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? WHY THE WEATHER ? Mailed January 31, 1930

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ROBOTS AS WEATHER OBSERVERS

A large share of the world-wide task of observing and recording the weather has been performed for many years by machines instead of men. Most meteorological stations except those of the simplest order are equipped with apparatus for making continuous automatic records of at least one weather element, such as temperature or barometric pressure, while at all the more important observatories there are instruments that register continuously the temperature, pressure, rainfall, sunshine, humidity, wind direction, wind velocity, and sometimes various other conditions of the atmosphere.

Some of these meteorological robots observe the weather at one place and register or report it somewhere else. The telethermograph, for example, traces a record of the temperature at a point more or less distant from the place of registration. In some cases the temperature at the summit of a mountain is registered by one of these instruments at the base of the mountain.

Apparatus recently devised in Europe sends automatic reports by radio of the atmospheric conditions encountered by a small free balloon during flight. If and when the "Graf Zeppelin" makes her projected cruise over the Arctic she will carry a supply of such instruments, designed by Prof. Molchanov, for obtaining upper-air measurements of temperature, humidity and barometric pressure. The same inventor is now working on an automatic weather observatory, weighing 1 1/2 tons, which is to be dropped from the airship on the polar ice, where it will transmit observations by radio three times a day for an entire year. Molchanov thinks that ten of these self-operated observatories might be carried by the airship and placed at favorable points in the course of the cruise.

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