

COMMISSION 27 OF THE I. A. U.
 INFORMATION BULLETIN ON VARIABLE STARS

Number 464

Konkoly Observatory
 Budapest
 1970 September 10

PHOTOGRAPHIC OBSERVATIONS OF THE ECLIPSING VARIABLE
 HBV 434 = V 1171 Cyg

This variable was discovered by Wachmann (A. A., Abh. Hamb. Sternw. VI, 4, 328 1966) during his survey of the Cygnus-Cloud. Although he observed 8 minima, no period could be found. Photoelectric observations obtained by the author during May and June 1969 gave 5 more minima. A weighted least-square-solution gave the following elements together with their mean errors:

$$\text{Min}_{\text{hel}} = 244\ 0380.5492 + 1.462\ 123\ 9 \cdot E$$

$$\begin{matrix} \pm 95 & \pm 1\ 9 \end{matrix}$$

Table I gives the observed times of minimum, the epochs, their weights and the observer, Wa denoting Wachmann and Bo denoting the author.

TABLE I

O	E	O - C	p	Obs.
243 3922.330	-4417.0	-0.021	1	Wa
4215.516	-4216.5	+0.009	1	"
4237.424	-4201.5	-0.015	1	"
4979.486	-3694.0	+0.020	1	"
4982.370	-3692.0	-0.020	1	"
5020.420	-3666.0	+0.014	1	"
5360.378	-3433.5	+0.029	1	"
5398.357	-3407.5	-0.007	1	"
244 0369.5695	-7.5	-0.0137	3	Bo
0372.5079	-5.5	+0.0004	5	"
0380.5527	0.0	+0.0035	10	"
0389.3114	+6.0	-0.0105	4	"
0394.4428	+9.5	+0.0035	10	"

The normals of Table II were formed out of Wachmann's photographic observations, n giving their number. The total phase at primary minimum is not verified by the photoelectric observations.

From Figure I the following characteristics of the light changes may be read:

$$\begin{matrix} \text{Max I} : 10^{\text{m}.04} & \text{Min I} : 10^{\text{m}.32} & \text{Type : EA} \\ \text{Max II} : 10^{\text{m}.04} & \text{Min II} : 10^{\text{m}.28} & \end{matrix}$$

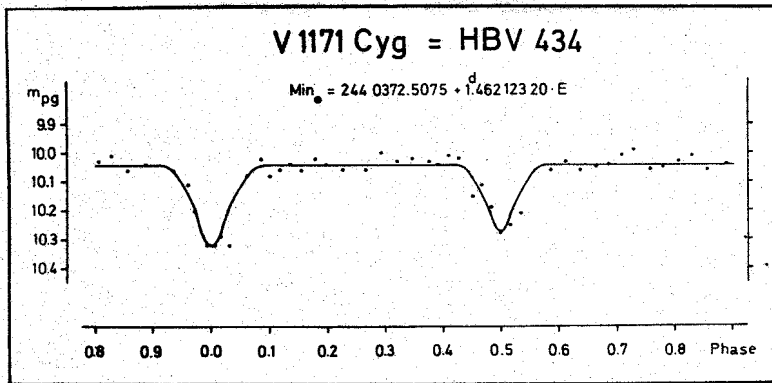


TABLE II

Phase	m_{pg}	n	Phase	m_{pg}	n	Phase	m_{pg}	n
0.0066	10.32	7	0.3219	10.03	10	0.6365	10.06	7
.0151	10.29	8	.3484	10.02	11	.6643	10.05	12
.0319	10.32	7	.3778	10.03	12	.6870	10.04	12
.0636	10.08	11	.3943	10.04	9	.7085	10.01	10
.0866	10.02	9	.4103	10.01	9	.7294	9.99	9
.1006	10.08	10	.4285	10.02	8	.7577	10.06	10
.1193	10.06	12	.4519	10.15	8	.7787	10.05	8
.1352	10.04	10	.4696	10.11	7	.8068	10.03	12
.1568	10.06	10	.4822	10.19	6	.8284	10.01	12
.1800	10.02	10	.4992	10.28	10	.8561	10.06	12
.1992	10.04	10	.5169	10.25	10	.8891	10.04	10
.2281	10.06	11	.5334	10.21	6	.9352	10.06	13
.2651	10.06	7	.5863	10.06	13	.9603	10.11	7
0.2947	10.00	9	0.6132	10.03	10	.9746	10.20	7
						0.9944	10.32	5

V 1171 Cyg will be further observed with the 60 cm photoelectric telescope of Hamburg Observatory for the sake of finding orbital elements.

The author is indebted to Prof. Dr. A. A. Wachmann for putting his photographic observations at the author's disposal.

Hamburger Sternwarte,
Germany

H. BOSSEN