COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 1182
Konkoly Observatory
Budapest
1976 October 4

MINIMA AND THE VISUAL LIGHT CURVE OF THE ECLIPSING BINARY RV PISCIUM

The star RV Psc is an interesting Algol-system ($\alpha_{1900}=1^h14^m06^s$, $\delta_{1900}= 30^o40'$, $11^m.3 - 12^m.0$, F8), but not a classical Algolid,with the very short period P = $13^h17^m45^s$ and both minima are almost equal. No period changes were observed (Ahnert 1975). Maybe the components of RV Psc are subdwarfs (luminosity class VI) ?

This paper contains the results of visual observations of RV Psc made in the year 1936 at the island Hios (Greece) using the 203 mm Expedition refractor. The observations were collected by Szafraniec (1962), but not elaborated as yet.

The following comparison stars were used:

a) $\alpha_{1900}= 1^h13^m41^s$, $\delta_{1900}= +30^o46'.6$, $m_v = 11^m.55$

$\alpha_{1900}= 1\ 13\ 46$, $\delta_{1900}= +30\ 42.5$, $m_v = 11.90$.

Table 1 gives primary and secondary minima determined by the tracing-paper method. The consecutive columns contain heliocentric time of minimum, kind of minimum, limit of error, number of points n and O - C.

Table 1

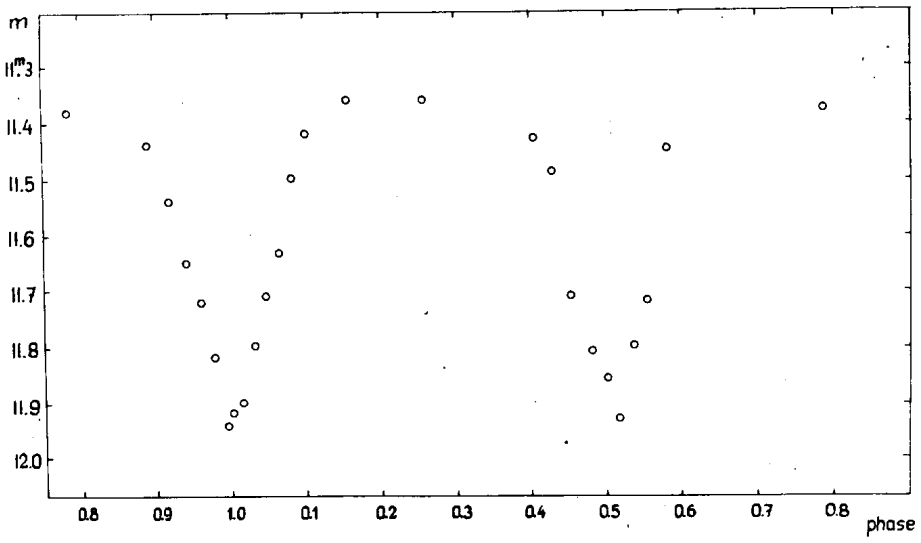
JD hel.	Min.	Lim.error	n	O-C
$2428347^d.5065$	I	$\pm 0^d.0015$	18	$+0^d.0017$
2428362.4620	I	.0015	33	-0.0006
2428367.4485	I	.0015	27	+0.0000
2428372.4405	I	.0020	13	+0.0061
2428390.4405	II	.0015	20	+0.0014
2428391.5500	II	.0020	11	+0.0029

The values of O-C were obtained according to the elements given by Ahnert (1975):

$$\left.\begin{array}{l}\text{Min. I JD hel.} = 2424381^d.480\\ \text{Min.II JD hel.} = 2424381.757\end{array}\right\} +0^d.55399145\cdot E.$$

The Figure presents the mean visual light curve of the eclipsing binary RV Psc.

Further observations, spectroscopic and photometric, are needed to explain the physical nature of this eclipsing system.



Mean light curve of RV Piscium

T.Z. DWORAK
K. KORDYLEWSKI

References:

Ahnert, P. 1975, IBVS, No.978
Szafraniec, R. 1962, Acta Astr.Suppl. 5, 719