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PHOTOELECTRIC BVR_c OBSERVATIONS OF THE CEPHEID V553 Cas

Recently Shugarov (1996) has analysed photographic archival plates at Sternberg Astronomical Institute of Moscow and found that V553 Cas is a Cepheid variable with the elements:

$$\text{Max JD}_{hel} = 2450323.60 + 4.90039 \times \text{E}$$

We observed this Cepheid photoelectrically at Mt. Maidanak observatory in August 1996 using the 60-cm reflector; a total of 31 BVR_c measurements were obtained (Table 1), the accuracy of the individual data is near $\pm 0\overset{m}{.}01$ in V and near $\pm 0\overset{m}{.}02$ in $B-V$ and $V-R_c$. Above elements are used in Figure 1 for plotting our observations. According to our data, the amplitude of the light curve is $0\overset{m}{.}85$ in V, $0\overset{m}{.}38$ in $B-V$ and $0\overset{m}{.}24$ in $V-R_c$.

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Table 1

JD_{hel} 2450300+	V	$B-V$	$V-R_c$	JD_{hel} 2450300+	V	$B-V$	$V-R_c$
12.2153	13.739	-	-	19.2132	13.090	1.526	0.951
12.4655	-	-	1.134	19.3402	13.136	1.651	0.983
14.2106	13.038	1.592	0.949	19.4169	13.132	1.670	0.990
14.3009	13.126	1.534	1.025	20.3198	13.405	1.790	1.062
14.4355	13.163	1.597	1.022	20.4014	13.400	1.804	1.068
15.2670	13.356	1.763	-	21.1947	13.538	-	1.083
15.3500	13.348	1.802	1.081	21.4214	13.576	1.886	1.098
15.3930	13.369	1.786	1.073	22.2075	13.715	-	1.069
16.1790	13.498	-	-	22.4710	13.783	1.840	1.131
16.3874	13.566	1.905	1.112	23.2221	13.285	1.605	0.992
17.2735	13.740	1.908	1.093	23.4582	13.031	1.593	0.933
17.3553	13.713	1.983	1.076	24.2215	13.148	-	0.952
17.4068	13.737	1.982	1.117	24.4056	13.178	-	0.999
18.2191	13.360	1.649	1.023	25.1947	13.363	-	1.054
18.3108	13.295	1.615	0.988	25.3389	13.423	1.740	1.082
18.4024	13.187	1.620	0.978				

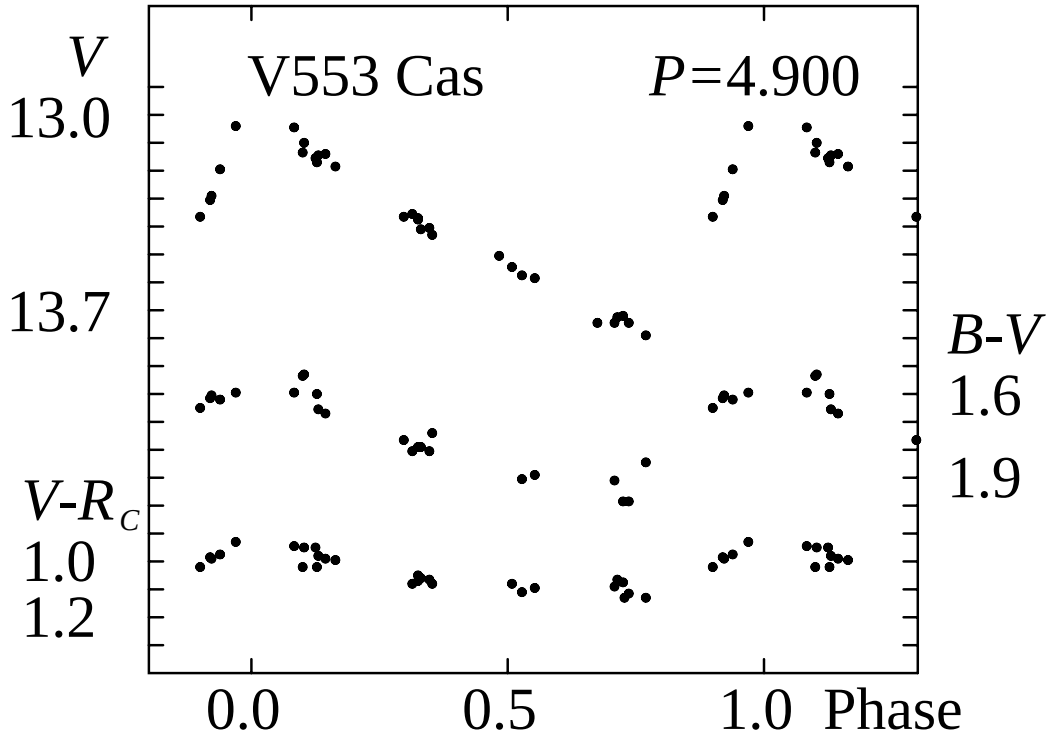

Figure 1

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Reference:
Shugarov S.Yu., 1996, private communication