

CORRECTION: Please substitute this corrected sheet for one mailed yesterday.

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A Science Service Feature

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? WHY THE WEATHER ?

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UTILIZING SOLAR ENERGY

By Charles Fitzhugh Talman,
Authority on Meteorology

Sir Napier Shaw has described as "the fundamental basis of the science of meteorology" the amount of thermal energy received by a horizontal surface in the form of radiation from sun and sky. There are special instruments for measuring this element, though unfortunately they are in continuous use at comparatively few places throughout the world; down to 1931 published statistics were available for only 28 stations. One of these stations is at Washington, D.C., where, on a cloudless day in midsummer, the receipt of radiation amounts to nearly 30 million horse-power hours per square mile. On a midsummer day of average cloudiness the amount is about 20 million horse-power hours.

"This," says Dr. H. H. Kimball, "appears to be an enormous amount of energy and comparable to the amount that may be derived per square mile of surface area from a storage lake in a water-power system. The difference lies in the fact that while the water-power may be developed at a single point -- viz., the outlet of the lake -- the solar energy is not so easily concentrated. Its concentration presents a problem analogous to that of utilizing water-power from many small ponds scattered over an extensive area."

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