

SMALL-AMPLITUDE VARIABLES IN THE OPEN CLUSTER IC 4665

The open cluster IC 4665 ($r = 364$ pc) is known to have a high percentage of spectral binaries among its bright members (Abt et al., 1972; Grampton et al., 1976). With the purpose of detecting these binaries eclipsing variables, we performed in 1984 a photoelectric B,V monitoring, using the 60-cm telescope of the Mайдanak Observatory. However, no sign of light weakening was detected in the moments of expected minima (Zakirov, 1987). This photoelectric material has been recently used by us to search for periodic small-amplitude variations in the brightness of the observed binaries. As a result, the periods of light variations have been discovered for five stars, which are given in Table 1. Here, star names are taken from the list of Kopff (1943), and in the column P(Sp), spectroscopic period is given according to Abt et al. (1972). The value k is the average signal-to-noise ratio. Light curves of these stars are displayed in Figures 1-5. The periods of the binaries are close to, or multiple of, P(Sp). We conclude that these light variations are related to the effect of axial rotation or orbital motion of the components rather than of eclipse in the double systems.

Table 1

Kopff	HD	Max	A	k	$\langle B-V \rangle$	P	P(Sp)	Sp
32	161261	8 ^m 290	0 ^m 017	2 ^m 19	0 ^m 057	1 ^m 60	8 ^m 23	B8+Shell
64	161603	7.366	0.021	2.82	0.040	41.5	43.5	B5IV
72	161660	7.759	0.017	2.15	0.012	15.61	15.58	B7V
76AB	161698	8.214	0.028	2.69	0.120	15.42	7.25	B8.5p
105	162028	7.517	0.022	1.95	0.027	15.05	8.01	B6V

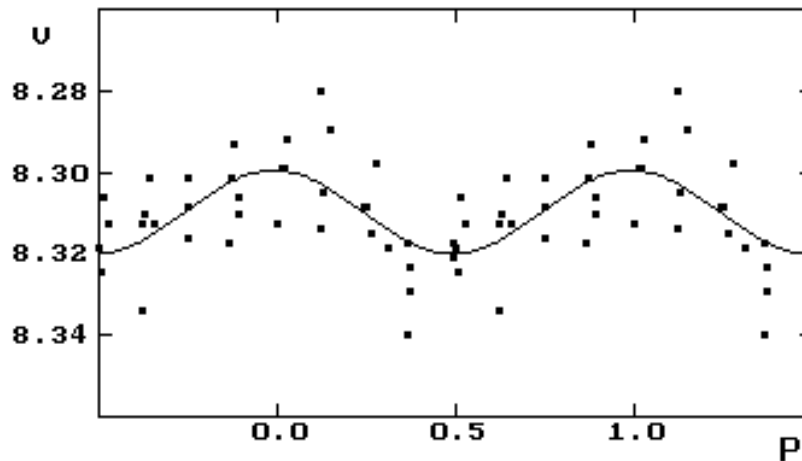


Figure 1. The light curve for star 32.

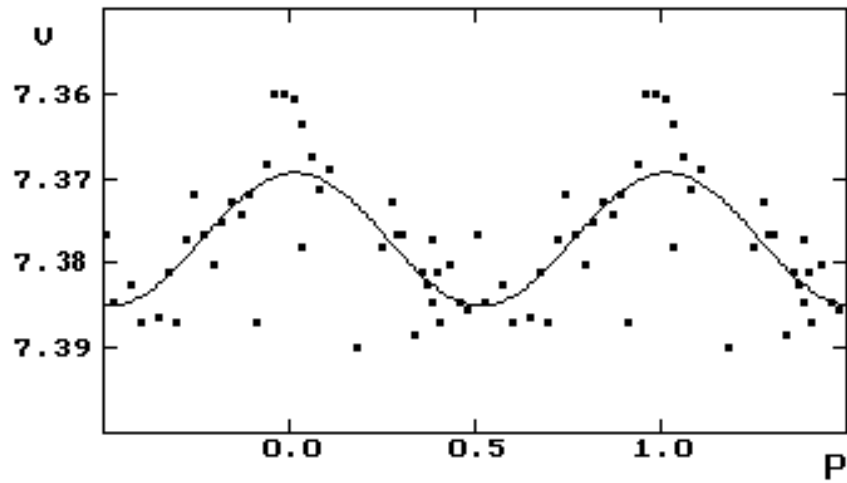


Figure 2. The light curve for star 64.

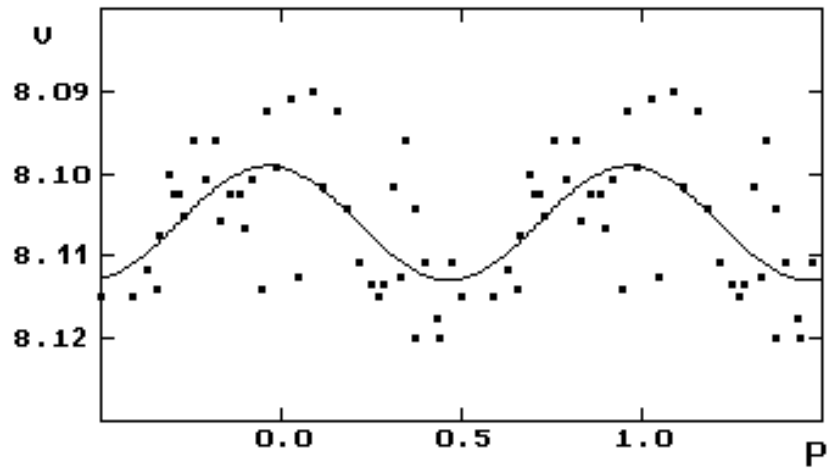


Figure 3. The light curve for star 72.

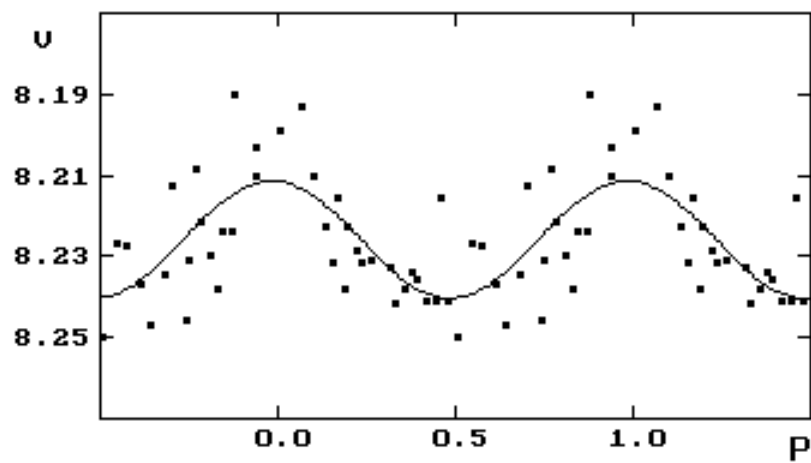


Figure 4. The light curve for star 76.

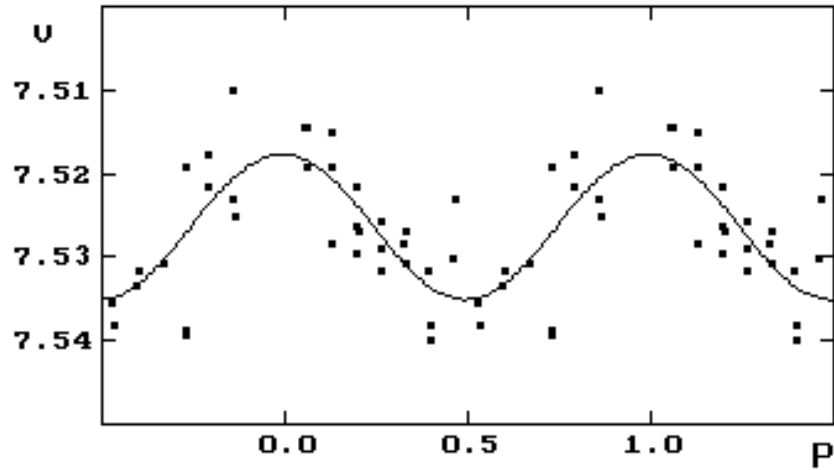


Figure 5. The light curve for star 105.

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