SEARCH OF VARIABILITY OF THE COMPANION OF THE CLASSICAL CEPHEID EV SCT

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ABSTRACT. Spectroscopic observations of EV Sct obtained on 4m telescope at KPNO showed that the secondary component is probably situated within the instability strip (Kovtyukh & Andrievsky, 1999). Some observers (Pel, 1976; Mermilliod, 1987) have noted a significant data scattering on the light curve. Therefore the companion of EV Sct perhaps is a small amplitude variable star. We present results of photoelectric observations of the EV Sct.

Key words: Stars: Cepheids; stars: individual: EV Sct.

1. Introduction

EV Sct is a famous classical Cepheid ($P = 3.091^d$) belonging to NGC 6664 cluster, which was for a long time used for $P - L$ calibration.

2. The observations and analysis

We have observed the EV Sct in June 2000. The observations were made on the 1.25m telescope AZT-11 of Crimean AO. For 9 nights more than 600 UBVR estimates of brightness of the star with accuracy of 0.02-0.03 mag have been obtained. As a standard we used a star "A" NGC 6664 (V=10.61; B-V=0.47). The time of the exposition was 15 sec. The results are given in Tabl.1. Unfortunaly the existing observational data is small and preliminary frequency analysis hasn't confirmed presence of variability of the companion.

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References

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Mermilliod J.C., Mayor M., Burki G.: 1987 *As.Ap. Suppl.*, **70**, 389.

Pel J.W.: 1976, *As.Ap.Suppl.*, **24**, 413.

Table 1: UBVR observation

J.D Hel 2415200+	U–B	B–V	V	R
12.32491	0.751	1.077	10.123	11.131
12.32913	0.768	1.076	10.124	11.130
12.34900	0.764	1.101	10.126	11.113
12.35157	0.766	1.096	10.121	11.110
12.36166	0.791	1.102	10.103	11.094
12.36378	0.791	1.099	10.099	11.097
12.38340	0.779	1.099	10.110	11.114
12.38542	0.797	1.096	10.116	11.120
12.39313	0.805	1.084	10.131	11.125
12.39579	0.792	1.076	10.133	11.122
12.40287	0.799	1.094	10.128	11.118
13.43067	0.852	1.170	10.343	11.178
13.44986	0.871	1.150	10.360	11.181
13.46313	0.861	1.173	10.339	11.169
15.31943	0.699	1.066	10.103	11.085
15.34042	0.680	1.073	10.110	11.085
15.35807	0.665	1.097	10.074	11.074
15.36800	0.696	1.070	10.102	11.080
15.37766	0.709	1.068	10.088	11.078
16.31895	0.598	1.116	10.323	11.082
16.33207	0.600	1.117	10.346	11.131
16.34560	0.567	1.094	10.323	11.110
16.36675	0.587	1.102	10.346	11.120
16.38851	0.620	1.102	10.382	11.131
16.39376	0.611	1.100	10.353	11.116
16.40590	0.603	1.102	10.345	11.117
17.42659	0.652	1.082	10.230	11.130
17.44177	0.671	1.072	10.207	11.112
17.47369	0.652	1.066	10.236	11.143
19.32258	0.806	1.162	10.294	11.181
19.34126	0.772	1.159	10.302	11.191
19.36829	0.731	1.148	10.295	11.200
19.38698	0.706	1.160	10.263	11.184
20.34944	0.823	1.121	10.248	11.137
20.37786	0.803	1.106	10.236	11.135
20.39740	0.802	1.119	10.229	11.130
21.45544	0.774	1.090	10.075	11.094
22.34105	0.866	1.162	10.276	11.164
22.36098	0.872	1.170	10.300	11.187