

AN EFFECTIVE TEMPERATURE CALIBRATION OF A UV-VISUAL PHOTOMETRIC INDEX  
FOR "NORMAL" NON-SUPERGIANT STARS

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ABSTRACT. The determination of the effective temperature of each individual star requires observations of the flux distribution in the largest possible wavelength range. Unfortunately, owing to observational constraints, this requirement severely limits the number of stars for which the direct determination of  $T_{\text{eff}}$  can be achieved. However, an estimate of  $T_{\text{eff}}$  for a very large number of stars can be obtained through a calibration of a photometric index versus the stellar effective temperature. The UV-Visual dereddened index,  $R = \log(F_{1965}/F_{5445})$ , has been shown to be suitable for "normal" non-supergiant stars in the spectral type range B5 - F7 (Malagnini et al. 1984). The analysis, with the method described in Malagnini et al. (1983), of stars in the spectral type range B5 - B0, enables us to extend and to refine the already proposed calibration of  $R$  versus  $T_{\text{eff}}$ . By using the complete calibration, the determination of  $T_{\text{eff}}$  for all the "normal" non-supergiant stars sampled from the 31215 objects in the Catalogue of Stellar Ultraviolet Fluxes (Thompson et al. 1978) is being carried out.

REFERENCES

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Malagnini, M. L., Morossi, C. and Faraggiana, R. 1984, in The MK Process and Stellar Classification, ed. R. F. Garrison (David Dunlap Observatory, Toronto), p.321.  
Thompson, G. I., Nandy, K., Jamar, G., Monfils, A., Houziaux, L., Carnochan, D. J. and Wilson, R. 1978, Catalogue of Stellar Ultraviolet Fluxes (The Science Research Council).

## DISCUSSION

JASCHEK: What do you mean by "normal" non-supergiant stars?

MOROSI: The "normal" non-supergiant stars are those quoted as not chemically peculiar according to the catalogue of M. Jashek.

JASCHEK: Does your calibration have any advantage over the other ones based on the usual photometric system?

MOROSI: I think that we can obtain greater accuracy in determining  $T_{\text{eff}}$  using our photometric index since it takes into account the behavior of the stellar flux in the ultraviolet region.