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NEW ELEMENTS FOR THE ECLIPSING BINARY V1036 Cyg

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Name of the object:
V1036 Cyg

Equatorial coordinates:	**Equinox:**
R.A.= $20^h08^m04^s$ **DEC.**= $40°43'42''$	2000

Observatory and telescope:
Agerer F.: Private observatory, 20-cm SCT; Frank, P.: Private observatory, 10-cm astrograph; Moschner, W.: Private observatory, 32-cm Ritchey-Chrétien telescope

Detector:	SBIG ST6 cameras in all cases

Filter(s):	none

Comparison star(s):	GSC 3154:0004

Check star(s):	GSC 3154:1519

Transformed to a standard system:	No

Availability of the data:
Upon request

Type of variability:	EA

Table 1: Observed times of minima for V1036 Cyg, epochs and residuals computed with respect to the linear ephemeris derived in this paper.

Nr	JD hel. 2400000+	Weight	Type*	Epoch	O–C	Observer
1	33894.440	0	P	−5901.0	+0.517	Romano
2	36808.374	1	P	−4853.0	+0.001	Romano
3	37189.377	1	P	−4716.0	+0.012	Romano
4	45646.240	1	P	−1675.0	−0.036	Moschner
5	50304.3939	10	E	0.0	+0.0039	Frank/Moschner
6	50315.5124	10	E	4.0	−0.0015	Frank/Moschner
7	50361.3948	10	E	20.5	−0.0050	Moschner
8	50396.1937	1	P	33.0	+0.0319	Moschner
9	50582.4853	10	E	100.0	−0.0011	Moschner
10	50671.4780	10	E	132.0	+0.0008	Frank/Moschner
11	50696.5038	10	E	141.0	−0.0021	Frank/Moschner
12	50717.3661	10	E	148.5	+0.0030	Moschner
13	50749.3455	10	E	160.0	+0.0013	Moschner
14	51045.5157	10	E	266.5	−0.0011	Moschner
15	51045.5187	10	E	266.5	+0.0019	Agerer
16	51376.4540	10	E	385.5	+0.0025	Moschner
17	51426.5061	10	E	403.5	−0.0028	Moschner
18	51433.4610	10	E	406.0	−0.0003	Moschner

* P denotes photographic plate minima and E CCD measured minima

Remarks:

V1036 Cyg was discovered by Weber (1962) and classified as an eclipsing binary. In the course of a sky survey in the field of Gamma Cygni, Romano (1969) found the star weak on three plates taken with the Schmidt-telescope of Padua-Asiago Observatory. No elements could be derived. In the GCVS (Kholopov et al. 1985) the variable is listed with a period of $0\overset{d}{.}74412$. In 1994 we put V1036 Cyg on our observing program. Soon it was clear, that the period given in the GCVS is a spurious one (1 cycle/day alias) with the relation:

$$\frac{1}{\mathrm{P_{GCVS}}} - \frac{1}{\mathrm{P}} \approx \frac{1}{1\mathrm{d_{sid}}} \tag{1}$$

The primary and secondary minima have an amplitude of $0\overset{m}{.}75$ and $0\overset{m}{.}35$ respectively. The minimum times are calculated according to the Kwee–van Woerden method (Kwee, van Woerden 1956). A least squares fit to the data given in Table 1 led to the preliminary ephemeris:

$$\begin{array}{rlll} \text{Min I} = \text{HJD} & 2450304.3900 & +2\overset{d}{.}7809637 & \times E \\ & \pm 4 & \pm 7 & \end{array} \tag{2}$$

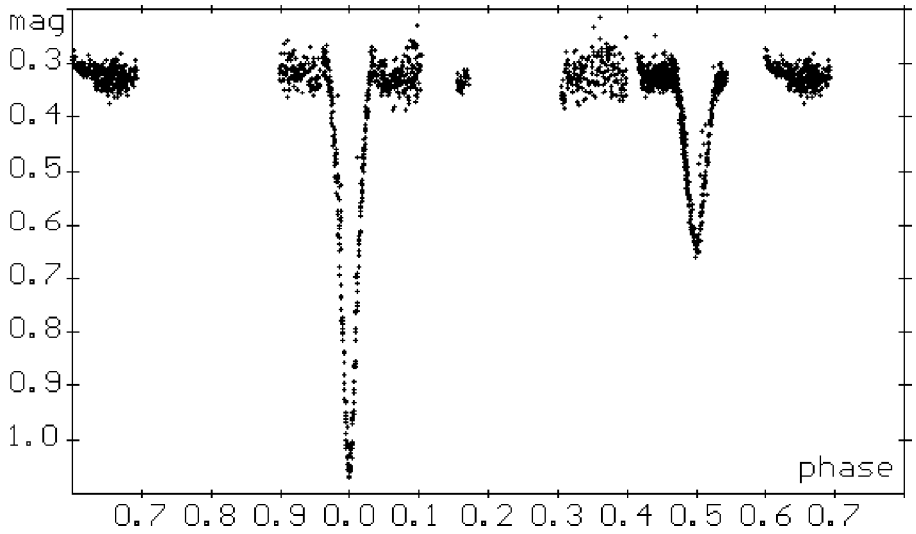

Figure 1. Differential light curve of V1036 Cyg

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