Breton received more than 140 mm in the last two days of the period.

A northwesterly flow in the wake of this system pushed much cooler Arctic air into all eastern regions dropping temperatures to below normal values.

## CLIMATIC PERSPECTIVES

## Staff

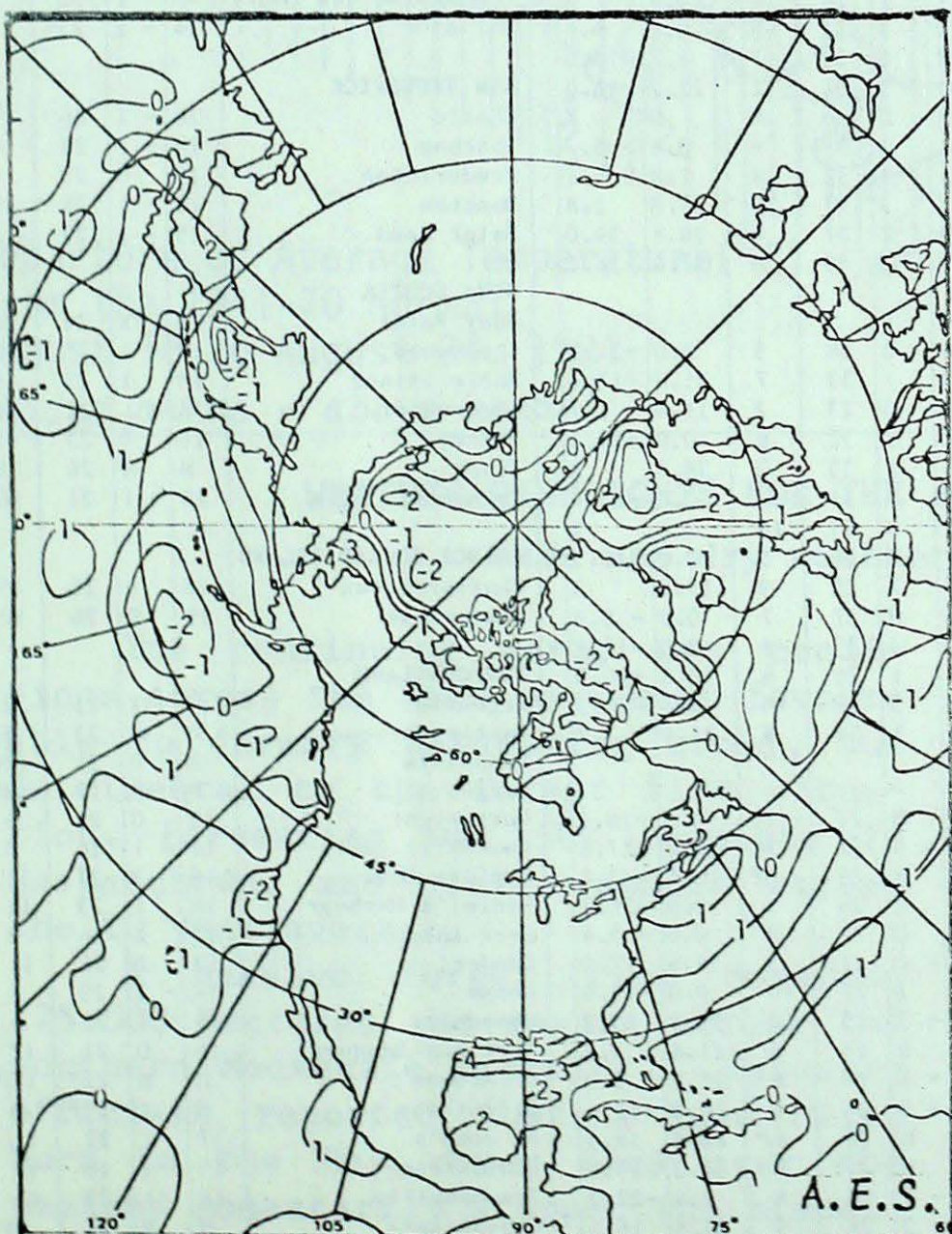
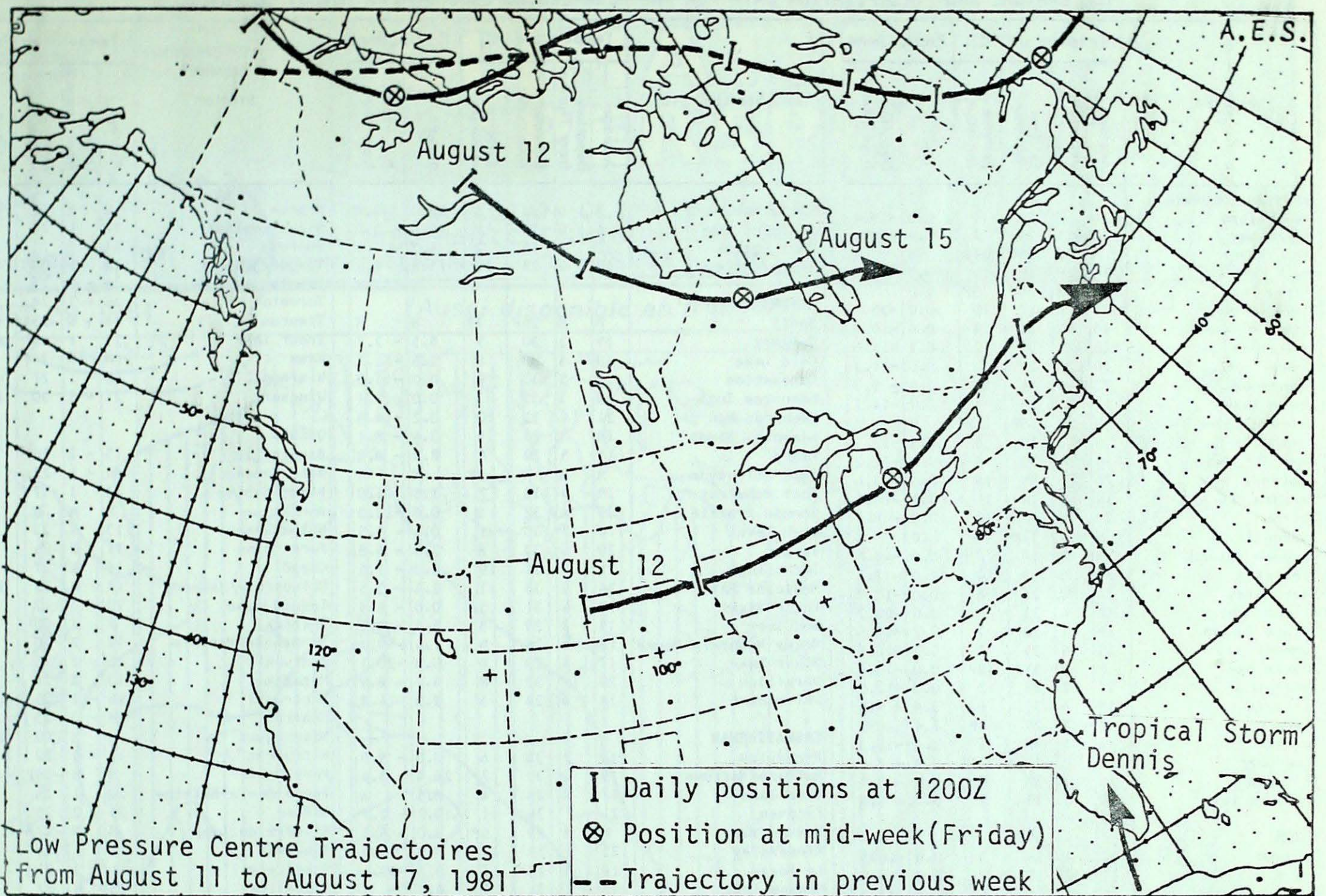
Editor: Yves Durocher  
Assistant Editor: Bob Paterson  
Technical Staff: Fred Richardson, Andy Radomski  
Graphics and Layout: Bill Johnson, Theresia Winkler, Phillip Borenstein  
Word Processing: Betty Lee

## Correspondents

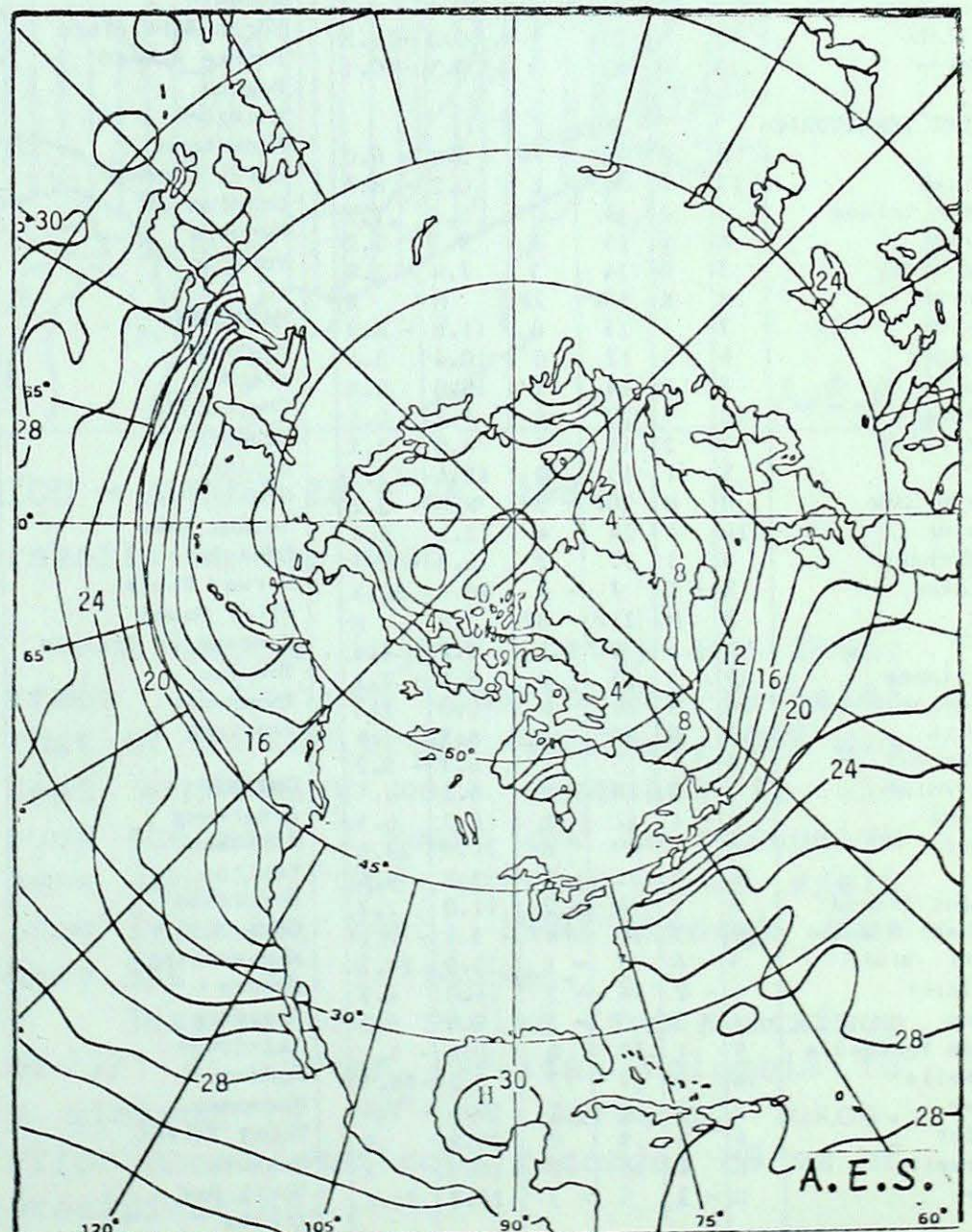
Terry Mullane, (Ice Forecasting Central)  
H.E. Wahl, (Whitehorse)  
Bill Prusak, (Western Region)  
Fred Luciw, (Central Region)  
T.J. Moyer, (Ontario Region)  
Jacques Miron, (Quebec Region)  
Michel Howe, (Atlantic Region)  
Staff of Prince George, Kamloops, Castlegar, Fort Nelson, Penticton and Kelowna weather office (Pacific Region)



LOW PRESSURE CENTRE TRAJECTORIES



Sea Surface Temperature Anomalies for mid July to mid August, 1981



Monthly Mean Sea Temperature for mid July to mid August, 1981



TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. AUGUST 18, 1981

Table with 3 main columns for British Columbia, Alberta, and Saskatchewan, each containing station names and temperature/precipitation data. Includes sub-sections for Yukon, Northwest Territories, Manitoba, Ontario, 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