ELEMENTS FOR CSV 8853 = Wr136

CSV 8853 = Wr 136 (α_{1900}: $23^h22^m19^s$ δ_{1900}:$+45^C01'$) was
discovered photographically by R. Weber (1963). He classified
the star as a probable cepheid variable. One of us (A.G.) set
out to determine the elements of variability of CSV 8853 visual-
ly in the summer of 1979, using his 20 cm Newton reflector.Very
soon it became evident, that the period of variation was rather
short, amounting to some 5 hours. Table I lists all the visually
determined times of maximum light along with the number of ob-
servations. From these observations the following preliminary
elements were deduced, employing standard least squares methods:

(1)   JD max hel = 2444065.462 + 0.190429·E.

O-C values and E in Table I refer to these elements.

Table I

Visual times of maximum for CSV 8853

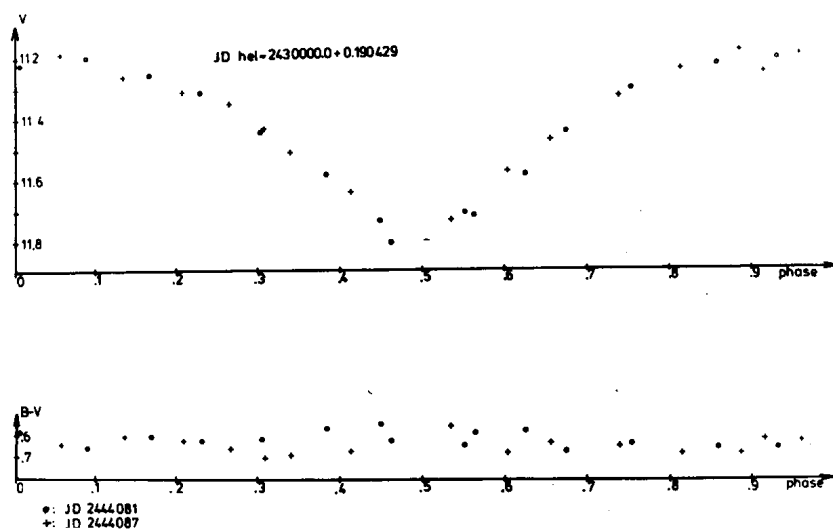| JD max hel 2400000 +	O-C	E	n
44065.4544	-0.0086	0	9
069.4672	+0.0048	21	17
070.4173	+0.0027	26	13
070.5902	-0.0148	27	7
072.5007	-0.0087	37	20
073.4550	-0.0067	42	11
076.5128	+0.0039	58	25
077.4643	+0.0032	63	24
078.4157	+0.0024	68	18
081.4653	+0.0049	84	15
082.4103	-0.0023	89	15
087.3677	+0.0035	115	18
118.3937	-0.0130	278	8
133.4463	-0.0055	357	6
143.3472	-0.0078	409	9

Figure 1. Photoelectric V- and B-V-curve of CSV 8853 obtained
with the Basel University photometer attached to the 1m reflector
on the Gornergrat, Switzerland.Circlets denote observations obtain-
ed on JD 2444081, crosses observations obtained on JD 2444087.

Table II

Photoelectric observations of CSV 8853

t_{obs}	phase	V	B-V
44081.4640	0.0061	11.230	0.590
44087.3770	0.0571	11.190	0.640
44081.4800	0.0901	11.210	0.670
44087,3920	0.1358	11.270	0.600
44081.4950	0.1689	11.270	0.610
44087.4060	0.2094	11.320	0.620
44081.5070	0.2319	11.330	0.630
44087.4170	0.2671	11.360	0.660
44081.5210	0.3055	11.460	0.620
44087.4250	0.3091	11.440	0.700
44087.4310	0.3406	11.520	0.690
44081.5360	0.3842	11.600	0.570
44087.4450	0.4142	11.650	0.670
44081.3580	0.4495	11.750	0.550
44081.5510	0.4630	11.820	0.630
44087.4680	0.5349	11.740	0.550
44081.5680	0.5523	11.720	0.650
44081.3800	0.5650	11.730	0.590
44087.4810	0.6032	11.580	0.680
44081.5820	0.6258	11.600	0.580
44087.4910	0.6557	11.480	0.630

Table II (cont.)

t_{obs}	phase	V	B-V
44081.4010	0.6753	11.460	0.680
44087.5070	0.7397	11.340	0.640
44081.4160	0.7541	11.320	0.640
44087.5210	0.8133	11.250	0.680
44081.4360	0.8591	11.240	0.660
44087.5350	0.8868	11.190	0.680
44087.3500	0.9153	11.260	0.610
44081.4500	0.9326	11.220	0.660
44087.5490	0.9603	11.200	0.620

In order to check the elements and to secure a photoelectric light-curve, one of us (R.D.) observed CVS 8853 during two nights in the summer of 1979, covering the whole cycle in both cases. We used the single channel RGUBV-photometer of Basel University attached to the 1 meter reflector of Gornergrat station, Switzerland (3100 m/M) operated by "Stiftung Hochalpine Forschungsstationen Jungfraujoch und Gornergrat". Transformation into the standard Johnson UBV-system was obtained by repeated observations of standard stars. Table II lists the V magnitudes as well as the B-V colours. They were all reduced differentially by comparing the variable with comparison star c in Weber's chart, lying some 3' south of CSV 8853 (V=11.55±0.02, B-V=+0.61±0.03). Due to the close proximity of the variable and the comparison star, the use of mean extinction coefficient was appropriate. The internal errors of a single observation amounts to 0.02 in V and 0.03 in B-V.

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Reference:

Weber, R. : 1963, I.B.V.S. No. 21