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? WHY THE WEATHER ?

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THE POLAR FRONT

A new method of weather forecasting that has attracted wide attention is based upon the "polar front" theory of atmospheric circulation, developed at the Geophysical Institute of Bergen, Norway, by Prof. V. Bjerknes and his assistants. The fundamental idea of this theory is ^{that the} vortices in the atmosphere known as cyclones, the travels of which are responsible for most of the "weather" we get in middle latitudes, are derived from waves set up by the interaction of two distinct streams of air; viz, cold polar air and warm equatorial air. The boundary between the streams is called the "polar front." This is supposed to encircle the globe and to shift north and south through a wide range of latitude.

It is claimed that, where observations are available from a dense network of stations, the polar front can easily be traced over the earth, and that its fluctuations give ample notice of the development of each cyclone, as well as of its probable movement. Definite sequences of weather are associated with what Sir Napier Shaw has happily described as the "wrigglings" of the polar front.

The idea of two great conflicting streams of air -- polar and equatorial -- was developed by the German meteorologist Dove in the first half of the nineteenth century, but had nearly passed into oblivion when it was revived, in a much modified form, by the Norwegians a few years ago.

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