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PHOTOMETRIC OBSERVATION OF V1187 CYGNI

[BAV Mitteilungen Nr. 73]

V1187 Cyg was discovered by Mayer (1965) as a variable of EA–type with $0^m.35$ and $0^m.31$ deep primary and secondary minima respectively. He submitted three moments of minima and gave a first ephemeris as:

$$\text{Min I} = \text{HJD}\,2438634.5462 + 7^d.535 \times \text{E}. \qquad (1)$$

With the above data V1187 Cyg is listed in the fourth edition of the GCVS (Kholopov et al. 1985) as to be variable between $10^m.88$ and $11^m.23$.

The variable had remained obviously unobserved for about 28 years when the BAV published two times of minima (Agerer 1994). Together with V1191 Cyg, which is in the same field of our CCD camera, this variable was further investigated. In contradiction to the ephemeris above, an observing run on Aug. 22 shows a minimum of V1187 Cyg. Two additional minima at times when the variable was expected to be constant, together with observations between minima, proved that the period listed in the GCVS has to be divided by five.

Using all minima times available from the 'BAV Database for Minima of Eclipsing Binaries by D. Lichtenknecker', a least squares fit yields the following linear elements:

$$\begin{array}{l} \text{Min I} = \text{HJD}\,2438634.5496 + 1^d.50700136 \times \text{E} \\ \qquad\qquad\qquad\quad \pm 3 \qquad\qquad\quad \pm 4 \end{array} \qquad (2)$$

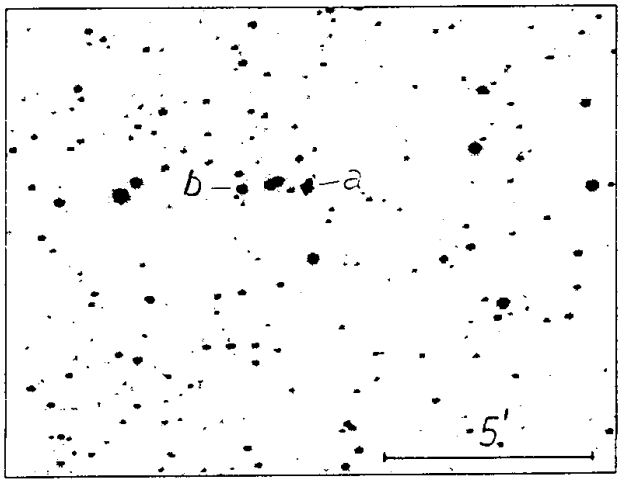

Figure 1: CCD image of V1187 Cyg (a) and V1191 Cyg (b).

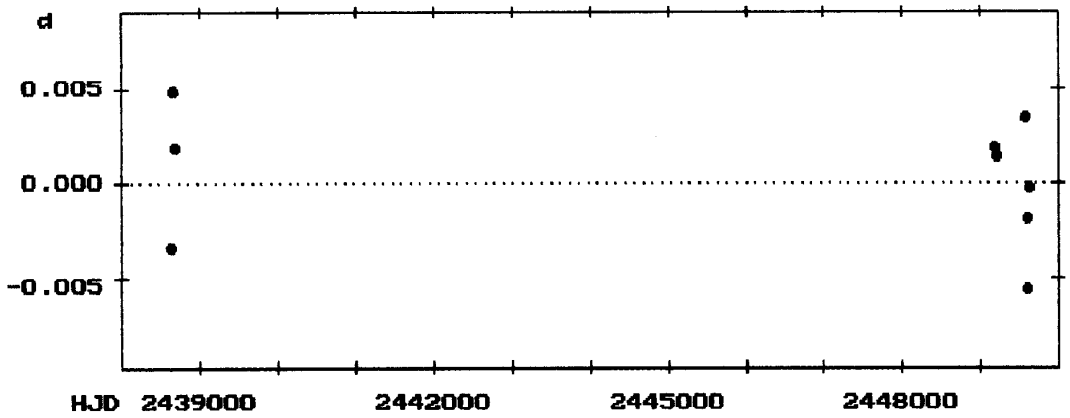

Figure 2: O–C diagram for V1187 Cyg computed with respect to the new ephemeris (2) using all available minima timings.

Table 1. Observed times of minima for V1187 Cyg, epochs and residuals computed with respect to the ephemeris (2) derived in this paper.

N	JD hel. 2400000+	W	T*	Epoch	(O–C)	Lit	N	JD hel. 2400000+	W	T*	Epoch	(O–C)	Lit
1	38634.5462	60	E	0.0	−0.0034	[1]	6	49587.439	30	E:	7268.0	+0.004	[3]
2	38653.392	30	E:	12.5	+0.005	[1]	7	49599.4897	60	E	7276.0	−0.0018	[3]
3	38668.459	30	E:	22.5	+0.002	[1]	8	49608.528	30	E:	7282.0	−0.006	[3]
4	49168.4910	60	E	6990.0	+0.0019	[2]	9	49621.3428	60	E	7290.5	−0.0002	[3]
5	49217.4681	60	E	7022.5	+0.0014	[2]							

[1]: Mayer (1965), [2]: Agerer (1994), [3]: Agerer: this paper

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