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Empirical Models for the Correlation of Monthly Average Daily Global Solar Radiation with Hours of Sunshine on a Horizontal Surface at Karachi, Pakistan

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Abstract: A new set of constants for Angstrom-type correlation of first and second order, to estimate monthly average daily global solar radiation, has been obtained employing sunshine hours data recorded at Karachi, Pakistan (Lat. 24° 54' N, Long. 67° 08' E). Least square regression is performed to derive these constants. The correlation equations developed are employed to calculate the monthly average daily global solar radiation. These results are then compared with various other existing correlations and the measured data. Excellent agreement has been found between the estimated and the measured values.

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