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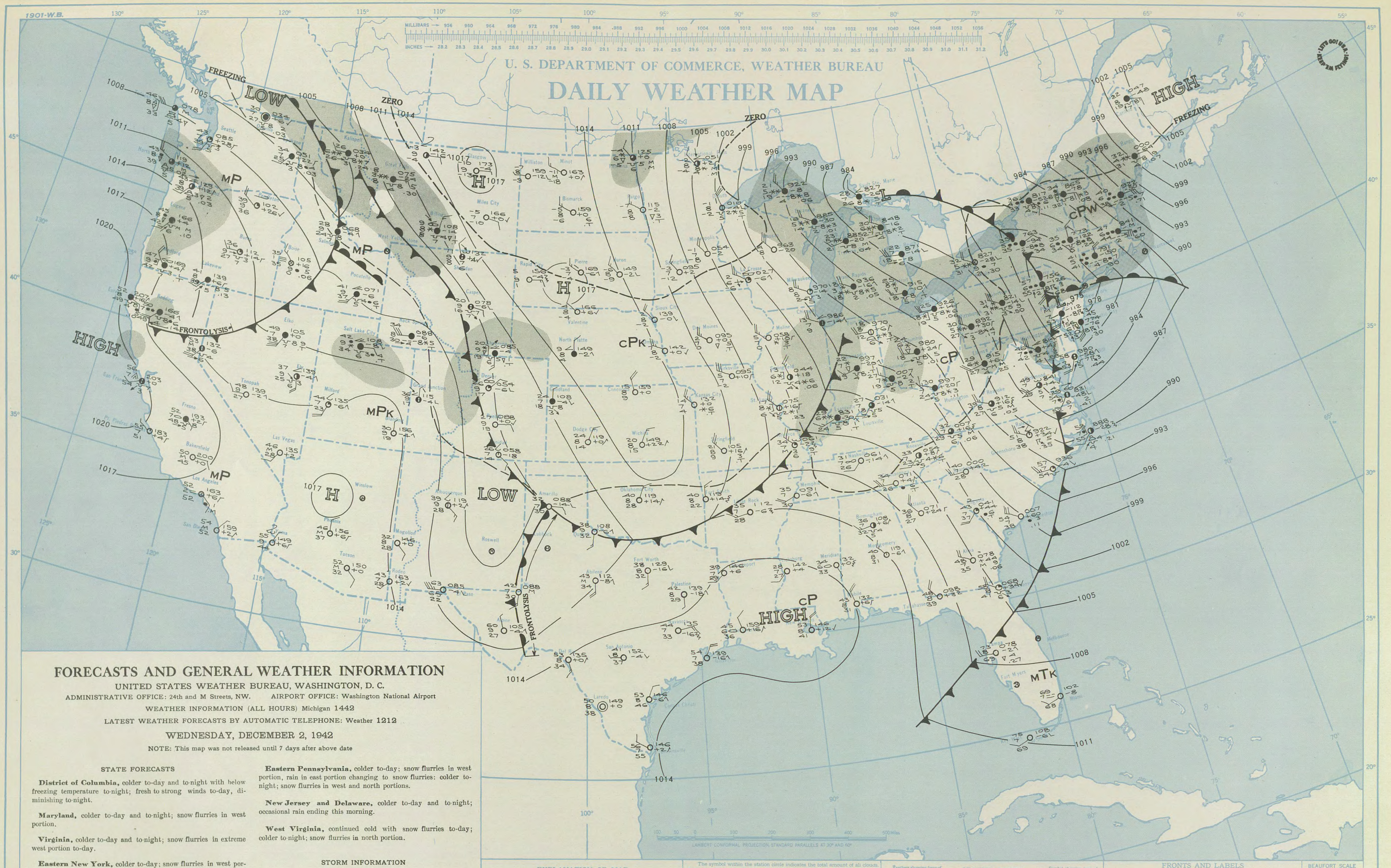

FORECASTS AND GENERAL WEATHER INFORMATION

UNITED STATES WEATHER BUREAU, WASHINGTON, D. C.

ADMINISTRATIVE OFFICE: 24th and M Streets, NW. AIRPORT OFFICE: Washington National Airport

WEATHER INFORMATION (ALL HOURS) Michigan 1442

LATEST WEATHER FORECASTS BY AUTOMATIC TELEPHONE: Weather 1212

WEDNESDAY, DECEMBER 2, 1942

NOTE: This map was not released until 7 days after above date

STATE FORECASTS

District of Columbia, colder to-day and to-night with below freezing temperature to-night; fresh to strong winds to-day, diminishing to-night.

Maryland, colder to-day and to-night; snow flurries in west portion.

Virginia, colder to-day and to-night; snow flurries in extreme west portion to-day.

Eastern New York, colder to-day; snow flurries in west portion, rain changing to snow in east portion; colder to-night; snow flurries in north and central portions.

Western New York and Western Pennsylvania, continued cold with snow flurries to-day; colder to-night with snow flurries.

Eastern Pennsylvania, colder to-day; snow flurries in west portion, rain in east portion changing to snow flurries: colder to-night; snow flurries in west and north portions.

New Jersey and Delaware, colder to-day and to-night; occasional rain ending this morning.

West Virginia, continued cold with snow flurries to-day; colder to-night; snow flurries in north portion.

STORM INFORMATION

Block Island to Hatteras, storm warnings remain displayed from south of Block Island to Cape Hatteras.

J. W. ANDERSON.

EXPLANATION OF MAP.

At 1:30 a. m., E. S. T., observations of the weather are taken at several hundred stations throughout the United States. Reports from 170 of these stations are inscribed on the above map. Temperature, wind direction and velocity, amount and kind of clouds, state of weather, visibility, amount of precipitation, and other meteorological data are indicated for each station.

The heavy lines are called "fronts" and separate the air masses of different characteristics. The labels which are made up of letter combinations indicate particular types of air masses. Fronts and labels are described to the right.

The light, continuous lines are called isobars and pass through points of equal sea-level pressure. The dashed line (when present) is an isotherm and passes through all points where the current temperature is 32° Fahrenheit. This line is labeled "Freezing" and separates the respective areas which are above and below the freezing temperature of 32° Fahrenheit.

The figures and symbols for the data always occupy approximately the same positions around the station circle, as shown on the adjacent "Station Model."

The geographical area where precipitation is falling at 1:30 a. m., E. S. T., is covered with dot shading. The letter "T" is used to indicate a "Trace" of precipitation, which is an amount too small to measure.

The table values in feet for the figures used for the "height of lower clouds" are as follows: 0 = 0 to 163 feet; 1 = 164 to 327 feet; 2 = 328 to 655; 3 = 656 to 983; 4 = 984 to 1967; 5 = 1968 to 3280; 6 = 3281 to 4920; 7 = 4921 to 6561; 8 = 6562 to 8201; and 9 = above 8202 feet or no clouds.

The table range values in miles for the figures used for "visibility" are as follows: 0 = less than 1-thirty-second mile (55 yards); 1 = from 1-thirty-second up to, but not including, 1-eighth mile (220 yards); 2 = from 1-eighth up to, but not including, 5-sixteenths mile (550 yards); 3 = from 5-sixteenths up to 5-eighths mile (1100 yards); 4 = up to 1 and 1-fourth miles; 5 = up to 2 and 1-half miles; 6 = up to 6 miles; 7 = up to 12 miles; 8 = up to 30 miles; 9 = 30 miles or more.

The symbol within the station circle indicates the total amount of all clouds. A figure is also entered for the "amount of clouds whose height is given by h". The values for N and N_h are as follows: 0 ○, absolutely no clouds; 1 ⦶, sky less than 1-tenth covered; 2 ⦶, 1-tenth covered; 3 ◔, 2- or 3-tenths; 4 ◑, 4-, 5-, or 6-tenths; 5 ◕, 7- or 8-tenths; 6 ◑, 9-tenths; 7 ◕, more than 9-tenths, but with openings; 8 ●, 10-tenths, or completely covered; 9 ⊗, sky obscured.

The symbol directly to the left of the station circle represents the current state of weather and may be any one of 96 separate symbols. The basic symbols for precipitation are: ❜ drizzle; • rain; ✳ snow; ▽ showers; ⏉ thunderstorm. A symbol for current state of weather is always used when precipitation is falling or when unusual conditions are observed. Some of the frequently used symbols are as follows: ∞ haze; ‹ distant lightning; = light fog; ⌂ smoke; ✳] snow in last hour, but not at time of observation; S dust storm; ≡ fog, sky not discernible; ❜❜ continuous moderate drizzle; • intermittent light rain; ✳✳ continuous light snow; ▽ light or moderate rain showers; ⏉ thunderstorm with rain. Symbols are entered singly or in combination, for example, a • represents rain and three bars ≡ represents fog. Three bars and a dot represent rain and fog. The bracket sign] means "in past hour, but not at time of observation."

The shaft of the arrow extends from the station circle in the direction *from which* the wind blows and the feathers on the shaft show the force of the wind on the Beaufort Scale. Each feather represents *two* units of force and each *half feather* represents *one* unit of force. For example, a wind blowing *from the east* at 5 miles an hour would be drawn ○—⌐ and would be described as an "east wind, force 2"; ⌐—○ is a "west-southwest wind, force 5."

The Weather Bureau will furnish upon request a more complete and detailed explanation of this map and the symbols and tables. Inquiries should be addressed to "Chief, U. S. Weather Bureau, Washington, D. C."

The subscription price of this map (daily, including Sundays and holidays) is $3.60 a year, or 30 cents a month; daily, except Sundays, is $3.00 a year, or 25 cents a month. Send subscriptions (check or money order) to "Superintendent of Documents, Washington, D. C."

STATION MODEL

Feathers showing force of wind in Beaufort Scale. (*19 to 24 miles per hour.*)

Arrow shaft showing direction of wind. (*Blowing from northwest.*)

Figures showing temperature in degrees Fahrenheit.

Symbol showing amount of sky covered by clouds. (*Completely covered.*)

Code figure showing visibility. (*1½ miles or more, but less than 2½ miles.*)

Symbol showing present state of weather.* (*Continuous light snow in flakes.*)

Figures showing dew point in degrees Fahrenheit.

Symbol showing type of low cloud.* (*Fractocumulus.*)

Height of lower clouds, except when lower clouds are only fragments below a layer of clouds whose base is below 8,200 feet.* (*656 to 983 feet.*)

Arrow showing direction of middle cloud.* (*From the northwest.*)

Code figure showing amount of clouds whose height is given by "h".* (*Nine-tenths coverage.*)

F, DD, TT, N, V, ww, T_sT_s, C_L, h, D_c, C_M, PPP, pp, a, R_t, W, RR, N_h

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Note: The letter symbols for each weather element are also shown above.

*Omitted when data are not observed or are not recorded.

Symbol showing type of middle cloud.* (*Altostratus.*)

Figures showing barometric pressure at sea level. Initial 9 or 10 for "hundreds" of millibars, and also decimal point, omitted. (*995.3 millibars.*)

Figures showing net amount of barometric change in past 3 hours. (In tenths of millibars.)

Symbol showing barometric tendency in past 3 hours. (*Falling or steady, then rising, or rising, then rising more quickly.*)*

Plus or minus sign showing whether pressure is higher or lower than 3 hours ago.

Code figure showing time precipitation began or ended.* (*Began 3 to 4 hours ago.*)

Past weather during 6 hours preceding observation. (*Rain.*)

Figures showing amount of precipitation in last 6 hours.* (In hundredths of an inch.)

FRONTS AND LABELS

The boundary between two different air masses is called a "front." Important changes in weather often occur with the passage of a front. The half circle and triangular points placed on the "front" lines are symbols to indicate the classification of the front and its direction of movement. The boundary of relatively cold air of polar origin advancing into an area occupied by warmer air of tropical origin is called a "cold front." The boundary of relatively warm air advancing into an area occupied by colder air of polar origin is called a "warm front." The line along which a cold front overtakes a warm front is called an "occluded front." A boundary between two air masses which shows little tendency at the time of observation to advance into either the warm or the cold air areas is called a "stationary" front. The front symbols, with arrows to show their direction of movement, are given below:

Warm front at the ground. Warm front above the ground.
Cold front at the ground. Cold front above the ground.
Occluded front. Stationary front.

The words "HIGH" and "LOW" indicate high and low barometric pressure.

Masses of air are classified into several different types which indicate their origin and basic characteristics. For example, the letter "P" denotes the polar type of relatively dry and cold air from northerly or polar regions. The letter "T" denotes the tropical type of relatively moist and warm air from southerly and tropical regions. The letters placed *before* the letters "T" and "P" show that the air mass is classified as Maritime (M) or Continental (C). The letters placed *after* "T" and "P" show that the air mass is colder (K) or warmer (w) than the surface over which the air is moving. Mixtures of air masses are denoted by plus signs (+), and transitional changes of air masses from one type to another are indicated by arrows (⟹). One air mass superimposed upon another is indicated by placing a line between the two labels.

P = Polar; C = Continental; T = Tropical; M = Maritime; S = Superior (very dry); K = Colder; w = Warmer.

BEAUFORT SCALE OF WIND FORCE

NO.	SYMBOL	MILES PER HOUR
0	◎	CALM
1	○—	1-3
2	○—	4-7
3	○—	8-12
4	○—	13-18
5	○—	19-24
6	○—	25-31
7	○—	32-38
8	○—	39-46
9	○—	47-54
10	○—	55-63
11	○—	64-75
12	○—	ABOVE 75

6-30-41