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Solar Radiation Estimation in Thailand Using Angstrom-Prescott Model and Empirical Methods

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It is required equipment and technique for measuring of global solar radiation and its component in many regions. There are financial difficulties in limited solar radiation measurement especially in developing countries. In this study, Angstrom-Prescott model could be employ to estimate solar radiations for 11 stations in Thailand. The empirical coefficients have been determined by five empirical methods, i.e., Food and Agriculture Organization (FAO), Rietveld model, Glover Mc-Culloch model, Tiwari & Sangeeta model and least square model. The estimated solar radiation was determined with measured solar radiation by using statistical tests; mean percentage error, mean bias error, root mean square error and correlation.

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