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A Science Service Feature

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? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University
tells:

HOW TO USE A WEATHER MAP

There is no surer way to appreciate the difficulties of forecasting than to try a hand at the game. Take the daily weather map and make your own forecast. Each morning the map with its table shows what the weather was at 8 a.m., Eastern Standard Time, and summarizes the conditions of the preceding 24 hours.

If you wish to compete with the official forecaster first look at the weather situation to the northwest, west, or southwest of your location. From the size of an approaching rainy or fair area, one can see not only to some extent why the forecaster is likely to be right, but also what the weather may be after the period covered. Such simple approximate rules as the following may be helpful in using weather maps:

1. Weather moves generally from west to east in our latitudes, because the prevailing winds are in that direction.
2. High pressure areas are likely to move toward the southeast and low ones toward the northeast. The dense air of a high tends to spread continually southward under the warmer, lighter air of a low and to displace it northward.
3. A low tends to follow the direction of the isotherm (equal temperature line) passing through its center. This is largely because winds aloft are about parallel to the surface isotherms.
4. Warm areas favor lows, and cold areas, highs. In winter lows are likely to choose a path over the relatively warm Great Lakes and St. Lawrence Valley. Similarly in all cool months warm waters of the Gulf Stream and Gulf of Mexico favor the development and intensification of lows, while the cold northern interior produces many highs.

(Tomorrow: Measuring Humidity in Winter)
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