

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

Number 2016

Konkoly Observatory  
Budapest  
1981 September 9  
HU ISSN 0374-0676

THE PERIOD OF THE SYMBIOTIC STAR AG PEGASI

AG Pegasi (WN6 + M3 III) is a well-known symbiotic star. From spectroscopical observations various authors derived periods ranging from 790 to 840 days (Merrill 1959, Boyarchuk 1967, Cowley and Stencel 1973, Hutchings et al. 1975).

The star shows also periodic brightness variations with an amplitude of about 0.35 mag. in V (Belyakina 1968). The variations are probably caused by binary motion of a hot spot on the M-star (Hutchings et al. 1975). According to those authors "the light curve may ultimately give us the best value of the period, since the velocity data are plagued with numerous difficulties already described".

Between 1973 and 1979 I observed AG Peg photoelectrically in U, B, V with the 60 cm-reflector II of Sonneberg Observatory. Photoelectric observations were published by Belyakina 1968, Mendoza 1972, Fernie 1972, Burchi 1980. Furthermore I observed the star on about 1000 Sonneberg sky patrol plates from 1928.....1981. On all those observations AG Peg shows periodic brightness variations best fitted with the following elements:

$$\text{Min.} = \text{J.D. } 242\,8250 + 827^{\text{d}}. \text{ E.}$$

There is a steady decline in mean brightness. From photoelectric observations in 1963....1979 I derived a mean value in V of 0.015 mag. per year.

Further details are given in a forthcoming paper in Mitt.  
veränderl. Sterne.

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