

Solar Irradiance

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Solar radiation received at ground level anywhere on Earth depends on the time of day, the latitude, the absorption and scattering by the column of air above the ground, and several other factors. A comparison of the vast amount of solar radiation we receive daily to the total energy usage of the World and particularly the U.S. shows how we fail to harness this “near infinite” resource. Data gathered and published by the Department of Energy is used in the talk. Calorimetric experiments are used to estimate the amount of solar irradiance received at ground level in Kalamazoo at different times of the day over several days. These results are compared to the outputs of typical household stoves.