Application of probability models to Malaysian sunshine data

ABSTRACT

A 10-year Malaysian sunshine data of four stations were fitted to three models, namely the Bendt, Hollands and Huget and Saunier models. Distribution parameters of the models were determined from the values of the observed mean of the sunshine data. The Kolmogorovó Smirnov test was applied to determine the goodness of fit. It was found that the Saunier model was suitable for the Petaling Jaya and Subang stations while the Hollands and Huget model well suited the Bayan Lepas and Kota Bharu stations. The Bendt model did not give a good fit for all stations. It was also found that for the months that have the same observed mean but different observed standard deviations the distribution models were able to fit well only if the estimated standard deviations were close in value to the observed standard deviations.