SOME PHYSICAL PARAMETERS AND UVBY β PHOTOMETRY OF TRAPEZIUM TYPE MULTIPLE SYSTEMS

G.N.SALUKVADZE AND G.SH.JAVAKHISHVILI Abastumani Astrophysical Observatory 383762 Abastumani, Republic of Georgia

Abstract.

The presented paper deals with the results of electrophotometric observations of 59 components of 19 trapezia in Strömgren and Crawford six-colour photometric system. The multiple systems, selected from the Abastumani Catalogue of Trapezia (Salukvadze, 1978), are: ABAO 2, 8,34, 48, 51, 62, 75, 94, 245, 312, 313, 316, 324, 348, 356, 363, 387, 396.

Observations were made on the 125-cm mirror telescope with the use of a one-channel photometer, based on photon counting, with diaphragms 10" and 20". Reduction was done on the Observatory computer with a procedure described by Salukvadze and Javakhishvili (1989).

We calculated the indices [m1],[c1] and [u-b] as in (Strömgren 1967, Philip and Egret 1980). The unreddened indices (b-y), m1 and c1 were calculated by the formulae of Crawford (1975).

Semi-empirical calibrations for effective temperature, bolometric correction and mass for early-type stars, using Strömgren photometric indices c0 and beta, are given by Balona (1984). In order to determine absolute magnitudes we used the calibration from Balona and Shobbrook (1984).

References

Salukvadze, G.N: 1978, Bull. Abastumani Astrophys. Obs. 49, 39.
Salukvadze, G.N., Javakhishvili,G.Sh.: 1989, Bull. Abastumani Astrophys. Obs. 66, 45.
Strömgren, B.: 1967, Proc. AAS-NASA Symposium, 461.
Philip, D.A.G., Egret D.: 1980, Astron. Astrophys. Suppl. Ser., 40, 199.
Crawford, D.L.: 1975, Astron.J., 80, 955.
Balona, L.A.: 1984, Mon. Not. R. Astr. Soc., 211, 973.
Balona, L.A., Shobbrook, R.R., 1984, Mon. Not. R. Astr. Soc., 211, 375.

391

E. Høg and P. K. Seidelmann (eds.),

Astronomical and Astrophysical Objectives of Sub-Milliarcsecond Optical Astrometry, 391. © 1995 IAU. Printed in the Netherlands.