

A Science Service Feature

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? WHY THE WEATHER ?

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By Charles Fitzhugh Talman,
Authority on Meteorology.

SOLAR RADIATION

All quantities are relative. Of the total amount of radiation sent out from the sun only one part in 2,200,000,000 falls upon the earth; an insignificant fraction. Compared, however, with the output of energy from artificial sources, the amount of solar radiation received by our planet is enormous. If the total radiation striking the earth in a single second could be converted into power, its value at the low rate of 1 cent a kilowatt hour would be \$478,000,000. The part this radiant energy from the far-off sun plays in man's affairs is, moreover, all-important.

"Solar radiation," says H.H. Kimball, "is the source of the power that keeps the atmosphere in circulation, including the secondary circulation in storms, which latter are sometimes appalling in violence. It evaporates moisture from land and water surfaces, which is later precipitated in the form of rain or snow. In connection with the atmospheric circulation it controls weather and climate. In ages past solar radiation by stimulating plant growth has stored for our present use the supplies of coal and oil we are now spending so lavishly. If in the distant future these supplies become exhausted, solar energy, the primary source, will still be unimpaired; and only man's ingenuity is required to make it directly available as power."

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21st and Constitution Ave.
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