

COMMISSIONS 27 AND 42 OF THE IAU
INFORMATION BULLETIN ON VARIABLE STARS

Number 5204

Konkoly Observatory
Budapest
20 November 2001

HU ISSN 0374 – 0676

NEW ELEMENTS FOR THE ECLIPSING BINARY V1036 Cyg

(BAV MITTEILUNGEN NO. 141)

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Name of the object:	
V1036 Cyg	
Equatorial coordinates:	Equinox:
R.A. = 20 ^h 08 ^m 04 ^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 $0^d.74412$. 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:

$$\frac{1}{P_{\text{GCVS}}} - \frac{1}{P} \approx \frac{1}{1d_{\text{sid}}} \quad (1)$$

The primary and secondary minima have an amplitude of $0^m.75$ and $0^m.35$ 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:

$$\text{Min I} = \text{HJD } 2450304.3900 \pm 4 + 2^d.7809637 \times E \pm 7 \quad (2)$$

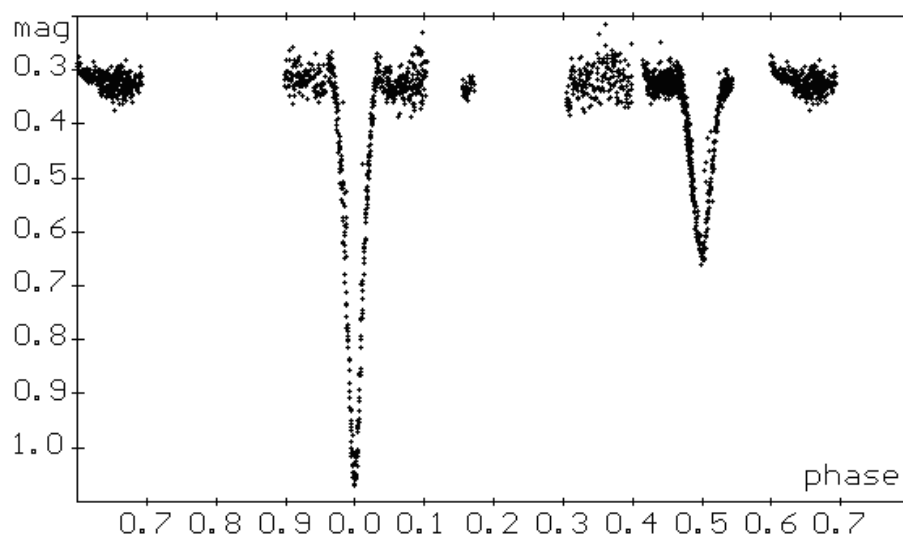


Figure 1. Differential light curve of V1036 Cyg

Acknowledgements:

This research made use of the SIMBAD data base, operated by the CDS at Strasbourg, France

References:

- Kholopov, P. N. et al. 1985, *General Catalogue of Variable Stars*, 4th Edition, Nauka, Moscow
- Kwee, K. K., van Woerden, H., 1956, *Bull. Astr. Inst. Netherlands*, **12**, No. 464, 327
- Romano, G., 1969, *Pubblicazioni dell' Osservatorio Astronomico di Padova*, No. **156**, 375-413
- Weber, R., 1962, *IBVS*, No. **6**