

A Science Service Feature

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? WHY THE WEATHER ?

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By Charles Fitzhugh Talman,
Authority on Meteorology.

UPPER-AIR RESEARCH

The United States Weather Bureau expects to inaugurate on July 1, at a few of its stations, the routine use of airplanes for gathering the data hitherto secured by means of kites for the information of weather forecasters and for other meteorological purposes. Airplanes have been similarly employed for some years by the U.S. Navy and also by a few of the meteorological services in the Old World.

The exploration of the upper atmosphere with the aid of aircraft -- in a broad sense of the latter term -- dates back to the middle of the eighteenth century. Thermometers were first sent aloft attached to kites as early as 1749, by Dr. Alexander Wilson, of Glasgow. Franklin's immortal kite was flown to investigate the lightning in 1752. In 1784 Dr. John Jeffries, in company with the aeronaut Blanchard, made the first balloon ascent for meteorological purposes. The pilot-balloon, sent up without a balloonist or instruments of any kind, as a means of observing the drift of the winds aloft, dates from the experiments of Thomas Forster, made in 1809. The box-kite, now widely used by meteorologists, was invented in 1893.

Sounding-balloons, which carry self-registering meteorological apparatus to great heights, were first used in France in 1893. Last September one of these devices, sent up from Hamburg, Germany, reached an altitude of 22.3 miles; a world "record" for sounding-balloons, and perhaps for all balloons; the altitude of 24.2 miles claimed for a pilot-balloon flight in February, 1913, on the coast of Greenland, being rather problematical.

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