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? WHY THE WEATHER ?

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WHEN THE POLAR FRONT ROLLS BY

The polar front is the forward edge of a moving mass of cold dry air usually coming more or less directly from polar or subpolar regions. This front has many aspects, from that of a raging thunderstorm to the almost imperceptible shift of wind towards the north. In winter, an expression of the polar front that is typical of a cold wave is: (1) a little clouding up, with rising temperature, (2) the approach of a bank of low clouds, (3) a sudden shift of wind to north attended by a snowflurry and rapid fall in temperature, then (4) a quick clearing of the sky whilethe north wind with drifting snow blows strongly and the temperature descends rapidly to low levels.

The initial clouding up and rising temperature attend the strengthening of the southerly wind as the belt of lowest pressure at the cold front draws near. The bank of low clouds, seen approaching, marks the front where the cold air is displacing and mixing with the warmer air in its path, andthe snow flurry that falls from this cloud bank represents the surplus of water vapor that cannot remain in the warm air when it is reduced in temperature by being forced to rise by the colder air and mixed with it. A quick clearing,except in the lee of water bodies or when the ground is warm and wet, immediately follows, because, with the warm humid air removed, the vapor present in the dry north wind is insufficient to allow condensation.

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