

COMMISSION 27 OF THE I.A.U.  
INFORMATION BULLETIN ON VARIABLE STARS  
Number 150

Konkoly Observatory  
Budapest  
8 August 1966

OBSERVATIONS OF VARIABLE F-TYPE STARS  
WITH SHORT PERIODS

After extended UBV photoelectric observations of about 70 bright field F stars, made between October 1965 and February 1966 with the Mount Wilson 60-inch and Palomar 20-inch reflectors, the following stars were found to show short period, small amplitude light variations. Approximate periods are given in parentheses: -HR 1287 ( $0^d134$ ), HR 1706 ( $0^d122$ ), HR 2107 ( $0^d137$ ), HR 3265 ( $0^d13$ ), HR 3888 ( $0^d13$ ), HR 4715 ( $0^d169$ )<sup>+/</sup>, HR 5005 ( $0^d14$ ), and HR 5017 ( $0^d14$ ). Some variation has also been detected in the star HR 2539 and in the close binary system HR 3889 although the nature of the variation is uncertain. There is strong evidence that the light amplitudes of most of the stars listed are changing in the manner shown by some of the known Delta Scuti stars.

More extensive observations with the Cassegrain photoelectric spectrum scanner on the Mount Wilson 60-inch and the Coudé spectrograph on the 100-inch have been completed to determine effective temperatures, surface gravities, masses and pulsation characteristics of these stars. A number of non-variable stars in the same region of the Colour-Magnitude Diagram have also been investigated to look for possible differences in physical characteristics between variable and non-variable stars.

The UBV observations of HR 1287 and HR 2107 were made in collaboration with Dr. A. R. Sandage.

Mount Wilson and Palomar Observatories,  
July 29, 1966

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+/ HR 4715 = 4 CVn was found to be variable in radial velocity with a period of  $0^d17$  by Jones and Haslam (Observatory 86, 34, (1966) Photoelectric observations of this star have been already published by Wachmann (IBVS 138).