

COMMISSION 27 OF THE I. A. U.  
INFORMATION BULLETIN ON VARIABLE STARS  
Number 1240

Konkoly Observatory  
Budaapest  
1977 February 15

FOUR-COLOUR PHOTOMETRY OF THE BRIGHT SOUTHERN VARIABLE HD100198

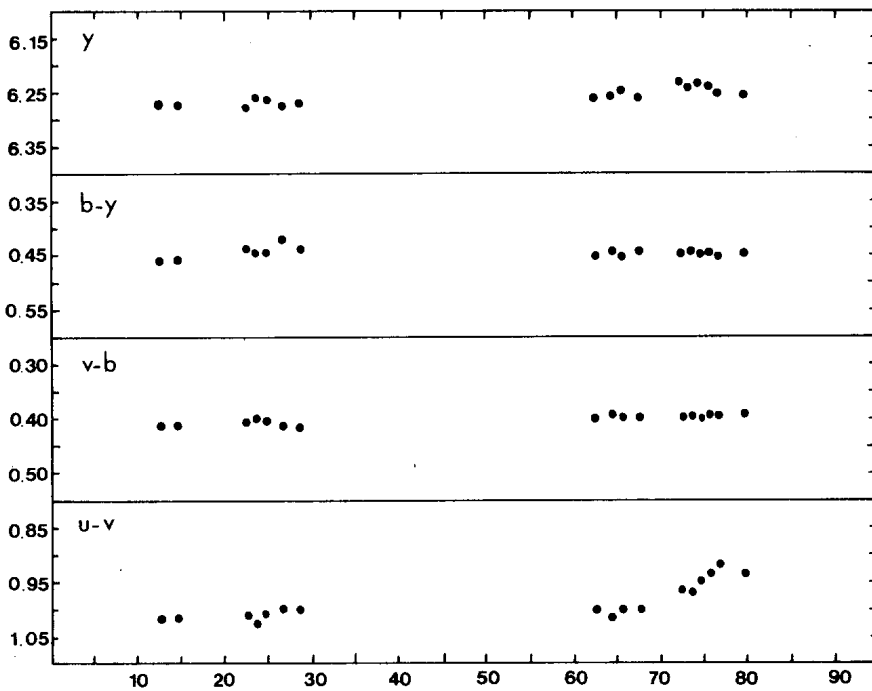
HD 100198 (HR 4438,  $V=6.36$ , A0Ia) was observed photoelectrically in the uvby system with the Danish National 50 cm Telescope and the ESO 50 cm Telescope at La Silla, Chile, on 17 nights in 1973 as comparison star for the variable  $\alpha^2$  Cen (HD 100262). The observations quickly revealed night-to-night variations in all colours. Since a second comparison star was always observed, differential measurements of HD 100198 relatively to HD 100380 ( $V=6.76$ , A0) are available. The observed colours b-y, v-b and u-v were transformed to the standard system of Crawford and Barnes (1970). The y observations were transformed to the standard V magnitudes of the UBV system. In each observing night two to ten differential measurements of each star were made. Fig.1 shows a plot of the nightly mean values of y, b-y, v-b and u-v. The average nightly mean error is about 0.005 mag. in all colours.

HD 100198 shows small irregular variations in y, b and v with additional larger variations in u on a time scale of several days. The individual differential measurements obtained during single nights were checked for short term variations, but no indications for the presence of significant fluctuations on a time scale of several hours was found.

The author wishes to express his thanks to the University of Copenhagen for the use of the 50 cm Danish Telescope and photometric equipment.

Part of this research was supported by the National Foundation of Collective Fundamental Research of Belgium (FKFO) under contract n<sup>o</sup> 2.9002.76.

HD 100198



J.D. - 2441800 (1973)

C. STERKEN  
Astrophysical Institute,  
Vrije Universiteit Brussel, Belgium  
and  
European Southern Observatory,  
Santiago, Chile

Reference:

Crawford, D.L., and Barnes, J.V., 1970, *Astron. J.* 75, 978