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HD 101799, A COMPLETELY ECLIPSING W UMa SYSTEM

The eclipsing character of HD 101799 was discovered by Bond (1970) on Curtiss-Schmidt prism-objective plates and confirmed by γ -photoelectric observations.

We report in this Note the first results of 1350 U, B, and V observations secured at Cerro Tololo Inter-American Observatory. They were made with the 16 inches (No 1) Observatory's telescope through a UBV set of standard filters and an RCA 1P21 photomultiplier refrigerated in a thermoelectric cold box. The variable star was observed differentially in relation to the comparison star HD 101834. The observations show the system to be a W UMa star with stationary light within the minima, i.e., the system undergoes total eclipses. Figure 1 displays the V-observations obtained on April 16, 1971.

We derived eleven times of minimum for each light curve in U, B, and V. They are listed in Table I; the residuals (O-C) and cycles are from the linear least squares ephemeris:

$$P.M. = JD_{hel.} 2441060.12322 + 0^d 37022894 \cdot E$$

$\quad \quad \quad \underline{+12} \quad \quad \quad \underline{+25}$

including the first time of minimum computed from the γ -observations kindly supplied by Dr Bond.

The light curve analysis will be further published.

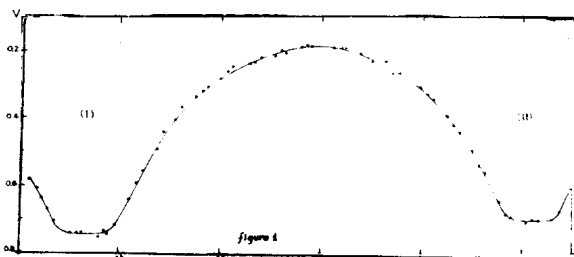


Table I: Times of minimum of HD 101799.

Min.	Color	JD. hel 2440000+	W	Cycles	O-C
II	V	0648.98393	2	-1110.5	-0.00005
II	V	1056.60640	2	-9.5	+0.0004
	B	.60633	2	-9.5	+0.0003
	U	.60652	1	-9.5	+0.0005
I	V	1057.53220	2	-7.0	+0.0006
	B	.53191	2	-7.0	+0.0003
	U	.53144	1	-7.0	-0.0002
II	V	1057.71742	2	-6.5	+0.0007
	B	.71732	2	-6.5	+0.0006
	U	.71749	1	-6.5	+0.0008
I	V	1058.64279	2	-4.0	+0.0005
	B	.64242	2	-4.0	+0.0001
	U	.64353	1	-4.0	+0.0012
II	V	1059.56809	2	-1.5	+0.0002
	B	.56798	2	-1.5	+0.0001
	U	.56740	1	-1.5	-0.0005
I	V	1059.75328	2	-1.0	+0.0003
	B	.75350	2	-1.0	+0.0005
	U	.75370	1	-1.0	+0.0007
I	V	1060.49285	2	+1.0	-0.0006
	B	.49273	2	+1.0	-0.0007
	U	.49292	1	+1.0	-0.0005
II	V	1060.67834	2	+1.5	-0.0002
	B	.67877	2	+1.5	+0.0002
	U	.67820	1	+1.5	-0.0004
I	V	1061.60395	2	+4.0	-0.0002
	B	.60383	2	+4.0	-0.0003
	U	.60298	1	+4.0	-0.0012
II	V	1063.63973	2	+9.5	-0.0007
	B	.63972	2	+9.5	-0.0007
	U	.63958	1	+9.5	-0.0008
I	V	1064.56504	2	+12.0	-0.0009
	B	.56545	2	+12.0	-0.0005
	U	.56676	1	+12.0	-0.0008

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Reference

Bond, H.E. 1970, Pub.A.S.P., 82, 1065.