

47. Fresh continental polar air surge at 1330 24 July, with brisk northerly winds. Evening thunderstorms 24 July. Fine weather with northwesterly winds on 25, 26 July, with barometric crest 102.70 kPa at 0857 26 July. Calm air night of 26-27 July ~~followed by~~ followed by southerly winds, afternoon and evening showers on 27 July, with low overcast on evening of 27 July.

2

48. Invasion of Pacific air at 0330 28 July. Sky improved during day, but clouded over with showers in evening, followed by clearing on wee hours of 29 July.

49. Continental polar air came ^{from north} at 0545 29 July with low overcast, Northerly winds veered to east and southeast during day and into evening, with ^{skies} improving to clear by 2055 29 July. Barometric crest 101.70 kPa at 1556 29 July. Low overcast during day of 30 July with rain showers, southerly winds, cold temperatures.

50. Cold occlusion at leading edge of Pacific air mass, ^{which} arrived at 2230 30 July, lasted only until morning of 31 July. Fair skies after frontal passage.
51. Fresh surge of continental air moved in at 0625 31 July. Mild fine day on 31 July with brisk northwesterlies dying to calm by end of day. Barometric crest ~~101.30~~ 101.30 kPa at 2258 31 July.
52. Cold blast of continental air arrived from ~~north~~ north at 0530 1 August. Rain showers for first several hours, with cloudy skies yielding to clear by 2256 1 August. Small pressure systems moved through Region through 2, 3, 4 August, with variable cloudiness, ^{light} variable winds, and ~~several~~ westerly thunderstorms on 3 August.
53. New surge of continental air at 0330 5 August marked by improving skies on 5 August, fresh ^{westerly} ~~northwesterly~~ winds that died to calm in evening. Barometric crest 101.78 kPa at 0656 6 August followed by southwesterly winds, afternoon showers, overcast evening.

54. New continental air mass at 0800 7 August followed by three days of fine weather. Light northwesterly winds by day, calm and foggy by night on 7-8 and 8-9 August. Barometric crest 101.59 kPa at 0758 9 August, as wind switched to southerly. ~~the~~ Patches ^{high} cloudiness marked 9 August, with no rain through 10 August.

55. ~~Cold~~ ^{Cool}, well-marked blast of continental air arrived 0330 10 August brought ^{cool} brisk westerlies on 10 and 11 August, which backed to southwesterly on evening of 11-12 August. Barometric peak 101.77 kPa at 1057 ~~on~~ 11 August. Air mass was very dry. Only showers just before arrival of next front.

56. Cold, sharp blast of continental air, ^{came in} ~~at 0730~~ at 0730 12 August. Mostly cloudy on 12 August with late afternoon showers. Northwesterly winds and fair weather through 13, 14 August to barometric crest 102.18 at 0456 15 August. Easterly winds, showers on 15 August in response to low, moving eastward, to the south, ~~at~~ with winds backing to northwesterly on 16 August. Improving skies after late afternoon thunderstorms 16 August; northwesterly winds and ^{mostly} fine weather on 17-18 August. Calm on night of 18-19 August followed by easterlies on 19 August into 20 August. Showers before dawn on 20 August.

Jose
488-511

57 ~~57~~, New continental air mass 1130 20 August. Improving skies became clear evening of 21 August, followed by showers around midnight and on wee hours of 22 August.

58.

Fresh continental air came in on cold front at 0830 22 August, cool, ^{dry, fine weather} with general northwesterly winds until pressure crest at 1022.9 kPa at 0955 24 August. Skies especially fair on 24 August with presence of high pressure. Southeasterly winds with skies became cloudy ^{with rain and drizzle} ~~on~~ 25 August ~~into~~ into 26 August.

58W

Diffuse warm frontal in Region around 1200 26 August. Dew point up to 69 at 1458 26 August. Late afternoon, evening of 26 August and most of 27 August marked by sporadic thunderstorms and showers.

59

Frontal system with edge well-shredded by mesoscale thunderstorm systems arrived around 1230 27 August. Thunderstorms from early afternoon to early evening. Northwesterly winds, mostly cloudy 28 August followed by calm; dense fog morning of 29 August after skies cleared. Barometric crest 1031.9 kPa at 0757 29 August. Southerly winds began under partly cloudy skies after mid-morning on 29 August. Mostly cloudy with showers, thunderstorms on 30 August. More dense fog on night of 30-31 August.

60.

Fresh continental frontal invasion 1430 31 August, Strato cumulus with light showers afternoon of 1 September, with variable winds after barometric crest of 102.45 kPa at 1159 1 September.

Barometer remained fairly steady through 2 September and first half of 3 September, with maximum crest 102.64 at 0352 3 September. More strato cumulus by day on 2 September, clearing on night of 2-3 September. Southerly winds 3 September after dawn, with increasing cloudiness, ~~at~~ followed by thunderstorms entire evening of 3 September and showers into wee hours of 4 September.

61.

Cold occlusion passed 0737 4 September, with showers and northwesterly winds all day and into wee hours of 5 September. Barometric crest of 102.14 kPa with calm winds followed by southeasterlies all day on 5 September. Low cloudiness all of 5 September, however, with thunderstorms at end of 5 September; showers, drizzle and fog all day on 6 September, with east winds, as ~~more~~ low pressure wave passed to the south. Fine day with high barometer and gentle southeast winds 7 September. Barometric crest 102.57 kPa at 0858 7 September, ~~clear~~ Low overcast all day on 8 September with showers part of time and thunderstorms in late afternoon and early evening as cold occlusion approached.

62. Cold occlusion passed just after midnight 9 September. Brisk westerly winds and low overcast and showers during day gave way to clear skies, light northwesterlies as 10 September arrived. Fine day on 10 September, Barometric crest 1020.7 kPa at 2157 10 September with calm air. Generally fine weather from 11 September to 15 September with variable winds, but a brief, small thunderstorm on 11 September. Dense fog on mornings of 12 and 14 September; some shower activity on 13 September. Very sunny, warm, dry on 15 and 16 September as southeasterly winds picked up, but low overcast came in on evening of 16 September. Foggy on 17 September from wee hours to arrival of new front.

63. Pacific air mass arrived 1558 17 September with low overcast, fog, and haze. Overcast all day on 18 September with generally ^{northeast} ~~northeast~~ winds. Some thunder activity in early afternoon.

64. Continental air mass entered from the northeast at 0030 19 September. Low overcast ^{and northeast winds} all day, with drizzle to early afternoon on 19 September. Low overcasted northeast winds broke up around dawn on 20 September, with barometer crest 1020.7 kPa at 0856 20 September. ~~Partly~~ The high pressure center stalled to the east, resulting in cloudy, rainy, cool weather with easterly winds through 25 September.

65.

Cold occlusion leading continental air mass passed over at 0630 25 September. Pressure rise very slow, with low overcast, rain, westerly winds increasing to afternoon of 27 September. Fair with dense ground fog night of 27-28 September, followed by more low clouds and rain later on 28 September, followed by rising barometer, northerly winds, and partly cloudy skies on 29th September. Very fine weather and very high barometer on 1-2-3 October, with barometric crest of 101.77 kPa at 1059 2 October, but northerly winds through 2 October. After night of calm, light southerly winds prevailed on 3 October into 4 October. Skies clouded on morning of 4 October, with rain breaking out ahead of ^{next} frontal passage.

66.

Continental polar cold front arrived 1230 4 October, with low clouds and precipitation yielding to clear skies during night of 4-5 October. Showers on evening of 5 October, with sky remaining low cloudy on 6 October. Barometric crest 103.13 kPa ^{2nd 1156 6 October} followed by light, variable winds for rest of 6 October, a fine day. Easterly winds and low clouds ~~and~~ developed on 7 October, with rain breaking out in the early afternoon, as a low pressure wave developed to the south. With very cold air advection, the rain became mixed with snow, and brisk northeasterlies blew before final clearing late on 8 October. A second barometric crest occurred at ~~0755~~ 9 October at 100.99 kPa, soon after which winds backed to southerly.

67. A new continental polar front moved into the Region at 0330 10 October. Skies remained cloudy, with barometer dropping during the afternoon of 10 October in response to a cold low moving over the surface low over Lake Superior. Strong northerly flow developed over the Region, causing high ^{north} winds to ^{gale velocity} and heavy snow that resulted in much damage to trees. The system cleared away by the evening of 11 October after much damage had been done. The barometer rose to a crest of 101.98 at 2257 12 October with calm winds. On 13 October, clear skies and brisk southerly winds ruled to midnight.

68. A surge of cold continental air arrived at 0030 14 October. Fine but cool weather with ^{moderate} northwesterly winds on 14, 15 October, even after barometric maximum of 102.81 kPa at 0955 15 October, as high passed to south. Fine day on 16 October, with fresh southerly winds after calm night.

69. New cold front crossed 0830 17 October. Fair weather on morning, but overcast developed with rain afternoon, evening, and into wee hours of 18 October. Low clouds broke up afternoon of 18 October, yielding to clear skies in evening, ^{followed by dense ground fog} Northwestersly winds to night of 18-19 October, with southerlies following barometric crest of 101.84 kPa at 0749 19 October. Calm, clear night of 19-20 October, with southerlies resuming in morning. morning of 19 October.

70.

Continental polar air mass moved in 1430 20 October with no low clouds or precipitation. Fine weather with northwesterly winds through dawn on 22 October, with easterlies following pressure crest of 103.33 kPa on 22 October. Fine weather ~~with~~ with easterlies through all of 23 October, with low overcast, drizzle and fog on 24 ~~at~~ October to midday 25 October, after which the sky cleared. Southerly winds most of the time 24, 25 October. ~~switching~~

71.

Pacific & cold front moved in 0130 26 October with light westerly winds, mild temperatures. ~~Fine~~ A few showers on we have at 27th, but otherwise generally fine mild weather on 26, 27, 28, 29 October. Winds mostly northwesterly except for nighttime calms up to ~~the~~ barometric crest 10265 kPa at 1057 28 October, becoming southeasterly through 28, 29, 30 October and first part of day 31 October. Overcast developed 30 October, with rain beginning 2318 30 October to a bit past noon on 31 October.

72.

New Paetoc air mass at 1230 31 October.
 Skies cleared, dense fog developed in early evening of
 31 October. Fine day 1 November, with more fog
 morning of 2 November. Barometric crest 101.47 1055
 1 November followed by light westerlies backing to strong
 southerlies on afternoon of 2 November.

73.

Another Paetoc cold front crossed Regim 0330 3 November
 After cloudy morning, skies cleared and stayed such to
 wee hours of 5 November. Barometric crest at 0852
 4 November, 1034.5 kPa, followed by moderate southeasterly winds,
 fine weather through 5 November to mid-afternoon of 6 November.
 Low overcast moved in hereafter, with addition of drizzle and
 fog on 7-8 November, ~~to~~

74.

Sharp continental polar cold front crossed from west at 0030
 9 November ~~bringing~~ with brisk northerlies. Drizzle and
 rain during 9 November changed to snow in evening, continuing
 to mid-morning of 10 November. Low overcast with northerly
 winds through remainder of 10 November. Fair skies, moderate
 northerlies 11 November. Barometric crest 103.55 kPa at 0758 12
 November, followed by ^{southeasterly winds and} continued fair skies through 12 November

75. Weak Pacific front 1320 13 November followed by fine, hazy days, ^{with light winds} 13-14 November. ~~Barometric crest 102.17 kPa 1857 13 November.~~ Low overcast with drizzle, ^{light winds} cleared in early 15 November.

76. Another Pacific front entered 0930 15 November, with drizzle to 1227, 15 November

77. New Pacific front in at 1530 15 November with rain which changed to snow at 1733 15 November. ^{fresh brisk} Snow, ^{Westerly} winds through night of 15-16 November, with snow ending around sunrise.

78. Continental polar front on scene at 1330 16 November with snow flurries, brisk westerlies. Low overcast, snow, and moderate to brisk northwesterlies 17-18 November, with decay of winds, clouds on night of 18-19 November. Barometric crest 102.65 kPa with calm ~~and~~ air at ~~1854~~ 0854 19 November. Wave passage brought low clouds, brisk easterlies, snow afternoon and evening 19 November and ^{up to sunrise} ~~last half~~ of 20 November. Thunderstorms, rain showers morning of 20 November. Barometric minimum ~~99.85 kPa 2425 kPa~~ 98.50 kPa at 1352 20 November followed by snow and blowing snow driven by brisk westerlies through pre-dawn hours of 21 November. Sky cleared by evening of 21 November, with winds dying to calm, and ice crystals on night of 21-22 November.

Barometric crest 102.07 kPa at 2357 21 November. Sky again clouded with southeasterlies ^{and some mid-day snow} on 22 November, as low moved to south. Followed by ^{variable cloudiness,} moderate northwesterlies 23 November, and clearing with first sub-zero (Fahrenheit) temperatures on 24 November. Fair on 24, 25 November with steady barometer above 102 kPa. Sky became gradually cloudy on ^{afternoon, evening} 26 November, with ^{gentle} southeasterly winds. Snow, east winds on 27 November as wave moved ~~to~~ south of Region. Improving skies on wee hours of 28 November, with clear skies, light westerlies until late afternoon. Low overcast, hazy atmosphere in evening of 28 November, with low overcast and fog ^{wee hours} ~~at~~ of 29 November.

78-W Pacific ^{Pacific} warm front moved over Region around 1330 29 November. Followed by brisk southerly winds and temperature ^{rising} up to 0°C (32°F) by midnight. Low clouds, mostly brisk southerlies, above-freezing temperatures before dawn.

79. Pacific cold front 0830 30 November followed by mild temperatures, low overcast, fog, south-southwest winds all day 30 November and into wee hours of 1 December.

Continental polar air mass arrived from northwest 0430 1 December. Low overcast, snow, moderate northwesterlies through morning of 2 December, followed by clearing and rising barometer.

Light northwesterlies blew on 3 December under clear skies, with ice crystal activity ~~on~~ in the morning of 3 December. Barometric maximum of 101.92 kPa 0257 4 December under clear skies, with calm air. ^{the period, to 4 December}

12^{December} was marked by no frontal passages, ^{but rather} with the typical early

December regime of generally low cloudiness issuing forth very light snow most of the time. Interruption of the low

~~clouds~~ ^{clouds and light snow} occurred on the night of 6-7 December ~~the~~ through the afternoon of 7 December, from the afternoon of 9 December to the wee hours of 11 December, and from the night of 11

December to into 12 December. Late on 12 December,

in response to a low passing to the south, freezing drizzle broke out, with low clouds, fog, and some snow and freezing

drizzle on ~~the~~ 13¹⁴⁻¹⁵ December. Winds were generally northwesterly on 10 December, and generally southerly 14 and 15 December.

~~80W~~ A period of mild weather began with the passage of a diffuse warm front around 1030 15 December. The regime was marked by continued low clouds, frequent fog, and rain on much of ~~the~~ 17 and 18 December

81. A Pacific cold front crossed at 0210 19 December, and was followed by low clouds, freezing drizzle and ^{then} snow to the westward of 21 December as the storm system stalled over the Upper Great Lakes. Winds veered from westerly to northwesterly on the afternoon of 20 December, but ~~then~~ backed to southerly with improving conditions on the night of 21-22 December. Barometric crest ~~101.62~~ 101.62 kPa at 0958 21 December.

82. A continental polar air mass arrived at 1330 22 December with the last air mass exchange of the year. Fair skies and rising barometer ruled most of 21-22 December, ^{followed by} ~~the~~ variable cloudiness and occasional very light snow and continued northwesterly winds of moderate velocity to the ~~morning of 27 December~~ barometric crest of 102.49 kPa at 0355 27 December. Winds on ~~the~~ 27 December backed to southeasterly, with snow breaking out in the evening, followed by northwesterlies for ^{most of} the rest of the year. Skies were generally cloudy until the morning of ~~the~~ 30 December, when they cleared and remained fair to the end of the year.

1976

TABLE —, FRONTAL PASSAGE TIMES AND INTERV

CP INDICATES CONTINENTAL
POLAR (PACIFIC) AIR MASS,POLAR AIR MASS, MP INDICATES MARITIME
MT INDICATES MARITIME TROPICAL AIR MASS

PASSAGE TIME (ST)

VALUES
WHICHBEHIND SLASHES GIVE DIRECTION, IN DEGREES, FROM
FRONT APPROACHED.

COLD FRONT

WARM FRONT

AIR
MASS

FOLLOWING WEATHER EVENT

ASTERISK INDICATES
OCCLUDED FRONT

1. 0230 1 JUNE/640	CP	
R 0600 2 JUNE/240	MP	Domination by high pressure
2. 0530 8 JUNE/330	MP	Front stalled just ^{South} of Duluth
* 1230 9 JUNE/190	MP	Front moved north, then retreated
* 1930 9 JUNE/240	MP	Ridging
3. 0530 11 JUNE/020	CP	Ridging
* 2200 12 JUNE/210	MP	Front stalled over C. Minn., then moved north
4. 0530 13 JUNE/240	MP	Southwesterly flow behind, wrap-around
5. 1830 13 JUNE/250	CP	Ridge passage
6. 1730 17 JUNE/240	CP	Ridge passage
7. 1230 22 JUNE/320	CP	Front stalled over Region
* 1730 22 JUNE/140	CP	Strong southerly flow
* 0330 25 JUNE/230	MP	Backed up as low formed over Region
* 0900 25 JUNE/050	CP	Moved south, old Front 7 advanced
R 0230 26 JUNE/360	CP	Old Front 7--advanced, then retreated
* 2130 26 JUNE/240	MP	Control by cold low north, then old Front 7 advanced
RR 0555 29 JUNE/030	CP	High center slowly moved in and stalled until July 6
1. 1243 6 JULY/310	MP	Ridge passage
1030 7 JULY/220	MP	Warm sector barely caught over part of Region
0. 1430 7 JULY/270	MP	Sector between MP, CP fronts
1. 1830 10 JULY/320	CP	Ridge passage -- high to north
2. #1530 13 JULY/250	MP	Sector between MP, CP fronts
0730 15 JULY/320	CP	Ridge passage -- high to south
2030 19 JULY/320	CP	High passage over Region
* 1930 21 JULY/220	CP	Weak return of old Front 16
2030 22 JULY/310	MP	Sector between MP, CP fronts
2. 0630 24 JULY/040	CP	Front stalled over Minnesota, then retreated
* 1330 25 JULY/220	MP	Warm sector
2. 2130 25 JULY/320	MP	Ridge passed slowly
3. 0430 4 AUG/010	CP	High passed over Region
2230 14 AUG/300	MP	Sector between MP, CP fronts

1976

20.	0130	12 AUG / 260	CP	High passage over Region
		*0530 18 AUG / 240	MP	Warm sector
21.	0730 0730	21 AUG / 310	MP	Sector between CP, MP fronts
22.	1803	21 AUG / 020	CP	At edge of high to NE
		*0830 22 AUG / 240	MP	Warm sector
23	0825	26 AUG / 280	MP	Weak ridge passage
24	0630	27 AUG / 270	MP	Sector between MP, CP fronts
25	1030	28 AUG / 330	CP	Ridge passage
26	1330	31 AUG / 030	CP	Ridge passage
		*1730 2 SEP / 240	CP	Warm sector
27	0330	3 SEP / 310	CP	High passage over region
		*0730 6 SEP / 270	CP	Warm sector
28.	1940	7 SEP / 290	CP	High passage to south
29.	0630	13 SEP / 200	CP	High passage to north
30.	0330	19 SEP / 320	CP	Just between fronts -- high remained west
31.	1630	21 SEP / 040	CP	High remained to west as new surge moved south
32.	1230	22 SEP / 330	CP	Another fresh surge
33.	1230	27 SEP / 360	CP	High passage over Region
34.	0730	26 SEP / 370	CP	High passage to south
35.	0730	29 SEP / 260	CP	High to north grazed Region
		*0630 30 SEP / 270	CP	Warm sector
36.	0530	1 OCT / 320	MP	High passage over Region
37.	2330	20 OCT / 260	CP	High passage to northwest
38.	0530	4 OCT / 280	MP	Quebec-Mexico ridge passage
39.	2330	8 OCT / 240	CP	Small ridge passage
		*1130 10 OCT / 250	MP	Warm sector
40	0330	12 OCT / 290	MP	Ridge passage
		*1030 14 OCT / 240	MP	Warm sector
41	1230	14 OCT / 270	CP	Big High passed over region
42	1030	23 OCT / 230	CP	Enormous continental high
43	1130	29 OCT / 340	MP	Ridge passage
		*0730 31 OCT / 250	MP	Warm sector
44	2230	1 NOV / 300	MP	Ridge passage
45	0830	2 NOV / 300	CP	Large high pulled to south

1976

46. 1030 NOV/300

47. 2130 5 NOV/350

* 0030 9 NOV/250

48. 1230 9 NOV/360

49. 1130 16 NOV/270

50. 0830 18 NOV/280

51. 1330 20 NOV/270

52. 1730 20 NOV/350

* 0930 25 NOV/270

53. 1430 25 NOV/330

* 1151 4 DEC/270

54. 1630 4 DEC/320

* 1430 7 DEC/220

55. 2130 9 DEC/310

* 1230 11 DEC/220

56. 1830 11 DEC/310

* 2130 13 DEC/220

57. 2330 14 DEC/360

* 1030 15 DEC/220

57) 1930 16 DEC/040

* 2030 17 DEC/220

58. 2130 18 DEC/320

* 1730 21 DEC/270

59. 0230 22 DEC/290

* 0930 24 DEC/290

60. 1230 24 DEC/330

CP

Ridge passage

CP

Large high passage to south

MP

Warm sector

CP

Large high mixed south of region

MP

Ridge passage

MP

Ridge passage

MP

Ridge passage

CP

Ridge passage

MP

Warm sector

CP

High passage over Region

MP

Warm sector

CP

Large ridge passage

MP

Warm sector

CP

Ridge passage

MP

Warm sector

CP

High passage

MP

Warm sector

CP

Ridge passage

MP

Retreat, transitioned Front 57

CP

Ridge passage

MP

Warm sector

CP

High passage to south

MP

Warm sector

CP

Ridge passage to south

MP

Warm sector

CP

Ridge domination

1977

		AIR MASS MP	
	*2100 SJAN/270		Warm sector
1	08126JAN/320	CP	Ridge passage to south
2	1930 7JAN/270	CP	High pressure passage to south; slow movement; followed by wave passage to south of Region on 15th; then ridge domination to 19th
	*1800 19JAN/270	MP	Warm sector
3	1025 20JAN/360	CP	High pressure domination
4	0630 21JAN/270	MP	No ridge movement -- ridge stationary to west
5	0228 26JAN/330	CP	High pressure passage over Region
	*1212 27 Jan	MP	Warm sector
6	1630 27JAN/320	CP	Stagnant w. Canada - Gulf of Mexico ridge
	*0230 2FEB/270	MP	Warm sector
7	1230 2FEB/320	CP	Passage of high near region on Feb 7th
	*1330 8FEB/270	MP	Warm sector with ridging
8	0530 9FEB/360	CP	Front just edged over
	*1230 9FEB/270	MP	Warm sector
9	*0430 12FEB/260	MP	Ridging
(8)	1330 12FEB/040	CP	High pressure moved over region
	*1400 ¹¹³⁰ 16FEB/270	MP	Warm sector
10	1430 17FEB/360	CP	Ridging
	*1430 19FEB/270	MP	Warm sector
11	1430 19FEB/320	CP	Ridge passage
12	1330 21FEB/330	CP	Ridging, then wave passage to south; then high passage to the south on March 1st, then another wave passage to south on 4th; then ridge passage on 6th
	*1630 6MAR/220	MP	Warm sector
13	0449 9MAR/270	MP	Ridging
	*0600 12MAR/140	MP	wave passed along front over general area
14	2030 14MAR/270	MP	Ridge passage
15	2145 15MAR/330	CP	Ridging
	*0117 17MAR/200	MP	Ridging
(15)	0430 17MAR/360	CP	Ridging
	*1330 18MAR/200	MP	Warm sector

1977		
2030 19 MAR/320	CP	High passage over Region
0600 22 MAR/330	CP	Ridging
* 1030 22 MAR/190	CP	Front 17 retreated then readvanced
17) 1745 22 MAR/360	CP	Large ridge passage
2130 26 MAR/290		Ridging; then wave passage to south on 28th-30th then high passage to south
* 0030 2 APR/270	CP	Ridging; then low passage to south
0247 7 APRIL/020	CP	High passage over Region following low center passage over Region
* 0600 10 APR/220	MP	Warm sector
2230 10 APRIL/320	MP	Ridging
1530 12 APR/300	MP	High passage over Region
1045 16 APR/290	MP	Ridging
0930 18 APR/290	MP	Front stalled over Wisconsin, Lake Superior until 21st; then, on 22nd, high passage over Region
0630 23 APR/320	CP	Passage of large high to south
0730 27 APR/360	CP	Passage of high to north
0448 1 MAY/320	CP	High passage over Region, then wave to south on 5th
1130 5 MAY/020	CP	High passage over Region
2230 8 MAY/020	CP	Ridging from High passing to northeast
* 0230 10 MAY/290	CP	Strong domination by deep ridge of high pressure
0113 20 MAY/270	MP	Ridging
* 0830 22 MAY/150	MP	Warm sector
1121 23 MAY/220	MP	Ridging
* 0630 (-) 25 MAY/220	MP	Long stay in warm sector due to deep high over Lake Superior, followed by wave passage to south on 30th
0430 1 JUNE/020	CP	High passage over Region
0730 3 JUNE/280	MP	Short warm sector stay
1430 3 JUNE	MP	Small high passage over Region
1530 5 JUNE	CP	High passage to south; then wave passage to south; then high passage over Region

5 *0230 11 JUNE / 320

6 .0917 16 JUNE / 280

7 0730 17 JUNE / 310

*103023 JUNE

8 .0530 24 JUNE / 310

9 .1530 26 JUNE / 320

10 *0330 30 JUNE / 290

11 .1130 3 JULY / 300

12 .0630 7 JULY / 280

13 1130 11 JULY / 260

*0330 14 JULY / 220

14 .0730 14 JULY / 290

15 .1930 16 JULY / 300

*1000 17 JULY / 180

16 .0149 20 JULY / 320

17 .1330 24 JULY / 320

18 .0330 28 JULY / 320

19 .0545 29 JULY / 350

20 *2230 30 JULY / 240

21 .0625 31 JULY / 300

CP

High passage to north; then stall, rid low to north, then ridge passage

NP

Ridge passage

CP

slow high passage

MP

warm sector

CP

High passage over Region

CP

High passage to south

CP

High passage to south

MP

Front stalled over central Minnesota, Wisconsin until 6th,

CP

High passage over Region

CP

High passage to south

MT

warm sector

CP

High passage over Region followed by several small systems.

CP

Ridging

MT

Warm Sector

CP

High passage over Region

CP

High passage over Region

MP

Ridging

CP

High passage to north; front stalled over Iowa

MP

Ridging

CP

Ridging

1977/ 52.0530	1 AUG/030	CP	Small systems
53.0030	5 AUG/220	CP	High passage over Region
54.0830	7 AUG/330	CP	High passage over Region
55.0330	10 AUG/270	CP	High passage to south
56.0400	12 AUG/300	CP	High passage to south, followed by wave to south on 15th; then ^{slow} high passage to south
57.0100	21 AUG/330	CP	Ridging
58.0830	22 AUG/310	CP	Large high passage over Region
	*1100 26 AUG	MT	Warm sector
59.1230	27 AUG/300	CP	High passage to south
60.1430	31 AUG/310	CP	High passage over Region
61.0730	4 SEP/320	CP	High passage to north, followed by wave passage to south on 6th
	P161 *1800 8 SEP/220	CP	Warm sector
62.0030	9 SEP/230	CP	High passage to south when then lingered to east
63.1958	17 SEP/290	MP	Front stalled over Lake Superior for a day, then moved east
64.0030	19 SEP/240	CP	High passage over Region, which stalled to east
65.0630	25 SEP/180	CP	very slow mover. Trush over Region until 29th, finally, followed by high passage to south on October 3rd
66.1230	4 OCT/280	CP	High pressure ridge moved over Region, followed by wave to south on 8th; then ridge moved to south
67.0330	10 OCT/290	CP	Cold low aloft moved over surface low over Lake Superior, causing intense deepening, cold flow from north. Followed by high passage to south
68.0030	14 OCT/300	CP	High passage to south
69.0830	17 OCT/280	CP	High passage to south
70.1100	20 OCT/360	CP	High passage over Region
71.0200	26 OCT/310	MP	High passage over Region
72.1230	31 OCT/260	MP	Ridging
73.0400	3 NOV/300	MP	High passage over Region followed by formation of huge low over southeastern U.S.

1977
4.0030 9 NOV / 280

CP Front stalled over Region as low center crept northward along the front. Then slow-moving high crossed Region on 12th.

5.1330 13 NOV / 290

MP Ridging

6.0930 15 NOV / 220

MP Ridging

Deep low formed over Lake Superior under cold low aloft

7.1530 15 NOV / 270

MP

8.1330 16 NOV / 270

CP

Deep low lingered a day, then moved out, followed by ridging on 19th. Then deep wave moved from south of Region to northeast of Region. Followed by another low moving south on 23rd, then high passage to south on 26th; low passage to south on 27th; high passage to south on 28th

* 1330 29 NOV / 200 MP

Warm sector

79.6830 30 NOV / 290

MP

Ridging

80.0430 1 DEC / 320

CP

Ridge passage; then low center passage over south part of Region on 13th, followed by ridging on 14th

* 1030 15 DEC

MP

Warm sector

81.0210 19 DEC / 220

MP

Low stalled over Upper Great Lakes until 21st; followed by ridging on 22nd

82.1330 22 DEC / 300

CP

Ridging followed by low center passage to south on 24th, followed by high center passage to south on 27th; then east-west ridge dominated Region for rest of year.

1978

1. 1100 2 JAN / 020 CP Ridging
2. ± 0100 3 JAN / 270 CP East-west ridge dominated to 7th, when wave moved to south; then strong high passed to south on 11th and stalled
3. 0800 15 JAN / 280 CP Strong high center passage over Region, followed by a second pulse on 19th
- ★ 1400 22 JAN / 210 MP Warm Sector
4. 1200 23 JAN / 290 CP Ridging
5. 1100 25 JAN / 220 CP Deep low center moved over Region; then ant. Yukon-Gulf ridge dominated until February 3, then moving east. Followed by new pulse moving north of Region on Feb 6th, becoming quasi-stationary over Region until February 22nd
- ★ 1100 22 FEB / 270 MP Warm Sector
6. 1700 22 FEB / 290 CP Ridging
7. 1000 24 FEB / 260 CP High passage to south; then small low; then new high pulse on March 1, and another on March 4th; and again on 6th
8. 0300 10 MAR / 020 CP Ridging
- ★ 0800 10 MAR / 240 CP Warm Sector
- (8) 1200 12 MAR / 020 CP Lingering in south part of Region through much of 13th; followed by ridging on 14th
9. 0700 15 MAR / 270 CP Ridge passage on 17th
- 0 ± 1300 18 MAR / 290 CP High passage to south
- 1 ± 1100 20 MAR / 280 CP Ridging
- 2 ± 0300 22 MAR / 290 MP Ridging
- 3 1000 22 MAR / 360 CP High passage over Region