

**International Energy Journal, Vol. 1 No. 1, June 2000**[HOME](#) | [ABOUT](#) | [LOG IN](#) | [REGISTER](#) | [SEARCH](#) | [CURRENT](#) | [ARCHIVES](#)[Home](#) > [Vol. 1 No. 1, June 2000](#) > [Luhanga](#)**Some Characteristics of Solar Ultraviolet Radiometers***P.V.C. Luhanga, R.O. Ocaya***Abstract**

Solar and terrestrial radiometers normally degrade with time and should ideally be recalibrated at least once a year for reliable operation. However, recalibration is often difficult for developing countries because of the inherent costs involved. The degradation in the sensitivity in different radiometers can vary markedly. In this paper the performance of two previously in stalled radiometers, an Eppley Laboratories Total Ultraviolet radiometer (TUVR) and an Eppley Laboratories Precision Spectral Pyranometer (PSP) are compared with two new and identical models. Over an average period of approximately six years. The older TUVR indicated a decline of over 40% in sensitivity. By using a technique of data smoothing of a discrete time series followed by a least-squares polynomial fit, the authors show that the data from the degraded TUVR can be recovered to an agreement of better than 0.17%. Therefore, if the calibration curve can be obtained for a given TUVR, correcting of the radiometer would be straightforward using the method described.

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