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PHOTOGRAPHIC LIGHTCURVE OF HBV 476

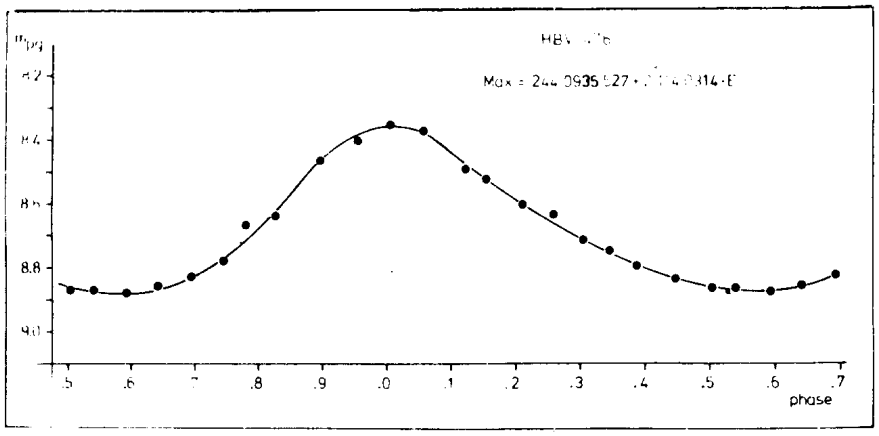
A total of 144 plates was measured in order to establish the lightcurve of this Cepheid variable. Using the preliminary light elements quoted in an earlier paper (IBVS no.506) a mean lightcurve was obtained. From this and the individual measurements 12 epochs of maximum brightness could be determined. They are given in the following table together with 4 epochs of maximum derived in the same way from photoelectric observations obtained with the 60 cm reflector at Hamburg.

Max. hel.		E	O-C
242 8335.908	pg	- 5 960	+0.005
8338.035	pg	- 5 959	+ .017
9515.512	pg	- 5 402	- .017
243 0373.783	pg	- 4 996	- .043
0515.497	pg	- 4 929	+ .030
0517.612	pg	- 4 928	+ .031
0591.582	pg	- 4 893	+ .011
0703.620	pg	- 4 840	+ .005
1029.160	pg	- 4 686	- .016
1031.282	pg	- 4 685	- .008
1033.399	pg	- 4 684	- .005
1060.878	pg	- 4 671	- .008
244 0943.971	pe	+ 4	- .012
0954.547	pe	+ 9	- .006
0963.023	pe	+ 13	+ .013
0965.132	pe	+ 14	+0.008

A least-square-solution of all times of maximum gave the following elements together with their mean errors

$$\text{Max} = 244\ 0935.527 \pm 9 + 2^{d}.114\ 0314 \pm 21\ E$$

leading to the residuals "O - C" in the above table. Using these light elements and forming normal points, a lightcurve shown in the Figure could be established.



Normal points:

Phase	m_{pg}	n	Phase	m_{pg}	n	Phase	m_{pg}	n
0.005	8.36	7	0.347	8.75	5	0.693	8.83	5
.056	8.38	9	.391	8.80	6	.745	8.78	6
.122	8.50	6	.448	8.84	11	.778	8.67	4
.154	8.53	7	.503	8.87	8	.824	8.64	5
.211	8.61	9	.541	8.87	5	.896	8.47	7
.259	8.64	6	.593	8.88	15	.955	8.41	9
.305	8.72	6	.642	8.86	8			

I am indebted to Professor Dr. A.A. Wachmann for having lead my interest to this variable and for putting his photographic and photoelectric observations at my disposal.

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