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A Science Service Feature

? WHY THE WEATHER ? Mailed July 18, 1932

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MEASURING CLOUDINESS AT NIGHT

Automatic records of the duration of cloudiness at night are made by an instrument called the "pole-star recorder," which, in its earliest form, was invented by Prof. E.C. Pickering, of Harvard College Observatory, about 1885. It was afterward improved by S.P. Fergusson for use at the Blue Hill Observatory, near Boston, in 1902. A still later type was introduced by the U.S. Weather Bureau in 1919.

The instrument in all its forms consists of a long-focus camera, so mounted that the pole star, Polaris, is permanently in the field. This star is near but not at the north pole of the heavens, around which it revolves every 24 hours. Hence the "trail" it registers on the photographic plate is a circular arc, which is continuous if the sky near the pole is clear all night, and broken if there are periods of cloudiness. The Weather Bureau instrument has an ingenious device for photographing a time scale on the photographic plate before each night's observations.

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