

AN IMPROVEMENT IN THE VISUAL SURFACE BRIGHTNESS SCALE FOR B5-F5
MAIN SEQUENCE STARS

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Angular diameters of 593 B5-F5 main sequence stars listed in the "Catalogue of apparent diameters and absolute radii of stars" (CADARS; Fracassini et al. 1981) have been analysed in order to improve the precision of the visual surface brightness S_V . The new relations between this quantity and the color index $(B-V)_0$ turn out to be in good agreement with those found with the interferometric method (Barnes et al. 1978). Moreover, the results suggest that surface gravity effects may bias the S_V - $(B-V)_0$ relations.

REFERENCES

- Barnes, T. G., Evans, D. S. and Moffett, T. J. 1978, Mon. Not. Roy. Astron. Soc., 183, 285.
Fracassini, M., Pasinetti, L. E. and Manzolini, F. 1981, Astron. Astrophys. Suppl., 45, 145.

DISCUSSION

EVANS: What is the source of your angular diameters?

PASTORI: The catalogue by Fracassini et al.

EVANS: But these are not direct determinations.

PASTORI. No.

EVANS: I think your argument is circular.

PASTORI: The method of Fracassini et al. is an indirect method derived from the original method by Chalonge and Divan applied to about thirty stars by Cayrel (1980) In the method of Fracassini et al. the parameters are obtained by means of Geneva photometry. In our work we compare our determinations of visual surface brightnesses with those of Barnes et al. (1978) which come from a direct method. So there is no circularity.