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? WHY THE WEATHER ?

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By Charles Fitzhugh Talman,  
Authority on Meteorology.

AUTOMATIC WEATHER INSTRUMENTS

More and more do the instruments with which weather is observed and measured tend to become automatic in their operation and hence to replace the human observer.

When the U. S. Weather Bureau begins, next July, to gather meteorological data from the upper air with the aid of airplanes, the latter will be equipped with automatic instruments generally known as "meteorographs," though the U. S. Navy applies the name "aerograph" to those used by its aviators. These devices make a continuous record of the temperature, humidity and pressure of the air along the route of a flight on a sheet of paper, ruled with lines showing the time of each detail of the record. They belong to the same large family of self-registering instruments that includes the thermograph, barograph, hygograph, etc. (Editor: Note spelling, "hygograph" not "hydrograph".)

Analogous to the idea of making a weather instrument trace its own record is that of attaching to it an automatic radio transmitter, by which the reports of its observations are broadcast. One device of this character is the radio pilot-balloon, which merely sends out signals showing its location from minute to minute during its drift, so that the upper-air currents can be charted on the ground. Others are various radio sounding-balloons that report the temperature and other meteorological conditions encountered in their flights.

In Russia an instrument has been invented for taking meteorological observations and reporting the results automatically by radio on the ice of the polar regions or in other places, such as deserts and jungles, where it is not practicable to keep a human observer on duty. It is said to be able to transmit reports three times a day for an entire year without attention.

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21st and Constitution Ave.  
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